

Supplementary material for “Impact of model misspecification in shared frailty survival models”

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Results: Treatment effect

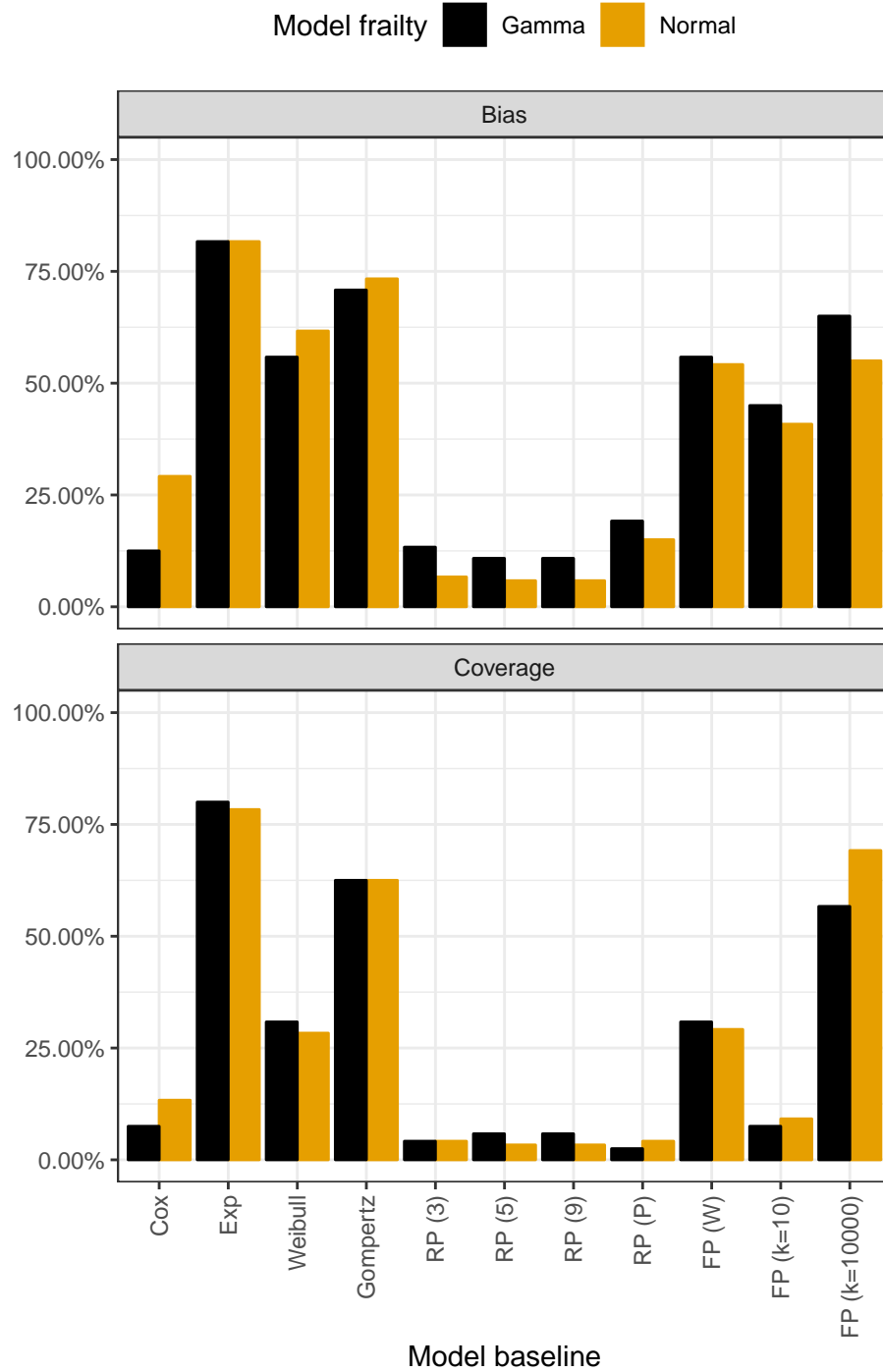


Figure 1: Percentage of simulated scenarios in which bias (top panel) or coverage (lower panel) for the estimated treatment effect was statistically different than the target value of 0 (for bias) or 95% (coverage), using Z tests based on Monte Carlo standard errors.

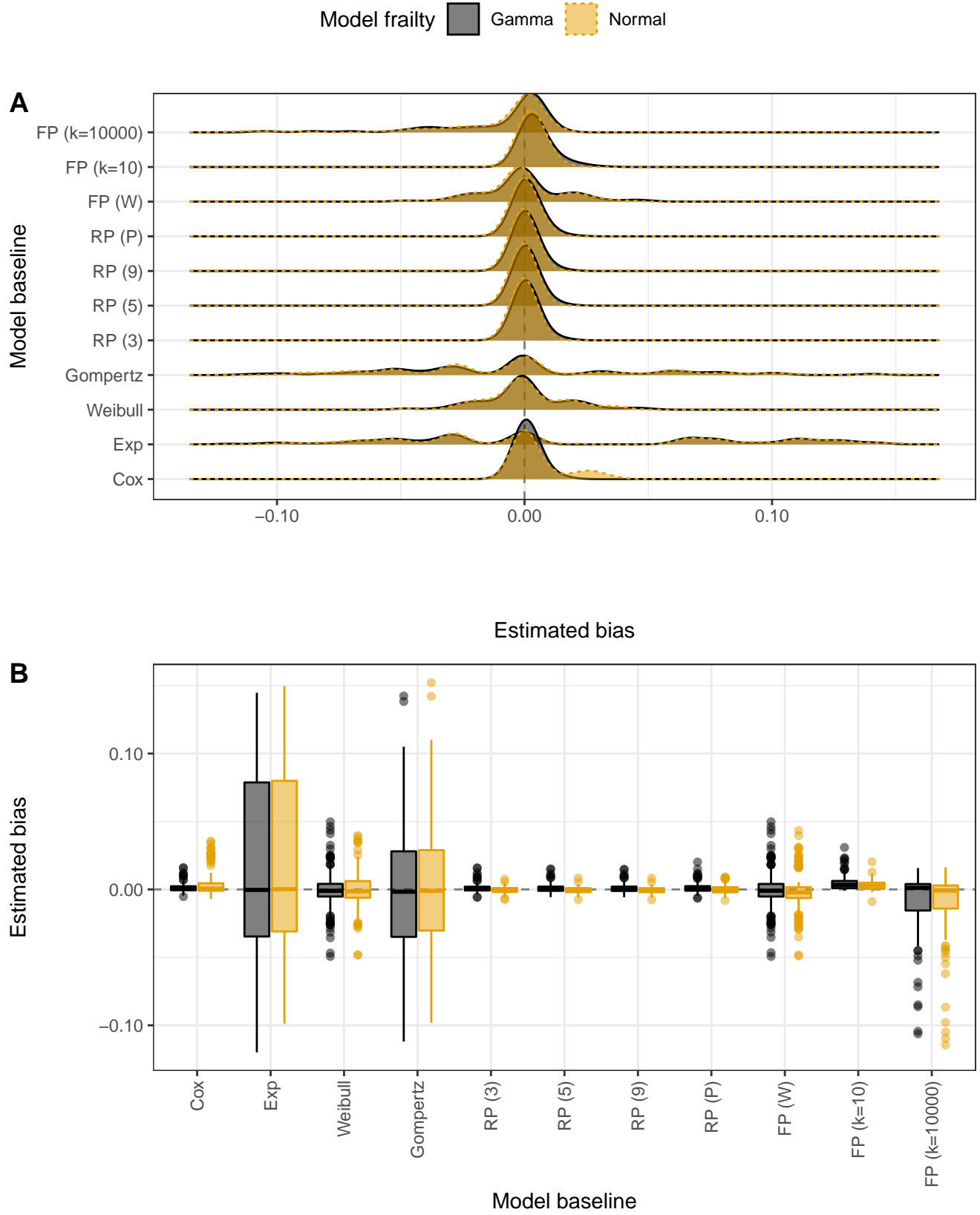


Figure 2: Bias distribution for the estimated treatment effect under each data-generating mechanisms by fitted model using ridgeline plots (panel A) or box plots (panel B).

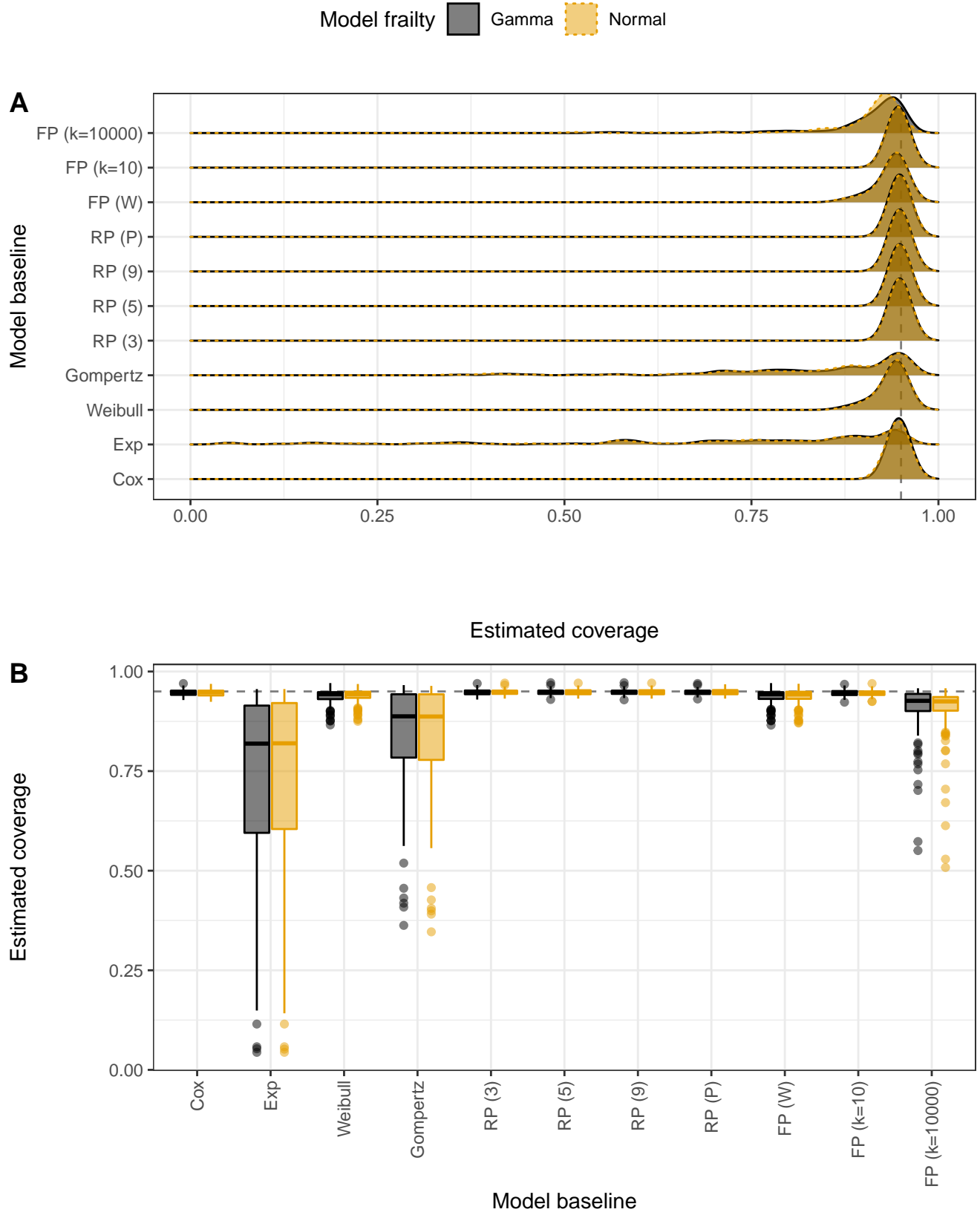


Figure 3: Coverage distribution for the estimated treatment effect under each data-generating mechanisms by fitted model using ridgeline plots (panel A) or box plots (panel B).

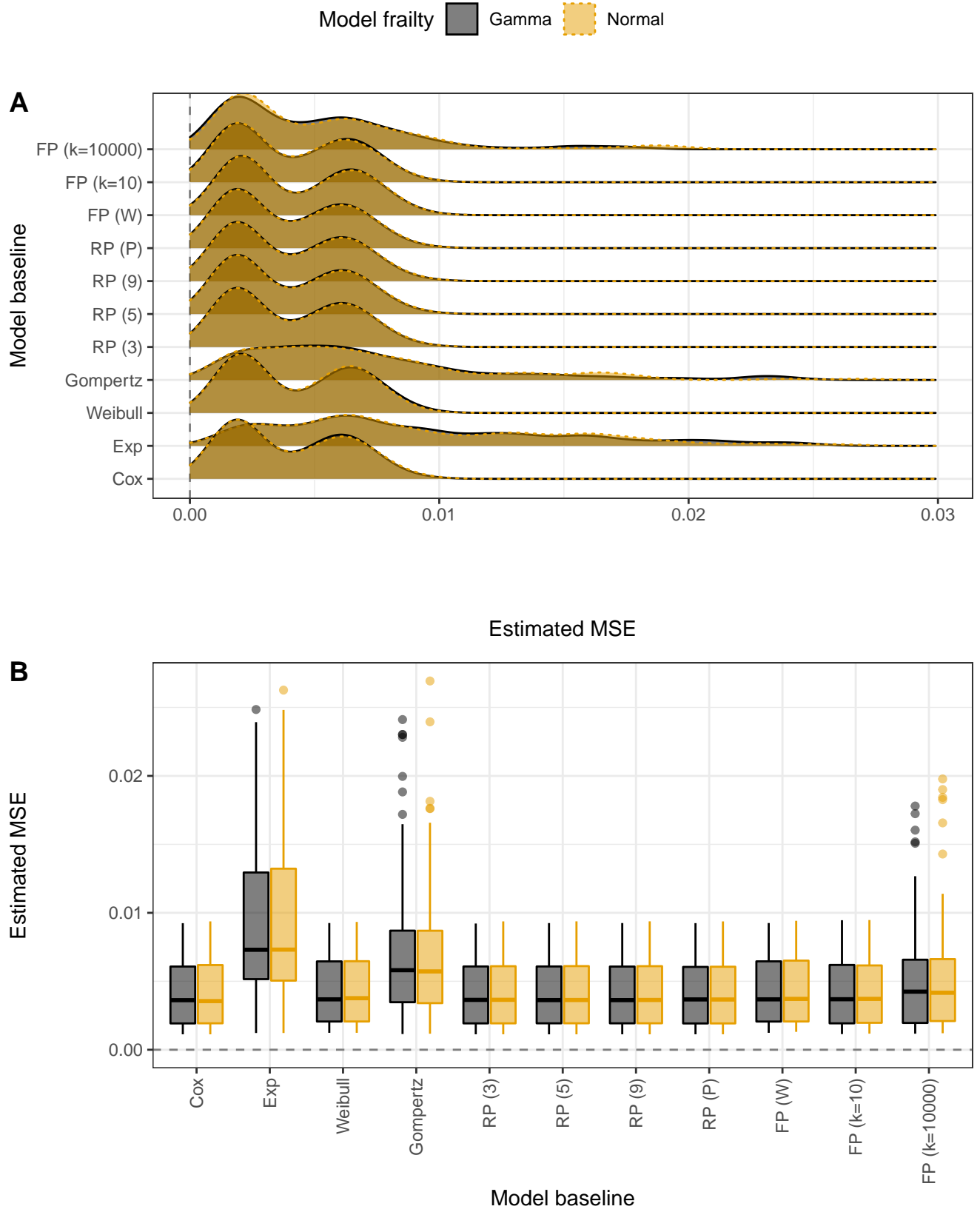


Figure 4: Mean squared error distribution for the estimated treatment effect under each data-generating mechanisms by fitted model using ridgeline plots (panel A) or box plots (panel B).

Table 1: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5012	0.0043	0.0668 (0.0015)	-0.0012 (0.0021)	0.9339 (0.0079)	0.0045 (0.0002)	999
Exp	-0.5010	0.0043	0.0654 (0.0015)	-0.0010 (0.0021)	0.9370 (0.0077)	0.0043 (0.0002)	1000
Weibull	-0.5024	0.0045	0.0665 (0.0015)	-0.0024 (0.0021)	0.9450 (0.0072)	0.0044 (0.0002)	1000
Gompertz	-0.5012	0.0045	0.0655 (0.0019)	-0.0012 (0.0026)	0.9382 (0.0097)	0.0043 (0.0002)	615
RP (3)	-0.5018	0.0045	0.0669 (0.0015)	-0.0018 (0.0021)	0.9419 (0.0074)	0.0045 (0.0002)	998
RP (5)	-0.5020	0.0045	0.0669 (0.0015)	-0.0020 (0.0021)	0.9419 (0.0074)	0.0045 (0.0002)	999
RP (9)	-0.5020	0.0045	0.0669 (0.0015)	-0.0020 (0.0021)	0.9409 (0.0075)	0.0045 (0.0002)	999
RP (P)	-0.5020	0.0045	0.0665 (0.0015)	-0.0020 (0.0021)	0.9440 (0.0073)	0.0044 (0.0002)	1000
FP (W)	-0.5027	0.0045	0.0666 (0.0015)	-0.0027 (0.0021)	0.9444 (0.0073)	0.0044 (0.0002)	990
FP (k=10)	-0.4991	0.0045	0.0669 (0.0015)	0.0009 (0.0021)	0.9410 (0.0075)	0.0045 (0.0002)	1000
FP (k=10000)	-0.5006	0.0035	0.0667 (0.0015)	-0.0006 (0.0021)	0.9070 (0.0092)	0.0044 (0.0002)	1000
Model frailty: Normal							
Cox	-0.4920	0.0042	0.0653 (0.0015)	0.0080 (0.0021)	0.9330 (0.0079)	0.0043 (0.0002)	1000
Exp	-0.5017	0.0044	0.0657 (0.0015)	-0.0017 (0.0021)	0.9399 (0.0075)	0.0043 (0.0002)	999
Weibull	-0.5080	0.0046	0.0673 (0.0015)	-0.0080 (0.0021)	0.9480 (0.0070)	0.0046 (0.0002)	1000
Gompertz	-0.5024	0.0046	0.0656 (0.0021)	-0.0024 (0.0029)	0.9425 (0.0104)	0.0043 (0.0003)	504
RP (3)	-0.5028	0.0046	0.0671 (0.0015)	-0.0028 (0.0021)	0.9410 (0.0075)	0.0045 (0.0002)	1000
RP (5)	-0.5029	0.0046	0.0671 (0.0015)	-0.0029 (0.0021)	0.9410 (0.0075)	0.0045 (0.0002)	1000
RP (9)	-0.5030	0.0046	0.0672 (0.0015)	-0.0030 (0.0021)	0.9400 (0.0075)	0.0045 (0.0002)	1000
RP (P)	-0.5031	0.0045	0.0669 (0.0015)	-0.0031 (0.0021)	0.9460 (0.0071)	0.0045 (0.0002)	1000
FP (W)	-0.5033	0.0045	0.0670 (0.0015)	-0.0033 (0.0021)	0.9464 (0.0072)	0.0045 (0.0002)	989
FP (k=10)	-0.5003	0.0046	0.0672 (0.0015)	-0.0003 (0.0021)	0.9400 (0.0075)	0.0045 (0.0002)	1000
FP (k=10000)	-0.5015	0.0037	0.0669 (0.0015)	-0.0015 (0.0021)	0.9130 (0.0089)	0.0045 (0.0002)	1000

Table 2: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4959	0.0047	0.0736 (0.0016)	0.0041 (0.0023)	0.9330 (0.0079)	0.0054 (0.0002)	1000
Exp	-0.5852	0.0056	0.0860 (0.0019)	-0.0852 (0.0027)	0.7560 (0.0136)	0.0147 (0.0006)	1000
Weibull	-0.4980	0.0049	0.0736 (0.0016)	0.0020 (0.0023)	0.9450 (0.0072)	0.0054 (0.0002)	1000
Gompertz	-0.5805	0.0059	0.0867 (0.0029)	-0.0805 (0.0041)	0.7932 (0.0193)	0.0140 (0.0008)	440
RP (3)	-0.4968	0.0049	0.0736 (0.0016)	0.0032 (0.0023)	0.9438 (0.0073)	0.0054 (0.0002)	996
RP (5)	-0.4967	0.0049	0.0738 (0.0017)	0.0033 (0.0023)	0.9437 (0.0073)	0.0054 (0.0002)	995
RP (9)	-0.4970	0.0049	0.0738 (0.0017)	0.0030 (0.0023)	0.9437 (0.0073)	0.0055 (0.0002)	994
RP (P)	-0.4974	0.0049	0.0736 (0.0016)	0.0026 (0.0023)	0.9440 (0.0073)	0.0054 (0.0002)	1000
FP (W)	-0.4980	0.0049	0.0737 (0.0017)	0.0020 (0.0023)	0.9445 (0.0073)	0.0054 (0.0002)	991
FP (k=10)	-0.4916	0.0049	0.0741 (0.0017)	0.0084 (0.0023)	0.9340 (0.0079)	0.0056 (0.0002)	1000
FP (k=10000)	-0.5145	0.0042	0.0771 (0.0017)	-0.0145 (0.0024)	0.8930 (0.0098)	0.0061 (0.0003)	1000
Model frailty: Normal							
Cox	-0.4878	0.0046	0.0721 (0.0016)	0.0122 (0.0023)	0.9330 (0.0079)	0.0053 (0.0002)	1000
Exp	-0.5864	0.0057	0.0860 (0.0019)	-0.0864 (0.0027)	0.7590 (0.0135)	0.0148 (0.0006)	1000
Weibull	-0.5054	0.0050	0.0747 (0.0017)	-0.0054 (0.0024)	0.9419 (0.0074)	0.0056 (0.0002)	999
Gompertz	-0.5861	0.0060	0.0903 (0.0032)	-0.0861 (0.0045)	0.7537 (0.0213)	0.0155 (0.0009)	410
RP (3)	-0.4979	0.0050	0.0741 (0.0017)	0.0021 (0.0023)	0.9398 (0.0075)	0.0055 (0.0002)	996
RP (5)	-0.4981	0.0050	0.0741 (0.0017)	0.0019 (0.0023)	0.9418 (0.0074)	0.0055 (0.0002)	997
RP (9)	-0.4981	0.0050	0.0741 (0.0017)	0.0019 (0.0023)	0.9408 (0.0075)	0.0055 (0.0002)	997
RP (P)	-0.4989	0.0050	0.0740 (0.0017)	0.0011 (0.0023)	0.9420 (0.0074)	0.0055 (0.0002)	1000
FP (W)	-0.4996	0.0049	0.0739 (0.0017)	0.0004 (0.0023)	0.9435 (0.0073)	0.0055 (0.0002)	992
FP (k=10)	-0.4953	0.0050	0.0748 (0.0017)	0.0047 (0.0024)	0.9390 (0.0076)	0.0056 (0.0002)	1000
FP (k=10000)	-0.5208	0.0045	0.0783 (0.0018)	-0.0208 (0.0025)	0.9000 (0.0095)	0.0066 (0.0003)	1000

Table 3: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5016	0.0040	0.0654 (0.0015)	-0.0016 (0.0021)	0.9390 (0.0076)	0.0043 (0.0002)	1000
Exp	-0.4034	0.0031	0.0516 (0.0012)	0.0966 (0.0016)	0.5957 (0.0157)	0.0120 (0.0004)	982
Weibull	-0.4590	0.0037	0.0594 (0.0013)	0.0410 (0.0019)	0.9010 (0.0094)	0.0052 (0.0002)	1000
Gompertz	-0.5028	0.0042	0.0655 (0.0015)	-0.0028 (0.0021)	0.9500 (0.0069)	0.0043 (0.0002)	1000
RP (3)	-0.5008	0.0042	0.0650 (0.0015)	-0.0008 (0.0021)	0.9529 (0.0067)	0.0042 (0.0002)	997
RP (5)	-0.5024	0.0042	0.0654 (0.0015)	-0.0024 (0.0021)	0.9480 (0.0070)	0.0043 (0.0002)	1000
RP (9)	-0.5028	0.0042	0.0655 (0.0015)	-0.0028 (0.0021)	0.9490 (0.0070)	0.0043 (0.0002)	1000
RP (P)	-0.4928	0.0041	0.0643 (0.0014)	0.0072 (0.0020)	0.9470 (0.0071)	0.0042 (0.0002)	1000
FP (W)	-0.4590	0.0037	0.0594 (0.0013)	0.0410 (0.0019)	0.9010 (0.0094)	0.0052 (0.0002)	1000
FP (k=10)	-0.4997	0.0042	0.0653 (0.0015)	0.0003 (0.0021)	0.9470 (0.0071)	0.0043 (0.0002)	1000
FP (k=10000)	-0.4951	0.0030	0.0643 (0.0014)	0.0049 (0.0020)	0.9020 (0.0094)	0.0042 (0.0002)	1000
Model frailty: Normal							
Cox	-0.4919	0.0039	0.0635 (0.0014)	0.0081 (0.0020)	0.9410 (0.0075)	0.0041 (0.0002)	1000
Exp	-0.4061	0.0032	0.0522 (0.0013)	0.0939 (0.0018)	0.6265 (0.0165)	0.0115 (0.0004)	862
Weibull	-0.4654	0.0038	0.0603 (0.0013)	0.0346 (0.0019)	0.9109 (0.0090)	0.0048 (0.0002)	999
Gompertz	-0.5064	0.0043	0.0654 (0.0015)	-0.0064 (0.0021)	0.9449 (0.0072)	0.0043 (0.0002)	999
RP (3)	-0.5019	0.0042	0.0653 (0.0015)	-0.0019 (0.0021)	0.9439 (0.0073)	0.0043 (0.0002)	998
RP (5)	-0.5028	0.0042	0.0655 (0.0015)	-0.0028 (0.0021)	0.9440 (0.0073)	0.0043 (0.0002)	1000
RP (9)	-0.5031	0.0042	0.0655 (0.0015)	-0.0031 (0.0021)	0.9440 (0.0073)	0.0043 (0.0002)	1000
RP (P)	-0.4936	0.0041	0.0645 (0.0014)	0.0064 (0.0020)	0.9470 (0.0071)	0.0042 (0.0002)	1000
FP (W)	-0.4604	0.0038	0.0596 (0.0013)	0.0396 (0.0019)	0.9030 (0.0094)	0.0051 (0.0002)	1000
FP (k=10)	-0.5006	0.0042	0.0654 (0.0015)	-0.0006 (0.0021)	0.9430 (0.0073)	0.0043 (0.0002)	1000
FP (k=10000)	-0.4978	0.0030	0.0647 (0.0014)	0.0022 (0.0020)	0.9020 (0.0094)	0.0042 (0.0002)	1000

Table 4: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5004	0.0040	0.0643 (0.0014)	-0.0004 (0.0020)	0.9449 (0.0072)	0.0041 (0.0002)	999
Exp	-0.3739	0.0031	0.0473 (0.0014)	-0.1261 (0.0020)	0.3646 (0.0201)	0.0181 (0.0005)	576
Weibull	-0.5493	0.0046	0.0697 (0.0016)	-0.0493 (0.0022)	0.8870 (0.0100)	0.0073 (0.0003)	1000
Gompertz	-0.5047	0.0043	0.0644 (0.0014)	-0.0047 (0.0020)	0.9550 (0.0066)	0.0042 (0.0002)	1000
RP (3)	-0.5021	0.0043	0.0646 (0.0014)	-0.0021 (0.0020)	0.9480 (0.0070)	0.0042 (0.0002)	1000
RP (5)	-0.5015	0.0043	0.0644 (0.0014)	-0.0015 (0.0020)	0.9510 (0.0068)	0.0041 (0.0002)	999
RP (9)	-0.5016	0.0043	0.0644 (0.0014)	-0.0016 (0.0020)	0.9500 (0.0069)	0.0041 (0.0002)	1000
RP (P)	-0.5039	0.0043	0.0647 (0.0014)	-0.0039 (0.0020)	0.9490 (0.0070)	0.0042 (0.0002)	1000
FP (W)	-0.5493	0.0046	0.0697 (0.0016)	-0.0493 (0.0022)	0.8880 (0.0100)	0.0073 (0.0003)	1000
FP (k=10)	-0.4911	0.0043	0.0649 (0.0015)	0.0089 (0.0021)	0.9470 (0.0071)	0.0043 (0.0002)	1000
FP (k=10000)	-0.6043	0.0037	0.0797 (0.0018)	-0.1043 (0.0025)	0.5731 (0.0157)	0.0172 (0.0006)	998
Model frailty: Normal							
Cox	-0.4909	0.0039	0.0625 (0.0014)	0.0091 (0.0020)	0.9470 (0.0071)	0.0040 (0.0002)	1000
Exp	-0.3699	0.0031	0.0419 (0.0031)	0.1301 (0.0043)	0.3085 (0.0476)	0.0187 (0.0012)	94
Weibull	-0.5481	0.0046	0.0692 (0.0015)	-0.0481 (0.0022)	0.8898 (0.0099)	0.0071 (0.0003)	998
Gompertz	-0.4967	0.0042	0.0629 (0.0014)	0.0033 (0.0020)	0.9560 (0.0065)	0.0040 (0.0002)	999
RP (3)	-0.5031	0.0043	0.0646 (0.0014)	-0.0031 (0.0020)	0.9479 (0.0070)	0.0042 (0.0002)	999
RP (5)	-0.5018	0.0043	0.0644 (0.0014)	-0.0018 (0.0020)	0.9550 (0.0066)	0.0042 (0.0002)	1000
RP (9)	-0.5019	0.0043	0.0644 (0.0014)	-0.0019 (0.0020)	0.9550 (0.0066)	0.0042 (0.0002)	1000
RP (P)	-0.5040	0.0043	0.0647 (0.0014)	-0.0040 (0.0020)	0.9540 (0.0066)	0.0042 (0.0002)	1000
FP (W)	-0.5482	0.0046	0.0695 (0.0016)	-0.0482 (0.0022)	0.8884 (0.0100)	0.0072 (0.0003)	986
FP (k=10)	-0.4946	0.0043	0.0649 (0.0015)	0.0054 (0.0021)	0.9490 (0.0070)	0.0042 (0.0002)	1000
FP (k=10000)	-0.6096	0.0036	0.0802 (0.0018)	-0.1096 (0.0025)	0.5290 (0.0158)	0.0184 (0.0006)	1000

Table 5: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4990	0.0045	0.0685 (0.0015)	0.0010 (0.0022)	0.9450 (0.0072)	0.0047 (0.0002)	1000
Exp	-0.5428	0.0049	0.0721 (0.0016)	-0.0428 (0.0023)	0.9050 (0.0093)	0.0070 (0.0003)	1000
Weibull	-0.5092	0.0047	0.0690 (0.0015)	-0.0092 (0.0022)	0.9460 (0.0071)	0.0048 (0.0002)	1000
Gompertz	-0.5422	0.0051	0.0698 (0.0023)	-0.0422 (0.0032)	0.9308 (0.0116)	0.0066 (0.0004)	477
RP (3)	-0.4996	0.0047	0.0686 (0.0015)	0.0004 (0.0022)	0.9508 (0.0069)	0.0047 (0.0002)	995
RP (5)	-0.4997	0.0047	0.0686 (0.0015)	0.0003 (0.0022)	0.9499 (0.0069)	0.0047 (0.0002)	998
RP (9)	-0.4999	0.0047	0.0686 (0.0015)	0.0001 (0.0022)	0.9488 (0.0070)	0.0047 (0.0002)	996
RP (P)	-0.5011	0.0047	0.0687 (0.0015)	-0.0011 (0.0022)	0.9490 (0.0070)	0.0047 (0.0002)	1000
FP (W)	-0.5091	0.0047	0.0691 (0.0016)	-0.0091 (0.0022)	0.9464 (0.0072)	0.0049 (0.0002)	988
FP (k=10)	-0.4959	0.0047	0.0685 (0.0015)	0.0041 (0.0022)	0.9469 (0.0071)	0.0047 (0.0002)	999
FP (k=10000)	-0.4923	0.0037	0.0674 (0.0015)	0.0077 (0.0021)	0.9250 (0.0083)	0.0046 (0.0002)	1000
Model frailty: Normal							
Cox	-0.4906	0.0044	0.0668 (0.0015)	0.0094 (0.0021)	0.9490 (0.0070)	0.0045 (0.0002)	1000
Exp	-0.5419	0.0049	0.0719 (0.0016)	-0.0419 (0.0023)	0.9098 (0.0091)	0.0069 (0.0003)	998
Weibull	-0.5133	0.0048	0.0694 (0.0016)	-0.0133 (0.0022)	0.9429 (0.0073)	0.0050 (0.0002)	999
Gompertz	-0.5378	0.0051	0.0706 (0.0024)	-0.0378 (0.0034)	0.9359 (0.0119)	0.0064 (0.0004)	421
RP (3)	-0.5005	0.0047	0.0688 (0.0015)	-0.0005 (0.0022)	0.9478 (0.0070)	0.0047 (0.0002)	996
RP (5)	-0.5010	0.0047	0.0689 (0.0015)	-0.0010 (0.0022)	0.9469 (0.0071)	0.0047 (0.0002)	999
RP (9)	-0.5013	0.0047	0.0689 (0.0015)	-0.0013 (0.0022)	0.9478 (0.0070)	0.0047 (0.0002)	996
RP (P)	-0.5018	0.0047	0.0688 (0.0015)	-0.0018 (0.0022)	0.9490 (0.0070)	0.0047 (0.0002)	1000
FP (W)	-0.5087	0.0047	0.0690 (0.0015)	-0.0087 (0.0022)	0.9467 (0.0071)	0.0048 (0.0002)	994
FP (k=10)	-0.4979	0.0047	0.0688 (0.0015)	0.0021 (0.0022)	0.9440 (0.0073)	0.0047 (0.0002)	1000
FP (k=10000)	-0.4925	0.0039	0.0673 (0.0015)	0.0075 (0.0021)	0.9270 (0.0082)	0.0046 (0.0002)	1000

Table 6: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4980	0.0041	0.0655 (0.0015)	0.0020 (0.0021)	0.9469 (0.0071)	0.0043 (0.0002)	998
Exp	-0.5009	0.0041	0.0643 (0.0014)	-0.0009 (0.0020)	0.9550 (0.0066)	0.0041 (0.0002)	1000
Weibull	-0.4996	0.0042	0.0653 (0.0015)	0.0004 (0.0021)	0.9510 (0.0068)	0.0043 (0.0002)	1000
Gompertz	-0.5000	0.0043	0.0645 (0.0019)	0.0000 (0.0027)	0.9626 (0.0078)	0.0042 (0.0003)	588
RP (3)	-0.4987	0.0043	0.0655 (0.0015)	0.0013 (0.0021)	0.9539 (0.0066)	0.0043 (0.0002)	998
RP (5)	-0.4988	0.0043	0.0656 (0.0015)	0.0012 (0.0021)	0.9519 (0.0068)	0.0043 (0.0002)	997
RP (9)	-0.4990	0.0043	0.0656 (0.0015)	0.0010 (0.0021)	0.9530 (0.0067)	0.0043 (0.0002)	1000
RP (P)	-0.4992	0.0043	0.0653 (0.0015)	0.0008 (0.0021)	0.9520 (0.0068)	0.0043 (0.0002)	1000
FP (W)	-0.4996	0.0042	0.0653 (0.0015)	0.0004 (0.0021)	0.9510 (0.0068)	0.0043 (0.0002)	1000
FP (k=10)	-0.4963	0.0043	0.0656 (0.0015)	0.0037 (0.0021)	0.9510 (0.0068)	0.0043 (0.0002)	1000
FP (k=10000)	-0.4979	0.0033	0.0654 (0.0015)	0.0021 (0.0021)	0.9220 (0.0085)	0.0043 (0.0002)	1000
Model frailty: Normal							
Cox	-0.4913	0.0040	0.0643 (0.0014)	0.0087 (0.0020)	0.9480 (0.0070)	0.0042 (0.0002)	1000
Exp	-0.5021	0.0042	0.0644 (0.0014)	-0.0021 (0.0020)	0.9560 (0.0065)	0.0041 (0.0002)	1000
Weibull	-0.5068	0.0044	0.0661 (0.0015)	-0.0068 (0.0021)	0.9489 (0.0070)	0.0044 (0.0002)	999
Gompertz	-0.5012	0.0044	0.0641 (0.0020)	-0.0012 (0.0028)	0.9625 (0.0082)	0.0041 (0.0003)	534
RP (3)	-0.5012	0.0044	0.0658 (0.0015)	-0.0012 (0.0021)	0.9517 (0.0068)	0.0043 (0.0002)	994
RP (5)	-0.5012	0.0044	0.0662 (0.0015)	-0.0012 (0.0021)	0.9488 (0.0070)	0.0044 (0.0002)	996
RP (9)	-0.5013	0.0044	0.0660 (0.0015)	-0.0013 (0.0021)	0.9490 (0.0070)	0.0044 (0.0002)	1000
RP (P)	-0.5014	0.0043	0.0657 (0.0015)	-0.0014 (0.0021)	0.9510 (0.0068)	0.0043 (0.0002)	1000
FP (W)	-0.5017	0.0043	0.0655 (0.0015)	-0.0017 (0.0021)	0.9498 (0.0069)	0.0043 (0.0002)	997
FP (k=10)	-0.4989	0.0044	0.0660 (0.0015)	0.0011 (0.0021)	0.9520 (0.0068)	0.0044 (0.0002)	1000
FP (k=10000)	-0.5002	0.0034	0.0657 (0.0015)	-0.0002 (0.0021)	0.9280 (0.0082)	0.0043 (0.0002)	1000

Table 7: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4961	0.0045	0.0693 (0.0016)	0.0039 (0.0022)	0.9390 (0.0076)	0.0048 (0.0002)	1000
Exp	-0.5944	0.0054	0.0834 (0.0019)	-0.0944 (0.0026)	0.7230 (0.0142)	0.0159 (0.0006)	1000
Weibull	-0.4994	0.0046	0.0701 (0.0016)	0.0006 (0.0022)	0.9390 (0.0076)	0.0049 (0.0002)	1000
Gompertz	-0.5937	0.0056	0.0878 (0.0029)	-0.0937 (0.0041)	0.7130 (0.0213)	0.0165 (0.0009)	453
RP (3)	-0.4967	0.0046	0.0696 (0.0016)	0.0033 (0.0022)	0.9415 (0.0074)	0.0049 (0.0002)	992
RP (5)	-0.4970	0.0047	0.0696 (0.0016)	0.0030 (0.0022)	0.9404 (0.0075)	0.0048 (0.0002)	990
RP (9)	-0.4970	0.0047	0.0696 (0.0016)	0.0030 (0.0022)	0.9406 (0.0075)	0.0048 (0.0002)	994
RP (P)	-0.4981	0.0046	0.0697 (0.0016)	0.0019 (0.0022)	0.9420 (0.0074)	0.0049 (0.0002)	1000
FP (W)	-0.4997	0.0046	0.0703 (0.0016)	0.0003 (0.0022)	0.9383 (0.0077)	0.0049 (0.0002)	988
FP (k=10)	-0.4921	0.0047	0.0700 (0.0016)	0.0079 (0.0022)	0.9410 (0.0075)	0.0050 (0.0002)	1000
FP (k=10000)	-0.5190	0.0039	0.0733 (0.0016)	-0.0190 (0.0023)	0.9000 (0.0095)	0.0057 (0.0003)	1000
Model frailty: Normal							
Cox	-0.4897	0.0044	0.0681 (0.0015)	0.0103 (0.0022)	0.9410 (0.0075)	0.0047 (0.0002)	1000
Exp	-0.5956	0.0055	0.0832 (0.0019)	-0.0956 (0.0026)	0.7295 (0.0141)	0.0161 (0.0006)	998
Weibull	-0.5076	0.0048	0.0711 (0.0016)	-0.0076 (0.0022)	0.9390 (0.0076)	0.0051 (0.0002)	1000
Gompertz	-0.5981	0.0057	0.0896 (0.0032)	-0.0981 (0.0045)	0.7003 (0.0230)	0.0176 (0.0010)	397
RP (3)	-0.4989	0.0047	0.0697 (0.0016)	0.0011 (0.0022)	0.9428 (0.0074)	0.0049 (0.0002)	997
RP (5)	-0.4989	0.0047	0.0699 (0.0016)	0.0011 (0.0022)	0.9416 (0.0074)	0.0049 (0.0002)	994
RP (9)	-0.4991	0.0047	0.0698 (0.0016)	0.0009 (0.0022)	0.9417 (0.0074)	0.0049 (0.0002)	995
RP (P)	-0.5003	0.0047	0.0700 (0.0016)	-0.0003 (0.0022)	0.9400 (0.0075)	0.0049 (0.0002)	1000
FP (W)	-0.5013	0.0047	0.0705 (0.0016)	-0.0013 (0.0022)	0.9382 (0.0077)	0.0050 (0.0002)	987
FP (k=10)	-0.4968	0.0048	0.0706 (0.0016)	0.0032 (0.0022)	0.9410 (0.0075)	0.0050 (0.0002)	1000
FP (k=10000)	-0.5267	0.0042	0.0743 (0.0017)	-0.0267 (0.0024)	0.9020 (0.0094)	0.0062 (0.0003)	1000

Table 8: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4987	0.0038	0.0655 (0.0015)	0.0013 (0.0021)	0.9450 (0.0072)	0.0043 (0.0002)	1000
Exp	-0.4041	0.0030	0.0512 (0.0012)	0.0959 (0.0017)	0.5929 (0.0161)	0.0118 (0.0004)	931
Weibull	-0.4537	0.0035	0.0589 (0.0013)	0.0463 (0.0019)	0.8660 (0.0108)	0.0056 (0.0002)	1000
Gompertz	-0.5003	0.0040	0.0658 (0.0015)	-0.0003 (0.0021)	0.9490 (0.0070)	0.0043 (0.0002)	1000
RP (3)	-0.4975	0.0040	0.0654 (0.0015)	0.0025 (0.0021)	0.9479 (0.0070)	0.0043 (0.0002)	998
RP (5)	-0.4993	0.0040	0.0656 (0.0015)	0.0007 (0.0021)	0.9489 (0.0070)	0.0043 (0.0002)	999
RP (9)	-0.4999	0.0040	0.0657 (0.0015)	0.0001 (0.0021)	0.9490 (0.0070)	0.0043 (0.0002)	1000
RP (P)	-0.4896	0.0039	0.0647 (0.0014)	0.0104 (0.0020)	0.9480 (0.0070)	0.0043 (0.0002)	1000
FP (W)	-0.4538	0.0035	0.0590 (0.0013)	0.0462 (0.0019)	0.8655 (0.0108)	0.0056 (0.0002)	996
FP (k=10)	-0.4969	0.0040	0.0653 (0.0015)	0.0031 (0.0021)	0.9480 (0.0070)	0.0043 (0.0002)	1000
FP (k=10000)	-0.4912	0.0028	0.0643 (0.0014)	0.0088 (0.0020)	0.9010 (0.0094)	0.0042 (0.0002)	1000
Model frailty: Normal							
Cox	-0.4924	0.0037	0.0642 (0.0014)	0.0076 (0.0020)	0.9480 (0.0070)	0.0042 (0.0002)	1000
Exp	-0.4046	0.0031	0.0515 (0.0014)	0.0954 (0.0019)	0.6055 (0.0185)	0.0117 (0.0004)	697
Weibull	-0.4613	0.0036	0.0599 (0.0013)	0.0387 (0.0019)	0.8937 (0.0098)	0.0051 (0.0002)	997
Gompertz	-0.5071	0.0041	0.0659 (0.0015)	-0.0071 (0.0021)	0.9429 (0.0073)	0.0044 (0.0002)	998
RP (3)	-0.5004	0.0041	0.0658 (0.0015)	-0.0004 (0.0021)	0.9488 (0.0070)	0.0043 (0.0002)	997
RP (5)	-0.5019	0.0041	0.0659 (0.0015)	-0.0019 (0.0021)	0.9469 (0.0071)	0.0043 (0.0002)	999
RP (9)	-0.5022	0.0041	0.0660 (0.0015)	-0.0022 (0.0021)	0.9469 (0.0071)	0.0044 (0.0002)	999
RP (P)	-0.4923	0.0040	0.0651 (0.0015)	0.0077 (0.0021)	0.9530 (0.0067)	0.0043 (0.0002)	1000
FP (W)	-0.4567	0.0036	0.0592 (0.0013)	0.0433 (0.0019)	0.8759 (0.0104)	0.0054 (0.0002)	999
FP (k=10)	-0.4999	0.0041	0.0657 (0.0015)	0.0001 (0.0021)	0.9460 (0.0071)	0.0043 (0.0002)	1000
FP (k=10000)	-0.4959	0.0028	0.0649 (0.0015)	0.0041 (0.0021)	0.9010 (0.0094)	0.0042 (0.0002)	1000

Table 9: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4958	0.0039	0.0649 (0.0015)	0.0042 (0.0021)	0.9450 (0.0072)	0.0042 (0.0002)	1000
Exp	-0.3689	0.0030	0.0480 (0.0015)	0.1311 (0.0021)	0.3195 (0.0203)	0.0195 (0.0006)	529
Weibull	-0.5468	0.0044	0.0705 (0.0016)	-0.0468 (0.0022)	0.8760 (0.0104)	0.0072 (0.0003)	1000
Gompertz	-0.5013	0.0041	0.0650 (0.0015)	-0.0013 (0.0021)	0.9560 (0.0065)	0.0042 (0.0002)	1000
RP (3)	-0.4972	0.0041	0.0652 (0.0015)	0.0028 (0.0021)	0.9460 (0.0071)	0.0043 (0.0002)	1000
RP (5)	-0.4967	0.0041	0.0651 (0.0015)	0.0033 (0.0021)	0.9479 (0.0070)	0.0042 (0.0002)	999
RP (9)	-0.4970	0.0041	0.0651 (0.0015)	0.0030 (0.0021)	0.9490 (0.0070)	0.0042 (0.0002)	1000
RP (P)	-0.4992	0.0041	0.0653 (0.0015)	0.0008 (0.0021)	0.9510 (0.0068)	0.0043 (0.0002)	1000
FP (W)	-0.5465	0.0044	0.0701 (0.0016)	-0.0465 (0.0022)	0.8770 (0.0104)	0.0071 (0.0003)	992
FP (k=10)	-0.4860	0.0041	0.0656 (0.0015)	0.0140 (0.0021)	0.9380 (0.0076)	0.0045 (0.0002)	1000
FP (k=10000)	-0.6062	0.0036	0.0807 (0.0018)	-0.1062 (0.0026)	0.5506 (0.0157)	0.0178 (0.0007)	999
Model frailty: Normal							
Cox	-0.4897	0.0038	0.0637 (0.0014)	0.0103 (0.0020)	0.9400 (0.0075)	0.0042 (0.0002)	1000
Exp	-0.3746	0.0031	0.0426 (0.0106)	0.1254 (0.0142)	0.2222 (0.1386)	0.0173 (0.0041)	9
Weibull	-0.5482	0.0045	0.0705 (0.0016)	-0.0482 (0.0022)	0.8808 (0.0103)	0.0073 (0.0003)	998
Gompertz	-0.4951	0.0040	0.0638 (0.0014)	0.0049 (0.0020)	0.9550 (0.0066)	0.0041 (0.0002)	1000
RP (3)	-0.5005	0.0041	0.0657 (0.0015)	-0.0005 (0.0021)	0.9500 (0.0069)	0.0043 (0.0002)	1000
RP (5)	-0.4993	0.0041	0.0655 (0.0015)	0.0007 (0.0021)	0.9510 (0.0068)	0.0043 (0.0002)	1000
RP (9)	-0.4995	0.0041	0.0656 (0.0015)	0.0005 (0.0021)	0.9540 (0.0066)	0.0043 (0.0002)	1000
RP (P)	-0.5015	0.0041	0.0657 (0.0015)	-0.0015 (0.0021)	0.9520 (0.0068)	0.0043 (0.0002)	1000
FP (W)	-0.5490	0.0045	0.0702 (0.0016)	-0.0490 (0.0023)	0.8782 (0.0105)	0.0073 (0.0003)	969
FP (k=10)	-0.4920	0.0042	0.0661 (0.0015)	0.0080 (0.0021)	0.9450 (0.0072)	0.0044 (0.0002)	1000
FP (k=10000)	-0.6145	0.0035	0.0817 (0.0018)	-0.1145 (0.0026)	0.5080 (0.0158)	0.0198 (0.0007)	1000

Table 10: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5014	0.0043	0.0648 (0.0014)	-0.0014 (0.0020)	0.9520 (0.0068)	0.0042 (0.0002)	1000
Exp	-0.5496	0.0047	0.0691 (0.0015)	-0.0496 (0.0022)	0.8840 (0.0101)	0.0072 (0.0003)	1000
Weibull	-0.5118	0.0045	0.0653 (0.0015)	-0.0118 (0.0021)	0.9500 (0.0069)	0.0044 (0.0002)	1000
Gompertz	-0.5500	0.0049	0.0674 (0.0021)	-0.0500 (0.0030)	0.9061 (0.0128)	0.0070 (0.0004)	522
RP (3)	-0.5021	0.0044	0.0649 (0.0015)	-0.0021 (0.0021)	0.9545 (0.0066)	0.0042 (0.0002)	988
RP (5)	-0.5026	0.0045	0.0648 (0.0015)	-0.0026 (0.0021)	0.9555 (0.0066)	0.0042 (0.0002)	989
RP (9)	-0.5026	0.0044	0.0649 (0.0015)	-0.0026 (0.0021)	0.9538 (0.0067)	0.0042 (0.0002)	995
RP (P)	-0.5037	0.0045	0.0650 (0.0015)	-0.0037 (0.0021)	0.9560 (0.0065)	0.0042 (0.0002)	1000
FP (W)	-0.5119	0.0045	0.0652 (0.0015)	-0.0119 (0.0021)	0.9507 (0.0069)	0.0044 (0.0002)	993
FP (k=10)	-0.4984	0.0044	0.0649 (0.0015)	0.0016 (0.0021)	0.9540 (0.0066)	0.0042 (0.0002)	999
FP (k=10000)	-0.4952	0.0035	0.0641 (0.0014)	0.0048 (0.0020)	0.9240 (0.0084)	0.0041 (0.0002)	1000
Model frailty: Normal							
Cox	-0.4949	0.0042	0.0636 (0.0014)	0.0051 (0.0020)	0.9530 (0.0067)	0.0041 (0.0002)	1000
Exp	-0.5493	0.0047	0.0692 (0.0015)	-0.0493 (0.0022)	0.8879 (0.0100)	0.0072 (0.0003)	999
Weibull	-0.5171	0.0046	0.0659 (0.0015)	-0.0171 (0.0021)	0.9459 (0.0072)	0.0046 (0.0002)	999
Gompertz	-0.5507	0.0049	0.0681 (0.0023)	-0.0507 (0.0033)	0.8865 (0.0154)	0.0072 (0.0004)	423
RP (3)	-0.5041	0.0045	0.0653 (0.0015)	-0.0041 (0.0021)	0.9535 (0.0067)	0.0043 (0.0002)	990
RP (5)	-0.5046	0.0045	0.0652 (0.0015)	-0.0046 (0.0021)	0.9546 (0.0066)	0.0043 (0.0002)	992
RP (9)	-0.5046	0.0045	0.0653 (0.0015)	-0.0046 (0.0021)	0.9540 (0.0066)	0.0043 (0.0002)	1000
RP (P)	-0.5053	0.0045	0.0653 (0.0015)	-0.0053 (0.0021)	0.9540 (0.0066)	0.0043 (0.0002)	1000
FP (W)	-0.5127	0.0045	0.0656 (0.0015)	-0.0127 (0.0021)	0.9493 (0.0070)	0.0045 (0.0002)	986
FP (k=10)	-0.5017	0.0045	0.0653 (0.0015)	-0.0017 (0.0021)	0.9540 (0.0066)	0.0043 (0.0002)	1000
FP (k=10000)	-0.4967	0.0036	0.0643 (0.0014)	0.0033 (0.0020)	0.9260 (0.0083)	0.0041 (0.0002)	1000

Table 11: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4997	0.0060	0.0794 (0.0018)	0.0003 (0.0025)	0.9380 (0.0076)	0.0063 (0.0003)	1000
Exp	-0.5004	0.0060	0.0781 (0.0017)	-0.0004 (0.0025)	0.9430 (0.0073)	0.0061 (0.0003)	1000
Weibull	-0.5011	0.0062	0.0794 (0.0018)	-0.0011 (0.0025)	0.9440 (0.0073)	0.0063 (0.0003)	1000
Gompertz	-0.5047	0.0062	0.0796 (0.0047)	-0.0047 (0.0066)	0.9388 (0.0198)	0.0063 (0.0008)	147
RP (3)	-0.5006	0.0062	0.0795 (0.0018)	-0.0006 (0.0025)	0.9430 (0.0073)	0.0063 (0.0003)	1000
RP (5)	-0.5007	0.0062	0.0795 (0.0018)	-0.0007 (0.0025)	0.9430 (0.0073)	0.0063 (0.0003)	1000
RP (9)	-0.5008	0.0062	0.0795 (0.0018)	-0.0008 (0.0025)	0.9440 (0.0073)	0.0063 (0.0003)	1000
RP (P)	-0.5008	0.0062	0.0796 (0.0018)	-0.0008 (0.0025)	0.9430 (0.0073)	0.0063 (0.0003)	1000
FP (W)	-0.5008	0.0062	0.0794 (0.0018)	-0.0008 (0.0025)	0.9438 (0.0073)	0.0063 (0.0003)	996
FP (k=10)	-0.4970	0.0062	0.0796 (0.0018)	0.0030 (0.0025)	0.9420 (0.0074)	0.0063 (0.0003)	1000
FP (k=10000)	-0.4990	0.0048	0.0791 (0.0018)	0.0010 (0.0025)	0.9088 (0.0091)	0.0063 (0.0003)	998
Model frailty: Normal							
Cox	-0.4748	0.0057	0.0757 (0.0017)	0.0252 (0.0024)	0.9260 (0.0083)	0.0064 (0.0003)	1000
Exp	-0.4902	0.0060	0.0771 (0.0017)	0.0098 (0.0024)	0.9430 (0.0073)	0.0060 (0.0003)	1000
Weibull	-0.4943	0.0062	0.0788 (0.0018)	0.0057 (0.0025)	0.9429 (0.0073)	0.0062 (0.0003)	998
Gompertz	-0.4979	0.0061	0.0780 (0.0050)	0.0021 (0.0071)	0.9421 (0.0212)	0.0060 (0.0008)	121
RP (3)	-0.4997	0.0064	0.0801 (0.0018)	0.0003 (0.0025)	0.9450 (0.0072)	0.0064 (0.0003)	1000
RP (5)	-0.4998	0.0064	0.0801 (0.0018)	0.0002 (0.0025)	0.9460 (0.0071)	0.0064 (0.0003)	1000
RP (9)	-0.4998	0.0064	0.0801 (0.0018)	0.0002 (0.0025)	0.9470 (0.0071)	0.0064 (0.0003)	1000
RP (P)	-0.5006	0.0063	0.0803 (0.0018)	-0.0006 (0.0025)	0.9420 (0.0074)	0.0064 (0.0003)	1000
FP (W)	-0.5007	0.0063	0.0801 (0.0018)	-0.0007 (0.0026)	0.9426 (0.0075)	0.0064 (0.0003)	958
FP (k=10)	-0.4955	0.0064	0.0800 (0.0018)	0.0045 (0.0025)	0.9455 (0.0072)	0.0064 (0.0003)	991
FP (k=10000)	-0.4950	0.0052	0.0791 (0.0018)	0.0050 (0.0025)	0.9180 (0.0087)	0.0063 (0.0003)	1000

Table 12: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5016	0.0065	0.0837 (0.0019)	-0.0016 (0.0026)	0.9440 (0.0073)	0.0070 (0.0003)	1000
Exp	-0.5982	0.0075	0.0998 (0.0022)	-0.0982 (0.0032)	0.7770 (0.0132)	0.0196 (0.0008)	1000
Weibull	-0.5046	0.0067	0.0843 (0.0019)	-0.0046 (0.0027)	0.9450 (0.0072)	0.0071 (0.0003)	1000
Gompertz	-0.5977	0.0078	0.1022 (0.0035)	-0.0977 (0.0050)	0.7976 (0.0195)	0.0200 (0.0014)	425
RP (3)	-0.5023	0.0067	0.0838 (0.0019)	-0.0023 (0.0026)	0.9460 (0.0071)	0.0070 (0.0003)	1000
RP (5)	-0.5022	0.0067	0.0838 (0.0019)	-0.0022 (0.0027)	0.9449 (0.0072)	0.0070 (0.0003)	998
RP (9)	-0.5025	0.0067	0.0839 (0.0019)	-0.0025 (0.0027)	0.9450 (0.0072)	0.0070 (0.0003)	1000
RP (P)	-0.5035	0.0067	0.0841 (0.0019)	-0.0035 (0.0027)	0.9460 (0.0071)	0.0071 (0.0003)	1000
FP (W)	-0.5046	0.0067	0.0843 (0.0019)	-0.0046 (0.0027)	0.9450 (0.0072)	0.0071 (0.0003)	1000
FP (k=10)	-0.4966	0.0067	0.0846 (0.0019)	0.0034 (0.0027)	0.9470 (0.0071)	0.0072 (0.0003)	1000
FP (k=10000)	-0.5289	0.0056	0.0894 (0.0020)	-0.0289 (0.0028)	0.8808 (0.0103)	0.0088 (0.0004)	998
Model frailty: Normal							
Cox	-0.4769	0.0062	0.0792 (0.0018)	0.0231 (0.0025)	0.9370 (0.0077)	0.0068 (0.0003)	1000
Exp	-0.5816	0.0076	0.0966 (0.0022)	-0.0816 (0.0031)	0.8285 (0.0120)	0.0160 (0.0007)	991
Weibull	-0.5005	0.0067	0.0833 (0.0019)	-0.0005 (0.0026)	0.9460 (0.0071)	0.0069 (0.0003)	1000
Gompertz	-0.5865	0.0078	0.0937 (0.0039)	-0.0865 (0.0055)	0.8438 (0.0214)	0.0162 (0.0013)	288
RP (3)	-0.5030	0.0069	0.0840 (0.0019)	-0.0030 (0.0027)	0.9460 (0.0071)	0.0071 (0.0003)	1000
RP (5)	-0.5030	0.0069	0.0841 (0.0019)	-0.0030 (0.0027)	0.9460 (0.0071)	0.0071 (0.0003)	1000
RP (9)	-0.5031	0.0069	0.0841 (0.0019)	-0.0031 (0.0027)	0.9450 (0.0072)	0.0071 (0.0003)	1000
RP (P)	-0.5044	0.0069	0.0844 (0.0019)	-0.0044 (0.0027)	0.9460 (0.0071)	0.0071 (0.0003)	1000
FP (W)	-0.5063	0.0069	0.0850 (0.0019)	-0.0063 (0.0027)	0.9452 (0.0073)	0.0073 (0.0003)	968
FP (k=10)	-0.5009	0.0070	0.0853 (0.0019)	-0.0009 (0.0027)	0.9469 (0.0071)	0.0073 (0.0003)	999
FP (k=10000)	-0.5302	0.0064	0.0890 (0.0020)	-0.0302 (0.0028)	0.9078 (0.0092)	0.0088 (0.0004)	998

Table 13: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4999	0.0056	0.0784 (0.0018)	0.0001 (0.0025)	0.9339 (0.0079)	0.0061 (0.0003)	999
Exp	-0.4111	0.0047	0.0629 (0.0014)	0.0889 (0.0020)	0.7550 (0.0136)	0.0119 (0.0004)	1000
Weibull	-0.4674	0.0053	0.0728 (0.0016)	0.0326 (0.0023)	0.9280 (0.0082)	0.0063 (0.0003)	1000
Gompertz	-0.4138	0.0048	0.0646 (0.0018)	0.0862 (0.0025)	0.7597 (0.0165)	0.0116 (0.0005)	670
RP (3)	-0.5004	0.0057	0.0784 (0.0018)	-0.0004 (0.0025)	0.9379 (0.0076)	0.0061 (0.0003)	999
RP (5)	-0.5009	0.0057	0.0785 (0.0018)	-0.0009 (0.0025)	0.9380 (0.0076)	0.0062 (0.0003)	1000
RP (9)	-0.5012	0.0057	0.0785 (0.0018)	-0.0012 (0.0025)	0.9380 (0.0076)	0.0062 (0.0003)	1000
RP (P)	-0.4942	0.0057	0.0776 (0.0017)	0.0058 (0.0025)	0.9350 (0.0078)	0.0060 (0.0003)	1000
FP (W)	-0.4676	0.0053	0.0729 (0.0016)	0.0324 (0.0023)	0.9273 (0.0082)	0.0064 (0.0003)	991
FP (k=10)	-0.4976	0.0057	0.0782 (0.0018)	0.0024 (0.0025)	0.9380 (0.0076)	0.0061 (0.0003)	1000
FP (k=10000)	-0.4956	0.0042	0.0774 (0.0017)	0.0044 (0.0025)	0.8867 (0.0100)	0.0060 (0.0003)	997
Model frailty: Normal							
Cox	-0.4744	0.0053	0.0744 (0.0017)	0.0256 (0.0024)	0.9240 (0.0084)	0.0062 (0.0003)	1000
Exp	-0.4061	0.0046	0.0625 (0.0014)	0.0939 (0.0020)	0.7330 (0.0140)	0.0127 (0.0004)	1000
Weibull	-0.4645	0.0054	0.0723 (0.0016)	0.0355 (0.0023)	0.9259 (0.0083)	0.0065 (0.0003)	998
Gompertz	-0.4067	0.0048	0.0645 (0.0022)	0.0933 (0.0031)	0.7260 (0.0216)	0.0129 (0.0006)	427
RP (3)	-0.4976	0.0059	0.0783 (0.0018)	0.0024 (0.0025)	0.9400 (0.0075)	0.0061 (0.0003)	1000
RP (5)	-0.4979	0.0059	0.0783 (0.0018)	0.0021 (0.0025)	0.9410 (0.0075)	0.0061 (0.0003)	1000
RP (9)	-0.4981	0.0059	0.0784 (0.0018)	0.0019 (0.0025)	0.9410 (0.0075)	0.0061 (0.0003)	1000
RP (P)	-0.4918	0.0058	0.0775 (0.0017)	0.0082 (0.0024)	0.9400 (0.0075)	0.0061 (0.0003)	1000
FP (W)	-0.4707	0.0055	0.0744 (0.0017)	0.0293 (0.0024)	0.9314 (0.0082)	0.0064 (0.0003)	948
FP (k=10)	-0.4950	0.0059	0.0782 (0.0018)	0.0050 (0.0025)	0.9400 (0.0075)	0.0061 (0.0003)	1000
FP (k=10000)	-0.4958	0.0044	0.0781 (0.0017)	0.0042 (0.0025)	0.8990 (0.0095)	0.0061 (0.0003)	1000

Table 14: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5005	0.0057	0.0789 (0.0018)	-0.0005 (0.0025)	0.9399 (0.0075)	0.0062 (0.0003)	999
Exp	-0.3664	0.0044	0.0596 (0.0013)	0.1336 (0.0019)	0.4680 (0.0158)	0.0214 (0.0005)	1000
Weibull	-0.5356	0.0062	0.0837 (0.0019)	-0.0356 (0.0026)	0.9100 (0.0090)	0.0083 (0.0004)	1000
Gompertz	-0.4638	0.0055	0.0833 (0.0019)	0.0362 (0.0027)	0.8643 (0.0109)	0.0082 (0.0004)	980
RP (3)	-0.5032	0.0059	0.0794 (0.0018)	-0.0032 (0.0025)	0.9490 (0.0070)	0.0063 (0.0003)	1000
RP (5)	-0.5015	0.0058	0.0791 (0.0018)	-0.0015 (0.0025)	0.9440 (0.0073)	0.0063 (0.0003)	1000
RP (9)	-0.5016	0.0058	0.0791 (0.0018)	-0.0016 (0.0025)	0.9450 (0.0072)	0.0063 (0.0003)	1000
RP (P)	-0.5029	0.0059	0.0792 (0.0018)	-0.0029 (0.0025)	0.9480 (0.0070)	0.0063 (0.0003)	1000
FP (W)	-0.5353	0.0062	0.0835 (0.0019)	-0.0353 (0.0026)	0.9107 (0.0090)	0.0082 (0.0004)	997
FP (k=10)	-0.4863	0.0058	0.0791 (0.0018)	0.0137 (0.0025)	0.9360 (0.0077)	0.0064 (0.0003)	1000
FP (k=10000)	-0.5849	0.0049	0.0940 (0.0021)	-0.0849 (0.0030)	0.7167 (0.0143)	0.0160 (0.0007)	999
Model frailty: Normal							
Cox	-0.4758	0.0054	0.0753 (0.0017)	0.0242 (0.0024)	0.9300 (0.0081)	0.0062 (0.0003)	1000
Exp	-0.3627	0.0043	0.0598 (0.0013)	0.1373 (0.0019)	0.4429 (0.0157)	0.0224 (0.0005)	998
Weibull	-0.5194	0.0060	0.0814 (0.0018)	-0.0194 (0.0026)	0.9357 (0.0078)	0.0070 (0.0003)	996
Gompertz	-0.4411	0.0052	0.0771 (0.0018)	0.0589 (0.0025)	0.8398 (0.0119)	0.0094 (0.0004)	949
RP (3)	-0.5012	0.0060	0.0790 (0.0018)	-0.0012 (0.0025)	0.9440 (0.0073)	0.0062 (0.0003)	1000
RP (5)	-0.4999	0.0060	0.0789 (0.0018)	0.0001 (0.0025)	0.9449 (0.0072)	0.0062 (0.0003)	999
RP (9)	-0.4999	0.0060	0.0789 (0.0018)	0.0001 (0.0025)	0.9450 (0.0072)	0.0062 (0.0003)	1000
RP (P)	-0.5000	0.0060	0.0788 (0.0018)	0.0000 (0.0025)	0.9430 (0.0073)	0.0062 (0.0003)	1000
FP (W)	-0.5295	0.0063	0.0826 (0.0019)	-0.0295 (0.0027)	0.9297 (0.0083)	0.0077 (0.0004)	939
FP (k=10)	-0.4894	0.0060	0.0788 (0.0018)	0.0106 (0.0025)	0.9389 (0.0076)	0.0063 (0.0003)	998
FP (k=10000)	-0.5866	0.0051	0.0953 (0.0021)	-0.0866 (0.0030)	0.7047 (0.0144)	0.0166 (0.0007)	999

Table 15: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4980	0.0062	0.0810 (0.0018)	0.0020 (0.0026)	0.9390 (0.0076)	0.0066 (0.0003)	1000
Exp	-0.5376	0.0066	0.0864 (0.0019)	-0.0376 (0.0027)	0.9160 (0.0088)	0.0089 (0.0004)	1000
Weibull	-0.5029	0.0064	0.0811 (0.0018)	-0.0029 (0.0026)	0.9410 (0.0075)	0.0066 (0.0003)	1000
Gompertz	-0.5365	0.0068	0.0885 (0.0029)	-0.0365 (0.0042)	0.9226 (0.0126)	0.0091 (0.0006)	452
RP (3)	-0.4980	0.0064	0.0811 (0.0018)	0.0020 (0.0026)	0.9399 (0.0075)	0.0066 (0.0003)	998
RP (5)	-0.4988	0.0064	0.0811 (0.0018)	0.0012 (0.0026)	0.9390 (0.0076)	0.0066 (0.0003)	1000
RP (9)	-0.4990	0.0064	0.0812 (0.0018)	0.0010 (0.0026)	0.9400 (0.0075)	0.0066 (0.0003)	1000
RP (P)	-0.4991	0.0064	0.0811 (0.0018)	0.0009 (0.0026)	0.9400 (0.0075)	0.0066 (0.0003)	1000
FP (W)	-0.5031	0.0064	0.0812 (0.0018)	-0.0031 (0.0026)	0.9407 (0.0075)	0.0066 (0.0003)	995
FP (k=10)	-0.4942	0.0064	0.0812 (0.0018)	0.0058 (0.0026)	0.9410 (0.0075)	0.0066 (0.0003)	1000
FP (k=10000)	-0.4908	0.0050	0.0802 (0.0018)	0.0092 (0.0025)	0.9089 (0.0091)	0.0065 (0.0003)	999
Model frailty: Normal							
Cox	-0.4737	0.0059	0.0772 (0.0017)	0.0263 (0.0024)	0.9330 (0.0079)	0.0066 (0.0003)	1000
Exp	-0.5256	0.0066	0.0851 (0.0019)	-0.0256 (0.0027)	0.9298 (0.0081)	0.0079 (0.0004)	997
Weibull	-0.4953	0.0064	0.0803 (0.0018)	0.0047 (0.0025)	0.9458 (0.0072)	0.0065 (0.0003)	997
Gompertz	-0.5264	0.0067	0.0892 (0.0035)	-0.0264 (0.0049)	0.9099 (0.0157)	0.0086 (0.0007)	333
RP (3)	-0.4981	0.0066	0.0816 (0.0018)	0.0019 (0.0026)	0.9420 (0.0074)	0.0067 (0.0003)	1000
RP (5)	-0.4990	0.0066	0.0817 (0.0018)	0.0010 (0.0026)	0.9419 (0.0074)	0.0067 (0.0003)	999
RP (9)	-0.4992	0.0066	0.0817 (0.0018)	0.0008 (0.0026)	0.9430 (0.0073)	0.0067 (0.0003)	1000
RP (P)	-0.4985	0.0066	0.0816 (0.0018)	0.0015 (0.0026)	0.9400 (0.0075)	0.0067 (0.0003)	1000
FP (W)	-0.5019	0.0065	0.0817 (0.0019)	-0.0019 (0.0026)	0.9438 (0.0074)	0.0067 (0.0003)	961
FP (k=10)	-0.4957	0.0066	0.0822 (0.0018)	0.0043 (0.0026)	0.9388 (0.0076)	0.0068 (0.0003)	997
FP (k=10000)	-0.4875	0.0055	0.0803 (0.0018)	0.0125 (0.0025)	0.9208 (0.0085)	0.0066 (0.0003)	998

Table 16: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4928	0.0052	0.0720 (0.0016)	0.0072 (0.0023)	0.9469 (0.0071)	0.0052 (0.0002)	999
Exp	-0.5047	0.0053	0.0727 (0.0016)	-0.0047 (0.0023)	0.9430 (0.0073)	0.0053 (0.0002)	1000
Weibull	-0.4941	0.0053	0.0717 (0.0016)	0.0059 (0.0023)	0.9440 (0.0073)	0.0052 (0.0002)	1000
Gompertz	-0.5054	0.0055	0.0771 (0.0038)	-0.0054 (0.0053)	0.9524 (0.0147)	0.0059 (0.0005)	210
RP (3)	-0.4936	0.0054	0.0721 (0.0016)	0.0064 (0.0023)	0.9480 (0.0070)	0.0052 (0.0002)	1000
RP (5)	-0.4938	0.0054	0.0721 (0.0016)	0.0062 (0.0023)	0.9480 (0.0070)	0.0052 (0.0002)	1000
RP (9)	-0.4939	0.0054	0.0722 (0.0016)	0.0061 (0.0023)	0.9480 (0.0070)	0.0052 (0.0002)	1000
RP (P)	-0.4939	0.0054	0.0719 (0.0016)	0.0061 (0.0023)	0.9459 (0.0072)	0.0052 (0.0002)	999
FP (W)	-0.4943	0.0053	0.0717 (0.0016)	0.0057 (0.0023)	0.9438 (0.0073)	0.0052 (0.0002)	996
FP (k=10)	-0.4910	0.0054	0.0721 (0.0016)	0.0090 (0.0023)	0.9458 (0.0072)	0.0053 (0.0002)	997
FP (k=10000)	-0.4962	0.0041	0.0726 (0.0016)	0.0038 (0.0023)	0.9060 (0.0092)	0.0053 (0.0002)	1000
Model frailty: Normal							
Cox	-0.4789	0.0050	0.0693 (0.0016)	0.0211 (0.0022)	0.9390 (0.0076)	0.0052 (0.0002)	1000
Exp	-0.4993	0.0053	0.0714 (0.0016)	0.0007 (0.0023)	0.9459 (0.0072)	0.0051 (0.0002)	998
Weibull	-0.4970	0.0054	0.0716 (0.0016)	0.0030 (0.0023)	0.9498 (0.0069)	0.0051 (0.0002)	997
Gompertz	-0.5010	0.0054	0.0738 (0.0041)	-0.0010 (0.0058)	0.9506 (0.0170)	0.0054 (0.0006)	162
RP (3)	-0.5013	0.0056	0.0727 (0.0016)	-0.0013 (0.0023)	0.9490 (0.0070)	0.0053 (0.0002)	1000
RP (5)	-0.5013	0.0056	0.0727 (0.0016)	-0.0013 (0.0023)	0.9470 (0.0071)	0.0053 (0.0002)	1000
RP (9)	-0.5014	0.0056	0.0727 (0.0016)	-0.0014 (0.0023)	0.9470 (0.0071)	0.0053 (0.0002)	1000
RP (P)	-0.5020	0.0056	0.0726 (0.0016)	-0.0020 (0.0023)	0.9480 (0.0070)	0.0053 (0.0002)	1000
FP (W)	-0.5027	0.0055	0.0724 (0.0016)	-0.0027 (0.0023)	0.9519 (0.0068)	0.0052 (0.0002)	977
FP (k=10)	-0.4984	0.0056	0.0726 (0.0016)	0.0016 (0.0023)	0.9460 (0.0071)	0.0053 (0.0002)	1000
FP (k=10000)	-0.5001	0.0043	0.0725 (0.0016)	-0.0001 (0.0023)	0.9180 (0.0087)	0.0053 (0.0002)	1000

Table 17: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4887	0.0056	0.0786 (0.0018)	0.0113 (0.0025)	0.9299 (0.0081)	0.0063 (0.0003)	999
Exp	-0.6064	0.0067	0.0986 (0.0022)	-0.1064 (0.0031)	0.7060 (0.0144)	0.0210 (0.0008)	1000
Weibull	-0.4928	0.0057	0.0795 (0.0018)	0.0072 (0.0025)	0.9330 (0.0079)	0.0064 (0.0003)	1000
Gompertz	-0.6002	0.0070	0.0940 (0.0048)	-0.1002 (0.0068)	0.7865 (0.0296)	0.0188 (0.0018)	192
RP (3)	-0.4892	0.0057	0.0787 (0.0018)	0.0108 (0.0025)	0.9329 (0.0079)	0.0063 (0.0003)	999
RP (5)	-0.4895	0.0057	0.0787 (0.0018)	0.0105 (0.0025)	0.9340 (0.0079)	0.0063 (0.0003)	1000
RP (9)	-0.4898	0.0057	0.0788 (0.0018)	0.0102 (0.0025)	0.9339 (0.0079)	0.0063 (0.0003)	999
RP (P)	-0.4908	0.0057	0.0791 (0.0018)	0.0092 (0.0025)	0.9350 (0.0078)	0.0063 (0.0003)	1000
FP (W)	-0.4935	0.0057	0.0795 (0.0018)	0.0065 (0.0025)	0.9341 (0.0079)	0.0064 (0.0003)	986
FP (k=10)	-0.4851	0.0058	0.0802 (0.0018)	0.0149 (0.0025)	0.9300 (0.0081)	0.0066 (0.0003)	1000
FP (k=10000)	-0.5321	0.0047	0.0872 (0.0020)	-0.0321 (0.0028)	0.8549 (0.0111)	0.0086 (0.0004)	999
Model frailty: Normal							
Cox	-0.4741	0.0054	0.0760 (0.0017)	0.0259 (0.0024)	0.9250 (0.0083)	0.0064 (0.0003)	1000
Exp	-0.5949	0.0068	0.0958 (0.0022)	-0.0949 (0.0030)	0.7495 (0.0138)	0.0182 (0.0007)	990
Weibull	-0.4963	0.0058	0.0796 (0.0018)	0.0037 (0.0025)	0.9359 (0.0077)	0.0063 (0.0003)	999
Gompertz	-0.5877	0.0070	0.0944 (0.0038)	-0.0877 (0.0053)	0.7792 (0.0233)	0.0166 (0.0012)	317
RP (3)	-0.4972	0.0059	0.0797 (0.0018)	0.0028 (0.0025)	0.9439 (0.0073)	0.0064 (0.0003)	999
RP (5)	-0.4973	0.0060	0.0797 (0.0018)	0.0027 (0.0025)	0.9440 (0.0073)	0.0063 (0.0003)	1000
RP (9)	-0.4974	0.0060	0.0797 (0.0018)	0.0026 (0.0025)	0.9430 (0.0073)	0.0063 (0.0003)	1000
RP (P)	-0.4989	0.0059	0.0801 (0.0018)	0.0011 (0.0025)	0.9400 (0.0075)	0.0064 (0.0003)	1000
FP (W)	-0.5007	0.0060	0.0810 (0.0018)	-0.0007 (0.0026)	0.9323 (0.0080)	0.0065 (0.0003)	975
FP (k=10)	-0.4989	0.0061	0.0817 (0.0018)	0.0011 (0.0026)	0.9388 (0.0076)	0.0067 (0.0003)	997
FP (k=10000)	-0.5413	0.0053	0.0876 (0.0020)	-0.0413 (0.0028)	0.8626 (0.0109)	0.0094 (0.0004)	997

Table 18: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4939	0.0049	0.0729 (0.0016)	0.0061 (0.0023)	0.9390 (0.0076)	0.0053 (0.0002)	1000
Exp	-0.4193	0.0041	0.0613 (0.0014)	0.0807 (0.0019)	0.7600 (0.0135)	0.0103 (0.0003)	1000
Weibull	-0.4563	0.0046	0.0675 (0.0015)	0.0437 (0.0021)	0.9060 (0.0092)	0.0065 (0.0003)	1000
Gompertz	-0.4201	0.0043	0.0608 (0.0017)	0.0799 (0.0024)	0.7685 (0.0164)	0.0101 (0.0004)	661
RP (3)	-0.4936	0.0050	0.0730 (0.0016)	0.0064 (0.0023)	0.9440 (0.0073)	0.0054 (0.0002)	1000
RP (5)	-0.4947	0.0050	0.0730 (0.0016)	0.0053 (0.0023)	0.9440 (0.0073)	0.0054 (0.0002)	1000
RP (9)	-0.4950	0.0050	0.0730 (0.0016)	0.0050 (0.0023)	0.9460 (0.0071)	0.0054 (0.0002)	1000
RP (P)	-0.4882	0.0049	0.0721 (0.0016)	0.0118 (0.0023)	0.9479 (0.0070)	0.0053 (0.0002)	999
FP (W)	-0.4563	0.0046	0.0675 (0.0015)	0.0437 (0.0021)	0.9050 (0.0093)	0.0065 (0.0003)	1000
FP (k=10)	-0.4912	0.0050	0.0729 (0.0016)	0.0088 (0.0023)	0.9430 (0.0073)	0.0054 (0.0002)	1000
FP (k=10000)	-0.4896	0.0036	0.0725 (0.0016)	0.0104 (0.0023)	0.8878 (0.0100)	0.0054 (0.0002)	998
Model frailty: Normal							
Cox	-0.4824	0.0047	0.0712 (0.0016)	0.0176 (0.0023)	0.9490 (0.0070)	0.0054 (0.0002)	1000
Exp	-0.4189	0.0041	0.0613 (0.0014)	0.0811 (0.0019)	0.7580 (0.0135)	0.0103 (0.0003)	1000
Weibull	-0.4656	0.0047	0.0687 (0.0015)	0.0344 (0.0022)	0.9257 (0.0083)	0.0059 (0.0002)	996
Gompertz	-0.4208	0.0043	0.0615 (0.0024)	0.0792 (0.0033)	0.7751 (0.0227)	0.0100 (0.0006)	338
RP (3)	-0.5023	0.0052	0.0744 (0.0017)	-0.0023 (0.0024)	0.9469 (0.0071)	0.0055 (0.0002)	999
RP (5)	-0.5028	0.0052	0.0744 (0.0017)	-0.0028 (0.0024)	0.9490 (0.0070)	0.0055 (0.0002)	1000
RP (9)	-0.5031	0.0052	0.0744 (0.0017)	-0.0031 (0.0024)	0.9480 (0.0070)	0.0055 (0.0002)	1000
RP (P)	-0.4967	0.0051	0.0736 (0.0016)	0.0033 (0.0023)	0.9510 (0.0068)	0.0054 (0.0002)	1000
FP (W)	-0.4688	0.0048	0.0694 (0.0016)	0.0312 (0.0022)	0.9329 (0.0079)	0.0058 (0.0002)	998
FP (k=10)	-0.5003	0.0052	0.0744 (0.0017)	-0.0003 (0.0024)	0.9480 (0.0070)	0.0055 (0.0002)	1000
FP (k=10000)	-0.5005	0.0037	0.0742 (0.0017)	-0.0005 (0.0023)	0.8850 (0.0101)	0.0055 (0.0002)	1000

Table 19: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4931	0.0049	0.0724 (0.0016)	0.0069 (0.0023)	0.9439 (0.0073)	0.0053 (0.0002)	999
Exp	-0.3593	0.0036	0.0540 (0.0012)	0.1407 (0.0017)	0.3430 (0.0150)	0.0227 (0.0005)	1000
Weibull	-0.5315	0.0054	0.0772 (0.0017)	-0.0315 (0.0024)	0.9150 (0.0088)	0.0069 (0.0003)	1000
Gompertz	-0.4704	0.0049	0.0699 (0.0016)	0.0296 (0.0022)	0.9260 (0.0083)	0.0058 (0.0003)	1000
RP (3)	-0.4952	0.0051	0.0728 (0.0016)	0.0048 (0.0023)	0.9450 (0.0072)	0.0053 (0.0002)	1000
RP (5)	-0.4940	0.0051	0.0726 (0.0016)	0.0060 (0.0023)	0.9440 (0.0073)	0.0053 (0.0002)	1000
RP (9)	-0.4941	0.0051	0.0725 (0.0016)	0.0059 (0.0023)	0.9449 (0.0072)	0.0053 (0.0002)	999
RP (P)	-0.4956	0.0051	0.0728 (0.0016)	0.0044 (0.0023)	0.9450 (0.0072)	0.0053 (0.0002)	1000
FP (W)	-0.5315	0.0054	0.0772 (0.0017)	-0.0315 (0.0024)	0.9150 (0.0088)	0.0069 (0.0003)	1000
FP (k=10)	-0.4766	0.0051	0.0734 (0.0016)	0.0234 (0.0023)	0.9230 (0.0084)	0.0059 (0.0003)	1000
FP (k=10000)	-0.5863	0.0044	0.0874 (0.0020)	-0.0863 (0.0028)	0.7015 (0.0145)	0.0151 (0.0006)	995
Model frailty: Normal							
Cox	-0.4805	0.0048	0.0704 (0.0016)	0.0195 (0.0022)	0.9370 (0.0077)	0.0053 (0.0002)	1000
Exp	-0.3582	0.0036	0.0541 (0.0012)	0.1418 (0.0017)	0.3310 (0.0149)	0.0230 (0.0005)	1000
Weibull	-0.5272	0.0054	0.0760 (0.0017)	-0.0272 (0.0024)	0.9206 (0.0086)	0.0065 (0.0003)	995
Gompertz	-0.4525	0.0047	0.0673 (0.0015)	0.0475 (0.0021)	0.8947 (0.0097)	0.0068 (0.0003)	997
RP (3)	-0.5027	0.0053	0.0736 (0.0016)	-0.0027 (0.0023)	0.9470 (0.0071)	0.0054 (0.0003)	1000
RP (5)	-0.5018	0.0053	0.0735 (0.0016)	-0.0018 (0.0023)	0.9440 (0.0073)	0.0054 (0.0002)	1000
RP (9)	-0.5019	0.0053	0.0735 (0.0016)	-0.0019 (0.0023)	0.9460 (0.0071)	0.0054 (0.0002)	1000
RP (P)	-0.5021	0.0053	0.0735 (0.0016)	-0.0021 (0.0023)	0.9440 (0.0073)	0.0054 (0.0002)	1000
FP (W)	-0.5350	0.0056	0.0780 (0.0019)	-0.0350 (0.0027)	0.9102 (0.0098)	0.0073 (0.0004)	857
FP (k=10)	-0.4899	0.0053	0.0740 (0.0017)	0.0101 (0.0023)	0.9460 (0.0071)	0.0056 (0.0003)	1000
FP (k=10000)	-0.6049	0.0044	0.0894 (0.0020)	-0.1049 (0.0028)	0.6130 (0.0154)	0.0190 (0.0007)	1000

Table 20: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4876	0.0054	0.0768 (0.0017)	0.0124 (0.0024)	0.9390 (0.0076)	0.0060 (0.0003)	1000
Exp	-0.5384	0.0058	0.0828 (0.0019)	-0.0384 (0.0026)	0.9050 (0.0093)	0.0083 (0.0004)	1000
Weibull	-0.4906	0.0055	0.0765 (0.0017)	0.0094 (0.0024)	0.9450 (0.0072)	0.0059 (0.0003)	1000
Gompertz	-0.5386	0.0060	0.0781 (0.0026)	-0.0386 (0.0037)	0.9226 (0.0126)	0.0076 (0.0005)	452
RP (3)	-0.4878	0.0055	0.0767 (0.0017)	0.0122 (0.0024)	0.9460 (0.0071)	0.0060 (0.0003)	1000
RP (5)	-0.4885	0.0055	0.0769 (0.0017)	0.0115 (0.0024)	0.9439 (0.0073)	0.0060 (0.0003)	999
RP (9)	-0.4887	0.0055	0.0770 (0.0017)	0.0113 (0.0024)	0.9440 (0.0073)	0.0060 (0.0003)	1000
RP (P)	-0.4888	0.0055	0.0769 (0.0017)	0.0112 (0.0024)	0.9430 (0.0073)	0.0060 (0.0003)	1000
FP (W)	-0.4914	0.0055	0.0764 (0.0017)	0.0086 (0.0024)	0.9442 (0.0073)	0.0059 (0.0003)	986
FP (k=10)	-0.4854	0.0055	0.0773 (0.0017)	0.0146 (0.0024)	0.9400 (0.0075)	0.0062 (0.0003)	1000
FP (k=10000)	-0.4866	0.0042	0.0764 (0.0017)	0.0134 (0.0024)	0.8929 (0.0098)	0.0060 (0.0003)	999
Model frailty: Normal							
Cox	-0.4737	0.0052	0.0741 (0.0017)	0.0263 (0.0023)	0.9280 (0.0082)	0.0062 (0.0003)	1000
Exp	-0.5316	0.0058	0.0812 (0.0018)	-0.0316 (0.0026)	0.9183 (0.0087)	0.0076 (0.0003)	992
Weibull	-0.4918	0.0056	0.0763 (0.0017)	0.0082 (0.0024)	0.9489 (0.0070)	0.0059 (0.0003)	999
Gompertz	-0.5345	0.0060	0.0752 (0.0028)	-0.0345 (0.0039)	0.9378 (0.0126)	0.0068 (0.0005)	370
RP (3)	-0.4953	0.0057	0.0777 (0.0017)	0.0047 (0.0025)	0.9500 (0.0069)	0.0061 (0.0003)	1000
RP (5)	-0.4961	0.0057	0.0779 (0.0017)	0.0039 (0.0025)	0.9510 (0.0068)	0.0061 (0.0003)	1000
RP (9)	-0.4964	0.0057	0.0780 (0.0017)	0.0036 (0.0025)	0.9510 (0.0068)	0.0061 (0.0003)	1000
RP (P)	-0.4957	0.0057	0.0778 (0.0017)	0.0043 (0.0025)	0.9520 (0.0068)	0.0061 (0.0003)	1000
FP (W)	-0.4969	0.0057	0.0768 (0.0017)	0.0031 (0.0025)	0.9511 (0.0069)	0.0059 (0.0003)	981
FP (k=10)	-0.4949	0.0058	0.0786 (0.0018)	0.0051 (0.0025)	0.9499 (0.0069)	0.0062 (0.0003)	999
FP (k=10000)	-0.4907	0.0045	0.0768 (0.0017)	0.0093 (0.0024)	0.9160 (0.0088)	0.0060 (0.0003)	1000

Table 21: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4979	0.0074	0.0898 (0.0020)	0.0021 (0.0028)	0.9399 (0.0075)	0.0081 (0.0004)	998
Exp	-0.4976	0.0074	0.0888 (0.0020)	0.0024 (0.0028)	0.9340 (0.0079)	0.0079 (0.0004)	1000
Weibull	-0.4997	0.0076	0.0897 (0.0020)	0.0003 (0.0028)	0.9370 (0.0077)	0.0080 (0.0004)	1000
Gompertz	-0.5020	0.0076	0.0910 (0.0030)	-0.0020 (0.0043)	0.9376 (0.0114)	0.0083 (0.0006)	449
RP (3)	-0.4988	0.0076	0.0900 (0.0020)	0.0012 (0.0028)	0.9419 (0.0074)	0.0081 (0.0004)	998
RP (5)	-0.4990	0.0076	0.0899 (0.0020)	0.0010 (0.0028)	0.9420 (0.0074)	0.0081 (0.0004)	1000
RP (9)	-0.4991	0.0076	0.0900 (0.0020)	0.0009 (0.0028)	0.9420 (0.0074)	0.0081 (0.0004)	1000
RP (P)	-0.4993	0.0076	0.0899 (0.0020)	0.0007 (0.0028)	0.9380 (0.0076)	0.0081 (0.0004)	1000
FP (W)	-0.4998	0.0076	0.0897 (0.0020)	0.0002 (0.0028)	0.9369 (0.0077)	0.0080 (0.0004)	998
FP (k=10)	-0.4948	0.0076	0.0899 (0.0020)	0.0052 (0.0028)	0.9398 (0.0075)	0.0081 (0.0004)	996
FP (k=10000)	-0.4965	0.0058	0.0894 (0.0020)	0.0035 (0.0028)	0.9110 (0.0090)	0.0080 (0.0004)	1000
Model frailty: Normal							
Cox	-0.4651	0.0071	0.0843 (0.0019)	0.0349 (0.0027)	0.9280 (0.0082)	0.0083 (0.0004)	1000
Exp	-0.4782	0.0073	0.0861 (0.0019)	0.0218 (0.0027)	0.9428 (0.0074)	0.0079 (0.0004)	997
Weibull	-0.4833	0.0075	0.0874 (0.0020)	0.0167 (0.0028)	0.9389 (0.0076)	0.0079 (0.0004)	999
Gompertz	-0.4795	0.0074	0.0907 (0.0037)	0.0205 (0.0052)	0.9342 (0.0142)	0.0086 (0.0008)	304
RP (3)	-0.4945	0.0078	0.0899 (0.0020)	0.0055 (0.0028)	0.9390 (0.0076)	0.0081 (0.0004)	1000
RP (5)	-0.4946	0.0078	0.0899 (0.0020)	0.0054 (0.0028)	0.9400 (0.0075)	0.0081 (0.0004)	1000
RP (9)	-0.4945	0.0078	0.0899 (0.0020)	0.0055 (0.0028)	0.9390 (0.0076)	0.0081 (0.0004)	1000
RP (P)	-0.4957	0.0078	0.0901 (0.0020)	0.0043 (0.0028)	0.9410 (0.0075)	0.0081 (0.0004)	1000
FP (W)	-0.4977	0.0078	0.0903 (0.0020)	0.0023 (0.0029)	0.9426 (0.0074)	0.0081 (0.0004)	976
FP (k=10)	-0.4899	0.0078	0.0900 (0.0020)	0.0101 (0.0028)	0.9369 (0.0077)	0.0082 (0.0004)	998
FP (k=10000)	-0.4858	0.0066	0.0883 (0.0020)	0.0142 (0.0028)	0.9267 (0.0083)	0.0080 (0.0004)	996

Table 22: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5025	0.0080	0.0878 (0.0020)	-0.0025 (0.0028)	0.9520 (0.0068)	0.0077 (0.0003)	999
Exp	-0.6015	0.0092	0.1046 (0.0023)	-0.1015 (0.0033)	0.7820 (0.0131)	0.0212 (0.0009)	1000
Weibull	-0.5056	0.0082	0.0883 (0.0020)	-0.0056 (0.0028)	0.9540 (0.0066)	0.0078 (0.0003)	1000
Gompertz	-0.6064	0.0095	0.1073 (0.0038)	-0.1064 (0.0054)	0.7764 (0.0209)	0.0228 (0.0014)	398
RP (3)	-0.5034	0.0082	0.0880 (0.0020)	-0.0034 (0.0028)	0.9539 (0.0066)	0.0077 (0.0003)	998
RP (5)	-0.5035	0.0082	0.0880 (0.0020)	-0.0035 (0.0028)	0.9550 (0.0066)	0.0078 (0.0003)	1000
RP (9)	-0.5037	0.0082	0.0880 (0.0020)	-0.0037 (0.0028)	0.9550 (0.0066)	0.0078 (0.0003)	1000
RP (P)	-0.5046	0.0082	0.0881 (0.0020)	-0.0046 (0.0028)	0.9550 (0.0066)	0.0078 (0.0003)	1000
FP (W)	-0.5056	0.0082	0.0883 (0.0020)	-0.0056 (0.0028)	0.9540 (0.0066)	0.0078 (0.0003)	1000
FP (k=10)	-0.4971	0.0082	0.0895 (0.0020)	0.0029 (0.0028)	0.9550 (0.0066)	0.0080 (0.0003)	1000
FP (k=10000)	-0.5360	0.0067	0.0946 (0.0021)	-0.0360 (0.0030)	0.8800 (0.0103)	0.0102 (0.0005)	1000
Model frailty: Normal							
Cox	-0.4701	0.0076	0.0823 (0.0018)	0.0299 (0.0026)	0.9470 (0.0071)	0.0077 (0.0003)	1000
Exp	-0.5739	0.0091	0.1002 (0.0022)	-0.0739 (0.0032)	0.8610 (0.0110)	0.0155 (0.0007)	993
Weibull	-0.4930	0.0081	0.0865 (0.0019)	0.0070 (0.0027)	0.9589 (0.0063)	0.0075 (0.0003)	997
Gompertz	-0.5755	0.0093	0.1032 (0.0043)	-0.0755 (0.0061)	0.8768 (0.0195)	0.0163 (0.0013)	284
RP (3)	-0.5017	0.0084	0.0882 (0.0020)	-0.0017 (0.0028)	0.9600 (0.0062)	0.0078 (0.0003)	1000
RP (5)	-0.5018	0.0084	0.0883 (0.0020)	-0.0018 (0.0028)	0.9600 (0.0062)	0.0078 (0.0003)	1000
RP (9)	-0.5018	0.0084	0.0883 (0.0020)	-0.0018 (0.0028)	0.9600 (0.0062)	0.0078 (0.0003)	1000
RP (P)	-0.5033	0.0084	0.0885 (0.0020)	-0.0033 (0.0028)	0.9580 (0.0063)	0.0078 (0.0003)	1000
FP (W)	-0.5053	0.0084	0.0887 (0.0020)	-0.0053 (0.0028)	0.9579 (0.0064)	0.0079 (0.0003)	974
FP (k=10)	-0.4996	0.0086	0.0900 (0.0020)	0.0004 (0.0028)	0.9560 (0.0065)	0.0081 (0.0003)	1000
FP (k=10000)	-0.5287	0.0080	0.0937 (0.0021)	-0.0287 (0.0030)	0.9208 (0.0085)	0.0096 (0.0004)	998

Table 23: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5019	0.0068	0.0848 (0.0019)	-0.0019 (0.0027)	0.9459 (0.0072)	0.0072 (0.0003)	998
Exp	-0.4206	0.0059	0.0710 (0.0016)	0.0794 (0.0022)	0.8260 (0.0120)	0.0113 (0.0004)	1000
Weibull	-0.4753	0.0066	0.0803 (0.0018)	0.0247 (0.0025)	0.9440 (0.0073)	0.0071 (0.0003)	1000
Gompertz	-0.4187	0.0060	0.0711 (0.0021)	0.0813 (0.0030)	0.8379 (0.0157)	0.0117 (0.0006)	549
RP (3)	-0.5024	0.0070	0.0853 (0.0019)	-0.0024 (0.0027)	0.9490 (0.0070)	0.0073 (0.0003)	1000
RP (5)	-0.5028	0.0070	0.0854 (0.0019)	-0.0028 (0.0027)	0.9490 (0.0070)	0.0073 (0.0003)	1000
RP (9)	-0.5030	0.0070	0.0854 (0.0019)	-0.0030 (0.0027)	0.9480 (0.0070)	0.0073 (0.0003)	1000
RP (P)	-0.4972	0.0069	0.0844 (0.0019)	0.0028 (0.0027)	0.9480 (0.0070)	0.0071 (0.0003)	1000
FP (W)	-0.4753	0.0066	0.0803 (0.0018)	0.0247 (0.0025)	0.9440 (0.0073)	0.0071 (0.0003)	1000
FP (k=10)	-0.4991	0.0069	0.0854 (0.0019)	0.0009 (0.0027)	0.9489 (0.0070)	0.0073 (0.0003)	998
FP (k=10000)	-0.4988	0.0052	0.0848 (0.0019)	0.0012 (0.0027)	0.9080 (0.0091)	0.0072 (0.0003)	1000
Model frailty: Normal							
Cox	-0.4700	0.0065	0.0810 (0.0018)	0.0300 (0.0026)	0.9330 (0.0079)	0.0075 (0.0003)	1000
Exp	-0.4081	0.0058	0.0706 (0.0016)	0.0919 (0.0022)	0.7771 (0.0132)	0.0134 (0.0005)	996
Weibull	-0.4634	0.0066	0.0790 (0.0018)	0.0366 (0.0025)	0.9346 (0.0078)	0.0076 (0.0003)	994
Gompertz	-0.4085	0.0059	0.0710 (0.0024)	0.0915 (0.0034)	0.7946 (0.0192)	0.0134 (0.0007)	443
RP (3)	-0.4965	0.0072	0.0857 (0.0019)	0.0035 (0.0027)	0.9480 (0.0070)	0.0074 (0.0003)	1000
RP (5)	-0.4965	0.0072	0.0857 (0.0019)	0.0035 (0.0027)	0.9480 (0.0070)	0.0074 (0.0003)	1000
RP (9)	-0.4966	0.0072	0.0857 (0.0019)	0.0034 (0.0027)	0.9490 (0.0070)	0.0074 (0.0003)	1000
RP (P)	-0.4915	0.0071	0.0849 (0.0019)	0.0085 (0.0027)	0.9500 (0.0069)	0.0073 (0.0003)	1000
FP (W)	-0.4784	0.0069	0.0823 (0.0019)	0.0216 (0.0026)	0.9444 (0.0073)	0.0072 (0.0003)	989
FP (k=10)	-0.4929	0.0072	0.0859 (0.0019)	0.0071 (0.0027)	0.9488 (0.0070)	0.0074 (0.0003)	997
FP (k=10000)	-0.4939	0.0056	0.0856 (0.0019)	0.0061 (0.0027)	0.9169 (0.0087)	0.0074 (0.0003)	999

Table 24: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4963	0.0069	0.0844 (0.0019)	0.0037 (0.0027)	0.9497 (0.0069)	0.0071 (0.0003)	994
Exp	-0.3593	0.0055	0.0621 (0.0014)	0.1407 (0.0020)	0.5240 (0.0158)	0.0237 (0.0006)	1000
Weibull	-0.5246	0.0074	0.0890 (0.0020)	-0.0246 (0.0028)	0.9300 (0.0081)	0.0085 (0.0003)	1000
Gompertz	-0.3577	0.0056	0.0622 (0.0018)	0.1423 (0.0025)	0.5191 (0.0203)	0.0241 (0.0007)	603
RP (3)	-0.4988	0.0071	0.0847 (0.0019)	0.0012 (0.0027)	0.9580 (0.0063)	0.0072 (0.0003)	1000
RP (5)	-0.4975	0.0071	0.0847 (0.0019)	0.0025 (0.0027)	0.9560 (0.0065)	0.0072 (0.0003)	999
RP (9)	-0.4975	0.0071	0.0847 (0.0019)	0.0025 (0.0027)	0.9540 (0.0066)	0.0072 (0.0003)	1000
RP (P)	-0.4981	0.0071	0.0847 (0.0019)	0.0019 (0.0027)	0.9560 (0.0065)	0.0072 (0.0003)	1000
FP (W)	-0.5245	0.0074	0.0887 (0.0020)	-0.0245 (0.0028)	0.9309 (0.0080)	0.0085 (0.0003)	998
FP (k=10)	-0.4778	0.0071	0.0847 (0.0019)	0.0222 (0.0027)	0.9479 (0.0070)	0.0077 (0.0003)	999
FP (k=10000)	-0.5717	0.0060	0.1002 (0.0022)	-0.0717 (0.0032)	0.7530 (0.0136)	0.0152 (0.0006)	1000
Model frailty: Normal							
Cox	-0.4645	0.0066	0.0797 (0.0018)	0.0355 (0.0025)	0.9340 (0.0079)	0.0076 (0.0003)	1000
Exp	-0.3504	0.0053	0.0623 (0.0014)	0.1496 (0.0020)	0.4605 (0.0158)	0.0263 (0.0006)	999
Weibull	-0.4987	0.0073	0.0853 (0.0019)	0.0013 (0.0027)	0.9517 (0.0068)	0.0073 (0.0003)	993
Gompertz	-0.3479	0.0054	0.0616 (0.0019)	0.1521 (0.0026)	0.4576 (0.0214)	0.0269 (0.0008)	542
RP (3)	-0.4924	0.0073	0.0846 (0.0019)	0.0076 (0.0027)	0.9570 (0.0064)	0.0072 (0.0003)	1000
RP (5)	-0.4916	0.0073	0.0846 (0.0019)	0.0084 (0.0027)	0.9570 (0.0064)	0.0072 (0.0003)	1000
RP (9)	-0.4917	0.0073	0.0845 (0.0019)	0.0083 (0.0027)	0.9560 (0.0065)	0.0072 (0.0003)	999
RP (P)	-0.4907	0.0073	0.0844 (0.0019)	0.0093 (0.0027)	0.9560 (0.0065)	0.0072 (0.0003)	1000
FP (W)	-0.5151	0.0076	0.0884 (0.0020)	-0.0151 (0.0028)	0.9449 (0.0072)	0.0080 (0.0003)	998
FP (k=10)	-0.4797	0.0073	0.0850 (0.0019)	0.0203 (0.0027)	0.9452 (0.0072)	0.0076 (0.0003)	986
FP (k=10000)	-0.5620	0.0065	0.1023 (0.0023)	-0.0620 (0.0032)	0.8008 (0.0126)	0.0143 (0.0006)	999

Table 25: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4994	0.0077	0.0889 (0.0020)	0.0006 (0.0028)	0.9458 (0.0072)	0.0079 (0.0003)	997
Exp	-0.5360	0.0081	0.0942 (0.0021)	-0.0360 (0.0030)	0.9240 (0.0084)	0.0102 (0.0004)	1000
Weibull	-0.5010	0.0078	0.0893 (0.0020)	-0.0010 (0.0028)	0.9510 (0.0068)	0.0080 (0.0003)	1000
Gompertz	-0.5423	0.0083	0.0917 (0.0033)	-0.0423 (0.0046)	0.9385 (0.0122)	0.0102 (0.0007)	390
RP (3)	-0.4989	0.0078	0.0889 (0.0020)	0.0011 (0.0028)	0.9520 (0.0068)	0.0079 (0.0003)	1000
RP (5)	-0.5001	0.0078	0.0892 (0.0020)	-0.0001 (0.0028)	0.9490 (0.0070)	0.0079 (0.0003)	1000
RP (9)	-0.5003	0.0079	0.0892 (0.0020)	-0.0003 (0.0028)	0.9510 (0.0068)	0.0080 (0.0003)	1000
RP (P)	-0.4997	0.0078	0.0891 (0.0020)	0.0003 (0.0028)	0.9490 (0.0070)	0.0079 (0.0003)	1000
FP (W)	-0.5010	0.0078	0.0893 (0.0020)	-0.0010 (0.0028)	0.9510 (0.0068)	0.0080 (0.0003)	1000
FP (k=10)	-0.4951	0.0078	0.0891 (0.0020)	0.0049 (0.0028)	0.9516 (0.0068)	0.0080 (0.0003)	992
FP (k=10000)	-0.4919	0.0061	0.0871 (0.0019)	0.0081 (0.0028)	0.9240 (0.0084)	0.0076 (0.0003)	1000
Model frailty: Normal							
Cox	-0.4675	0.0073	0.0844 (0.0019)	0.0325 (0.0027)	0.9320 (0.0080)	0.0082 (0.0004)	1000
Exp	-0.5157	0.0080	0.0926 (0.0021)	-0.0157 (0.0029)	0.9424 (0.0074)	0.0088 (0.0004)	989
Weibull	-0.4856	0.0077	0.0880 (0.0020)	0.0144 (0.0028)	0.9459 (0.0072)	0.0079 (0.0003)	998
Gompertz	-0.5159	0.0082	0.0907 (0.0039)	-0.0159 (0.0055)	0.9552 (0.0126)	0.0085 (0.0007)	268
RP (3)	-0.4967	0.0081	0.0903 (0.0020)	0.0033 (0.0029)	0.9480 (0.0070)	0.0082 (0.0004)	1000
RP (5)	-0.4976	0.0081	0.0904 (0.0020)	0.0024 (0.0029)	0.9490 (0.0070)	0.0082 (0.0004)	1000
RP (9)	-0.4978	0.0081	0.0904 (0.0020)	0.0022 (0.0029)	0.9490 (0.0070)	0.0082 (0.0004)	1000
RP (P)	-0.4966	0.0081	0.0902 (0.0020)	0.0034 (0.0029)	0.9490 (0.0070)	0.0081 (0.0004)	1000
FP (W)	-0.4985	0.0081	0.0906 (0.0021)	0.0015 (0.0029)	0.9492 (0.0071)	0.0082 (0.0004)	965
FP (k=10)	-0.4941	0.0081	0.0911 (0.0020)	0.0059 (0.0029)	0.9448 (0.0072)	0.0083 (0.0004)	997
FP (k=10000)	-0.4838	0.0069	0.0875 (0.0020)	0.0162 (0.0028)	0.9290 (0.0081)	0.0079 (0.0003)	1000

Table 26: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4903	0.0060	0.0774 (0.0017)	0.0097 (0.0025)	0.9479 (0.0070)	0.0061 (0.0003)	999
Exp	-0.5088	0.0061	0.0791 (0.0018)	-0.0088 (0.0025)	0.9490 (0.0070)	0.0063 (0.0003)	1000
Weibull	-0.4905	0.0061	0.0772 (0.0017)	0.0095 (0.0024)	0.9440 (0.0073)	0.0060 (0.0003)	1000
Gompertz	-0.5065	0.0063	0.0763 (0.0026)	-0.0065 (0.0036)	0.9530 (0.0100)	0.0059 (0.0004)	447
RP (3)	-0.4911	0.0061	0.0776 (0.0017)	0.0089 (0.0025)	0.9469 (0.0071)	0.0061 (0.0003)	999
RP (5)	-0.4912	0.0061	0.0777 (0.0017)	0.0088 (0.0025)	0.9470 (0.0071)	0.0061 (0.0003)	1000
RP (9)	-0.4913	0.0061	0.0778 (0.0017)	0.0087 (0.0025)	0.9470 (0.0071)	0.0061 (0.0003)	1000
RP (P)	-0.4909	0.0061	0.0774 (0.0017)	0.0091 (0.0024)	0.9460 (0.0071)	0.0061 (0.0003)	1000
FP (W)	-0.4908	0.0061	0.0772 (0.0017)	0.0092 (0.0025)	0.9443 (0.0073)	0.0060 (0.0003)	988
FP (k=10)	-0.4891	0.0061	0.0780 (0.0017)	0.0109 (0.0025)	0.9460 (0.0071)	0.0062 (0.0003)	1000
FP (k=10000)	-0.4985	0.0046	0.0788 (0.0018)	0.0015 (0.0025)	0.9130 (0.0089)	0.0062 (0.0003)	1000
Model frailty: Normal							
Cox	-0.4761	0.0058	0.0751 (0.0017)	0.0239 (0.0024)	0.9360 (0.0077)	0.0062 (0.0003)	1000
Exp	-0.4986	0.0061	0.0772 (0.0017)	0.0014 (0.0024)	0.9508 (0.0069)	0.0060 (0.0003)	995
Weibull	-0.4920	0.0062	0.0770 (0.0017)	0.0080 (0.0024)	0.9550 (0.0066)	0.0060 (0.0003)	999
Gompertz	-0.4885	0.0062	0.0742 (0.0041)	0.0115 (0.0058)	0.9576 (0.0157)	0.0056 (0.0006)	165
RP (3)	-0.5028	0.0064	0.0791 (0.0018)	-0.0028 (0.0025)	0.9550 (0.0066)	0.0063 (0.0003)	1000
RP (5)	-0.5028	0.0064	0.0792 (0.0018)	-0.0028 (0.0025)	0.9530 (0.0067)	0.0063 (0.0003)	1000
RP (9)	-0.5030	0.0064	0.0790 (0.0018)	-0.0030 (0.0025)	0.9540 (0.0066)	0.0063 (0.0003)	999
RP (P)	-0.5037	0.0064	0.0791 (0.0018)	-0.0037 (0.0025)	0.9520 (0.0068)	0.0063 (0.0003)	1000
FP (W)	-0.5040	0.0064	0.0788 (0.0018)	-0.0040 (0.0026)	0.9505 (0.0071)	0.0062 (0.0003)	930
FP (k=10)	-0.4999	0.0064	0.0789 (0.0018)	0.0001 (0.0025)	0.9572 (0.0065)	0.0062 (0.0003)	981
FP (k=10000)	-0.5008	0.0050	0.0786 (0.0018)	-0.0008 (0.0025)	0.9270 (0.0082)	0.0062 (0.0003)	1000

Table 27: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4897	0.0064	0.0806 (0.0018)	0.0103 (0.0025)	0.9489 (0.0070)	0.0066 (0.0003)	999
Exp	-0.6199	0.0077	0.1024 (0.0023)	-0.1199 (0.0032)	0.6950 (0.0146)	0.0248 (0.0009)	1000
Weibull	-0.4934	0.0065	0.0809 (0.0018)	0.0066 (0.0026)	0.9510 (0.0068)	0.0066 (0.0003)	1000
Gompertz	-0.6119	0.0080	0.1026 (0.0038)	-0.1119 (0.0054)	0.7348 (0.0232)	0.0230 (0.0015)	362
RP (3)	-0.4906	0.0065	0.0808 (0.0018)	0.0094 (0.0026)	0.9520 (0.0068)	0.0066 (0.0003)	1000
RP (5)	-0.4908	0.0065	0.0808 (0.0018)	0.0092 (0.0026)	0.9520 (0.0068)	0.0066 (0.0003)	999
RP (9)	-0.4909	0.0065	0.0808 (0.0018)	0.0091 (0.0026)	0.9510 (0.0068)	0.0066 (0.0003)	1000
RP (P)	-0.4915	0.0065	0.0808 (0.0018)	0.0085 (0.0026)	0.9500 (0.0069)	0.0066 (0.0003)	1000
FP (W)	-0.4933	0.0065	0.0809 (0.0018)	0.0067 (0.0026)	0.9510 (0.0068)	0.0066 (0.0003)	999
FP (k=10)	-0.4885	0.0067	0.0841 (0.0019)	0.0115 (0.0027)	0.9450 (0.0072)	0.0072 (0.0003)	1000
FP (k=10000)	-0.5521	0.0054	0.0919 (0.0021)	-0.0521 (0.0029)	0.8210 (0.0121)	0.0111 (0.0005)	1000
Model frailty: Normal							
Cox	-0.4735	0.0062	0.0776 (0.0017)	0.0265 (0.0025)	0.9410 (0.0075)	0.0067 (0.0003)	1000
Exp	-0.5989	0.0077	0.0982 (0.0022)	-0.0989 (0.0031)	0.7664 (0.0135)	0.0194 (0.0008)	989
Weibull	-0.4942	0.0066	0.0806 (0.0018)	0.0058 (0.0026)	0.9510 (0.0068)	0.0065 (0.0003)	999
Gompertz	-0.5905	0.0079	0.0972 (0.0041)	-0.0905 (0.0058)	0.8165 (0.0232)	0.0176 (0.0014)	278
RP (3)	-0.5022	0.0069	0.0823 (0.0018)	-0.0022 (0.0026)	0.9490 (0.0070)	0.0068 (0.0003)	1000
RP (5)	-0.5020	0.0069	0.0822 (0.0018)	-0.0020 (0.0026)	0.9490 (0.0070)	0.0068 (0.0003)	1000
RP (9)	-0.5019	0.0069	0.0822 (0.0018)	-0.0019 (0.0026)	0.9500 (0.0069)	0.0068 (0.0003)	1000
RP (P)	-0.5033	0.0069	0.0824 (0.0018)	-0.0033 (0.0026)	0.9470 (0.0071)	0.0068 (0.0003)	1000
FP (W)	-0.5061	0.0069	0.0832 (0.0019)	-0.0061 (0.0027)	0.9490 (0.0071)	0.0070 (0.0003)	961
FP (k=10)	-0.5089	0.0071	0.0857 (0.0019)	-0.0089 (0.0027)	0.9399 (0.0075)	0.0074 (0.0003)	999
FP (k=10000)	-0.5548	0.0062	0.0916 (0.0021)	-0.0548 (0.0029)	0.8527 (0.0112)	0.0114 (0.0005)	998

Table 28: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4840	0.0055	0.0763 (0.0017)	0.0160 (0.0024)	0.9379 (0.0076)	0.0061 (0.0003)	998
Exp	-0.4243	0.0048	0.0654 (0.0015)	0.0757 (0.0021)	0.8190 (0.0122)	0.0100 (0.0003)	1000
Weibull	-0.4503	0.0052	0.0709 (0.0016)	0.0497 (0.0022)	0.8910 (0.0099)	0.0075 (0.0003)	1000
Gompertz	-0.4229	0.0050	0.0634 (0.0019)	0.0771 (0.0027)	0.8395 (0.0158)	0.0100 (0.0005)	542
RP (3)	-0.4840	0.0057	0.0764 (0.0017)	0.0160 (0.0024)	0.9410 (0.0075)	0.0061 (0.0003)	1000
RP (5)	-0.4849	0.0057	0.0765 (0.0017)	0.0151 (0.0024)	0.9440 (0.0073)	0.0061 (0.0003)	1000
RP (9)	-0.4852	0.0057	0.0765 (0.0017)	0.0148 (0.0024)	0.9440 (0.0073)	0.0061 (0.0003)	1000
RP (P)	-0.4799	0.0056	0.0758 (0.0017)	0.0201 (0.0024)	0.9410 (0.0075)	0.0061 (0.0003)	1000
FP (W)	-0.4502	0.0052	0.0709 (0.0016)	0.0498 (0.0022)	0.8910 (0.0099)	0.0075 (0.0003)	1000
FP (k=10)	-0.4807	0.0056	0.0763 (0.0017)	0.0193 (0.0024)	0.9390 (0.0076)	0.0062 (0.0003)	1000
FP (k=10000)	-0.4843	0.0042	0.0763 (0.0017)	0.0157 (0.0024)	0.8937 (0.0098)	0.0061 (0.0003)	997
Model frailty: Normal							
Cox	-0.4731	0.0054	0.0743 (0.0017)	0.0269 (0.0023)	0.9350 (0.0078)	0.0062 (0.0003)	1000
Exp	-0.4205	0.0049	0.0647 (0.0014)	0.0795 (0.0020)	0.8114 (0.0124)	0.0105 (0.0004)	997
Weibull	-0.4603	0.0055	0.0721 (0.0016)	0.0397 (0.0023)	0.9183 (0.0087)	0.0068 (0.0003)	991
Gompertz	-0.4201	0.0050	0.0627 (0.0020)	0.0799 (0.0028)	0.8251 (0.0172)	0.0103 (0.0005)	486
RP (3)	-0.4967	0.0060	0.0780 (0.0017)	0.0033 (0.0025)	0.9489 (0.0070)	0.0061 (0.0003)	999
RP (5)	-0.4970	0.0060	0.0781 (0.0017)	0.0030 (0.0025)	0.9470 (0.0071)	0.0061 (0.0003)	1000
RP (9)	-0.4971	0.0060	0.0780 (0.0017)	0.0029 (0.0025)	0.9480 (0.0070)	0.0061 (0.0003)	1000
RP (P)	-0.4925	0.0059	0.0774 (0.0017)	0.0075 (0.0024)	0.9540 (0.0066)	0.0060 (0.0003)	1000
FP (W)	-0.4704	0.0056	0.0742 (0.0017)	0.0296 (0.0024)	0.9338 (0.0082)	0.0064 (0.0003)	921
FP (k=10)	-0.4942	0.0059	0.0780 (0.0017)	0.0058 (0.0025)	0.9520 (0.0068)	0.0061 (0.0003)	1000
FP (k=10000)	-0.4958	0.0044	0.0776 (0.0017)	0.0042 (0.0025)	0.9070 (0.0092)	0.0060 (0.0003)	1000

Table 29: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4901	0.0056	0.0756 (0.0017)	0.0099 (0.0024)	0.9429 (0.0073)	0.0058 (0.0003)	999
Exp	-0.3553	0.0042	0.0546 (0.0012)	0.1447 (0.0017)	0.3700 (0.0153)	0.0239 (0.0005)	1000
Weibull	-0.5190	0.0060	0.0794 (0.0018)	-0.0190 (0.0025)	0.9310 (0.0080)	0.0067 (0.0003)	1000
Gompertz	-0.3617	0.0044	0.0625 (0.0016)	0.1383 (0.0023)	0.4085 (0.0182)	0.0230 (0.0006)	727
RP (3)	-0.4921	0.0058	0.0760 (0.0017)	0.0079 (0.0024)	0.9470 (0.0071)	0.0058 (0.0003)	1000
RP (5)	-0.4913	0.0058	0.0759 (0.0017)	0.0087 (0.0024)	0.9460 (0.0071)	0.0058 (0.0003)	1000
RP (9)	-0.4916	0.0058	0.0759 (0.0017)	0.0084 (0.0024)	0.9469 (0.0071)	0.0058 (0.0003)	999
RP (P)	-0.4922	0.0058	0.0760 (0.0017)	0.0078 (0.0024)	0.9449 (0.0072)	0.0058 (0.0003)	999
FP (W)	-0.5199	0.0060	0.0787 (0.0018)	-0.0199 (0.0025)	0.9333 (0.0079)	0.0066 (0.0003)	990
FP (k=10)	-0.4691	0.0058	0.0772 (0.0017)	0.0309 (0.0024)	0.9360 (0.0077)	0.0069 (0.0003)	1000
FP (k=10000)	-0.5683	0.0050	0.0895 (0.0020)	-0.0683 (0.0028)	0.7738 (0.0132)	0.0127 (0.0005)	999
Model frailty: Normal							
Cox	-0.4782	0.0055	0.0732 (0.0016)	0.0218 (0.0023)	0.9490 (0.0070)	0.0058 (0.0002)	1000
Exp	-0.3522	0.0042	0.0546 (0.0012)	0.1478 (0.0017)	0.3561 (0.0152)	0.0248 (0.0005)	997
Weibull	-0.5140	0.0060	0.0782 (0.0018)	-0.0140 (0.0025)	0.9359 (0.0078)	0.0063 (0.0003)	998
Gompertz	-0.3580	0.0043	0.0614 (0.0017)	0.1420 (0.0024)	0.3909 (0.0190)	0.0239 (0.0007)	660
RP (3)	-0.5035	0.0061	0.0771 (0.0017)	-0.0035 (0.0024)	0.9470 (0.0071)	0.0059 (0.0003)	1000
RP (5)	-0.5032	0.0061	0.0770 (0.0017)	-0.0032 (0.0024)	0.9469 (0.0071)	0.0059 (0.0003)	999
RP (9)	-0.5031	0.0061	0.0771 (0.0017)	-0.0031 (0.0024)	0.9480 (0.0070)	0.0059 (0.0003)	1000
RP (P)	-0.5023	0.0060	0.0769 (0.0017)	-0.0023 (0.0024)	0.9490 (0.0070)	0.0059 (0.0003)	1000
FP (W)	-0.5283	0.0063	0.0798 (0.0021)	-0.0283 (0.0029)	0.9313 (0.0092)	0.0072 (0.0004)	757
FP (k=10)	-0.4886	0.0061	0.0776 (0.0017)	0.0114 (0.0025)	0.9479 (0.0070)	0.0061 (0.0003)	999
FP (k=10000)	-0.5979	0.0051	0.0932 (0.0021)	-0.0979 (0.0029)	0.6710 (0.0149)	0.0183 (0.0007)	1000

Table 30: Simulation results for treatment effect, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4843	0.0061	0.0799 (0.0018)	0.0157 (0.0025)	0.9410 (0.0075)	0.0066 (0.0003)	1000
Exp	-0.5412	0.0066	0.0882 (0.0020)	-0.0412 (0.0028)	0.8910 (0.0099)	0.0095 (0.0004)	1000
Weibull	-0.4822	0.0062	0.0792 (0.0018)	0.0178 (0.0025)	0.9440 (0.0073)	0.0066 (0.0003)	1000
Gompertz	-0.5451	0.0069	0.0869 (0.0030)	-0.0451 (0.0042)	0.8952 (0.0149)	0.0096 (0.0007)	420
RP (3)	-0.4845	0.0063	0.0798 (0.0018)	0.0155 (0.0025)	0.9429 (0.0073)	0.0066 (0.0003)	999
RP (5)	-0.4852	0.0063	0.0800 (0.0018)	0.0148 (0.0025)	0.9460 (0.0071)	0.0066 (0.0003)	1000
RP (9)	-0.4854	0.0063	0.0801 (0.0018)	0.0146 (0.0025)	0.9450 (0.0072)	0.0066 (0.0003)	1000
RP (P)	-0.4849	0.0063	0.0799 (0.0018)	0.0151 (0.0025)	0.9440 (0.0073)	0.0066 (0.0003)	1000
FP (W)	-0.4827	0.0062	0.0793 (0.0018)	0.0173 (0.0025)	0.9442 (0.0073)	0.0066 (0.0003)	986
FP (k=10)	-0.4838	0.0063	0.0813 (0.0018)	0.0162 (0.0026)	0.9430 (0.0073)	0.0069 (0.0003)	1000
FP (k=10000)	-0.4918	0.0047	0.0809 (0.0018)	0.0082 (0.0026)	0.9050 (0.0093)	0.0066 (0.0003)	1000
Model frailty: Normal							
Cox	-0.4699	0.0059	0.0771 (0.0017)	0.0301 (0.0024)	0.9360 (0.0077)	0.0069 (0.0003)	1000
Exp	-0.5309	0.0067	0.0860 (0.0019)	-0.0309 (0.0027)	0.9082 (0.0092)	0.0083 (0.0004)	991
Weibull	-0.4828	0.0063	0.0790 (0.0018)	0.0172 (0.0025)	0.9446 (0.0073)	0.0065 (0.0003)	993
Gompertz	-0.5247	0.0068	0.0850 (0.0054)	-0.0247 (0.0075)	0.9055 (0.0260)	0.0078 (0.0011)	127
RP (3)	-0.4963	0.0066	0.0817 (0.0018)	0.0037 (0.0026)	0.9520 (0.0068)	0.0067 (0.0003)	1000
RP (5)	-0.4968	0.0066	0.0817 (0.0018)	0.0032 (0.0026)	0.9510 (0.0068)	0.0067 (0.0003)	1000
RP (9)	-0.4969	0.0066	0.0817 (0.0018)	0.0031 (0.0026)	0.9530 (0.0067)	0.0067 (0.0003)	1000
RP (P)	-0.4960	0.0066	0.0816 (0.0018)	0.0040 (0.0026)	0.9540 (0.0066)	0.0067 (0.0003)	1000
FP (W)	-0.4947	0.0065	0.0813 (0.0019)	0.0053 (0.0027)	0.9535 (0.0069)	0.0066 (0.0003)	924
FP (k=10)	-0.4986	0.0067	0.0831 (0.0019)	0.0014 (0.0026)	0.9536 (0.0067)	0.0069 (0.0003)	992
FP (k=10000)	-0.4963	0.0053	0.0813 (0.0018)	0.0037 (0.0026)	0.9230 (0.0084)	0.0066 (0.0003)	1000

Table 31: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4998	0.0058	0.0777 (0.0017)	0.0002 (0.0025)	0.9379 (0.0076)	0.0060 (0.0003)	999
Exp	-0.5003	0.0057	0.0772 (0.0017)	-0.0003 (0.0024)	0.9370 (0.0077)	0.0060 (0.0003)	1000
Weibull	-0.5010	0.0058	0.0775 (0.0017)	-0.0010 (0.0025)	0.9410 (0.0075)	0.0060 (0.0003)	1000
Gompertz	-0.4987	0.0058	0.0739 (0.0023)	0.0013 (0.0033)	0.9566 (0.0090)	0.0055 (0.0004)	507
RP (3)	-0.5006	0.0058	0.0776 (0.0017)	-0.0006 (0.0025)	0.9419 (0.0074)	0.0060 (0.0003)	999
RP (5)	-0.5005	0.0058	0.0778 (0.0017)	-0.0005 (0.0025)	0.9409 (0.0075)	0.0060 (0.0003)	999
RP (9)	-0.5005	0.0058	0.0779 (0.0017)	-0.0005 (0.0025)	0.9399 (0.0075)	0.0061 (0.0003)	999
RP (P)	-0.5007	0.0058	0.0776 (0.0017)	-0.0007 (0.0025)	0.9400 (0.0075)	0.0060 (0.0003)	1000
FP (W)	-0.5010	0.0058	0.0775 (0.0017)	-0.0010 (0.0025)	0.9410 (0.0075)	0.0060 (0.0003)	1000
FP (k=10)	-0.4976	0.0058	0.0778 (0.0017)	0.0024 (0.0025)	0.9400 (0.0075)	0.0060 (0.0003)	1000
FP (k=10000)	-0.4989	0.0048	0.0776 (0.0017)	0.0011 (0.0025)	0.9210 (0.0085)	0.0060 (0.0003)	1000
Model frailty: Normal							
Cox	-0.4991	0.0058	0.0776 (0.0017)	0.0009 (0.0025)	0.9410 (0.0075)	0.0060 (0.0003)	1000
Exp	-0.4993	0.0057	0.0771 (0.0017)	0.0007 (0.0024)	0.9390 (0.0076)	0.0059 (0.0003)	1000
Weibull	-0.5005	0.0058	0.0774 (0.0017)	-0.0005 (0.0025)	0.9418 (0.0074)	0.0060 (0.0003)	997
Gompertz	-0.4988	0.0058	0.0788 (0.0025)	0.0012 (0.0036)	0.9401 (0.0108)	0.0062 (0.0004)	484
RP (3)	-0.5002	0.0058	0.0777 (0.0017)	-0.0002 (0.0025)	0.9440 (0.0073)	0.0060 (0.0003)	1000
RP (5)	-0.5002	0.0058	0.0777 (0.0017)	-0.0002 (0.0025)	0.9420 (0.0074)	0.0060 (0.0003)	1000
RP (9)	-0.5003	0.0058	0.0778 (0.0017)	-0.0003 (0.0025)	0.9410 (0.0075)	0.0060 (0.0003)	1000
RP (P)	-0.5005	0.0058	0.0775 (0.0017)	-0.0005 (0.0025)	0.9400 (0.0075)	0.0060 (0.0003)	1000
FP (W)	-0.5003	0.0058	0.0779 (0.0018)	-0.0003 (0.0025)	0.9408 (0.0075)	0.0061 (0.0003)	979
FP (k=10)	-0.4974	0.0058	0.0777 (0.0017)	0.0026 (0.0025)	0.9420 (0.0074)	0.0060 (0.0003)	1000
FP (k=10000)	-0.4988	0.0050	0.0775 (0.0017)	0.0012 (0.0025)	0.9250 (0.0083)	0.0060 (0.0003)	1000

Table 32: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5003	0.0065	0.0836 (0.0019)	-0.0003 (0.0026)	0.9409 (0.0075)	0.0070 (0.0003)	999
Exp	-0.5553	0.0066	0.0931 (0.0021)	-0.0553 (0.0029)	0.8640 (0.0108)	0.0117 (0.0005)	1000
Weibull	-0.5015	0.0065	0.0837 (0.0019)	-0.0015 (0.0026)	0.9410 (0.0075)	0.0070 (0.0003)	1000
Gompertz	-0.5561	0.0066	0.0915 (0.0032)	-0.0561 (0.0045)	0.8799 (0.0161)	0.0115 (0.0008)	408
RP (3)	-0.5006	0.0065	0.0837 (0.0019)	-0.0006 (0.0026)	0.9410 (0.0075)	0.0070 (0.0003)	1000
RP (5)	-0.5006	0.0065	0.0837 (0.0019)	-0.0006 (0.0026)	0.9409 (0.0075)	0.0070 (0.0003)	999
RP (9)	-0.5007	0.0065	0.0837 (0.0019)	-0.0007 (0.0026)	0.9410 (0.0075)	0.0070 (0.0003)	1000
RP (P)	-0.5011	0.0065	0.0836 (0.0019)	-0.0011 (0.0026)	0.9420 (0.0074)	0.0070 (0.0003)	1000
FP (W)	-0.5015	0.0065	0.0837 (0.0019)	-0.0015 (0.0026)	0.9410 (0.0075)	0.0070 (0.0003)	1000
FP (k=10)	-0.4949	0.0065	0.0840 (0.0019)	0.0051 (0.0027)	0.9370 (0.0077)	0.0071 (0.0003)	1000
FP (k=10000)	-0.5091	0.0056	0.0858 (0.0019)	-0.0091 (0.0027)	0.9168 (0.0087)	0.0074 (0.0003)	998
Model frailty: Normal							
Cox	-0.5001	0.0065	0.0836 (0.0019)	-0.0001 (0.0026)	0.9420 (0.0074)	0.0070 (0.0003)	1000
Exp	-0.5554	0.0066	0.0932 (0.0021)	-0.0554 (0.0030)	0.8635 (0.0109)	0.0117 (0.0005)	996
Weibull	-0.5015	0.0065	0.0838 (0.0019)	-0.0015 (0.0027)	0.9418 (0.0074)	0.0070 (0.0003)	996
Gompertz	-0.5540	0.0067	0.0931 (0.0033)	-0.0540 (0.0047)	0.8715 (0.0168)	0.0116 (0.0008)	397
RP (3)	-0.5011	0.0065	0.0838 (0.0019)	-0.0011 (0.0027)	0.9430 (0.0073)	0.0070 (0.0003)	1000
RP (5)	-0.5011	0.0065	0.0838 (0.0019)	-0.0011 (0.0027)	0.9429 (0.0073)	0.0070 (0.0003)	999
RP (9)	-0.5012	0.0065	0.0838 (0.0019)	-0.0012 (0.0027)	0.9430 (0.0073)	0.0070 (0.0003)	1000
RP (P)	-0.5016	0.0065	0.0838 (0.0019)	-0.0016 (0.0026)	0.9420 (0.0074)	0.0070 (0.0003)	1000
FP (W)	-0.5016	0.0065	0.0840 (0.0019)	-0.0016 (0.0027)	0.9423 (0.0074)	0.0070 (0.0003)	988
FP (k=10)	-0.4957	0.0065	0.0842 (0.0019)	0.0043 (0.0027)	0.9370 (0.0077)	0.0071 (0.0003)	1000
FP (k=10000)	-0.5100	0.0058	0.0859 (0.0019)	-0.0100 (0.0027)	0.9180 (0.0087)	0.0075 (0.0003)	1000

Table 33: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5013	0.0051	0.0734 (0.0016)	-0.0013 (0.0023)	0.9509 (0.0068)	0.0054 (0.0002)	998
Exp	-0.4215	0.0049	0.0613 (0.0014)	0.0785 (0.0019)	0.8230 (0.0121)	0.0099 (0.0003)	1000
Weibull	-0.4761	0.0051	0.0692 (0.0015)	0.0239 (0.0022)	0.9430 (0.0073)	0.0054 (0.0002)	1000
Gompertz	-0.5019	0.0052	0.0734 (0.0016)	-0.0019 (0.0023)	0.9510 (0.0068)	0.0054 (0.0002)	1000
RP (3)	-0.5011	0.0052	0.0732 (0.0016)	-0.0011 (0.0023)	0.9520 (0.0068)	0.0054 (0.0002)	999
RP (5)	-0.5018	0.0052	0.0733 (0.0016)	-0.0018 (0.0023)	0.9520 (0.0068)	0.0054 (0.0002)	1000
RP (9)	-0.5021	0.0052	0.0734 (0.0016)	-0.0021 (0.0023)	0.9520 (0.0068)	0.0054 (0.0002)	1000
RP (P)	-0.4957	0.0052	0.0725 (0.0016)	0.0043 (0.0023)	0.9510 (0.0068)	0.0053 (0.0002)	1000
FP (W)	-0.4761	0.0051	0.0692 (0.0015)	0.0239 (0.0022)	0.9430 (0.0073)	0.0054 (0.0002)	1000
FP (k=10)	-0.4992	0.0052	0.0733 (0.0016)	0.0008 (0.0023)	0.9510 (0.0068)	0.0054 (0.0002)	1000
FP (k=10000)	-0.4967	0.0041	0.0725 (0.0016)	0.0033 (0.0023)	0.9220 (0.0085)	0.0053 (0.0002)	1000
Model frailty: Normal							
Cox	-0.5002	0.0052	0.0732 (0.0016)	-0.0002 (0.0023)	0.9490 (0.0070)	0.0054 (0.0002)	1000
Exp	-0.4211	0.0049	0.0613 (0.0014)	0.0789 (0.0019)	0.8195 (0.0122)	0.0100 (0.0003)	997
Weibull	-0.4758	0.0051	0.0694 (0.0016)	0.0242 (0.0022)	0.9437 (0.0073)	0.0054 (0.0002)	995
Gompertz	-0.5007	0.0052	0.0733 (0.0016)	-0.0007 (0.0023)	0.9508 (0.0069)	0.0054 (0.0002)	995
RP (3)	-0.5006	0.0052	0.0732 (0.0016)	-0.0006 (0.0023)	0.9500 (0.0069)	0.0054 (0.0002)	1000
RP (5)	-0.5012	0.0052	0.0733 (0.0016)	-0.0012 (0.0023)	0.9500 (0.0069)	0.0054 (0.0002)	1000
RP (9)	-0.5014	0.0052	0.0734 (0.0016)	-0.0014 (0.0023)	0.9490 (0.0070)	0.0054 (0.0002)	1000
RP (P)	-0.4952	0.0052	0.0725 (0.0016)	0.0048 (0.0023)	0.9510 (0.0068)	0.0053 (0.0002)	1000
FP (W)	-0.4763	0.0051	0.0692 (0.0016)	0.0237 (0.0022)	0.9446 (0.0073)	0.0054 (0.0002)	993
FP (k=10)	-0.4988	0.0052	0.0733 (0.0016)	0.0012 (0.0023)	0.9500 (0.0069)	0.0054 (0.0002)	1000
FP (k=10000)	-0.4969	0.0042	0.0726 (0.0016)	0.0031 (0.0023)	0.9210 (0.0085)	0.0053 (0.0002)	1000

Table 34: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4983	0.0053	0.0708 (0.0016)	0.0017 (0.0022)	0.9599 (0.0062)	0.0050 (0.0002)	997
Exp	-0.3866	0.0049	0.0543 (0.0012)	0.1134 (0.0017)	0.6700 (0.0149)	0.0158 (0.0004)	1000
Weibull	-0.5260	0.0053	0.0747 (0.0017)	-0.0260 (0.0024)	0.9270 (0.0082)	0.0063 (0.0003)	1000
Gompertz	-0.4993	0.0053	0.0713 (0.0016)	0.0007 (0.0023)	0.9610 (0.0061)	0.0051 (0.0002)	1000
RP (3)	-0.4999	0.0053	0.0707 (0.0016)	0.0001 (0.0022)	0.9600 (0.0062)	0.0050 (0.0002)	999
RP (5)	-0.4992	0.0053	0.0708 (0.0016)	0.0008 (0.0022)	0.9600 (0.0062)	0.0050 (0.0002)	1000
RP (9)	-0.4994	0.0053	0.0710 (0.0016)	0.0006 (0.0022)	0.9599 (0.0062)	0.0050 (0.0002)	997
RP (P)	-0.5012	0.0053	0.0710 (0.0016)	-0.0012 (0.0022)	0.9579 (0.0064)	0.0050 (0.0002)	998
FP (W)	-0.5259	0.0053	0.0747 (0.0017)	-0.0259 (0.0024)	0.9269 (0.0082)	0.0062 (0.0003)	999
FP (k=10)	-0.4881	0.0053	0.0714 (0.0016)	0.0119 (0.0023)	0.9570 (0.0064)	0.0052 (0.0002)	1000
FP (k=10000)	-0.5450	0.0043	0.0804 (0.0018)	-0.0450 (0.0025)	0.8390 (0.0116)	0.0085 (0.0004)	1000
Model frailty: Normal							
Cox	-0.4976	0.0053	0.0708 (0.0016)	0.0024 (0.0022)	0.9610 (0.0061)	0.0050 (0.0002)	1000
Exp	-0.3859	0.0049	0.0544 (0.0012)	0.1141 (0.0017)	0.6600 (0.0150)	0.0160 (0.0004)	1000
Weibull	-0.5250	0.0053	0.0747 (0.0017)	-0.0250 (0.0024)	0.9276 (0.0082)	0.0062 (0.0003)	994
Gompertz	-0.4971	0.0053	0.0710 (0.0016)	0.0029 (0.0022)	0.9609 (0.0061)	0.0050 (0.0002)	997
RP (3)	-0.4993	0.0053	0.0709 (0.0016)	0.0007 (0.0022)	0.9610 (0.0061)	0.0050 (0.0002)	1000
RP (5)	-0.4988	0.0053	0.0708 (0.0016)	0.0012 (0.0022)	0.9610 (0.0061)	0.0050 (0.0002)	1000
RP (9)	-0.4989	0.0053	0.0709 (0.0016)	0.0011 (0.0022)	0.9610 (0.0061)	0.0050 (0.0002)	1000
RP (P)	-0.5006	0.0053	0.0711 (0.0016)	-0.0006 (0.0022)	0.9610 (0.0061)	0.0051 (0.0002)	1000
FP (W)	-0.5251	0.0054	0.0744 (0.0017)	-0.0251 (0.0024)	0.9279 (0.0083)	0.0062 (0.0003)	971
FP (k=10)	-0.4896	0.0053	0.0714 (0.0016)	0.0104 (0.0023)	0.9560 (0.0065)	0.0052 (0.0002)	1000
FP (k=10000)	-0.5445	0.0044	0.0805 (0.0018)	-0.0445 (0.0025)	0.8400 (0.0116)	0.0085 (0.0004)	1000

Table 35: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4959	0.0060	0.0756 (0.0017)	0.0041 (0.0024)	0.9650 (0.0058)	0.0057 (0.0003)	999
Exp	-0.5273	0.0060	0.0795 (0.0018)	-0.0273 (0.0025)	0.9430 (0.0073)	0.0071 (0.0003)	1000
Weibull	-0.5020	0.0061	0.0763 (0.0017)	-0.0020 (0.0024)	0.9640 (0.0059)	0.0058 (0.0003)	1000
Gompertz	-0.5332	0.0062	0.0818 (0.0047)	-0.0332 (0.0067)	0.9272 (0.0211)	0.0077 (0.0009)	151
RP (3)	-0.4962	0.0061	0.0757 (0.0017)	0.0038 (0.0024)	0.9660 (0.0057)	0.0057 (0.0003)	1000
RP (5)	-0.4964	0.0061	0.0757 (0.0017)	0.0036 (0.0024)	0.9660 (0.0057)	0.0057 (0.0003)	999
RP (9)	-0.4965	0.0061	0.0757 (0.0017)	0.0035 (0.0024)	0.9650 (0.0058)	0.0057 (0.0003)	1000
RP (P)	-0.4975	0.0061	0.0758 (0.0017)	0.0025 (0.0024)	0.9660 (0.0057)	0.0057 (0.0003)	1000
FP (W)	-0.5020	0.0061	0.0763 (0.0017)	-0.0020 (0.0024)	0.9640 (0.0059)	0.0058 (0.0003)	1000
FP (k=10)	-0.4927	0.0061	0.0758 (0.0017)	0.0073 (0.0024)	0.9650 (0.0058)	0.0058 (0.0003)	1000
FP (k=10000)	-0.4918	0.0051	0.0751 (0.0017)	0.0082 (0.0024)	0.9460 (0.0071)	0.0057 (0.0003)	1000
Model frailty: Normal							
Cox	-0.4956	0.0060	0.0757 (0.0017)	0.0044 (0.0024)	0.9640 (0.0059)	0.0057 (0.0003)	1000
Exp	-0.5267	0.0061	0.0796 (0.0018)	-0.0267 (0.0025)	0.9418 (0.0074)	0.0070 (0.0003)	996
Weibull	-0.5017	0.0061	0.0764 (0.0017)	-0.0017 (0.0024)	0.9628 (0.0060)	0.0058 (0.0003)	995
Gompertz	-0.5306	0.0062	0.0789 (0.0029)	-0.0306 (0.0041)	0.9373 (0.0127)	0.0071 (0.0005)	367
RP (3)	-0.4965	0.0061	0.0759 (0.0017)	0.0035 (0.0024)	0.9660 (0.0057)	0.0058 (0.0003)	1000
RP (5)	-0.4968	0.0061	0.0759 (0.0017)	0.0032 (0.0024)	0.9650 (0.0058)	0.0058 (0.0003)	1000
RP (9)	-0.4968	0.0061	0.0759 (0.0017)	0.0032 (0.0024)	0.9650 (0.0058)	0.0058 (0.0003)	1000
RP (P)	-0.4977	0.0061	0.0760 (0.0017)	0.0023 (0.0024)	0.9650 (0.0058)	0.0058 (0.0003)	1000
FP (W)	-0.5022	0.0061	0.0766 (0.0017)	-0.0022 (0.0025)	0.9631 (0.0060)	0.0059 (0.0003)	975
FP (k=10)	-0.4930	0.0061	0.0760 (0.0017)	0.0070 (0.0024)	0.9630 (0.0060)	0.0058 (0.0003)	1000
FP (k=10000)	-0.4921	0.0053	0.0753 (0.0017)	0.0079 (0.0024)	0.9510 (0.0068)	0.0057 (0.0003)	1000

Table 36: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4956	0.0055	0.0730 (0.0016)	0.0044 (0.0023)	0.9498 (0.0069)	0.0053 (0.0002)	996
Exp	-0.4968	0.0055	0.0729 (0.0016)	0.0032 (0.0023)	0.9530 (0.0067)	0.0053 (0.0002)	1000
Weibull	-0.4965	0.0055	0.0729 (0.0016)	0.0035 (0.0023)	0.9480 (0.0070)	0.0053 (0.0002)	1000
Gompertz	-0.4954	0.0056	0.0730 (0.0023)	0.0046 (0.0032)	0.9526 (0.0094)	0.0053 (0.0003)	506
RP (3)	-0.4961	0.0056	0.0731 (0.0016)	0.0039 (0.0023)	0.9540 (0.0066)	0.0054 (0.0002)	999
RP (5)	-0.4962	0.0056	0.0731 (0.0016)	0.0038 (0.0023)	0.9530 (0.0067)	0.0054 (0.0002)	1000
RP (9)	-0.4964	0.0056	0.0731 (0.0016)	0.0036 (0.0023)	0.9520 (0.0068)	0.0054 (0.0002)	999
RP (P)	-0.4962	0.0056	0.0730 (0.0016)	0.0038 (0.0023)	0.9500 (0.0069)	0.0053 (0.0002)	1000
FP (W)	-0.4965	0.0055	0.0729 (0.0016)	0.0035 (0.0023)	0.9480 (0.0070)	0.0053 (0.0002)	1000
FP (k=10)	-0.4936	0.0056	0.0731 (0.0016)	0.0064 (0.0023)	0.9520 (0.0068)	0.0054 (0.0002)	1000
FP (k=10000)	-0.4948	0.0046	0.0731 (0.0016)	0.0052 (0.0023)	0.9240 (0.0084)	0.0054 (0.0002)	1000
Model frailty: Normal							
Cox	-0.4961	0.0056	0.0730 (0.0016)	0.0039 (0.0023)	0.9530 (0.0067)	0.0053 (0.0002)	1000
Exp	-0.4965	0.0055	0.0728 (0.0016)	0.0035 (0.0023)	0.9530 (0.0067)	0.0053 (0.0002)	999
Weibull	-0.4971	0.0056	0.0730 (0.0016)	0.0029 (0.0023)	0.9509 (0.0068)	0.0053 (0.0002)	998
Gompertz	-0.4958	0.0056	0.0724 (0.0023)	0.0042 (0.0032)	0.9578 (0.0090)	0.0052 (0.0003)	498
RP (3)	-0.4972	0.0056	0.0731 (0.0016)	0.0028 (0.0023)	0.9520 (0.0068)	0.0054 (0.0002)	1000
RP (5)	-0.4973	0.0056	0.0731 (0.0016)	0.0027 (0.0023)	0.9560 (0.0065)	0.0054 (0.0002)	1000
RP (9)	-0.4973	0.0056	0.0731 (0.0016)	0.0027 (0.0023)	0.9540 (0.0066)	0.0054 (0.0002)	1000
RP (P)	-0.4972	0.0056	0.0731 (0.0016)	0.0028 (0.0023)	0.9540 (0.0066)	0.0053 (0.0002)	1000
FP (W)	-0.4973	0.0056	0.0731 (0.0016)	0.0027 (0.0023)	0.9504 (0.0069)	0.0053 (0.0002)	988
FP (k=10)	-0.4946	0.0056	0.0731 (0.0016)	0.0054 (0.0023)	0.9540 (0.0066)	0.0054 (0.0002)	1000
FP (k=10000)	-0.4959	0.0047	0.0732 (0.0016)	0.0041 (0.0023)	0.9250 (0.0083)	0.0054 (0.0002)	1000

Table 37: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4959	0.0061	0.0787 (0.0018)	0.0041 (0.0025)	0.9488 (0.0070)	0.0062 (0.0003)	997
Exp	-0.5577	0.0062	0.0884 (0.0020)	-0.0577 (0.0028)	0.8540 (0.0112)	0.0111 (0.0005)	1000
Weibull	-0.4977	0.0061	0.0787 (0.0018)	0.0023 (0.0025)	0.9490 (0.0070)	0.0062 (0.0003)	1000
Gompertz	-0.5521	0.0063	0.0884 (0.0032)	-0.0521 (0.0046)	0.8636 (0.0177)	0.0105 (0.0007)	374
RP (3)	-0.4963	0.0061	0.0787 (0.0018)	0.0037 (0.0025)	0.9490 (0.0070)	0.0062 (0.0003)	1000
RP (5)	-0.4964	0.0061	0.0788 (0.0018)	0.0036 (0.0025)	0.9479 (0.0070)	0.0062 (0.0003)	999
RP (9)	-0.4964	0.0061	0.0787 (0.0018)	0.0036 (0.0025)	0.9480 (0.0070)	0.0062 (0.0003)	1000
RP (P)	-0.4970	0.0061	0.0787 (0.0018)	0.0030 (0.0025)	0.9500 (0.0069)	0.0062 (0.0003)	1000
FP (W)	-0.4977	0.0061	0.0787 (0.0018)	0.0023 (0.0025)	0.9490 (0.0070)	0.0062 (0.0003)	1000
FP (k=10)	-0.4907	0.0062	0.0791 (0.0018)	0.0093 (0.0025)	0.9460 (0.0071)	0.0063 (0.0003)	1000
FP (k=10000)	-0.5072	0.0052	0.0807 (0.0018)	-0.0072 (0.0026)	0.9220 (0.0085)	0.0066 (0.0003)	1000
Model frailty: Normal							
Cox	-0.4966	0.0061	0.0788 (0.0018)	0.0034 (0.0025)	0.9510 (0.0068)	0.0062 (0.0003)	1000
Exp	-0.5583	0.0062	0.0888 (0.0020)	-0.0583 (0.0028)	0.8495 (0.0113)	0.0113 (0.0005)	997
Weibull	-0.4986	0.0062	0.0790 (0.0018)	0.0014 (0.0025)	0.9509 (0.0068)	0.0062 (0.0003)	997
Gompertz	-0.5543	0.0063	0.0889 (0.0032)	-0.0543 (0.0045)	0.8545 (0.0180)	0.0108 (0.0007)	385
RP (3)	-0.4977	0.0062	0.0790 (0.0018)	0.0023 (0.0025)	0.9510 (0.0068)	0.0062 (0.0003)	1000
RP (5)	-0.4977	0.0062	0.0790 (0.0018)	0.0023 (0.0025)	0.9510 (0.0068)	0.0062 (0.0003)	1000
RP (9)	-0.4978	0.0062	0.0790 (0.0018)	0.0022 (0.0025)	0.9510 (0.0068)	0.0062 (0.0003)	1000
RP (P)	-0.4984	0.0062	0.0790 (0.0018)	0.0016 (0.0025)	0.9530 (0.0067)	0.0062 (0.0003)	1000
FP (W)	-0.4985	0.0062	0.0790 (0.0018)	0.0015 (0.0025)	0.9522 (0.0068)	0.0062 (0.0003)	983
FP (k=10)	-0.4925	0.0062	0.0795 (0.0018)	0.0075 (0.0025)	0.9480 (0.0070)	0.0064 (0.0003)	1000
FP (k=10000)	-0.5089	0.0054	0.0811 (0.0018)	-0.0089 (0.0026)	0.9250 (0.0083)	0.0067 (0.0003)	1000

Table 38: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4963	0.0050	0.0678 (0.0015)	0.0037 (0.0021)	0.9599 (0.0062)	0.0046 (0.0002)	997
Exp	-0.4173	0.0047	0.0567 (0.0013)	0.0827 (0.0018)	0.8190 (0.0122)	0.0101 (0.0003)	1000
Weibull	-0.4703	0.0049	0.0643 (0.0014)	0.0297 (0.0020)	0.9480 (0.0070)	0.0050 (0.0002)	1000
Gompertz	-0.4970	0.0051	0.0682 (0.0015)	0.0030 (0.0022)	0.9640 (0.0059)	0.0047 (0.0002)	1000
RP (3)	-0.4960	0.0051	0.0678 (0.0015)	0.0040 (0.0021)	0.9619 (0.0061)	0.0046 (0.0002)	997
RP (5)	-0.4969	0.0051	0.0679 (0.0015)	0.0031 (0.0021)	0.9620 (0.0061)	0.0046 (0.0002)	999
RP (9)	-0.4972	0.0051	0.0679 (0.0015)	0.0028 (0.0021)	0.9620 (0.0060)	0.0046 (0.0002)	1000
RP (P)	-0.4908	0.0050	0.0671 (0.0015)	0.0092 (0.0021)	0.9590 (0.0063)	0.0046 (0.0002)	999
FP (W)	-0.4701	0.0049	0.0642 (0.0014)	0.0299 (0.0020)	0.9479 (0.0070)	0.0050 (0.0002)	999
FP (k=10)	-0.4944	0.0050	0.0679 (0.0015)	0.0056 (0.0021)	0.9600 (0.0062)	0.0046 (0.0002)	1000
FP (k=10000)	-0.4914	0.0039	0.0673 (0.0015)	0.0086 (0.0021)	0.9320 (0.0080)	0.0046 (0.0002)	1000
Model frailty: Normal							
Cox	-0.4964	0.0050	0.0677 (0.0015)	0.0036 (0.0021)	0.9630 (0.0060)	0.0046 (0.0002)	1000
Exp	-0.4171	0.0047	0.0566 (0.0013)	0.0829 (0.0018)	0.8200 (0.0121)	0.0101 (0.0003)	1000
Weibull	-0.4709	0.0050	0.0644 (0.0014)	0.0291 (0.0020)	0.9499 (0.0069)	0.0050 (0.0002)	999
Gompertz	-0.4970	0.0051	0.0682 (0.0015)	0.0030 (0.0022)	0.9639 (0.0059)	0.0047 (0.0002)	998
RP (3)	-0.4967	0.0051	0.0678 (0.0015)	0.0033 (0.0021)	0.9620 (0.0060)	0.0046 (0.0002)	1000
RP (5)	-0.4975	0.0051	0.0680 (0.0015)	0.0025 (0.0021)	0.9630 (0.0060)	0.0046 (0.0002)	1000
RP (9)	-0.4976	0.0051	0.0679 (0.0015)	0.0024 (0.0021)	0.9620 (0.0060)	0.0046 (0.0002)	1000
RP (P)	-0.4913	0.0050	0.0672 (0.0015)	0.0087 (0.0021)	0.9620 (0.0060)	0.0046 (0.0002)	1000
FP (W)	-0.4693	0.0050	0.0642 (0.0015)	0.0307 (0.0021)	0.9494 (0.0071)	0.0051 (0.0002)	948
FP (k=10)	-0.4951	0.0051	0.0679 (0.0015)	0.0049 (0.0021)	0.9610 (0.0061)	0.0046 (0.0002)	1000
FP (k=10000)	-0.4926	0.0040	0.0674 (0.0015)	0.0074 (0.0021)	0.9330 (0.0079)	0.0046 (0.0002)	1000

Table 39: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4970	0.0051	0.0742 (0.0017)	0.0030 (0.0023)	0.9448 (0.0072)	0.0055 (0.0003)	997
Exp	-0.3790	0.0047	0.0574 (0.0013)	0.1210 (0.0018)	0.5870 (0.0156)	0.0179 (0.0005)	1000
Weibull	-0.5260	0.0052	0.0785 (0.0018)	-0.0260 (0.0025)	0.9100 (0.0090)	0.0068 (0.0003)	1000
Gompertz	-0.4971	0.0052	0.0747 (0.0017)	0.0029 (0.0024)	0.9530 (0.0067)	0.0056 (0.0003)	1000
RP (3)	-0.4980	0.0052	0.0744 (0.0017)	0.0020 (0.0024)	0.9410 (0.0075)	0.0055 (0.0003)	1000
RP (5)	-0.4976	0.0052	0.0743 (0.0017)	0.0024 (0.0023)	0.9430 (0.0073)	0.0055 (0.0003)	1000
RP (9)	-0.4978	0.0052	0.0743 (0.0017)	0.0022 (0.0023)	0.9440 (0.0073)	0.0055 (0.0003)	1000
RP (P)	-0.4995	0.0052	0.0747 (0.0017)	0.0005 (0.0024)	0.9410 (0.0075)	0.0056 (0.0003)	1000
FP (W)	-0.5260	0.0052	0.0785 (0.0018)	-0.0260 (0.0025)	0.9100 (0.0090)	0.0068 (0.0003)	1000
FP (k=10)	-0.4857	0.0052	0.0751 (0.0017)	0.0143 (0.0024)	0.9410 (0.0075)	0.0058 (0.0003)	1000
FP (k=10000)	-0.5489	0.0042	0.0840 (0.0019)	-0.0489 (0.0027)	0.8010 (0.0126)	0.0094 (0.0004)	1000
Model frailty: Normal							
Cox	-0.4974	0.0051	0.0740 (0.0017)	0.0026 (0.0023)	0.9420 (0.0074)	0.0055 (0.0003)	1000
Exp	-0.3788	0.0047	0.0574 (0.0013)	0.1212 (0.0018)	0.5846 (0.0156)	0.0180 (0.0005)	999
Weibull	-0.5261	0.0052	0.0783 (0.0018)	-0.0261 (0.0025)	0.9089 (0.0091)	0.0068 (0.0003)	999
Gompertz	-0.4959	0.0052	0.0743 (0.0017)	0.0041 (0.0024)	0.9529 (0.0067)	0.0055 (0.0003)	997
RP (3)	-0.4989	0.0052	0.0744 (0.0017)	0.0011 (0.0024)	0.9410 (0.0075)	0.0055 (0.0003)	1000
RP (5)	-0.4985	0.0052	0.0742 (0.0017)	0.0015 (0.0023)	0.9420 (0.0074)	0.0055 (0.0003)	1000
RP (9)	-0.4987	0.0052	0.0742 (0.0017)	0.0013 (0.0023)	0.9420 (0.0074)	0.0055 (0.0003)	1000
RP (P)	-0.5003	0.0052	0.0746 (0.0017)	-0.0003 (0.0024)	0.9400 (0.0075)	0.0056 (0.0003)	1000
FP (W)	-0.5273	0.0052	0.0780 (0.0018)	-0.0273 (0.0025)	0.9071 (0.0094)	0.0068 (0.0003)	958
FP (k=10)	-0.4885	0.0052	0.0749 (0.0017)	0.0115 (0.0024)	0.9470 (0.0071)	0.0057 (0.0003)	1000
FP (k=10000)	-0.5501	0.0042	0.0839 (0.0019)	-0.0501 (0.0027)	0.8020 (0.0126)	0.0095 (0.0004)	1000

Table 40: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4964	0.0058	0.0738 (0.0017)	0.0036 (0.0023)	0.9629 (0.0060)	0.0055 (0.0002)	998
Exp	-0.5294	0.0058	0.0781 (0.0017)	-0.0294 (0.0025)	0.9260 (0.0083)	0.0070 (0.0003)	1000
Weibull	-0.5020	0.0058	0.0748 (0.0017)	-0.0020 (0.0024)	0.9590 (0.0063)	0.0056 (0.0002)	1000
Gompertz	-0.5276	0.0059	0.0803 (0.0028)	-0.0276 (0.0039)	0.9127 (0.0137)	0.0072 (0.0005)	424
RP (3)	-0.4967	0.0058	0.0740 (0.0017)	0.0033 (0.0023)	0.9610 (0.0061)	0.0055 (0.0002)	1000
RP (5)	-0.4968	0.0058	0.0740 (0.0017)	0.0032 (0.0023)	0.9630 (0.0060)	0.0055 (0.0002)	1000
RP (9)	-0.4969	0.0058	0.0740 (0.0017)	0.0031 (0.0023)	0.9630 (0.0060)	0.0055 (0.0002)	999
RP (P)	-0.4978	0.0058	0.0742 (0.0017)	0.0022 (0.0023)	0.9610 (0.0061)	0.0055 (0.0002)	1000
FP (W)	-0.5020	0.0058	0.0748 (0.0017)	-0.0020 (0.0024)	0.9590 (0.0063)	0.0056 (0.0002)	1000
FP (k=10)	-0.4932	0.0058	0.0741 (0.0017)	0.0068 (0.0023)	0.9620 (0.0060)	0.0055 (0.0002)	1000
FP (k=10000)	-0.4922	0.0048	0.0734 (0.0016)	0.0078 (0.0023)	0.9400 (0.0075)	0.0054 (0.0002)	1000
Model frailty: Normal							
Cox	-0.4968	0.0058	0.0740 (0.0017)	0.0032 (0.0023)	0.9610 (0.0061)	0.0055 (0.0002)	1000
Exp	-0.5290	0.0058	0.0780 (0.0017)	-0.0290 (0.0025)	0.9287 (0.0082)	0.0069 (0.0003)	996
Weibull	-0.5024	0.0058	0.0749 (0.0017)	-0.0024 (0.0024)	0.9549 (0.0066)	0.0056 (0.0002)	998
Gompertz	-0.5295	0.0059	0.0788 (0.0028)	-0.0295 (0.0039)	0.9206 (0.0135)	0.0071 (0.0005)	403
RP (3)	-0.4978	0.0058	0.0742 (0.0017)	0.0022 (0.0023)	0.9600 (0.0062)	0.0055 (0.0002)	1000
RP (5)	-0.4979	0.0058	0.0742 (0.0017)	0.0021 (0.0023)	0.9610 (0.0061)	0.0055 (0.0002)	1000
RP (9)	-0.4980	0.0058	0.0742 (0.0017)	0.0020 (0.0023)	0.9610 (0.0061)	0.0055 (0.0002)	1000
RP (P)	-0.4989	0.0058	0.0744 (0.0017)	0.0011 (0.0024)	0.9610 (0.0061)	0.0055 (0.0002)	1000
FP (W)	-0.5037	0.0058	0.0746 (0.0017)	-0.0037 (0.0024)	0.9581 (0.0064)	0.0056 (0.0002)	979
FP (k=10)	-0.4944	0.0058	0.0744 (0.0017)	0.0056 (0.0024)	0.9610 (0.0061)	0.0056 (0.0002)	1000
FP (k=10000)	-0.4933	0.0049	0.0736 (0.0016)	0.0067 (0.0023)	0.9430 (0.0073)	0.0055 (0.0002)	1000

Table 41: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5014	0.0068	0.0807 (0.0018)	-0.0014 (0.0026)	0.9497 (0.0069)	0.0065 (0.0003)	994
Exp	-0.5011	0.0067	0.0795 (0.0018)	-0.0011 (0.0025)	0.9520 (0.0068)	0.0063 (0.0003)	1000
Weibull	-0.5023	0.0068	0.0803 (0.0018)	-0.0023 (0.0025)	0.9510 (0.0068)	0.0065 (0.0003)	1000
Gompertz	-0.4991	0.0067	0.0784 (0.0033)	0.0009 (0.0046)	0.9521 (0.0125)	0.0061 (0.0005)	292
RP (3)	-0.5022	0.0068	0.0806 (0.0018)	-0.0022 (0.0026)	0.9527 (0.0067)	0.0065 (0.0003)	994
RP (5)	-0.5022	0.0068	0.0807 (0.0018)	-0.0022 (0.0026)	0.9499 (0.0069)	0.0065 (0.0003)	998
RP (9)	-0.5022	0.0068	0.0806 (0.0018)	-0.0022 (0.0025)	0.9500 (0.0069)	0.0065 (0.0003)	1000
RP (P)	-0.5019	0.0068	0.0804 (0.0018)	-0.0019 (0.0025)	0.9499 (0.0069)	0.0065 (0.0003)	998
FP (W)	-0.5022	0.0068	0.0804 (0.0018)	-0.0022 (0.0025)	0.9510 (0.0068)	0.0065 (0.0003)	999
FP (k=10)	-0.4989	0.0068	0.0806 (0.0018)	0.0011 (0.0025)	0.9500 (0.0069)	0.0065 (0.0003)	1000
FP (k=10000)	-0.5002	0.0059	0.0805 (0.0018)	-0.0002 (0.0025)	0.9400 (0.0075)	0.0065 (0.0003)	1000
Model frailty: Normal							
Cox	-0.5025	0.0068	0.0809 (0.0018)	-0.0025 (0.0026)	0.9510 (0.0068)	0.0065 (0.0003)	1000
Exp	-0.5003	0.0067	0.0790 (0.0018)	-0.0003 (0.0025)	0.9556 (0.0065)	0.0062 (0.0003)	992
Weibull	-0.5025	0.0068	0.0807 (0.0018)	-0.0025 (0.0026)	0.9517 (0.0068)	0.0065 (0.0003)	994
Gompertz	-0.5047	0.0068	0.0823 (0.0029)	-0.0047 (0.0041)	0.9512 (0.0106)	0.0068 (0.0004)	410
RP (3)	-0.5029	0.0068	0.0810 (0.0018)	-0.0029 (0.0026)	0.9500 (0.0069)	0.0066 (0.0003)	1000
RP (5)	-0.5031	0.0068	0.0810 (0.0018)	-0.0031 (0.0026)	0.9500 (0.0069)	0.0066 (0.0003)	1000
RP (9)	-0.5031	0.0068	0.0810 (0.0018)	-0.0031 (0.0026)	0.9510 (0.0068)	0.0066 (0.0003)	1000
RP (P)	-0.5030	0.0068	0.0808 (0.0018)	-0.0030 (0.0026)	0.9520 (0.0068)	0.0065 (0.0003)	1000
FP (W)	-0.5039	0.0068	0.0810 (0.0018)	-0.0039 (0.0026)	0.9511 (0.0069)	0.0066 (0.0003)	981
FP (k=10)	-0.4995	0.0068	0.0812 (0.0018)	0.0005 (0.0026)	0.9489 (0.0070)	0.0066 (0.0003)	979
FP (k=10000)	-0.5018	0.0062	0.0809 (0.0018)	-0.0018 (0.0026)	0.9389 (0.0076)	0.0065 (0.0003)	998

Table 42: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5053	0.0075	0.0825 (0.0018)	-0.0053 (0.0026)	0.9698 (0.0054)	0.0068 (0.0003)	995
Exp	-0.5662	0.0076	0.0916 (0.0020)	-0.0662 (0.0029)	0.8620 (0.0109)	0.0128 (0.0005)	1000
Weibull	-0.5068	0.0076	0.0824 (0.0018)	-0.0068 (0.0026)	0.9710 (0.0053)	0.0068 (0.0003)	1000
Gompertz	-0.5745	0.0077	0.0954 (0.0036)	-0.0745 (0.0051)	0.8272 (0.0201)	0.0146 (0.0010)	353
RP (3)	-0.5057	0.0076	0.0823 (0.0018)	-0.0057 (0.0026)	0.9699 (0.0054)	0.0068 (0.0003)	998
RP (5)	-0.5057	0.0076	0.0824 (0.0018)	-0.0057 (0.0026)	0.9720 (0.0052)	0.0068 (0.0003)	1000
RP (9)	-0.5057	0.0076	0.0825 (0.0018)	-0.0057 (0.0026)	0.9720 (0.0052)	0.0068 (0.0003)	999
RP (P)	-0.5063	0.0076	0.0825 (0.0018)	-0.0063 (0.0026)	0.9699 (0.0054)	0.0068 (0.0003)	997
FP (W)	-0.5068	0.0076	0.0824 (0.0018)	-0.0068 (0.0026)	0.9710 (0.0053)	0.0068 (0.0003)	1000
FP (k=10)	-0.4996	0.0076	0.0831 (0.0019)	0.0004 (0.0026)	0.9680 (0.0056)	0.0069 (0.0003)	1000
FP (k=10000)	-0.5190	0.0068	0.0849 (0.0019)	-0.0190 (0.0027)	0.9420 (0.0074)	0.0076 (0.0003)	1000
Model frailty: Normal							
Cox	-0.5070	0.0076	0.0827 (0.0018)	-0.0070 (0.0026)	0.9690 (0.0055)	0.0069 (0.0003)	1000
Exp	-0.5667	0.0077	0.0918 (0.0021)	-0.0667 (0.0029)	0.8661 (0.0108)	0.0129 (0.0005)	993
Weibull	-0.5081	0.0076	0.0827 (0.0019)	-0.0081 (0.0026)	0.9687 (0.0055)	0.0069 (0.0003)	991
Gompertz	-0.5764	0.0078	0.0921 (0.0037)	-0.0764 (0.0052)	0.8526 (0.0201)	0.0143 (0.0011)	312
RP (3)	-0.5074	0.0076	0.0827 (0.0018)	-0.0074 (0.0026)	0.9710 (0.0053)	0.0069 (0.0003)	1000
RP (5)	-0.5075	0.0076	0.0827 (0.0018)	-0.0075 (0.0026)	0.9710 (0.0053)	0.0069 (0.0003)	1000
RP (9)	-0.5076	0.0076	0.0827 (0.0019)	-0.0076 (0.0026)	0.9710 (0.0053)	0.0069 (0.0003)	1000
RP (P)	-0.5082	0.0076	0.0827 (0.0019)	-0.0082 (0.0026)	0.9680 (0.0056)	0.0069 (0.0003)	1000
FP (W)	-0.5084	0.0076	0.0824 (0.0019)	-0.0084 (0.0026)	0.9693 (0.0055)	0.0068 (0.0003)	977
FP (k=10)	-0.5019	0.0077	0.0834 (0.0019)	-0.0019 (0.0026)	0.9699 (0.0054)	0.0070 (0.0003)	996
FP (k=10000)	-0.5211	0.0071	0.0852 (0.0019)	-0.0211 (0.0027)	0.9460 (0.0071)	0.0077 (0.0003)	1000

Table 43: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5016	0.0059	0.0764 (0.0017)	-0.0016 (0.0024)	0.9509 (0.0068)	0.0058 (0.0003)	997
Exp	-0.4302	0.0057	0.0652 (0.0015)	0.0698 (0.0021)	0.8860 (0.0101)	0.0091 (0.0003)	1000
Weibull	-0.4820	0.0059	0.0737 (0.0016)	0.0180 (0.0023)	0.9490 (0.0070)	0.0058 (0.0002)	1000
Gompertz	-0.4415	0.0058	0.0734 (0.0028)	0.0585 (0.0040)	0.8827 (0.0174)	0.0088 (0.0006)	341
RP (3)	-0.5020	0.0059	0.0765 (0.0017)	-0.0020 (0.0024)	0.9508 (0.0069)	0.0058 (0.0003)	996
RP (5)	-0.5024	0.0059	0.0765 (0.0017)	-0.0024 (0.0024)	0.9499 (0.0069)	0.0059 (0.0003)	999
RP (9)	-0.5025	0.0059	0.0765 (0.0017)	-0.0025 (0.0024)	0.9510 (0.0068)	0.0059 (0.0003)	999
RP (P)	-0.4978	0.0059	0.0759 (0.0017)	0.0022 (0.0024)	0.9517 (0.0068)	0.0058 (0.0003)	993
FP (W)	-0.4820	0.0059	0.0737 (0.0016)	0.0180 (0.0023)	0.9490 (0.0070)	0.0058 (0.0002)	1000
FP (k=10)	-0.4996	0.0059	0.0765 (0.0017)	0.0004 (0.0024)	0.9490 (0.0070)	0.0058 (0.0003)	1000
FP (k=10000)	-0.4982	0.0051	0.0761 (0.0017)	0.0018 (0.0024)	0.9350 (0.0078)	0.0058 (0.0003)	1000
Model frailty: Normal							
Cox	-0.5017	0.0059	0.0762 (0.0017)	-0.0017 (0.0024)	0.9520 (0.0068)	0.0058 (0.0003)	1000
Exp	-0.4289	0.0057	0.0651 (0.0015)	0.0711 (0.0021)	0.8844 (0.0101)	0.0093 (0.0003)	995
Weibull	-0.4822	0.0059	0.0739 (0.0017)	0.0178 (0.0023)	0.9505 (0.0069)	0.0058 (0.0003)	990
Gompertz	-0.4382	0.0058	0.0706 (0.0020)	0.0618 (0.0029)	0.8924 (0.0126)	0.0088 (0.0004)	604
RP (3)	-0.5020	0.0060	0.0764 (0.0017)	-0.0020 (0.0024)	0.9540 (0.0066)	0.0058 (0.0003)	1000
RP (5)	-0.5023	0.0060	0.0764 (0.0017)	-0.0023 (0.0024)	0.9530 (0.0067)	0.0058 (0.0003)	1000
RP (9)	-0.5024	0.0060	0.0764 (0.0017)	-0.0024 (0.0024)	0.9520 (0.0068)	0.0058 (0.0003)	1000
RP (P)	-0.4976	0.0060	0.0757 (0.0017)	0.0024 (0.0024)	0.9580 (0.0063)	0.0057 (0.0003)	1000
FP (W)	-0.4826	0.0059	0.0737 (0.0017)	0.0174 (0.0024)	0.9508 (0.0069)	0.0057 (0.0003)	975
FP (k=10)	-0.4992	0.0060	0.0763 (0.0017)	0.0008 (0.0024)	0.9547 (0.0066)	0.0058 (0.0003)	993
FP (k=10000)	-0.4995	0.0053	0.0762 (0.0017)	0.0005 (0.0024)	0.9429 (0.0073)	0.0058 (0.0003)	998

Table 44: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4981	0.0061	0.0764 (0.0017)	0.0019 (0.0024)	0.9540 (0.0066)	0.0058 (0.0003)	999
Exp	-0.3858	0.0058	0.0588 (0.0013)	0.1142 (0.0019)	0.7170 (0.0142)	0.0165 (0.0004)	1000
Weibull	-0.5198	0.0062	0.0801 (0.0018)	-0.0198 (0.0025)	0.9440 (0.0073)	0.0068 (0.0003)	1000
Gompertz	-0.4681	0.0060	0.0856 (0.0020)	0.0319 (0.0028)	0.8881 (0.0102)	0.0083 (0.0004)	947
RP (3)	-0.5001	0.0061	0.0764 (0.0017)	-0.0001 (0.0024)	0.9507 (0.0069)	0.0058 (0.0003)	994
RP (5)	-0.4991	0.0061	0.0764 (0.0017)	0.0009 (0.0024)	0.9530 (0.0067)	0.0058 (0.0003)	999
RP (9)	-0.4988	0.0061	0.0766 (0.0017)	0.0012 (0.0024)	0.9528 (0.0067)	0.0059 (0.0003)	996
RP (P)	-0.4999	0.0061	0.0768 (0.0017)	0.0001 (0.0024)	0.9526 (0.0067)	0.0059 (0.0003)	992
FP (W)	-0.5198	0.0062	0.0801 (0.0018)	-0.0198 (0.0025)	0.9439 (0.0073)	0.0068 (0.0003)	998
FP (k=10)	-0.4860	0.0061	0.0768 (0.0017)	0.0140 (0.0024)	0.9510 (0.0068)	0.0061 (0.0003)	1000
FP (k=10000)	-0.5371	0.0054	0.0856 (0.0019)	-0.0371 (0.0027)	0.8870 (0.0100)	0.0087 (0.0004)	1000
Model frailty: Normal							
Cox	-0.4985	0.0061	0.0768 (0.0017)	0.0015 (0.0024)	0.9530 (0.0067)	0.0059 (0.0003)	1000
Exp	-0.3838	0.0058	0.0587 (0.0013)	0.1162 (0.0019)	0.7028 (0.0145)	0.0169 (0.0004)	996
Weibull	-0.5191	0.0062	0.0803 (0.0018)	-0.0191 (0.0026)	0.9433 (0.0074)	0.0068 (0.0003)	988
Gompertz	-0.4637	0.0061	0.0854 (0.0020)	0.0363 (0.0029)	0.8855 (0.0107)	0.0086 (0.0004)	882
RP (3)	-0.5001	0.0062	0.0770 (0.0017)	-0.0001 (0.0024)	0.9510 (0.0068)	0.0059 (0.0003)	1000
RP (5)	-0.4992	0.0062	0.0768 (0.0017)	0.0008 (0.0024)	0.9560 (0.0065)	0.0059 (0.0003)	1000
RP (9)	-0.4992	0.0062	0.0769 (0.0017)	0.0008 (0.0024)	0.9550 (0.0066)	0.0059 (0.0003)	1000
RP (P)	-0.5002	0.0062	0.0771 (0.0017)	-0.0002 (0.0024)	0.9530 (0.0067)	0.0059 (0.0003)	1000
FP (W)	-0.5190	0.0062	0.0807 (0.0019)	-0.0190 (0.0026)	0.9430 (0.0075)	0.0069 (0.0003)	948
FP (k=10)	-0.4908	0.0062	0.0773 (0.0017)	0.0092 (0.0025)	0.9526 (0.0068)	0.0060 (0.0003)	991
FP (k=10000)	-0.5371	0.0057	0.0865 (0.0019)	-0.0371 (0.0027)	0.8920 (0.0099)	0.0088 (0.0004)	991

Table 45: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4995	0.0071	0.0856 (0.0019)	0.0005 (0.0027)	0.9457 (0.0072)	0.0073 (0.0003)	994
Exp	-0.5290	0.0071	0.0899 (0.0020)	-0.0290 (0.0028)	0.9340 (0.0079)	0.0089 (0.0004)	1000
Weibull	-0.5029	0.0071	0.0860 (0.0019)	-0.0029 (0.0027)	0.9500 (0.0069)	0.0074 (0.0003)	1000
Gompertz	-0.5287	0.0072	0.0904 (0.0034)	-0.0287 (0.0047)	0.9286 (0.0135)	0.0090 (0.0007)	364
RP (3)	-0.4996	0.0071	0.0854 (0.0019)	0.0004 (0.0027)	0.9449 (0.0072)	0.0073 (0.0003)	999
RP (5)	-0.5001	0.0071	0.0856 (0.0019)	-0.0001 (0.0027)	0.9450 (0.0072)	0.0073 (0.0003)	1000
RP (9)	-0.5002	0.0072	0.0856 (0.0019)	-0.0002 (0.0027)	0.9430 (0.0073)	0.0073 (0.0003)	1000
RP (P)	-0.5004	0.0071	0.0855 (0.0019)	-0.0004 (0.0027)	0.9460 (0.0071)	0.0073 (0.0003)	1000
FP (W)	-0.5029	0.0071	0.0860 (0.0019)	-0.0029 (0.0027)	0.9500 (0.0069)	0.0074 (0.0003)	1000
FP (k=10)	-0.4959	0.0072	0.0856 (0.0019)	0.0041 (0.0027)	0.9470 (0.0071)	0.0073 (0.0003)	1000
FP (k=10000)	-0.4947	0.0063	0.0843 (0.0019)	0.0053 (0.0027)	0.9390 (0.0076)	0.0071 (0.0003)	1000
Model frailty: Normal							
Cox	-0.5009	0.0072	0.0859 (0.0019)	-0.0009 (0.0027)	0.9460 (0.0071)	0.0074 (0.0003)	1000
Exp	-0.5279	0.0071	0.0900 (0.0020)	-0.0279 (0.0029)	0.9335 (0.0079)	0.0089 (0.0004)	992
Weibull	-0.5032	0.0072	0.0864 (0.0019)	-0.0032 (0.0027)	0.9496 (0.0069)	0.0075 (0.0003)	993
Gompertz	-0.5253	0.0072	0.0932 (0.0036)	-0.0253 (0.0051)	0.9063 (0.0160)	0.0093 (0.0008)	331
RP (3)	-0.5009	0.0072	0.0858 (0.0019)	-0.0009 (0.0027)	0.9480 (0.0070)	0.0074 (0.0003)	1000
RP (5)	-0.5014	0.0072	0.0860 (0.0019)	-0.0014 (0.0027)	0.9480 (0.0070)	0.0074 (0.0003)	1000
RP (9)	-0.5015	0.0072	0.0860 (0.0019)	-0.0015 (0.0027)	0.9470 (0.0071)	0.0074 (0.0003)	1000
RP (P)	-0.5015	0.0072	0.0858 (0.0019)	-0.0015 (0.0027)	0.9480 (0.0070)	0.0074 (0.0003)	1000
FP (W)	-0.5031	0.0072	0.0858 (0.0020)	-0.0031 (0.0028)	0.9513 (0.0069)	0.0074 (0.0003)	966
FP (k=10)	-0.4969	0.0072	0.0864 (0.0019)	0.0031 (0.0027)	0.9455 (0.0072)	0.0075 (0.0003)	991
FP (k=10000)	-0.4965	0.0066	0.0845 (0.0019)	0.0035 (0.0027)	0.9460 (0.0071)	0.0071 (0.0003)	1000

Table 46: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4999	0.0060	0.0829 (0.0019)	0.0001 (0.0026)	0.9284 (0.0082)	0.0069 (0.0003)	992
Exp	-0.5040	0.0059	0.0823 (0.0018)	-0.0040 (0.0026)	0.9380 (0.0076)	0.0068 (0.0003)	1000
Weibull	-0.5012	0.0060	0.0828 (0.0019)	-0.0012 (0.0026)	0.9350 (0.0078)	0.0068 (0.0003)	1000
Gompertz	-0.5097	0.0060	0.0837 (0.0030)	-0.0097 (0.0042)	0.9391 (0.0120)	0.0071 (0.0005)	394
RP (3)	-0.5007	0.0060	0.0832 (0.0019)	-0.0007 (0.0026)	0.9296 (0.0081)	0.0069 (0.0003)	995
RP (5)	-0.5008	0.0060	0.0831 (0.0019)	-0.0008 (0.0026)	0.9299 (0.0081)	0.0069 (0.0003)	998
RP (9)	-0.5009	0.0060	0.0831 (0.0019)	-0.0009 (0.0026)	0.9290 (0.0081)	0.0069 (0.0003)	1000
RP (P)	-0.5010	0.0060	0.0829 (0.0019)	-0.0010 (0.0026)	0.9310 (0.0080)	0.0069 (0.0003)	1000
FP (W)	-0.5013	0.0060	0.0828 (0.0019)	-0.0013 (0.0026)	0.9349 (0.0078)	0.0068 (0.0003)	999
FP (k=10)	-0.4982	0.0060	0.0831 (0.0019)	0.0018 (0.0026)	0.9320 (0.0080)	0.0069 (0.0003)	1000
FP (k=10000)	-0.4996	0.0052	0.0829 (0.0019)	0.0004 (0.0026)	0.9100 (0.0090)	0.0069 (0.0003)	1000
Model frailty: Normal							
Cox	-0.5030	0.0060	0.0832 (0.0019)	-0.0030 (0.0026)	0.9320 (0.0080)	0.0069 (0.0003)	1000
Exp	-0.5033	0.0059	0.0816 (0.0018)	-0.0033 (0.0026)	0.9395 (0.0076)	0.0067 (0.0003)	991
Weibull	-0.5041	0.0060	0.0829 (0.0019)	-0.0041 (0.0026)	0.9346 (0.0078)	0.0069 (0.0003)	994
Gompertz	-0.5072	0.0060	0.0832 (0.0031)	-0.0072 (0.0043)	0.9353 (0.0128)	0.0070 (0.0005)	371
RP (3)	-0.5037	0.0061	0.0834 (0.0019)	-0.0037 (0.0026)	0.9320 (0.0080)	0.0070 (0.0003)	1000
RP (5)	-0.5038	0.0061	0.0834 (0.0019)	-0.0038 (0.0026)	0.9320 (0.0080)	0.0070 (0.0003)	1000
RP (9)	-0.5039	0.0061	0.0834 (0.0019)	-0.0039 (0.0026)	0.9320 (0.0080)	0.0070 (0.0003)	1000
RP (P)	-0.5040	0.0060	0.0832 (0.0019)	-0.0040 (0.0026)	0.9320 (0.0080)	0.0069 (0.0003)	1000
FP (W)	-0.5051	0.0060	0.0833 (0.0019)	-0.0051 (0.0027)	0.9315 (0.0081)	0.0070 (0.0003)	964
FP (k=10)	-0.5008	0.0061	0.0833 (0.0019)	-0.0008 (0.0027)	0.9335 (0.0080)	0.0069 (0.0003)	978
FP (k=10000)	-0.5027	0.0054	0.0831 (0.0019)	-0.0027 (0.0026)	0.9148 (0.0088)	0.0069 (0.0003)	998

Table 47: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4993	0.0066	0.0809 (0.0018)	0.0007 (0.0026)	0.9498 (0.0069)	0.0065 (0.0003)	996
Exp	-0.5721	0.0067	0.0926 (0.0021)	-0.0721 (0.0029)	0.8260 (0.0120)	0.0138 (0.0006)	1000
Weibull	-0.5011	0.0066	0.0813 (0.0018)	-0.0011 (0.0026)	0.9520 (0.0068)	0.0066 (0.0003)	1000
Gompertz	-0.5680	0.0068	0.0905 (0.0043)	-0.0680 (0.0061)	0.8409 (0.0247)	0.0128 (0.0011)	220
RP (3)	-0.4994	0.0066	0.0812 (0.0018)	0.0006 (0.0026)	0.9489 (0.0070)	0.0066 (0.0003)	998
RP (5)	-0.4996	0.0066	0.0812 (0.0018)	0.0004 (0.0026)	0.9490 (0.0070)	0.0066 (0.0003)	1000
RP (9)	-0.4997	0.0066	0.0812 (0.0018)	0.0003 (0.0026)	0.9490 (0.0070)	0.0066 (0.0003)	1000
RP (P)	-0.5004	0.0066	0.0812 (0.0018)	-0.0004 (0.0026)	0.9510 (0.0068)	0.0066 (0.0003)	1000
FP (W)	-0.5011	0.0066	0.0813 (0.0018)	-0.0011 (0.0026)	0.9520 (0.0068)	0.0066 (0.0003)	1000
FP (k=10)	-0.4951	0.0066	0.0823 (0.0018)	0.0049 (0.0026)	0.9460 (0.0071)	0.0068 (0.0003)	1000
FP (k=10000)	-0.5204	0.0058	0.0849 (0.0019)	-0.0204 (0.0027)	0.9230 (0.0084)	0.0076 (0.0003)	1000
Model frailty: Normal							
Cox	-0.5023	0.0066	0.0813 (0.0018)	-0.0023 (0.0026)	0.9490 (0.0070)	0.0066 (0.0003)	1000
Exp	-0.5720	0.0067	0.0922 (0.0021)	-0.0720 (0.0029)	0.8318 (0.0119)	0.0137 (0.0006)	993
Weibull	-0.5042	0.0066	0.0814 (0.0018)	-0.0042 (0.0026)	0.9496 (0.0069)	0.0066 (0.0003)	992
Gompertz	-0.5717	0.0069	0.0889 (0.0034)	-0.0717 (0.0048)	0.8480 (0.0194)	0.0130 (0.0009)	342
RP (3)	-0.5030	0.0066	0.0813 (0.0018)	-0.0030 (0.0026)	0.9500 (0.0069)	0.0066 (0.0003)	1000
RP (5)	-0.5031	0.0066	0.0814 (0.0018)	-0.0031 (0.0026)	0.9490 (0.0070)	0.0066 (0.0003)	1000
RP (9)	-0.5032	0.0066	0.0814 (0.0018)	-0.0032 (0.0026)	0.9490 (0.0070)	0.0066 (0.0003)	1000
RP (P)	-0.5039	0.0066	0.0814 (0.0018)	-0.0039 (0.0026)	0.9500 (0.0069)	0.0066 (0.0003)	1000
FP (W)	-0.5034	0.0066	0.0820 (0.0019)	-0.0034 (0.0027)	0.9514 (0.0070)	0.0067 (0.0003)	946
FP (k=10)	-0.4994	0.0067	0.0824 (0.0019)	0.0006 (0.0026)	0.9504 (0.0069)	0.0068 (0.0003)	988
FP (k=10000)	-0.5238	0.0061	0.0851 (0.0019)	-0.0238 (0.0027)	0.9198 (0.0086)	0.0078 (0.0003)	997

Table 48: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4975	0.0054	0.0752 (0.0017)	0.0025 (0.0024)	0.9425 (0.0074)	0.0057 (0.0003)	991
Exp	-0.4296	0.0051	0.0653 (0.0015)	0.0704 (0.0021)	0.8490 (0.0113)	0.0092 (0.0004)	1000
Weibull	-0.4765	0.0054	0.0722 (0.0016)	0.0235 (0.0023)	0.9400 (0.0075)	0.0058 (0.0003)	1000
Gompertz	-0.4433	0.0053	0.0701 (0.0025)	0.0567 (0.0035)	0.8911 (0.0155)	0.0081 (0.0006)	404
RP (3)	-0.4980	0.0054	0.0753 (0.0017)	0.0020 (0.0024)	0.9420 (0.0074)	0.0057 (0.0003)	1000
RP (5)	-0.4983	0.0054	0.0754 (0.0017)	0.0017 (0.0024)	0.9429 (0.0073)	0.0057 (0.0003)	999
RP (9)	-0.4986	0.0054	0.0754 (0.0017)	0.0014 (0.0024)	0.9450 (0.0072)	0.0057 (0.0003)	1000
RP (P)	-0.4938	0.0054	0.0747 (0.0017)	0.0062 (0.0024)	0.9420 (0.0074)	0.0056 (0.0003)	1000
FP (W)	-0.4765	0.0054	0.0722 (0.0016)	0.0235 (0.0023)	0.9400 (0.0075)	0.0058 (0.0003)	1000
FP (k=10)	-0.4956	0.0054	0.0754 (0.0017)	0.0044 (0.0024)	0.9400 (0.0075)	0.0057 (0.0003)	1000
FP (k=10000)	-0.4940	0.0046	0.0749 (0.0017)	0.0060 (0.0024)	0.9200 (0.0086)	0.0056 (0.0003)	1000
Model frailty: Normal							
Cox	-0.4991	0.0054	0.0753 (0.0017)	0.0009 (0.0024)	0.9460 (0.0071)	0.0057 (0.0003)	1000
Exp	-0.4289	0.0052	0.0652 (0.0015)	0.0711 (0.0021)	0.8523 (0.0112)	0.0093 (0.0004)	995
Weibull	-0.4792	0.0054	0.0725 (0.0016)	0.0208 (0.0023)	0.9425 (0.0074)	0.0057 (0.0003)	992
Gompertz	-0.4405	0.0053	0.0728 (0.0021)	0.0595 (0.0030)	0.8701 (0.0136)	0.0088 (0.0005)	608
RP (3)	-0.4996	0.0055	0.0754 (0.0017)	0.0004 (0.0024)	0.9440 (0.0073)	0.0057 (0.0003)	1000
RP (5)	-0.5000	0.0055	0.0755 (0.0017)	0.0000 (0.0024)	0.9460 (0.0071)	0.0057 (0.0003)	1000
RP (9)	-0.5001	0.0055	0.0755 (0.0017)	-0.0001 (0.0024)	0.9440 (0.0073)	0.0057 (0.0003)	1000
RP (P)	-0.4955	0.0054	0.0748 (0.0017)	0.0045 (0.0024)	0.9490 (0.0070)	0.0056 (0.0003)	1000
FP (W)	-0.4794	0.0054	0.0727 (0.0017)	0.0206 (0.0023)	0.9429 (0.0075)	0.0057 (0.0003)	964
FP (k=10)	-0.4973	0.0055	0.0756 (0.0017)	0.0027 (0.0024)	0.9412 (0.0075)	0.0057 (0.0003)	987
FP (k=10000)	-0.4973	0.0047	0.0748 (0.0017)	0.0027 (0.0024)	0.9254 (0.0083)	0.0056 (0.0003)	992

Table 49: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4947	0.0055	0.0750 (0.0017)	0.0053 (0.0024)	0.9476 (0.0071)	0.0056 (0.0002)	993
Exp	-0.3725	0.0052	0.0568 (0.0013)	0.1275 (0.0018)	0.5720 (0.0156)	0.0195 (0.0005)	1000
Weibull	-0.5165	0.0056	0.0785 (0.0018)	-0.0165 (0.0025)	0.9320 (0.0080)	0.0064 (0.0003)	1000
Gompertz	-0.4722	0.0055	0.0771 (0.0017)	0.0278 (0.0025)	0.9253 (0.0084)	0.0067 (0.0003)	990
RP (3)	-0.4962	0.0056	0.0751 (0.0017)	0.0038 (0.0024)	0.9479 (0.0070)	0.0057 (0.0002)	999
RP (5)	-0.4957	0.0056	0.0750 (0.0017)	0.0043 (0.0024)	0.9490 (0.0070)	0.0056 (0.0002)	1000
RP (9)	-0.4959	0.0056	0.0751 (0.0017)	0.0041 (0.0024)	0.9500 (0.0069)	0.0057 (0.0002)	1000
RP (P)	-0.4963	0.0056	0.0751 (0.0017)	0.0037 (0.0024)	0.9508 (0.0069)	0.0056 (0.0002)	996
FP (W)	-0.5164	0.0056	0.0785 (0.0018)	-0.0164 (0.0025)	0.9319 (0.0080)	0.0064 (0.0003)	999
FP (k=10)	-0.4797	0.0056	0.0759 (0.0017)	0.0203 (0.0024)	0.9450 (0.0072)	0.0062 (0.0003)	1000
FP (k=10000)	-0.5394	0.0048	0.0852 (0.0019)	-0.0394 (0.0027)	0.8480 (0.0114)	0.0088 (0.0004)	1000
Model frailty: Normal							
Cox	-0.4974	0.0055	0.0751 (0.0017)	0.0026 (0.0024)	0.9520 (0.0068)	0.0056 (0.0002)	1000
Exp	-0.3716	0.0052	0.0566 (0.0013)	0.1284 (0.0018)	0.5666 (0.0157)	0.0197 (0.0005)	999
Weibull	-0.5180	0.0056	0.0783 (0.0018)	-0.0180 (0.0025)	0.9262 (0.0083)	0.0064 (0.0003)	989
Gompertz	-0.4704	0.0055	0.0769 (0.0018)	0.0296 (0.0025)	0.9270 (0.0084)	0.0068 (0.0003)	959
RP (3)	-0.4986	0.0056	0.0752 (0.0017)	0.0014 (0.0024)	0.9510 (0.0068)	0.0056 (0.0002)	1000
RP (5)	-0.4983	0.0056	0.0751 (0.0017)	0.0017 (0.0024)	0.9510 (0.0068)	0.0056 (0.0002)	1000
RP (9)	-0.4984	0.0056	0.0752 (0.0017)	0.0016 (0.0024)	0.9520 (0.0068)	0.0057 (0.0002)	1000
RP (P)	-0.4990	0.0056	0.0753 (0.0017)	0.0010 (0.0024)	0.9530 (0.0067)	0.0057 (0.0002)	1000
FP (W)	-0.5183	0.0056	0.0778 (0.0018)	-0.0183 (0.0025)	0.9279 (0.0084)	0.0064 (0.0003)	943
FP (k=10)	-0.4873	0.0056	0.0756 (0.0017)	0.0127 (0.0024)	0.9438 (0.0073)	0.0059 (0.0003)	997
FP (k=10000)	-0.5442	0.0050	0.0856 (0.0019)	-0.0442 (0.0027)	0.8479 (0.0114)	0.0093 (0.0004)	993

Table 50: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4994	0.0062	0.0816 (0.0018)	0.0006 (0.0026)	0.9438 (0.0073)	0.0066 (0.0003)	996
Exp	-0.5331	0.0062	0.0859 (0.0019)	-0.0331 (0.0027)	0.9090 (0.0091)	0.0085 (0.0004)	1000
Weibull	-0.5013	0.0062	0.0815 (0.0018)	-0.0013 (0.0026)	0.9430 (0.0073)	0.0066 (0.0003)	1000
Gompertz	-0.5220	0.0063	0.0799 (0.0045)	-0.0220 (0.0064)	0.9427 (0.0186)	0.0068 (0.0008)	157
RP (3)	-0.4997	0.0063	0.0814 (0.0018)	0.0003 (0.0026)	0.9439 (0.0073)	0.0066 (0.0003)	999
RP (5)	-0.5002	0.0063	0.0815 (0.0018)	-0.0002 (0.0026)	0.9440 (0.0073)	0.0066 (0.0003)	1000
RP (9)	-0.5003	0.0063	0.0815 (0.0018)	-0.0003 (0.0026)	0.9450 (0.0072)	0.0066 (0.0003)	1000
RP (P)	-0.5004	0.0063	0.0815 (0.0018)	-0.0004 (0.0026)	0.9459 (0.0072)	0.0066 (0.0003)	998
FP (W)	-0.5013	0.0062	0.0815 (0.0018)	-0.0013 (0.0026)	0.9430 (0.0073)	0.0066 (0.0003)	1000
FP (k=10)	-0.4971	0.0063	0.0816 (0.0018)	0.0029 (0.0026)	0.9420 (0.0074)	0.0067 (0.0003)	1000
FP (k=10000)	-0.4962	0.0054	0.0808 (0.0018)	0.0038 (0.0026)	0.9240 (0.0084)	0.0065 (0.0003)	1000
Model frailty: Normal							
Cox	-0.5023	0.0063	0.0816 (0.0018)	-0.0023 (0.0026)	0.9430 (0.0073)	0.0067 (0.0003)	1000
Exp	-0.5322	0.0062	0.0855 (0.0019)	-0.0322 (0.0027)	0.9125 (0.0090)	0.0083 (0.0004)	994
Weibull	-0.5037	0.0063	0.0818 (0.0018)	-0.0037 (0.0026)	0.9416 (0.0074)	0.0067 (0.0003)	994
Gompertz	-0.5302	0.0063	0.0860 (0.0032)	-0.0302 (0.0046)	0.9150 (0.0148)	0.0083 (0.0007)	353
RP (3)	-0.5025	0.0063	0.0815 (0.0018)	-0.0025 (0.0026)	0.9430 (0.0073)	0.0066 (0.0003)	1000
RP (5)	-0.5030	0.0063	0.0817 (0.0018)	-0.0030 (0.0026)	0.9430 (0.0073)	0.0067 (0.0003)	1000
RP (9)	-0.5032	0.0063	0.0817 (0.0018)	-0.0032 (0.0026)	0.9420 (0.0074)	0.0067 (0.0003)	1000
RP (P)	-0.5030	0.0063	0.0816 (0.0018)	-0.0030 (0.0026)	0.9440 (0.0073)	0.0067 (0.0003)	1000
FP (W)	-0.5046	0.0063	0.0814 (0.0019)	-0.0046 (0.0027)	0.9457 (0.0074)	0.0066 (0.0003)	939
FP (k=10)	-0.4991	0.0063	0.0816 (0.0018)	0.0009 (0.0026)	0.9426 (0.0074)	0.0066 (0.0003)	976
FP (k=10000)	-0.4989	0.0056	0.0807 (0.0018)	0.0011 (0.0026)	0.9296 (0.0081)	0.0065 (0.0003)	995

Table 51: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5025	0.0076	0.0902 (0.0020)	-0.0025 (0.0029)	0.9476 (0.0071)	0.0081 (0.0004)	993
Exp	-0.5027	0.0075	0.0887 (0.0020)	-0.0027 (0.0028)	0.9470 (0.0071)	0.0079 (0.0003)	1000
Weibull	-0.5038	0.0076	0.0899 (0.0020)	-0.0038 (0.0028)	0.9470 (0.0071)	0.0081 (0.0004)	1000
Gompertz	-0.5062	0.0076	0.0887 (0.0032)	-0.0062 (0.0045)	0.9596 (0.0099)	0.0079 (0.0005)	396
RP (3)	-0.5034	0.0077	0.0902 (0.0020)	-0.0034 (0.0029)	0.9476 (0.0071)	0.0081 (0.0004)	993
RP (5)	-0.5034	0.0077	0.0901 (0.0020)	-0.0034 (0.0029)	0.9479 (0.0070)	0.0081 (0.0004)	998
RP (9)	-0.5037	0.0077	0.0902 (0.0020)	-0.0037 (0.0029)	0.9478 (0.0070)	0.0081 (0.0004)	997
RP (P)	-0.5039	0.0076	0.0895 (0.0020)	-0.0039 (0.0029)	0.9488 (0.0070)	0.0080 (0.0004)	977
FP (W)	-0.5038	0.0076	0.0899 (0.0020)	-0.0038 (0.0028)	0.9470 (0.0071)	0.0081 (0.0004)	1000
FP (k=10)	-0.4999	0.0077	0.0901 (0.0020)	0.0001 (0.0028)	0.9470 (0.0071)	0.0081 (0.0004)	1000
FP (k=10000)	-0.5011	0.0069	0.0897 (0.0020)	-0.0011 (0.0028)	0.9390 (0.0076)	0.0080 (0.0004)	1000
Model frailty: Normal							
Cox	-0.5057	0.0077	0.0908 (0.0020)	-0.0057 (0.0029)	0.9490 (0.0070)	0.0083 (0.0004)	1000
Exp	-0.5017	0.0076	0.0888 (0.0020)	-0.0017 (0.0028)	0.9487 (0.0070)	0.0079 (0.0003)	994
Weibull	-0.5057	0.0077	0.0908 (0.0020)	-0.0057 (0.0029)	0.9446 (0.0073)	0.0083 (0.0004)	992
Gompertz	-0.5091	0.0077	0.0894 (0.0031)	-0.0091 (0.0044)	0.9539 (0.0103)	0.0081 (0.0005)	412
RP (3)	-0.5057	0.0077	0.0908 (0.0020)	-0.0057 (0.0029)	0.9480 (0.0070)	0.0083 (0.0004)	1000
RP (5)	-0.5058	0.0077	0.0908 (0.0020)	-0.0058 (0.0029)	0.9490 (0.0070)	0.0083 (0.0004)	1000
RP (9)	-0.5060	0.0077	0.0909 (0.0020)	-0.0060 (0.0029)	0.9490 (0.0070)	0.0083 (0.0004)	1000
RP (P)	-0.5059	0.0077	0.0906 (0.0020)	-0.0059 (0.0029)	0.9460 (0.0071)	0.0082 (0.0004)	1000
FP (W)	-0.5058	0.0077	0.0909 (0.0020)	-0.0058 (0.0029)	0.9442 (0.0073)	0.0083 (0.0004)	986
FP (k=10)	-0.5014	0.0077	0.0908 (0.0021)	-0.0014 (0.0029)	0.9465 (0.0072)	0.0082 (0.0004)	972
FP (k=10000)	-0.5052	0.0072	0.0905 (0.0020)	-0.0052 (0.0029)	0.9429 (0.0073)	0.0082 (0.0004)	999

Table 52: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4987	0.0085	0.0962 (0.0022)	0.0013 (0.0030)	0.9408 (0.0075)	0.0092 (0.0004)	996
Exp	-0.5616	0.0086	0.1077 (0.0024)	-0.0616 (0.0034)	0.8560 (0.0111)	0.0154 (0.0007)	1000
Weibull	-0.5009	0.0085	0.0962 (0.0022)	-0.0009 (0.0030)	0.9390 (0.0076)	0.0093 (0.0004)	1000
Gompertz	-0.5582	0.0087	0.1040 (0.0042)	-0.0582 (0.0059)	0.8738 (0.0189)	0.0142 (0.0011)	309
RP (3)	-0.4996	0.0085	0.0961 (0.0022)	0.0004 (0.0030)	0.9419 (0.0074)	0.0092 (0.0004)	999
RP (5)	-0.4995	0.0085	0.0962 (0.0022)	0.0005 (0.0030)	0.9409 (0.0075)	0.0093 (0.0004)	999
RP (9)	-0.4996	0.0085	0.0962 (0.0022)	0.0004 (0.0030)	0.9409 (0.0075)	0.0093 (0.0004)	999
RP (P)	-0.4999	0.0085	0.0962 (0.0022)	0.0001 (0.0030)	0.9407 (0.0075)	0.0092 (0.0004)	995
FP (W)	-0.5009	0.0085	0.0962 (0.0022)	-0.0009 (0.0030)	0.9390 (0.0076)	0.0093 (0.0004)	1000
FP (k=10)	-0.4936	0.0085	0.0971 (0.0022)	0.0064 (0.0031)	0.9360 (0.0077)	0.0095 (0.0004)	1000
FP (k=10000)	-0.5155	0.0077	0.0998 (0.0022)	-0.0155 (0.0032)	0.9100 (0.0090)	0.0102 (0.0005)	1000
Model frailty: Normal							
Cox	-0.5020	0.0085	0.0968 (0.0022)	-0.0020 (0.0031)	0.9370 (0.0077)	0.0094 (0.0004)	1000
Exp	-0.5616	0.0086	0.1083 (0.0024)	-0.0616 (0.0034)	0.8596 (0.0110)	0.0155 (0.0007)	990
Weibull	-0.5029	0.0086	0.0966 (0.0022)	-0.0029 (0.0031)	0.9406 (0.0075)	0.0093 (0.0004)	993
Gompertz	-0.5644	0.0087	0.1087 (0.0042)	-0.0644 (0.0059)	0.8513 (0.0192)	0.0159 (0.0011)	343
RP (3)	-0.5021	0.0086	0.0968 (0.0022)	-0.0021 (0.0031)	0.9380 (0.0076)	0.0094 (0.0004)	1000
RP (5)	-0.5022	0.0086	0.0969 (0.0022)	-0.0022 (0.0031)	0.9380 (0.0076)	0.0094 (0.0004)	1000
RP (9)	-0.5023	0.0086	0.0969 (0.0022)	-0.0023 (0.0031)	0.9370 (0.0077)	0.0094 (0.0004)	1000
RP (P)	-0.5028	0.0086	0.0968 (0.0022)	-0.0028 (0.0031)	0.9390 (0.0076)	0.0094 (0.0004)	1000
FP (W)	-0.5034	0.0086	0.0970 (0.0022)	-0.0034 (0.0031)	0.9403 (0.0076)	0.0094 (0.0004)	971
FP (k=10)	-0.4969	0.0086	0.0973 (0.0022)	0.0031 (0.0031)	0.9366 (0.0077)	0.0095 (0.0004)	993
FP (k=10000)	-0.5169	0.0082	0.1007 (0.0023)	-0.0169 (0.0032)	0.9200 (0.0086)	0.0104 (0.0005)	1000

Table 53: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4977	0.0066	0.0785 (0.0018)	0.0023 (0.0025)	0.9580 (0.0063)	0.0062 (0.0003)	999
Exp	-0.4318	0.0064	0.0686 (0.0015)	0.0682 (0.0022)	0.9000 (0.0095)	0.0094 (0.0004)	1000
Weibull	-0.4815	0.0066	0.0761 (0.0017)	0.0185 (0.0024)	0.9570 (0.0064)	0.0061 (0.0003)	1000
Gompertz	-0.4305	0.0065	0.0668 (0.0022)	0.0695 (0.0030)	0.9002 (0.0137)	0.0093 (0.0005)	481
RP (3)	-0.4985	0.0067	0.0786 (0.0018)	0.0015 (0.0025)	0.9590 (0.0063)	0.0062 (0.0003)	1000
RP (5)	-0.4986	0.0067	0.0787 (0.0018)	0.0014 (0.0025)	0.9599 (0.0062)	0.0062 (0.0003)	998
RP (9)	-0.4986	0.0067	0.0787 (0.0018)	0.0014 (0.0025)	0.9589 (0.0063)	0.0062 (0.0003)	997
RP (P)	-0.4952	0.0066	0.0778 (0.0018)	0.0048 (0.0025)	0.9591 (0.0063)	0.0061 (0.0003)	978
FP (W)	-0.4815	0.0066	0.0761 (0.0017)	0.0185 (0.0024)	0.9570 (0.0064)	0.0061 (0.0003)	1000
FP (k=10)	-0.4955	0.0066	0.0785 (0.0018)	0.0045 (0.0025)	0.9570 (0.0064)	0.0062 (0.0003)	1000
FP (k=10000)	-0.4950	0.0059	0.0784 (0.0018)	0.0050 (0.0025)	0.9440 (0.0073)	0.0062 (0.0003)	1000
Model frailty: Normal							
Cox	-0.4993	0.0067	0.0791 (0.0018)	0.0007 (0.0025)	0.9590 (0.0063)	0.0063 (0.0003)	1000
Exp	-0.4303	0.0064	0.0686 (0.0015)	0.0697 (0.0022)	0.8984 (0.0096)	0.0096 (0.0004)	994
Weibull	-0.4829	0.0066	0.0763 (0.0017)	0.0171 (0.0024)	0.9595 (0.0063)	0.0061 (0.0003)	988
Gompertz	-0.4331	0.0065	0.0690 (0.0023)	0.0669 (0.0032)	0.9106 (0.0132)	0.0092 (0.0005)	470
RP (3)	-0.4996	0.0067	0.0792 (0.0018)	0.0004 (0.0025)	0.9590 (0.0063)	0.0063 (0.0003)	1000
RP (5)	-0.4997	0.0067	0.0792 (0.0018)	0.0003 (0.0025)	0.9580 (0.0063)	0.0063 (0.0003)	1000
RP (9)	-0.4998	0.0067	0.0792 (0.0018)	0.0002 (0.0025)	0.9590 (0.0063)	0.0063 (0.0003)	1000
RP (P)	-0.4958	0.0067	0.0786 (0.0018)	0.0042 (0.0025)	0.9570 (0.0064)	0.0062 (0.0003)	1000
FP (W)	-0.4835	0.0066	0.0771 (0.0017)	0.0165 (0.0024)	0.9577 (0.0064)	0.0062 (0.0003)	992
FP (k=10)	-0.4964	0.0067	0.0792 (0.0018)	0.0036 (0.0025)	0.9580 (0.0063)	0.0063 (0.0003)	1000
FP (k=10000)	-0.4979	0.0062	0.0792 (0.0018)	0.0021 (0.0025)	0.9510 (0.0068)	0.0063 (0.0003)	1000

Table 54: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5045	0.0068	0.0839 (0.0019)	-0.0045 (0.0027)	0.9456 (0.0072)	0.0070 (0.0003)	992
Exp	-0.3900	0.0065	0.0661 (0.0015)	0.1100 (0.0021)	0.7620 (0.0135)	0.0165 (0.0005)	1000
Weibull	-0.5223	0.0069	0.0873 (0.0020)	-0.0223 (0.0028)	0.9270 (0.0082)	0.0081 (0.0004)	1000
Gompertz	-0.4001	0.0066	0.0790 (0.0029)	0.0999 (0.0040)	0.7870 (0.0209)	0.0162 (0.0008)	385
RP (3)	-0.5057	0.0069	0.0843 (0.0019)	-0.0057 (0.0027)	0.9435 (0.0073)	0.0071 (0.0003)	991
RP (5)	-0.5049	0.0069	0.0846 (0.0019)	-0.0049 (0.0027)	0.9438 (0.0073)	0.0072 (0.0003)	996
RP (9)	-0.5048	0.0069	0.0845 (0.0019)	-0.0048 (0.0027)	0.9436 (0.0073)	0.0072 (0.0003)	993
RP (P)	-0.5063	0.0069	0.0848 (0.0019)	-0.0063 (0.0027)	0.9428 (0.0075)	0.0072 (0.0003)	961
FP (W)	-0.5223	0.0069	0.0871 (0.0020)	-0.0223 (0.0028)	0.9278 (0.0082)	0.0081 (0.0004)	997
FP (k=10)	-0.4901	0.0069	0.0849 (0.0019)	0.0099 (0.0027)	0.9380 (0.0076)	0.0073 (0.0003)	1000
FP (k=10000)	-0.5393	0.0062	0.0927 (0.0021)	-0.0393 (0.0029)	0.8780 (0.0103)	0.0101 (0.0005)	1000
Model frailty: Normal							
Cox	-0.5055	0.0069	0.0849 (0.0019)	-0.0055 (0.0027)	0.9440 (0.0073)	0.0072 (0.0003)	1000
Exp	-0.3875	0.0065	0.0657 (0.0015)	0.1125 (0.0021)	0.7525 (0.0137)	0.0170 (0.0005)	994
Weibull	-0.5219	0.0069	0.0872 (0.0020)	-0.0219 (0.0028)	0.9298 (0.0081)	0.0081 (0.0004)	983
Gompertz	-0.3960	0.0066	0.0754 (0.0022)	0.1040 (0.0032)	0.7681 (0.0178)	0.0165 (0.0007)	565
RP (3)	-0.5065	0.0069	0.0849 (0.0019)	-0.0065 (0.0027)	0.9440 (0.0073)	0.0072 (0.0003)	1000
RP (5)	-0.5058	0.0069	0.0849 (0.0019)	-0.0058 (0.0027)	0.9430 (0.0073)	0.0072 (0.0003)	1000
RP (9)	-0.5059	0.0069	0.0849 (0.0019)	-0.0059 (0.0027)	0.9430 (0.0073)	0.0072 (0.0003)	1000
RP (P)	-0.5063	0.0069	0.0849 (0.0019)	-0.0063 (0.0027)	0.9440 (0.0073)	0.0072 (0.0003)	1000
FP (W)	-0.5217	0.0069	0.0870 (0.0020)	-0.0217 (0.0028)	0.9317 (0.0081)	0.0080 (0.0004)	967
FP (k=10)	-0.4978	0.0069	0.0851 (0.0019)	0.0022 (0.0027)	0.9439 (0.0073)	0.0072 (0.0003)	999
FP (k=10000)	-0.5364	0.0066	0.0936 (0.0021)	-0.0364 (0.0030)	0.8848 (0.0101)	0.0101 (0.0005)	998

Table 55: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5004	0.0080	0.0884 (0.0020)	-0.0004 (0.0028)	0.9548 (0.0066)	0.0078 (0.0003)	995
Exp	-0.5280	0.0080	0.0925 (0.0021)	-0.0280 (0.0029)	0.9300 (0.0081)	0.0093 (0.0004)	1000
Weibull	-0.5020	0.0080	0.0886 (0.0020)	-0.0020 (0.0028)	0.9560 (0.0065)	0.0078 (0.0004)	1000
Gompertz	-0.5343	0.0081	0.0866 (0.0034)	-0.0343 (0.0047)	0.9403 (0.0129)	0.0087 (0.0006)	335
RP (3)	-0.5002	0.0080	0.0885 (0.0020)	-0.0002 (0.0028)	0.9560 (0.0065)	0.0078 (0.0003)	999
RP (5)	-0.5010	0.0080	0.0885 (0.0020)	-0.0010 (0.0028)	0.9560 (0.0065)	0.0078 (0.0003)	1000
RP (9)	-0.5013	0.0080	0.0886 (0.0020)	-0.0013 (0.0028)	0.9549 (0.0066)	0.0079 (0.0004)	998
RP (P)	-0.5011	0.0080	0.0887 (0.0020)	-0.0011 (0.0028)	0.9554 (0.0066)	0.0079 (0.0004)	986
FP (W)	-0.5019	0.0080	0.0886 (0.0020)	-0.0019 (0.0028)	0.9560 (0.0065)	0.0078 (0.0004)	999
FP (k=10)	-0.4967	0.0080	0.0888 (0.0020)	0.0033 (0.0028)	0.9570 (0.0064)	0.0079 (0.0004)	1000
FP (k=10000)	-0.4953	0.0072	0.0876 (0.0020)	0.0047 (0.0028)	0.9460 (0.0071)	0.0077 (0.0003)	1000
Model frailty: Normal							
Cox	-0.5034	0.0081	0.0893 (0.0020)	-0.0034 (0.0028)	0.9520 (0.0068)	0.0080 (0.0004)	1000
Exp	-0.5264	0.0080	0.0927 (0.0021)	-0.0264 (0.0029)	0.9304 (0.0081)	0.0093 (0.0004)	992
Weibull	-0.5034	0.0081	0.0893 (0.0020)	-0.0034 (0.0028)	0.9567 (0.0065)	0.0080 (0.0004)	994
Gompertz	-0.5257	0.0081	0.0911 (0.0034)	-0.0257 (0.0049)	0.9286 (0.0138)	0.0089 (0.0007)	350
RP (3)	-0.5025	0.0081	0.0892 (0.0020)	-0.0025 (0.0028)	0.9570 (0.0064)	0.0080 (0.0004)	1000
RP (5)	-0.5034	0.0081	0.0892 (0.0020)	-0.0034 (0.0028)	0.9560 (0.0065)	0.0080 (0.0004)	1000
RP (9)	-0.5037	0.0081	0.0893 (0.0020)	-0.0037 (0.0028)	0.9550 (0.0066)	0.0080 (0.0004)	1000
RP (P)	-0.5031	0.0081	0.0892 (0.0020)	-0.0031 (0.0028)	0.9570 (0.0064)	0.0080 (0.0004)	1000
FP (W)	-0.5041	0.0081	0.0895 (0.0020)	-0.0041 (0.0029)	0.9569 (0.0065)	0.0080 (0.0004)	975
FP (k=10)	-0.4983	0.0081	0.0894 (0.0020)	0.0017 (0.0028)	0.9595 (0.0063)	0.0080 (0.0004)	987
FP (k=10000)	-0.4990	0.0076	0.0884 (0.0020)	0.0010 (0.0028)	0.9479 (0.0070)	0.0078 (0.0003)	999

Table 56: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4975	0.0063	0.0798 (0.0018)	0.0025 (0.0025)	0.9528 (0.0067)	0.0064 (0.0003)	995
Exp	-0.5026	0.0062	0.0799 (0.0018)	-0.0026 (0.0025)	0.9480 (0.0070)	0.0064 (0.0003)	1000
Weibull	-0.4982	0.0063	0.0801 (0.0018)	0.0018 (0.0025)	0.9520 (0.0068)	0.0064 (0.0003)	1000
Gompertz	-0.5015	0.0063	0.0770 (0.0030)	-0.0015 (0.0043)	0.9659 (0.0101)	0.0059 (0.0004)	323
RP (3)	-0.4983	0.0063	0.0805 (0.0018)	0.0017 (0.0026)	0.9507 (0.0069)	0.0065 (0.0003)	993
RP (5)	-0.4982	0.0063	0.0803 (0.0018)	0.0018 (0.0025)	0.9510 (0.0068)	0.0064 (0.0003)	999
RP (9)	-0.4982	0.0063	0.0803 (0.0018)	0.0018 (0.0025)	0.9510 (0.0068)	0.0065 (0.0003)	999
RP (P)	-0.4979	0.0063	0.0802 (0.0018)	0.0021 (0.0025)	0.9497 (0.0069)	0.0064 (0.0003)	994
FP (W)	-0.4982	0.0063	0.0801 (0.0018)	0.0018 (0.0025)	0.9520 (0.0068)	0.0064 (0.0003)	1000
FP (k=10)	-0.4958	0.0063	0.0804 (0.0018)	0.0042 (0.0025)	0.9490 (0.0070)	0.0065 (0.0003)	1000
FP (k=10000)	-0.4974	0.0056	0.0804 (0.0018)	0.0026 (0.0025)	0.9340 (0.0079)	0.0065 (0.0003)	1000
Model frailty: Normal							
Cox	-0.5014	0.0063	0.0806 (0.0018)	-0.0014 (0.0025)	0.9520 (0.0068)	0.0065 (0.0003)	999
Exp	-0.5015	0.0062	0.0798 (0.0018)	-0.0015 (0.0025)	0.9474 (0.0071)	0.0064 (0.0003)	989
Weibull	-0.5025	0.0063	0.0807 (0.0018)	-0.0025 (0.0026)	0.9475 (0.0071)	0.0065 (0.0003)	990
Gompertz	-0.4979	0.0063	0.0764 (0.0029)	0.0021 (0.0041)	0.9560 (0.0111)	0.0058 (0.0005)	341
RP (3)	-0.5024	0.0063	0.0809 (0.0018)	-0.0024 (0.0026)	0.9490 (0.0070)	0.0066 (0.0003)	1000
RP (5)	-0.5024	0.0063	0.0809 (0.0018)	-0.0024 (0.0026)	0.9510 (0.0068)	0.0065 (0.0003)	1000
RP (9)	-0.5024	0.0063	0.0809 (0.0018)	-0.0024 (0.0026)	0.9510 (0.0068)	0.0065 (0.0003)	1000
RP (P)	-0.5028	0.0063	0.0809 (0.0018)	-0.0028 (0.0026)	0.9480 (0.0070)	0.0065 (0.0003)	1000
FP (W)	-0.5026	0.0063	0.0806 (0.0018)	-0.0026 (0.0026)	0.9482 (0.0071)	0.0065 (0.0003)	966
FP (k=10)	-0.4996	0.0063	0.0811 (0.0018)	0.0004 (0.0026)	0.9495 (0.0070)	0.0066 (0.0003)	991
FP (k=10000)	-0.5011	0.0058	0.0807 (0.0018)	-0.0011 (0.0026)	0.9398 (0.0075)	0.0065 (0.0003)	997

Table 57: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4972	0.0068	0.0832 (0.0019)	0.0028 (0.0026)	0.9518 (0.0068)	0.0069 (0.0003)	995
Exp	-0.5788	0.0069	0.0966 (0.0022)	-0.0788 (0.0031)	0.7960 (0.0127)	0.0155 (0.0006)	1000
Weibull	-0.4997	0.0068	0.0838 (0.0019)	0.0003 (0.0027)	0.9480 (0.0070)	0.0070 (0.0003)	1000
Gompertz	-0.5815	0.0071	0.0909 (0.0049)	-0.0815 (0.0069)	0.8129 (0.0298)	0.0149 (0.0013)	171
RP (3)	-0.4976	0.0068	0.0836 (0.0019)	0.0024 (0.0026)	0.9520 (0.0068)	0.0070 (0.0003)	999
RP (5)	-0.4978	0.0068	0.0837 (0.0019)	0.0022 (0.0027)	0.9498 (0.0069)	0.0070 (0.0003)	997
RP (9)	-0.4978	0.0068	0.0836 (0.0019)	0.0022 (0.0026)	0.9500 (0.0069)	0.0070 (0.0003)	1000
RP (P)	-0.4988	0.0068	0.0837 (0.0019)	0.0012 (0.0026)	0.9509 (0.0068)	0.0070 (0.0003)	997
FP (W)	-0.4997	0.0068	0.0838 (0.0019)	0.0003 (0.0027)	0.9480 (0.0070)	0.0070 (0.0003)	1000
FP (k=10)	-0.4959	0.0069	0.0857 (0.0019)	0.0041 (0.0027)	0.9490 (0.0070)	0.0073 (0.0003)	1000
FP (k=10000)	-0.5275	0.0062	0.0888 (0.0020)	-0.0275 (0.0028)	0.9000 (0.0095)	0.0086 (0.0004)	1000
Model frailty: Normal							
Cox	-0.5016	0.0069	0.0839 (0.0019)	-0.0016 (0.0027)	0.9510 (0.0068)	0.0070 (0.0003)	1000
Exp	-0.5775	0.0070	0.0966 (0.0022)	-0.0775 (0.0031)	0.8091 (0.0125)	0.0153 (0.0006)	985
Weibull	-0.5047	0.0069	0.0843 (0.0019)	-0.0047 (0.0027)	0.9512 (0.0069)	0.0071 (0.0003)	983
Gompertz	-0.5748	0.0071	0.0898 (0.0040)	-0.0748 (0.0057)	0.8480 (0.0227)	0.0136 (0.0010)	250
RP (3)	-0.5027	0.0069	0.0842 (0.0019)	-0.0027 (0.0027)	0.9490 (0.0070)	0.0071 (0.0003)	1000
RP (5)	-0.5027	0.0069	0.0841 (0.0019)	-0.0027 (0.0027)	0.9520 (0.0068)	0.0071 (0.0003)	1000
RP (9)	-0.5027	0.0069	0.0841 (0.0019)	-0.0027 (0.0027)	0.9510 (0.0068)	0.0071 (0.0003)	1000
RP (P)	-0.5037	0.0069	0.0842 (0.0019)	-0.0037 (0.0027)	0.9510 (0.0068)	0.0071 (0.0003)	1000
FP (W)	-0.5040	0.0069	0.0844 (0.0019)	-0.0040 (0.0027)	0.9508 (0.0069)	0.0071 (0.0003)	976
FP (k=10)	-0.5016	0.0070	0.0853 (0.0019)	-0.0016 (0.0027)	0.9488 (0.0070)	0.0073 (0.0003)	977
FP (k=10000)	-0.5311	0.0065	0.0890 (0.0020)	-0.0311 (0.0028)	0.9050 (0.0093)	0.0089 (0.0004)	1000

Table 58: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4967	0.0056	0.0772 (0.0017)	0.0033 (0.0024)	0.9446 (0.0073)	0.0060 (0.0003)	993
Exp	-0.4354	0.0054	0.0666 (0.0015)	0.0646 (0.0021)	0.8850 (0.0101)	0.0086 (0.0003)	1000
Weibull	-0.4780	0.0056	0.0742 (0.0017)	0.0220 (0.0023)	0.9430 (0.0073)	0.0060 (0.0002)	1000
Gompertz	-0.4369	0.0055	0.0663 (0.0024)	0.0631 (0.0034)	0.8851 (0.0163)	0.0084 (0.0005)	383
RP (3)	-0.4972	0.0057	0.0772 (0.0017)	0.0028 (0.0024)	0.9469 (0.0071)	0.0060 (0.0003)	998
RP (5)	-0.4975	0.0057	0.0773 (0.0017)	0.0025 (0.0024)	0.9489 (0.0070)	0.0060 (0.0003)	999
RP (9)	-0.4977	0.0057	0.0773 (0.0017)	0.0023 (0.0024)	0.9460 (0.0071)	0.0060 (0.0003)	1000
RP (P)	-0.4937	0.0056	0.0768 (0.0017)	0.0063 (0.0024)	0.9489 (0.0070)	0.0059 (0.0003)	999
FP (W)	-0.4779	0.0056	0.0742 (0.0017)	0.0221 (0.0023)	0.9429 (0.0073)	0.0060 (0.0002)	998
FP (k=10)	-0.4947	0.0056	0.0773 (0.0017)	0.0053 (0.0024)	0.9500 (0.0069)	0.0060 (0.0003)	1000
FP (k=10000)	-0.4934	0.0050	0.0768 (0.0017)	0.0066 (0.0024)	0.9290 (0.0081)	0.0059 (0.0003)	1000
Model frailty: Normal							
Cox	-0.4991	0.0056	0.0770 (0.0017)	0.0009 (0.0024)	0.9399 (0.0075)	0.0059 (0.0003)	999
Exp	-0.4340	0.0054	0.0661 (0.0015)	0.0660 (0.0021)	0.8838 (0.0102)	0.0087 (0.0003)	990
Weibull	-0.4834	0.0056	0.0744 (0.0017)	0.0166 (0.0024)	0.9493 (0.0070)	0.0058 (0.0002)	986
Gompertz	-0.4328	0.0055	0.0644 (0.0024)	0.0672 (0.0035)	0.8876 (0.0170)	0.0087 (0.0005)	347
RP (3)	-0.5000	0.0057	0.0772 (0.0017)	0.0000 (0.0024)	0.9430 (0.0073)	0.0060 (0.0003)	1000
RP (5)	-0.5003	0.0057	0.0772 (0.0017)	-0.0003 (0.0024)	0.9430 (0.0073)	0.0060 (0.0003)	1000
RP (9)	-0.5005	0.0057	0.0772 (0.0017)	-0.0005 (0.0024)	0.9420 (0.0074)	0.0060 (0.0003)	1000
RP (P)	-0.4967	0.0057	0.0767 (0.0017)	0.0033 (0.0024)	0.9430 (0.0073)	0.0059 (0.0002)	1000
FP (W)	-0.4828	0.0056	0.0746 (0.0017)	0.0172 (0.0024)	0.9479 (0.0071)	0.0059 (0.0002)	978
FP (k=10)	-0.4980	0.0057	0.0771 (0.0017)	0.0020 (0.0024)	0.9419 (0.0074)	0.0059 (0.0003)	999
FP (k=10000)	-0.4977	0.0051	0.0769 (0.0017)	0.0023 (0.0024)	0.9269 (0.0082)	0.0059 (0.0003)	999

Table 59: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4964	0.0058	0.0757 (0.0017)	0.0036 (0.0024)	0.9508 (0.0069)	0.0057 (0.0003)	996
Exp	-0.3691	0.0054	0.0569 (0.0013)	0.1309 (0.0018)	0.5830 (0.0156)	0.0204 (0.0005)	1000
Weibull	-0.5142	0.0058	0.0781 (0.0017)	-0.0142 (0.0025)	0.9370 (0.0077)	0.0063 (0.0003)	1000
Gompertz	-0.3951	0.0055	0.0786 (0.0021)	0.1049 (0.0030)	0.6750 (0.0179)	0.0172 (0.0006)	683
RP (3)	-0.4979	0.0058	0.0757 (0.0017)	0.0021 (0.0024)	0.9488 (0.0070)	0.0057 (0.0003)	996
RP (5)	-0.4972	0.0058	0.0757 (0.0017)	0.0028 (0.0024)	0.9499 (0.0069)	0.0057 (0.0003)	999
RP (9)	-0.4972	0.0058	0.0756 (0.0017)	0.0028 (0.0024)	0.9510 (0.0068)	0.0057 (0.0003)	999
RP (P)	-0.4971	0.0058	0.0756 (0.0017)	0.0029 (0.0024)	0.9484 (0.0070)	0.0057 (0.0003)	988
FP (W)	-0.5141	0.0058	0.0781 (0.0017)	-0.0141 (0.0025)	0.9369 (0.0077)	0.0063 (0.0003)	999
FP (k=10)	-0.4777	0.0058	0.0767 (0.0017)	0.0223 (0.0024)	0.9460 (0.0071)	0.0064 (0.0003)	1000
FP (k=10000)	-0.5386	0.0052	0.0842 (0.0019)	-0.0386 (0.0027)	0.8820 (0.0102)	0.0086 (0.0004)	1000
Model frailty: Normal							
Cox	-0.4989	0.0058	0.0755 (0.0017)	0.0011 (0.0024)	0.9489 (0.0070)	0.0057 (0.0003)	999
Exp	-0.3676	0.0054	0.0564 (0.0013)	0.1324 (0.0018)	0.5714 (0.0157)	0.0207 (0.0005)	994
Weibull	-0.5163	0.0058	0.0781 (0.0018)	-0.0163 (0.0025)	0.9362 (0.0078)	0.0064 (0.0003)	988
Gompertz	-0.3899	0.0055	0.0777 (0.0022)	0.1101 (0.0031)	0.6476 (0.0190)	0.0181 (0.0007)	630
RP (3)	-0.5006	0.0058	0.0757 (0.0017)	-0.0006 (0.0024)	0.9480 (0.0070)	0.0057 (0.0003)	1000
RP (5)	-0.5002	0.0058	0.0756 (0.0017)	-0.0002 (0.0024)	0.9480 (0.0070)	0.0057 (0.0003)	1000
RP (9)	-0.5003	0.0058	0.0757 (0.0017)	-0.0003 (0.0024)	0.9480 (0.0070)	0.0057 (0.0003)	1000
RP (P)	-0.5004	0.0058	0.0756 (0.0017)	-0.0004 (0.0024)	0.9460 (0.0071)	0.0057 (0.0003)	1000
FP (W)	-0.5168	0.0058	0.0782 (0.0018)	-0.0168 (0.0025)	0.9372 (0.0078)	0.0064 (0.0003)	972
FP (k=10)	-0.4889	0.0058	0.0760 (0.0017)	0.0111 (0.0024)	0.9459 (0.0072)	0.0059 (0.0003)	999
FP (k=10000)	-0.5468	0.0054	0.0852 (0.0019)	-0.0468 (0.0027)	0.8751 (0.0105)	0.0094 (0.0004)	993

Table 60: Simulation results for treatment effect, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4986	0.0065	0.0830 (0.0019)	0.0014 (0.0026)	0.9397 (0.0075)	0.0069 (0.0003)	995
Exp	-0.5342	0.0065	0.0882 (0.0020)	-0.0342 (0.0028)	0.9050 (0.0093)	0.0089 (0.0004)	1000
Weibull	-0.4974	0.0065	0.0828 (0.0019)	0.0026 (0.0026)	0.9450 (0.0072)	0.0069 (0.0003)	1000
Gompertz	-0.5260	0.0065	0.0844 (0.0035)	-0.0260 (0.0049)	0.9184 (0.0160)	0.0078 (0.0005)	294
RP (3)	-0.4983	0.0065	0.0832 (0.0019)	0.0017 (0.0026)	0.9417 (0.0074)	0.0069 (0.0003)	995
RP (5)	-0.4990	0.0065	0.0835 (0.0019)	0.0010 (0.0026)	0.9400 (0.0075)	0.0070 (0.0003)	1000
RP (9)	-0.4992	0.0065	0.0835 (0.0019)	0.0008 (0.0026)	0.9400 (0.0075)	0.0070 (0.0003)	1000
RP (P)	-0.4987	0.0065	0.0834 (0.0019)	0.0013 (0.0026)	0.9409 (0.0075)	0.0069 (0.0003)	999
FP (W)	-0.4974	0.0065	0.0828 (0.0019)	0.0026 (0.0026)	0.9450 (0.0072)	0.0069 (0.0003)	1000
FP (k=10)	-0.4979	0.0065	0.0839 (0.0019)	0.0021 (0.0027)	0.9420 (0.0074)	0.0070 (0.0003)	1000
FP (k=10000)	-0.4977	0.0058	0.0832 (0.0019)	0.0023 (0.0026)	0.9260 (0.0083)	0.0069 (0.0003)	1000
Model frailty: Normal							
Cox	-0.5023	0.0065	0.0836 (0.0019)	-0.0023 (0.0026)	0.9419 (0.0074)	0.0070 (0.0003)	999
Exp	-0.5334	0.0065	0.0877 (0.0020)	-0.0334 (0.0028)	0.9020 (0.0094)	0.0088 (0.0004)	990
Weibull	-0.5017	0.0065	0.0831 (0.0019)	-0.0017 (0.0026)	0.9467 (0.0071)	0.0069 (0.0003)	994
Gompertz	-0.5247	0.0066	0.0848 (0.0035)	-0.0247 (0.0050)	0.9110 (0.0167)	0.0078 (0.0006)	292
RP (3)	-0.5029	0.0066	0.0837 (0.0019)	-0.0029 (0.0026)	0.9450 (0.0072)	0.0070 (0.0003)	1000
RP (5)	-0.5035	0.0066	0.0839 (0.0019)	-0.0035 (0.0027)	0.9450 (0.0072)	0.0070 (0.0003)	1000
RP (9)	-0.5036	0.0066	0.0839 (0.0019)	-0.0036 (0.0027)	0.9430 (0.0073)	0.0070 (0.0003)	1000
RP (P)	-0.5030	0.0066	0.0837 (0.0019)	-0.0030 (0.0026)	0.9440 (0.0073)	0.0070 (0.0003)	1000
FP (W)	-0.5026	0.0065	0.0834 (0.0019)	-0.0026 (0.0027)	0.9458 (0.0072)	0.0069 (0.0003)	978
FP (k=10)	-0.5013	0.0066	0.0840 (0.0019)	-0.0013 (0.0027)	0.9443 (0.0073)	0.0071 (0.0003)	987
FP (k=10000)	-0.5017	0.0060	0.0833 (0.0019)	-0.0017 (0.0026)	0.9339 (0.0079)	0.0069 (0.0003)	998

Table 61: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4995	0.0021	0.0461 (0.0010)	0.0005 (0.0015)	0.9381 (0.0077)	0.0021 (0.0001)	986
Exp	-0.4997	0.0021	0.0458 (0.0010)	0.0003 (0.0014)	0.9380 (0.0076)	0.0021 (0.0001)	1000
Weibull	-0.4998	0.0021	0.0460 (0.0010)	0.0002 (0.0015)	0.9430 (0.0073)	0.0021 (0.0001)	1000
Gompertz	-0.4983	0.0021	0.0464 (0.0015)	0.0017 (0.0021)	0.9374 (0.0107)	0.0022 (0.0001)	511
RP (3)	-0.4996	0.0021	0.0461 (0.0010)	0.0004 (0.0015)	0.9390 (0.0076)	0.0021 (0.0001)	1000
RP (5)	-0.4996	0.0021	0.0461 (0.0010)	0.0004 (0.0015)	0.9390 (0.0076)	0.0021 (0.0001)	1000
RP (9)	-0.4996	0.0021	0.0461 (0.0010)	0.0004 (0.0015)	0.9390 (0.0076)	0.0021 (0.0001)	1000
RP (P)	-0.4998	0.0021	0.0459 (0.0010)	0.0002 (0.0015)	0.9419 (0.0074)	0.0021 (0.0001)	998
FP (W)	-0.4998	0.0021	0.0460 (0.0010)	0.0002 (0.0015)	0.9429 (0.0073)	0.0021 (0.0001)	999
FP (k=10)	-0.4983	0.0021	0.0461 (0.0010)	0.0017 (0.0015)	0.9420 (0.0074)	0.0021 (0.0001)	1000
FP (k=10000)	-0.4990	0.0020	0.0461 (0.0010)	0.0010 (0.0015)	0.9370 (0.0077)	0.0021 (0.0001)	1000
Model frailty: Normal							
Cox	-0.4996	0.0021	0.0461 (0.0010)	0.0004 (0.0015)	0.9400 (0.0075)	0.0021 (0.0001)	1000
Exp	-0.4997	0.0021	0.0458 (0.0010)	0.0003 (0.0014)	0.9390 (0.0076)	0.0021 (0.0001)	1000
Weibull	-0.5000	0.0021	0.0461 (0.0010)	0.0000 (0.0015)	0.9429 (0.0073)	0.0021 (0.0001)	999
Gompertz	-0.4991	0.0021	0.0469 (0.0014)	0.0009 (0.0020)	0.9303 (0.0109)	0.0022 (0.0001)	545
RP (3)	-0.4997	0.0021	0.0461 (0.0010)	0.0003 (0.0015)	0.9390 (0.0076)	0.0021 (0.0001)	1000
RP (5)	-0.4997	0.0021	0.0461 (0.0010)	0.0003 (0.0015)	0.9400 (0.0075)	0.0021 (0.0001)	1000
RP (9)	-0.4998	0.0021	0.0461 (0.0010)	0.0002 (0.0015)	0.9400 (0.0075)	0.0021 (0.0001)	1000
RP (P)	-0.4999	0.0021	0.0461 (0.0010)	0.0001 (0.0015)	0.9420 (0.0074)	0.0021 (0.0001)	1000
FP (W)	-0.4994	0.0021	0.0463 (0.0011)	0.0006 (0.0015)	0.9412 (0.0078)	0.0021 (0.0001)	918
FP (k=10)	-0.4988	0.0021	0.0461 (0.0010)	0.0012 (0.0015)	0.9446 (0.0073)	0.0021 (0.0001)	993
FP (k=10000)	-0.4999	0.0020	0.0461 (0.0010)	0.0001 (0.0015)	0.9358 (0.0078)	0.0021 (0.0001)	997

Table 62: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5012	0.0024	0.0495 (0.0011)	-0.0012 (0.0016)	0.9488 (0.0070)	0.0024 (0.0001)	997
Exp	-0.5506	0.0024	0.0543 (0.0012)	-0.0506 (0.0017)	0.7910 (0.0129)	0.0055 (0.0002)	1000
Weibull	-0.5024	0.0024	0.0496 (0.0011)	-0.0024 (0.0016)	0.9470 (0.0071)	0.0025 (0.0001)	1000
Gompertz	-0.5538	0.0024	0.0533 (0.0019)	-0.0538 (0.0027)	0.7758 (0.0212)	0.0057 (0.0003)	388
RP (3)	-0.5013	0.0024	0.0494 (0.0011)	-0.0013 (0.0016)	0.9490 (0.0070)	0.0024 (0.0001)	1000
RP (5)	-0.5014	0.0024	0.0494 (0.0011)	-0.0014 (0.0016)	0.9490 (0.0070)	0.0024 (0.0001)	1000
RP (9)	-0.5015	0.0024	0.0494 (0.0011)	-0.0015 (0.0016)	0.9490 (0.0070)	0.0024 (0.0001)	1000
RP (P)	-0.5019	0.0024	0.0495 (0.0011)	-0.0019 (0.0016)	0.9480 (0.0070)	0.0025 (0.0001)	1000
FP (W)	-0.5021	0.0024	0.0497 (0.0011)	-0.0021 (0.0016)	0.9465 (0.0072)	0.0025 (0.0001)	990
FP (k=10)	-0.4978	0.0024	0.0496 (0.0011)	0.0022 (0.0016)	0.9480 (0.0070)	0.0025 (0.0001)	1000
FP (k=10000)	-0.5068	0.0023	0.0503 (0.0011)	-0.0068 (0.0016)	0.9400 (0.0075)	0.0026 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5016	0.0024	0.0494 (0.0011)	-0.0016 (0.0016)	0.9500 (0.0069)	0.0024 (0.0001)	1000
Exp	-0.5509	0.0024	0.0543 (0.0012)	-0.0509 (0.0017)	0.7890 (0.0129)	0.0055 (0.0002)	1000
Weibull	-0.5026	0.0024	0.0495 (0.0011)	-0.0026 (0.0016)	0.9469 (0.0071)	0.0025 (0.0001)	998
Gompertz	-0.5548	0.0024	0.0543 (0.0019)	-0.0548 (0.0027)	0.7726 (0.0207)	0.0059 (0.0003)	409
RP (3)	-0.5016	0.0024	0.0494 (0.0011)	-0.0016 (0.0016)	0.9500 (0.0069)	0.0024 (0.0001)	1000
RP (5)	-0.5017	0.0024	0.0494 (0.0011)	-0.0017 (0.0016)	0.9500 (0.0069)	0.0024 (0.0001)	1000
RP (9)	-0.5017	0.0024	0.0494 (0.0011)	-0.0017 (0.0016)	0.9500 (0.0069)	0.0024 (0.0001)	1000
RP (P)	-0.5021	0.0024	0.0495 (0.0011)	-0.0021 (0.0016)	0.9470 (0.0071)	0.0025 (0.0001)	1000
FP (W)	-0.5027	0.0024	0.0496 (0.0011)	-0.0027 (0.0016)	0.9470 (0.0071)	0.0025 (0.0001)	982
FP (k=10)	-0.4985	0.0024	0.0498 (0.0011)	0.0015 (0.0016)	0.9447 (0.0073)	0.0025 (0.0001)	994
FP (k=10000)	-0.5067	0.0023	0.0504 (0.0011)	-0.0067 (0.0016)	0.9368 (0.0077)	0.0026 (0.0001)	997

Table 63: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4976	0.0019	0.0441 (0.0010)	0.0024 (0.0014)	0.9524 (0.0068)	0.0019 (0.0001)	988
Exp	-0.4226	0.0018	0.0371 (0.0008)	0.0774 (0.0012)	0.5640 (0.0157)	0.0074 (0.0002)	1000
Weibull	-0.4747	0.0019	0.0421 (0.0009)	0.0253 (0.0013)	0.9110 (0.0090)	0.0024 (0.0001)	1000
Gompertz	-0.4979	0.0019	0.0442 (0.0010)	0.0021 (0.0014)	0.9510 (0.0068)	0.0020 (0.0001)	1000
RP (3)	-0.4972	0.0019	0.0442 (0.0010)	0.0028 (0.0014)	0.9500 (0.0069)	0.0020 (0.0001)	1000
RP (5)	-0.4978	0.0019	0.0442 (0.0010)	0.0022 (0.0014)	0.9510 (0.0068)	0.0020 (0.0001)	1000
RP (9)	-0.4980	0.0019	0.0442 (0.0010)	0.0020 (0.0014)	0.9510 (0.0068)	0.0020 (0.0001)	1000
RP (P)	-0.4948	0.0019	0.0440 (0.0010)	0.0052 (0.0014)	0.9510 (0.0068)	0.0020 (0.0001)	1000
FP (W)	-0.4746	0.0019	0.0422 (0.0009)	0.0254 (0.0013)	0.9106 (0.0090)	0.0024 (0.0001)	995
FP (k=10)	-0.4968	0.0019	0.0442 (0.0010)	0.0032 (0.0014)	0.9510 (0.0068)	0.0020 (0.0001)	1000
FP (k=10000)	-0.4946	0.0017	0.0440 (0.0010)	0.0054 (0.0014)	0.9400 (0.0075)	0.0020 (0.0001)	1000
Model frailty: Normal							
Cox	-0.4977	0.0019	0.0442 (0.0010)	0.0023 (0.0014)	0.9490 (0.0070)	0.0020 (0.0001)	1000
Exp	-0.4225	0.0018	0.0372 (0.0008)	0.0775 (0.0012)	0.5620 (0.0157)	0.0074 (0.0002)	1000
Weibull	-0.4747	0.0019	0.0422 (0.0009)	0.0253 (0.0013)	0.9109 (0.0090)	0.0024 (0.0001)	999
Gompertz	-0.4979	0.0019	0.0442 (0.0010)	0.0021 (0.0014)	0.9510 (0.0068)	0.0020 (0.0001)	1000
RP (3)	-0.4972	0.0019	0.0442 (0.0010)	0.0028 (0.0014)	0.9500 (0.0069)	0.0020 (0.0001)	1000
RP (5)	-0.4977	0.0019	0.0442 (0.0010)	0.0023 (0.0014)	0.9510 (0.0068)	0.0020 (0.0001)	1000
RP (9)	-0.4979	0.0019	0.0442 (0.0010)	0.0021 (0.0014)	0.9500 (0.0069)	0.0020 (0.0001)	1000
RP (P)	-0.4947	0.0019	0.0440 (0.0010)	0.0053 (0.0014)	0.9510 (0.0068)	0.0020 (0.0001)	1000
FP (W)	-0.4747	0.0019	0.0420 (0.0010)	0.0253 (0.0014)	0.9131 (0.0092)	0.0024 (0.0001)	932
FP (k=10)	-0.4973	0.0019	0.0445 (0.0010)	0.0027 (0.0014)	0.9484 (0.0070)	0.0020 (0.0001)	988
FP (k=10000)	-0.4954	0.0017	0.0443 (0.0010)	0.0046 (0.0014)	0.9307 (0.0081)	0.0020 (0.0001)	995

Table 64: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4992	0.0019	0.0453 (0.0010)	0.0008 (0.0014)	0.9432 (0.0074)	0.0021 (0.0001)	986
Exp	-0.3922	0.0019	0.0353 (0.0008)	0.1078 (0.0011)	0.2470 (0.0136)	0.0129 (0.0002)	1000
Weibull	-0.5235	0.0019	0.0474 (0.0011)	-0.0235 (0.0015)	0.9010 (0.0094)	0.0028 (0.0001)	1000
Gompertz	-0.5003	0.0019	0.0454 (0.0010)	-0.0003 (0.0014)	0.9440 (0.0073)	0.0021 (0.0001)	1000
RP (3)	-0.4996	0.0019	0.0453 (0.0010)	0.0004 (0.0014)	0.9440 (0.0073)	0.0020 (0.0001)	1000
RP (5)	-0.4994	0.0019	0.0452 (0.0010)	0.0006 (0.0014)	0.9440 (0.0073)	0.0020 (0.0001)	1000
RP (9)	-0.4994	0.0019	0.0452 (0.0010)	0.0006 (0.0014)	0.9440 (0.0073)	0.0020 (0.0001)	1000
RP (P)	-0.5001	0.0019	0.0453 (0.0010)	-0.0001 (0.0014)	0.9438 (0.0073)	0.0021 (0.0001)	996
FP (W)	-0.5234	0.0019	0.0474 (0.0011)	-0.0234 (0.0015)	0.9008 (0.0095)	0.0028 (0.0001)	998
FP (k=10)	-0.4940	0.0019	0.0453 (0.0010)	0.0060 (0.0014)	0.9440 (0.0073)	0.0021 (0.0001)	1000
FP (k=10000)	-0.5356	0.0018	0.0506 (0.0011)	-0.0356 (0.0016)	0.8170 (0.0122)	0.0038 (0.0002)	1000
Model frailty: Normal							
Cox	-0.4992	0.0019	0.0452 (0.0010)	0.0008 (0.0014)	0.9400 (0.0075)	0.0020 (0.0001)	1000
Exp	-0.3920	0.0019	0.0353 (0.0008)	0.1080 (0.0011)	0.2452 (0.0136)	0.0129 (0.0002)	999
Weibull	-0.5234	0.0019	0.0474 (0.0011)	-0.0234 (0.0015)	0.9029 (0.0094)	0.0028 (0.0001)	999
Gompertz	-0.5001	0.0019	0.0454 (0.0010)	-0.0001 (0.0014)	0.9430 (0.0073)	0.0021 (0.0001)	1000
RP (3)	-0.4997	0.0019	0.0453 (0.0010)	0.0003 (0.0014)	0.9430 (0.0073)	0.0020 (0.0001)	1000
RP (5)	-0.4994	0.0019	0.0452 (0.0010)	0.0006 (0.0014)	0.9420 (0.0074)	0.0020 (0.0001)	1000
RP (9)	-0.4995	0.0019	0.0452 (0.0010)	0.0005 (0.0014)	0.9410 (0.0075)	0.0020 (0.0001)	1000
RP (P)	-0.5001	0.0019	0.0453 (0.0010)	-0.0001 (0.0014)	0.9430 (0.0073)	0.0020 (0.0001)	1000
FP (W)	-0.5230	0.0019	0.0477 (0.0011)	-0.0230 (0.0016)	0.9061 (0.0096)	0.0028 (0.0001)	927
FP (k=10)	-0.4948	0.0019	0.0453 (0.0010)	0.0052 (0.0014)	0.9437 (0.0073)	0.0021 (0.0001)	995
FP (k=10000)	-0.5316	0.0017	0.0510 (0.0011)	-0.0316 (0.0016)	0.8263 (0.0120)	0.0036 (0.0002)	996

Table 65: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4993	0.0022	0.0476 (0.0011)	0.0007 (0.0015)	0.9500 (0.0069)	0.0023 (0.0001)	1000
Exp	-0.5279	0.0022	0.0502 (0.0011)	-0.0279 (0.0016)	0.8880 (0.0100)	0.0033 (0.0001)	1000
Weibull	-0.5045	0.0022	0.0482 (0.0011)	-0.0045 (0.0015)	0.9470 (0.0071)	0.0023 (0.0001)	1000
Gompertz	-0.5290	0.0023	0.0505 (0.0018)	-0.0290 (0.0025)	0.8756 (0.0163)	0.0034 (0.0002)	410
RP (3)	-0.4994	0.0023	0.0476 (0.0011)	0.0006 (0.0015)	0.9500 (0.0069)	0.0023 (0.0001)	1000
RP (5)	-0.4995	0.0023	0.0477 (0.0011)	0.0005 (0.0015)	0.9500 (0.0069)	0.0023 (0.0001)	1000
RP (9)	-0.4995	0.0023	0.0477 (0.0011)	0.0005 (0.0015)	0.9510 (0.0068)	0.0023 (0.0001)	1000
RP (P)	-0.4999	0.0023	0.0477 (0.0011)	0.0001 (0.0015)	0.9489 (0.0070)	0.0023 (0.0001)	998
FP (W)	-0.5045	0.0022	0.0482 (0.0011)	-0.0045 (0.0015)	0.9470 (0.0071)	0.0023 (0.0001)	1000
FP (k=10)	-0.4975	0.0023	0.0477 (0.0011)	0.0025 (0.0015)	0.9479 (0.0070)	0.0023 (0.0001)	999
FP (k=10000)	-0.4961	0.0021	0.0473 (0.0011)	0.0039 (0.0015)	0.9450 (0.0072)	0.0023 (0.0001)	1000
Model frailty: Normal							
Cox	-0.4995	0.0023	0.0477 (0.0011)	0.0005 (0.0015)	0.9520 (0.0068)	0.0023 (0.0001)	1000
Exp	-0.5279	0.0022	0.0503 (0.0011)	-0.0279 (0.0016)	0.8868 (0.0100)	0.0033 (0.0001)	998
Weibull	-0.5045	0.0022	0.0482 (0.0011)	-0.0045 (0.0015)	0.9470 (0.0071)	0.0023 (0.0001)	1000
Gompertz	-0.5277	0.0023	0.0491 (0.0017)	-0.0277 (0.0023)	0.8858 (0.0152)	0.0032 (0.0002)	438
RP (3)	-0.4996	0.0023	0.0477 (0.0011)	0.0004 (0.0015)	0.9510 (0.0068)	0.0023 (0.0001)	1000
RP (5)	-0.4996	0.0023	0.0477 (0.0011)	0.0004 (0.0015)	0.9520 (0.0068)	0.0023 (0.0001)	1000
RP (9)	-0.4997	0.0023	0.0477 (0.0011)	0.0003 (0.0015)	0.9520 (0.0068)	0.0023 (0.0001)	1000
RP (P)	-0.5000	0.0023	0.0478 (0.0011)	-0.0000 (0.0015)	0.9500 (0.0069)	0.0023 (0.0001)	1000
FP (W)	-0.5045	0.0022	0.0482 (0.0011)	-0.0045 (0.0015)	0.9455 (0.0073)	0.0023 (0.0001)	972
FP (k=10)	-0.4977	0.0023	0.0478 (0.0011)	0.0023 (0.0015)	0.9510 (0.0068)	0.0023 (0.0001)	1000
FP (k=10000)	-0.4965	0.0021	0.0474 (0.0011)	0.0035 (0.0015)	0.9499 (0.0069)	0.0023 (0.0001)	998

Table 66: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5006	0.0021	0.0454 (0.0010)	-0.0006 (0.0014)	0.9501 (0.0069)	0.0021 (0.0001)	982
Exp	-0.5008	0.0020	0.0449 (0.0010)	-0.0008 (0.0014)	0.9560 (0.0065)	0.0020 (0.0001)	1000
Weibull	-0.5011	0.0020	0.0454 (0.0010)	-0.0011 (0.0014)	0.9490 (0.0070)	0.0021 (0.0001)	1000
Gompertz	-0.5012	0.0021	0.0455 (0.0018)	-0.0012 (0.0025)	0.9626 (0.0106)	0.0021 (0.0001)	321
RP (3)	-0.5006	0.0021	0.0454 (0.0010)	-0.0006 (0.0014)	0.9510 (0.0068)	0.0021 (0.0001)	1000
RP (5)	-0.5007	0.0021	0.0454 (0.0010)	-0.0007 (0.0014)	0.9510 (0.0068)	0.0021 (0.0001)	1000
RP (9)	-0.5007	0.0021	0.0454 (0.0010)	-0.0007 (0.0014)	0.9510 (0.0068)	0.0021 (0.0001)	1000
RP (P)	-0.5009	0.0020	0.0454 (0.0010)	-0.0009 (0.0014)	0.9510 (0.0068)	0.0021 (0.0001)	999
FP (W)	-0.5009	0.0020	0.0453 (0.0010)	-0.0009 (0.0014)	0.9499 (0.0069)	0.0020 (0.0001)	999
FP (k=10)	-0.4996	0.0021	0.0455 (0.0010)	0.0004 (0.0014)	0.9490 (0.0070)	0.0021 (0.0001)	1000
FP (k=10000)	-0.5001	0.0019	0.0454 (0.0010)	-0.0001 (0.0014)	0.9440 (0.0073)	0.0021 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5008	0.0021	0.0454 (0.0010)	-0.0008 (0.0014)	0.9500 (0.0069)	0.0021 (0.0001)	1000
Exp	-0.5008	0.0020	0.0449 (0.0010)	-0.0008 (0.0014)	0.9550 (0.0066)	0.0020 (0.0001)	1000
Weibull	-0.5013	0.0020	0.0454 (0.0010)	-0.0013 (0.0014)	0.9499 (0.0069)	0.0021 (0.0001)	999
Gompertz	-0.5006	0.0021	0.0452 (0.0014)	-0.0006 (0.0020)	0.9593 (0.0087)	0.0020 (0.0001)	516
RP (3)	-0.5009	0.0021	0.0454 (0.0010)	-0.0009 (0.0014)	0.9510 (0.0068)	0.0021 (0.0001)	1000
RP (5)	-0.5009	0.0021	0.0454 (0.0010)	-0.0009 (0.0014)	0.9510 (0.0068)	0.0021 (0.0001)	1000
RP (9)	-0.5010	0.0021	0.0454 (0.0010)	-0.0010 (0.0014)	0.9520 (0.0068)	0.0021 (0.0001)	1000
RP (P)	-0.5012	0.0020	0.0454 (0.0010)	-0.0012 (0.0014)	0.9500 (0.0069)	0.0021 (0.0001)	1000
FP (W)	-0.5017	0.0020	0.0456 (0.0010)	-0.0017 (0.0015)	0.9496 (0.0071)	0.0021 (0.0001)	953
FP (k=10)	-0.5001	0.0021	0.0457 (0.0010)	-0.0001 (0.0014)	0.9509 (0.0068)	0.0021 (0.0001)	997
FP (k=10000)	-0.5011	0.0019	0.0458 (0.0010)	-0.0011 (0.0015)	0.9427 (0.0074)	0.0021 (0.0001)	995

Table 67: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4993	0.0023	0.0486 (0.0011)	0.0007 (0.0015)	0.9417 (0.0074)	0.0024 (0.0001)	995
Exp	-0.5530	0.0023	0.0540 (0.0012)	-0.0530 (0.0017)	0.7990 (0.0127)	0.0057 (0.0002)	1000
Weibull	-0.5006	0.0023	0.0487 (0.0011)	-0.0006 (0.0015)	0.9400 (0.0075)	0.0024 (0.0001)	1000
Gompertz	-0.5551	0.0023	0.0538 (0.0019)	-0.0551 (0.0027)	0.7899 (0.0205)	0.0059 (0.0004)	395
RP (3)	-0.4996	0.0023	0.0487 (0.0011)	0.0004 (0.0015)	0.9420 (0.0074)	0.0024 (0.0001)	1000
RP (5)	-0.4996	0.0023	0.0487 (0.0011)	0.0004 (0.0015)	0.9420 (0.0074)	0.0024 (0.0001)	1000
RP (9)	-0.4997	0.0023	0.0487 (0.0011)	0.0003 (0.0015)	0.9410 (0.0075)	0.0024 (0.0001)	1000
RP (P)	-0.5000	0.0023	0.0487 (0.0011)	-0.0000 (0.0015)	0.9410 (0.0075)	0.0024 (0.0001)	1000
FP (W)	-0.5005	0.0023	0.0487 (0.0011)	-0.0005 (0.0015)	0.9399 (0.0075)	0.0024 (0.0001)	999
FP (k=10)	-0.4962	0.0023	0.0489 (0.0011)	0.0038 (0.0015)	0.9360 (0.0077)	0.0024 (0.0001)	1000
FP (k=10000)	-0.5071	0.0022	0.0499 (0.0011)	-0.0071 (0.0016)	0.9230 (0.0084)	0.0025 (0.0001)	1000
Model frailty: Normal							
Cox	-0.4999	0.0023	0.0488 (0.0011)	0.0001 (0.0015)	0.9410 (0.0075)	0.0024 (0.0001)	1000
Exp	-0.5533	0.0023	0.0541 (0.0012)	-0.0533 (0.0017)	0.7988 (0.0127)	0.0058 (0.0002)	999
Weibull	-0.5009	0.0023	0.0488 (0.0011)	-0.0009 (0.0015)	0.9389 (0.0076)	0.0024 (0.0001)	999
Gompertz	-0.5553	0.0023	0.0524 (0.0018)	-0.0553 (0.0026)	0.7981 (0.0197)	0.0058 (0.0004)	416
RP (3)	-0.5000	0.0023	0.0487 (0.0011)	0.0000 (0.0015)	0.9410 (0.0075)	0.0024 (0.0001)	1000
RP (5)	-0.5000	0.0023	0.0487 (0.0011)	-0.0000 (0.0015)	0.9400 (0.0075)	0.0024 (0.0001)	1000
RP (9)	-0.5001	0.0023	0.0488 (0.0011)	-0.0001 (0.0015)	0.9410 (0.0075)	0.0024 (0.0001)	1000
RP (P)	-0.5004	0.0023	0.0488 (0.0011)	-0.0004 (0.0015)	0.9400 (0.0075)	0.0024 (0.0001)	1000
FP (W)	-0.5006	0.0023	0.0488 (0.0011)	-0.0006 (0.0016)	0.9385 (0.0077)	0.0024 (0.0001)	976
FP (k=10)	-0.4968	0.0023	0.0495 (0.0011)	0.0032 (0.0016)	0.9337 (0.0079)	0.0025 (0.0001)	996
FP (k=10000)	-0.5071	0.0022	0.0505 (0.0011)	-0.0071 (0.0016)	0.9207 (0.0086)	0.0026 (0.0001)	996

Table 68: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5002	0.0018	0.0438 (0.0010)	-0.0002 (0.0014)	0.9388 (0.0076)	0.0019 (0.0001)	997
Exp	-0.4234	0.0018	0.0369 (0.0008)	0.0766 (0.0012)	0.5690 (0.0157)	0.0072 (0.0002)	1000
Weibull	-0.4760	0.0018	0.0417 (0.0009)	0.0240 (0.0013)	0.9160 (0.0088)	0.0023 (0.0001)	1000
Gompertz	-0.5002	0.0018	0.0440 (0.0010)	-0.0002 (0.0014)	0.9380 (0.0076)	0.0019 (0.0001)	1000
RP (3)	-0.4993	0.0018	0.0438 (0.0010)	0.0007 (0.0014)	0.9410 (0.0075)	0.0019 (0.0001)	1000
RP (5)	-0.5001	0.0018	0.0438 (0.0010)	-0.0001 (0.0014)	0.9410 (0.0075)	0.0019 (0.0001)	1000
RP (9)	-0.5002	0.0018	0.0439 (0.0010)	-0.0002 (0.0014)	0.9390 (0.0076)	0.0019 (0.0001)	1000
RP (P)	-0.4969	0.0018	0.0436 (0.0010)	0.0031 (0.0014)	0.9439 (0.0073)	0.0019 (0.0001)	999
FP (W)	-0.4760	0.0018	0.0417 (0.0009)	0.0240 (0.0013)	0.9159 (0.0088)	0.0023 (0.0001)	999
FP (k=10)	-0.4991	0.0018	0.0438 (0.0010)	0.0009 (0.0014)	0.9400 (0.0075)	0.0019 (0.0001)	1000
FP (k=10000)	-0.4968	0.0017	0.0435 (0.0010)	0.0032 (0.0014)	0.9300 (0.0081)	0.0019 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5001	0.0018	0.0439 (0.0010)	-0.0001 (0.0014)	0.9380 (0.0076)	0.0019 (0.0001)	1000
Exp	-0.4234	0.0018	0.0369 (0.0008)	0.0766 (0.0012)	0.5696 (0.0157)	0.0072 (0.0002)	999
Weibull	-0.4762	0.0018	0.0417 (0.0009)	0.0238 (0.0013)	0.9160 (0.0088)	0.0023 (0.0001)	1000
Gompertz	-0.5003	0.0018	0.0440 (0.0010)	-0.0003 (0.0014)	0.9368 (0.0077)	0.0019 (0.0001)	997
RP (3)	-0.4995	0.0018	0.0438 (0.0010)	0.0005 (0.0014)	0.9410 (0.0075)	0.0019 (0.0001)	1000
RP (5)	-0.5002	0.0018	0.0439 (0.0010)	-0.0002 (0.0014)	0.9390 (0.0076)	0.0019 (0.0001)	1000
RP (9)	-0.5003	0.0018	0.0439 (0.0010)	-0.0003 (0.0014)	0.9380 (0.0076)	0.0019 (0.0001)	1000
RP (P)	-0.4971	0.0018	0.0436 (0.0010)	0.0029 (0.0014)	0.9420 (0.0074)	0.0019 (0.0001)	1000
FP (W)	-0.4760	0.0018	0.0418 (0.0010)	0.0240 (0.0014)	0.9147 (0.0092)	0.0023 (0.0001)	926
FP (k=10)	-0.4995	0.0018	0.0444 (0.0010)	0.0005 (0.0014)	0.9391 (0.0076)	0.0020 (0.0001)	986
FP (k=10000)	-0.4980	0.0016	0.0440 (0.0010)	0.0020 (0.0014)	0.9224 (0.0085)	0.0019 (0.0001)	992

Table 69: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5026	0.0019	0.0437 (0.0010)	-0.0026 (0.0014)	0.9533 (0.0067)	0.0019 (0.0001)	985
Exp	-0.3882	0.0018	0.0346 (0.0008)	0.1118 (0.0011)	0.2120 (0.0129)	0.0137 (0.0002)	1000
Weibull	-0.5285	0.0019	0.0460 (0.0010)	-0.0285 (0.0015)	0.8780 (0.0103)	0.0029 (0.0001)	1000
Gompertz	-0.5028	0.0019	0.0443 (0.0010)	-0.0028 (0.0014)	0.9490 (0.0070)	0.0020 (0.0001)	1000
RP (3)	-0.5031	0.0019	0.0438 (0.0010)	-0.0031 (0.0014)	0.9520 (0.0068)	0.0019 (0.0001)	1000
RP (5)	-0.5030	0.0019	0.0437 (0.0010)	-0.0030 (0.0014)	0.9530 (0.0067)	0.0019 (0.0001)	1000
RP (9)	-0.5031	0.0019	0.0437 (0.0010)	-0.0031 (0.0014)	0.9530 (0.0067)	0.0019 (0.0001)	1000
RP (P)	-0.5036	0.0019	0.0437 (0.0010)	-0.0036 (0.0014)	0.9519 (0.0068)	0.0019 (0.0001)	997
FP (W)	-0.5285	0.0019	0.0461 (0.0010)	-0.0285 (0.0015)	0.8778 (0.0104)	0.0029 (0.0001)	998
FP (k=10)	-0.4970	0.0019	0.0439 (0.0010)	0.0030 (0.0014)	0.9500 (0.0069)	0.0019 (0.0001)	1000
FP (k=10000)	-0.5450	0.0017	0.0491 (0.0011)	-0.0450 (0.0016)	0.7680 (0.0133)	0.0044 (0.0002)	1000
Model frailty: Normal							
Cox	-0.5030	0.0019	0.0437 (0.0010)	-0.0030 (0.0014)	0.9530 (0.0067)	0.0019 (0.0001)	1000
Exp	-0.3880	0.0018	0.0346 (0.0008)	0.1120 (0.0011)	0.2104 (0.0129)	0.0137 (0.0002)	998
Weibull	-0.5285	0.0019	0.0460 (0.0010)	-0.0285 (0.0015)	0.8789 (0.0103)	0.0029 (0.0001)	999
Gompertz	-0.5026	0.0019	0.0443 (0.0010)	-0.0026 (0.0014)	0.9499 (0.0069)	0.0020 (0.0001)	998
RP (3)	-0.5033	0.0019	0.0438 (0.0010)	-0.0033 (0.0014)	0.9520 (0.0068)	0.0019 (0.0001)	1000
RP (5)	-0.5031	0.0019	0.0437 (0.0010)	-0.0031 (0.0014)	0.9530 (0.0067)	0.0019 (0.0001)	1000
RP (9)	-0.5032	0.0019	0.0437 (0.0010)	-0.0032 (0.0014)	0.9510 (0.0068)	0.0019 (0.0001)	1000
RP (P)	-0.5038	0.0019	0.0438 (0.0010)	-0.0038 (0.0014)	0.9510 (0.0068)	0.0019 (0.0001)	1000
FP (W)	-0.5289	0.0019	0.0466 (0.0011)	-0.0289 (0.0015)	0.8708 (0.0111)	0.0030 (0.0001)	913
FP (k=10)	-0.4985	0.0019	0.0444 (0.0010)	0.0015 (0.0014)	0.9507 (0.0069)	0.0020 (0.0001)	994
FP (k=10000)	-0.5422	0.0017	0.0496 (0.0011)	-0.0422 (0.0016)	0.7683 (0.0134)	0.0042 (0.0002)	997

Table 70: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5020	0.0022	0.0456 (0.0010)	-0.0020 (0.0014)	0.9546 (0.0066)	0.0021 (0.0001)	992
Exp	-0.5310	0.0021	0.0480 (0.0011)	-0.0310 (0.0015)	0.8980 (0.0096)	0.0033 (0.0001)	1000
Weibull	-0.5062	0.0021	0.0460 (0.0010)	-0.0062 (0.0015)	0.9520 (0.0068)	0.0022 (0.0001)	1000
Gompertz	-0.5277	0.0022	0.0479 (0.0017)	-0.0277 (0.0024)	0.9144 (0.0138)	0.0031 (0.0002)	409
RP (3)	-0.5018	0.0022	0.0457 (0.0010)	-0.0018 (0.0014)	0.9530 (0.0067)	0.0021 (0.0001)	1000
RP (5)	-0.5019	0.0022	0.0457 (0.0010)	-0.0019 (0.0014)	0.9540 (0.0066)	0.0021 (0.0001)	1000
RP (9)	-0.5019	0.0022	0.0457 (0.0010)	-0.0019 (0.0014)	0.9540 (0.0066)	0.0021 (0.0001)	1000
RP (P)	-0.5022	0.0022	0.0457 (0.0010)	-0.0022 (0.0014)	0.9550 (0.0066)	0.0021 (0.0001)	1000
FP (W)	-0.5062	0.0021	0.0460 (0.0010)	-0.0062 (0.0015)	0.9520 (0.0068)	0.0022 (0.0001)	1000
FP (k=10)	-0.4999	0.0022	0.0457 (0.0010)	0.0001 (0.0014)	0.9500 (0.0069)	0.0021 (0.0001)	1000
FP (k=10000)	-0.4983	0.0020	0.0455 (0.0010)	0.0017 (0.0014)	0.9420 (0.0074)	0.0021 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5021	0.0022	0.0457 (0.0010)	-0.0021 (0.0014)	0.9540 (0.0066)	0.0021 (0.0001)	1000
Exp	-0.5311	0.0021	0.0480 (0.0011)	-0.0311 (0.0015)	0.8969 (0.0096)	0.0033 (0.0001)	999
Weibull	-0.5066	0.0021	0.0460 (0.0010)	-0.0066 (0.0015)	0.9519 (0.0068)	0.0022 (0.0001)	998
Gompertz	-0.5285	0.0022	0.0478 (0.0016)	-0.0285 (0.0023)	0.9169 (0.0135)	0.0031 (0.0002)	421
RP (3)	-0.5021	0.0022	0.0457 (0.0010)	-0.0021 (0.0014)	0.9540 (0.0066)	0.0021 (0.0001)	1000
RP (5)	-0.5023	0.0022	0.0457 (0.0010)	-0.0023 (0.0014)	0.9540 (0.0066)	0.0021 (0.0001)	1000
RP (9)	-0.5023	0.0022	0.0457 (0.0010)	-0.0023 (0.0014)	0.9540 (0.0066)	0.0021 (0.0001)	1000
RP (P)	-0.5026	0.0022	0.0457 (0.0010)	-0.0026 (0.0014)	0.9550 (0.0066)	0.0021 (0.0001)	1000
FP (W)	-0.5069	0.0021	0.0461 (0.0011)	-0.0069 (0.0015)	0.9478 (0.0073)	0.0022 (0.0001)	939
FP (k=10)	-0.5006	0.0022	0.0461 (0.0010)	-0.0006 (0.0015)	0.9489 (0.0070)	0.0021 (0.0001)	998
FP (k=10000)	-0.4991	0.0020	0.0458 (0.0010)	0.0009 (0.0015)	0.9428 (0.0074)	0.0021 (0.0001)	997

Table 71: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5000	0.0024	0.0500 (0.0011)	-0.0000 (0.0016)	0.9460 (0.0072)	0.0025 (0.0001)	981
Exp	-0.5001	0.0024	0.0495 (0.0011)	-0.0001 (0.0016)	0.9480 (0.0070)	0.0024 (0.0001)	1000
Weibull	-0.5006	0.0024	0.0500 (0.0011)	-0.0006 (0.0016)	0.9460 (0.0071)	0.0025 (0.0001)	1000
Gompertz	-0.5015	0.0024	0.0487 (0.0016)	-0.0015 (0.0023)	0.9500 (0.0102)	0.0024 (0.0002)	460
RP (3)	-0.5002	0.0024	0.0500 (0.0011)	-0.0002 (0.0016)	0.9470 (0.0071)	0.0025 (0.0001)	1000
RP (5)	-0.5003	0.0024	0.0500 (0.0011)	-0.0003 (0.0016)	0.9480 (0.0070)	0.0025 (0.0001)	1000
RP (9)	-0.5003	0.0024	0.0500 (0.0011)	-0.0003 (0.0016)	0.9470 (0.0071)	0.0025 (0.0001)	1000
RP (P)	-0.4999	0.0024	0.0500 (0.0011)	0.0001 (0.0016)	0.9448 (0.0074)	0.0025 (0.0001)	960
FP (W)	-0.5005	0.0024	0.0499 (0.0011)	-0.0005 (0.0016)	0.9463 (0.0072)	0.0025 (0.0001)	987
FP (k=10)	-0.4988	0.0024	0.0500 (0.0011)	0.0012 (0.0016)	0.9449 (0.0072)	0.0025 (0.0001)	998
FP (k=10000)	-0.4995	0.0024	0.0499 (0.0011)	0.0005 (0.0016)	0.9439 (0.0073)	0.0025 (0.0001)	999
Model frailty: Normal							
Cox	-0.5008	0.0024	0.0500 (0.0011)	-0.0008 (0.0016)	0.9480 (0.0070)	0.0025 (0.0001)	1000
Exp	-0.5002	0.0024	0.0494 (0.0011)	-0.0002 (0.0016)	0.9469 (0.0071)	0.0024 (0.0001)	998
Weibull	-0.5013	0.0024	0.0500 (0.0011)	-0.0013 (0.0016)	0.9449 (0.0072)	0.0025 (0.0001)	998
Gompertz	-0.5007	0.0024	0.0477 (0.0016)	-0.0007 (0.0023)	0.9536 (0.0101)	0.0023 (0.0002)	431
RP (3)	-0.5008	0.0024	0.0500 (0.0011)	-0.0008 (0.0016)	0.9470 (0.0071)	0.0025 (0.0001)	1000
RP (5)	-0.5009	0.0024	0.0500 (0.0011)	-0.0009 (0.0016)	0.9490 (0.0070)	0.0025 (0.0001)	1000
RP (9)	-0.5010	0.0024	0.0500 (0.0011)	-0.0010 (0.0016)	0.9480 (0.0070)	0.0025 (0.0001)	1000
RP (P)	-0.5013	0.0024	0.0502 (0.0011)	-0.0013 (0.0016)	0.9450 (0.0072)	0.0025 (0.0001)	1000
FP (W)	-0.5018	0.0024	0.0501 (0.0012)	-0.0018 (0.0016)	0.9450 (0.0074)	0.0025 (0.0001)	946
FP (k=10)	-0.4993	0.0024	0.0500 (0.0011)	0.0007 (0.0016)	0.9486 (0.0070)	0.0025 (0.0001)	992
FP (k=10000)	-0.5008	0.0023	0.0502 (0.0011)	-0.0008 (0.0016)	0.9378 (0.0076)	0.0025 (0.0001)	997

Table 72: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5016	0.0028	0.0528 (0.0012)	-0.0016 (0.0017)	0.9399 (0.0076)	0.0028 (0.0001)	982
Exp	-0.5554	0.0027	0.0583 (0.0013)	-0.0554 (0.0018)	0.7960 (0.0127)	0.0065 (0.0003)	1000
Weibull	-0.5025	0.0028	0.0529 (0.0012)	-0.0025 (0.0017)	0.9380 (0.0076)	0.0028 (0.0001)	1000
Gompertz	-0.5533	0.0028	0.0611 (0.0022)	-0.0533 (0.0032)	0.7968 (0.0208)	0.0066 (0.0004)	374
RP (3)	-0.5013	0.0028	0.0529 (0.0012)	-0.0013 (0.0017)	0.9390 (0.0076)	0.0028 (0.0001)	1000
RP (5)	-0.5013	0.0028	0.0529 (0.0012)	-0.0013 (0.0017)	0.9400 (0.0075)	0.0028 (0.0001)	1000
RP (9)	-0.5014	0.0028	0.0529 (0.0012)	-0.0014 (0.0017)	0.9400 (0.0075)	0.0028 (0.0001)	1000
RP (P)	-0.5017	0.0028	0.0523 (0.0012)	-0.0017 (0.0017)	0.9424 (0.0075)	0.0027 (0.0001)	973
FP (W)	-0.5023	0.0028	0.0528 (0.0012)	-0.0023 (0.0017)	0.9388 (0.0076)	0.0028 (0.0001)	997
FP (k=10)	-0.4977	0.0028	0.0531 (0.0012)	0.0023 (0.0017)	0.9346 (0.0078)	0.0028 (0.0001)	994
FP (k=10000)	-0.5110	0.0027	0.0543 (0.0012)	-0.0110 (0.0017)	0.9269 (0.0082)	0.0031 (0.0001)	998
Model frailty: Normal							
Cox	-0.5020	0.0028	0.0530 (0.0012)	-0.0020 (0.0017)	0.9390 (0.0076)	0.0028 (0.0001)	1000
Exp	-0.5560	0.0027	0.0585 (0.0013)	-0.0560 (0.0019)	0.7912 (0.0129)	0.0066 (0.0003)	996
Weibull	-0.5032	0.0028	0.0528 (0.0012)	-0.0032 (0.0017)	0.9379 (0.0076)	0.0028 (0.0001)	999
Gompertz	-0.5531	0.0028	0.0602 (0.0022)	-0.0531 (0.0031)	0.8133 (0.0201)	0.0064 (0.0004)	375
RP (3)	-0.5021	0.0028	0.0529 (0.0012)	-0.0021 (0.0017)	0.9380 (0.0076)	0.0028 (0.0001)	1000
RP (5)	-0.5022	0.0028	0.0530 (0.0012)	-0.0022 (0.0017)	0.9380 (0.0076)	0.0028 (0.0001)	1000
RP (9)	-0.5022	0.0028	0.0530 (0.0012)	-0.0022 (0.0017)	0.9370 (0.0077)	0.0028 (0.0001)	1000
RP (P)	-0.5026	0.0028	0.0529 (0.0012)	-0.0026 (0.0017)	0.9370 (0.0077)	0.0028 (0.0001)	1000
FP (W)	-0.5033	0.0028	0.0524 (0.0012)	-0.0033 (0.0017)	0.9419 (0.0075)	0.0027 (0.0001)	964
FP (k=10)	-0.4989	0.0028	0.0534 (0.0012)	0.0011 (0.0017)	0.9334 (0.0079)	0.0028 (0.0001)	991
FP (k=10000)	-0.5090	0.0027	0.0545 (0.0012)	-0.0090 (0.0017)	0.9228 (0.0084)	0.0031 (0.0001)	998

Table 73: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5004	0.0021	0.0462 (0.0010)	-0.0004 (0.0015)	0.9470 (0.0072)	0.0021 (0.0001)	981
Exp	-0.4324	0.0020	0.0396 (0.0009)	0.0676 (0.0013)	0.6880 (0.0147)	0.0061 (0.0002)	1000
Weibull	-0.4821	0.0021	0.0443 (0.0010)	0.0179 (0.0014)	0.9420 (0.0074)	0.0023 (0.0001)	1000
Gompertz	-0.4411	0.0021	0.0470 (0.0014)	0.0589 (0.0019)	0.7355 (0.0182)	0.0057 (0.0002)	586
RP (3)	-0.5008	0.0021	0.0461 (0.0010)	-0.0008 (0.0015)	0.9500 (0.0069)	0.0021 (0.0001)	1000
RP (5)	-0.5011	0.0021	0.0462 (0.0010)	-0.0011 (0.0015)	0.9480 (0.0070)	0.0021 (0.0001)	1000
RP (9)	-0.5012	0.0021	0.0462 (0.0010)	-0.0012 (0.0015)	0.9470 (0.0071)	0.0021 (0.0001)	1000
RP (P)	-0.4981	0.0021	0.0458 (0.0010)	0.0019 (0.0015)	0.9516 (0.0069)	0.0021 (0.0001)	972
FP (W)	-0.4822	0.0021	0.0444 (0.0010)	0.0178 (0.0014)	0.9419 (0.0074)	0.0023 (0.0001)	998
FP (k=10)	-0.4999	0.0021	0.0462 (0.0010)	0.0001 (0.0015)	0.9510 (0.0068)	0.0021 (0.0001)	999
FP (k=10000)	-0.4989	0.0020	0.0460 (0.0010)	0.0011 (0.0015)	0.9450 (0.0072)	0.0021 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5012	0.0021	0.0462 (0.0010)	-0.0012 (0.0015)	0.9490 (0.0070)	0.0021 (0.0001)	1000
Exp	-0.4324	0.0021	0.0397 (0.0009)	0.0676 (0.0013)	0.6934 (0.0146)	0.0061 (0.0002)	998
Weibull	-0.4826	0.0021	0.0444 (0.0010)	0.0174 (0.0014)	0.9430 (0.0073)	0.0023 (0.0001)	1000
Gompertz	-0.4414	0.0021	0.0456 (0.0012)	0.0586 (0.0018)	0.7504 (0.0167)	0.0055 (0.0002)	673
RP (3)	-0.5011	0.0021	0.0462 (0.0010)	-0.0011 (0.0015)	0.9490 (0.0070)	0.0021 (0.0001)	1000
RP (5)	-0.5014	0.0021	0.0462 (0.0010)	-0.0014 (0.0015)	0.9490 (0.0070)	0.0021 (0.0001)	1000
RP (9)	-0.5015	0.0021	0.0463 (0.0010)	-0.0015 (0.0015)	0.9480 (0.0070)	0.0021 (0.0001)	1000
RP (P)	-0.4990	0.0021	0.0461 (0.0010)	0.0010 (0.0015)	0.9510 (0.0068)	0.0021 (0.0001)	1000
FP (W)	-0.4825	0.0021	0.0445 (0.0010)	0.0175 (0.0014)	0.9391 (0.0078)	0.0023 (0.0001)	952
FP (k=10)	-0.5004	0.0021	0.0466 (0.0011)	-0.0004 (0.0015)	0.9499 (0.0070)	0.0022 (0.0001)	978
FP (k=10000)	-0.5010	0.0019	0.0467 (0.0011)	-0.0010 (0.0015)	0.9395 (0.0076)	0.0022 (0.0001)	991

Table 74: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4973	0.0022	0.0455 (0.0010)	0.0027 (0.0014)	0.9584 (0.0064)	0.0021 (0.0001)	985
Exp	-0.3907	0.0021	0.0367 (0.0008)	0.1093 (0.0012)	0.2990 (0.0145)	0.0133 (0.0003)	1000
Weibull	-0.5162	0.0022	0.0476 (0.0011)	-0.0162 (0.0015)	0.9210 (0.0085)	0.0025 (0.0001)	1000
Gompertz	-0.4684	0.0022	0.0601 (0.0014)	0.0316 (0.0019)	0.8138 (0.0126)	0.0046 (0.0002)	956
RP (3)	-0.4982	0.0022	0.0455 (0.0010)	0.0018 (0.0014)	0.9590 (0.0063)	0.0021 (0.0001)	1000
RP (5)	-0.4974	0.0022	0.0455 (0.0010)	0.0026 (0.0014)	0.9590 (0.0063)	0.0021 (0.0001)	1000
RP (9)	-0.4974	0.0022	0.0457 (0.0010)	0.0026 (0.0015)	0.9577 (0.0064)	0.0021 (0.0001)	993
RP (P)	-0.4985	0.0022	0.0464 (0.0011)	0.0015 (0.0015)	0.9596 (0.0064)	0.0022 (0.0002)	941
FP (W)	-0.5162	0.0022	0.0477 (0.0011)	-0.0162 (0.0015)	0.9208 (0.0085)	0.0025 (0.0001)	998
FP (k=10)	-0.4916	0.0022	0.0455 (0.0010)	0.0084 (0.0014)	0.9529 (0.0067)	0.0021 (0.0001)	998
FP (k=10000)	-0.5266	0.0021	0.0511 (0.0011)	-0.0266 (0.0016)	0.8690 (0.0107)	0.0033 (0.0001)	1000
Model frailty: Normal							
Cox	-0.4976	0.0022	0.0454 (0.0010)	0.0024 (0.0014)	0.9580 (0.0063)	0.0021 (0.0001)	1000
Exp	-0.3905	0.0021	0.0366 (0.0008)	0.1095 (0.0012)	0.2969 (0.0145)	0.0133 (0.0003)	997
Weibull	-0.5166	0.0022	0.0477 (0.0011)	-0.0166 (0.0015)	0.9227 (0.0085)	0.0025 (0.0001)	996
Gompertz	-0.4675	0.0022	0.0609 (0.0015)	0.0325 (0.0021)	0.7998 (0.0136)	0.0048 (0.0002)	869
RP (3)	-0.4987	0.0022	0.0456 (0.0010)	0.0013 (0.0014)	0.9600 (0.0062)	0.0021 (0.0001)	1000
RP (5)	-0.4979	0.0022	0.0455 (0.0010)	0.0021 (0.0014)	0.9590 (0.0063)	0.0021 (0.0001)	1000
RP (9)	-0.4979	0.0022	0.0455 (0.0010)	0.0021 (0.0014)	0.9590 (0.0063)	0.0021 (0.0001)	1000
RP (P)	-0.4983	0.0022	0.0457 (0.0010)	0.0017 (0.0014)	0.9580 (0.0063)	0.0021 (0.0001)	1000
FP (W)	-0.5166	0.0022	0.0471 (0.0011)	-0.0166 (0.0016)	0.9261 (0.0086)	0.0025 (0.0001)	920
FP (k=10)	-0.4935	0.0022	0.0456 (0.0010)	0.0065 (0.0015)	0.9583 (0.0064)	0.0021 (0.0001)	983
FP (k=10000)	-0.5009	0.0021	0.0514 (0.0012)	-0.0009 (0.0016)	0.9140 (0.0089)	0.0026 (0.0001)	988

Table 75: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5025	0.0026	0.0522 (0.0012)	-0.0025 (0.0017)	0.9451 (0.0073)	0.0027 (0.0001)	984
Exp	-0.5295	0.0025	0.0543 (0.0012)	-0.0295 (0.0017)	0.8840 (0.0101)	0.0038 (0.0002)	1000
Weibull	-0.5051	0.0026	0.0522 (0.0012)	-0.0051 (0.0017)	0.9430 (0.0073)	0.0028 (0.0001)	1000
Gompertz	-0.5339	0.0026	0.0528 (0.0023)	-0.0339 (0.0032)	0.8835 (0.0197)	0.0039 (0.0003)	266
RP (3)	-0.5020	0.0026	0.0520 (0.0012)	-0.0020 (0.0016)	0.9478 (0.0070)	0.0027 (0.0001)	997
RP (5)	-0.5025	0.0026	0.0520 (0.0012)	-0.0025 (0.0016)	0.9460 (0.0071)	0.0027 (0.0001)	1000
RP (9)	-0.5026	0.0026	0.0520 (0.0012)	-0.0026 (0.0016)	0.9460 (0.0071)	0.0027 (0.0001)	1000
RP (P)	-0.5023	0.0026	0.0519 (0.0012)	-0.0023 (0.0017)	0.9469 (0.0072)	0.0027 (0.0001)	960
FP (W)	-0.5051	0.0026	0.0523 (0.0012)	-0.0051 (0.0017)	0.9427 (0.0074)	0.0028 (0.0001)	994
FP (k=10)	-0.5004	0.0026	0.0519 (0.0012)	-0.0004 (0.0016)	0.9446 (0.0073)	0.0027 (0.0001)	993
FP (k=10000)	-0.4984	0.0025	0.0516 (0.0012)	0.0016 (0.0016)	0.9449 (0.0072)	0.0027 (0.0001)	998
Model frailty: Normal							
Cox	-0.5032	0.0026	0.0521 (0.0012)	-0.0032 (0.0016)	0.9450 (0.0072)	0.0027 (0.0001)	1000
Exp	-0.5297	0.0025	0.0544 (0.0012)	-0.0297 (0.0017)	0.8790 (0.0103)	0.0038 (0.0002)	1000
Weibull	-0.5057	0.0026	0.0523 (0.0012)	-0.0057 (0.0017)	0.9439 (0.0073)	0.0028 (0.0001)	999
Gompertz	-0.5314	0.0026	0.0537 (0.0020)	-0.0314 (0.0028)	0.8816 (0.0166)	0.0039 (0.0003)	380
RP (3)	-0.5028	0.0026	0.0520 (0.0012)	-0.0028 (0.0016)	0.9470 (0.0071)	0.0027 (0.0001)	1000
RP (5)	-0.5033	0.0026	0.0521 (0.0012)	-0.0033 (0.0016)	0.9430 (0.0073)	0.0027 (0.0001)	1000
RP (9)	-0.5034	0.0026	0.0521 (0.0012)	-0.0034 (0.0016)	0.9450 (0.0072)	0.0027 (0.0001)	1000
RP (P)	-0.5034	0.0026	0.0521 (0.0012)	-0.0034 (0.0016)	0.9450 (0.0072)	0.0027 (0.0001)	1000
FP (W)	-0.5055	0.0026	0.0528 (0.0012)	-0.0055 (0.0017)	0.9414 (0.0076)	0.0028 (0.0001)	956
FP (k=10)	-0.5011	0.0026	0.0522 (0.0012)	-0.0011 (0.0017)	0.9456 (0.0072)	0.0027 (0.0001)	992
FP (k=10000)	-0.4997	0.0024	0.0521 (0.0012)	0.0003 (0.0016)	0.9388 (0.0076)	0.0027 (0.0001)	997

Table 76: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4967	0.0022	0.0491 (0.0011)	0.0033 (0.0016)	0.9371 (0.0078)	0.0024 (0.0001)	970
Exp	-0.4978	0.0021	0.0485 (0.0011)	0.0022 (0.0015)	0.9380 (0.0076)	0.0024 (0.0001)	1000
Weibull	-0.4976	0.0021	0.0488 (0.0011)	0.0024 (0.0015)	0.9440 (0.0073)	0.0024 (0.0001)	1000
Gompertz	-0.4938	0.0021	0.0504 (0.0026)	0.0062 (0.0037)	0.9570 (0.0149)	0.0026 (0.0003)	186
RP (3)	-0.4970	0.0022	0.0488 (0.0011)	0.0030 (0.0015)	0.9390 (0.0076)	0.0024 (0.0001)	1000
RP (5)	-0.4971	0.0022	0.0488 (0.0011)	0.0029 (0.0015)	0.9400 (0.0075)	0.0024 (0.0001)	1000
RP (9)	-0.4971	0.0022	0.0488 (0.0011)	0.0029 (0.0015)	0.9390 (0.0076)	0.0024 (0.0001)	1000
RP (P)	-0.4975	0.0022	0.0488 (0.0011)	0.0025 (0.0016)	0.9409 (0.0075)	0.0024 (0.0001)	981
FP (W)	-0.4976	0.0021	0.0488 (0.0011)	0.0024 (0.0015)	0.9438 (0.0073)	0.0024 (0.0001)	996
FP (k=10)	-0.4960	0.0022	0.0489 (0.0011)	0.0040 (0.0015)	0.9409 (0.0075)	0.0024 (0.0001)	999
FP (k=10000)	-0.4963	0.0021	0.0488 (0.0011)	0.0037 (0.0015)	0.9330 (0.0079)	0.0024 (0.0001)	1000
Model frailty: Normal							
Cox	-0.4975	0.0022	0.0488 (0.0011)	0.0025 (0.0015)	0.9390 (0.0076)	0.0024 (0.0001)	1000
Exp	-0.4977	0.0021	0.0485 (0.0011)	0.0023 (0.0015)	0.9379 (0.0076)	0.0024 (0.0001)	999
Weibull	-0.4983	0.0022	0.0488 (0.0011)	0.0017 (0.0015)	0.9440 (0.0073)	0.0024 (0.0001)	1000
Gompertz	-0.4959	0.0022	0.0482 (0.0016)	0.0041 (0.0023)	0.9515 (0.0103)	0.0023 (0.0002)	433
RP (3)	-0.4977	0.0022	0.0488 (0.0011)	0.0023 (0.0015)	0.9390 (0.0076)	0.0024 (0.0001)	1000
RP (5)	-0.4977	0.0022	0.0488 (0.0011)	0.0023 (0.0015)	0.9410 (0.0075)	0.0024 (0.0001)	1000
RP (9)	-0.4978	0.0022	0.0489 (0.0011)	0.0022 (0.0015)	0.9400 (0.0075)	0.0024 (0.0001)	1000
RP (P)	-0.4980	0.0022	0.0488 (0.0011)	0.0020 (0.0015)	0.9420 (0.0074)	0.0024 (0.0001)	1000
FP (W)	-0.4983	0.0021	0.0490 (0.0011)	0.0017 (0.0016)	0.9399 (0.0076)	0.0024 (0.0001)	982
FP (k=10)	-0.4965	0.0022	0.0489 (0.0011)	0.0035 (0.0016)	0.9380 (0.0077)	0.0024 (0.0001)	984
FP (k=10000)	-0.4977	0.0020	0.0489 (0.0011)	0.0023 (0.0015)	0.9298 (0.0081)	0.0024 (0.0001)	997

Table 77: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5013	0.0024	0.0476 (0.0011)	-0.0013 (0.0015)	0.9518 (0.0069)	0.0023 (0.0001)	975
Exp	-0.5653	0.0024	0.0541 (0.0012)	-0.0653 (0.0017)	0.6910 (0.0146)	0.0072 (0.0003)	1000
Weibull	-0.5025	0.0024	0.0476 (0.0011)	-0.0025 (0.0015)	0.9520 (0.0068)	0.0023 (0.0001)	1000
Gompertz	-0.5636	0.0024	0.0537 (0.0019)	-0.0636 (0.0027)	0.7128 (0.0229)	0.0069 (0.0004)	390
RP (3)	-0.5010	0.0024	0.0476 (0.0011)	-0.0010 (0.0015)	0.9500 (0.0069)	0.0023 (0.0001)	1000
RP (5)	-0.5010	0.0024	0.0476 (0.0011)	-0.0010 (0.0015)	0.9500 (0.0069)	0.0023 (0.0001)	1000
RP (9)	-0.5011	0.0024	0.0476 (0.0011)	-0.0011 (0.0015)	0.9500 (0.0069)	0.0023 (0.0001)	1000
RP (P)	-0.5013	0.0024	0.0476 (0.0011)	-0.0013 (0.0015)	0.9502 (0.0069)	0.0023 (0.0001)	984
FP (W)	-0.5027	0.0024	0.0476 (0.0011)	-0.0027 (0.0015)	0.9527 (0.0067)	0.0023 (0.0001)	993
FP (k=10)	-0.4986	0.0024	0.0480 (0.0011)	0.0014 (0.0015)	0.9478 (0.0070)	0.0023 (0.0001)	997
FP (k=10000)	-0.5180	0.0023	0.0498 (0.0011)	-0.0180 (0.0016)	0.9258 (0.0083)	0.0028 (0.0001)	997
Model frailty: Normal							
Cox	-0.5018	0.0024	0.0477 (0.0011)	-0.0018 (0.0015)	0.9490 (0.0070)	0.0023 (0.0001)	1000
Exp	-0.5656	0.0024	0.0542 (0.0012)	-0.0656 (0.0017)	0.6920 (0.0146)	0.0072 (0.0003)	1000
Weibull	-0.5033	0.0024	0.0478 (0.0011)	-0.0033 (0.0015)	0.9508 (0.0069)	0.0023 (0.0001)	996
Gompertz	-0.5675	0.0024	0.0566 (0.0021)	-0.0675 (0.0030)	0.6648 (0.0247)	0.0077 (0.0005)	364
RP (3)	-0.5019	0.0024	0.0477 (0.0011)	-0.0019 (0.0015)	0.9500 (0.0069)	0.0023 (0.0001)	1000
RP (5)	-0.5019	0.0024	0.0477 (0.0011)	-0.0019 (0.0015)	0.9500 (0.0069)	0.0023 (0.0001)	1000
RP (9)	-0.5020	0.0024	0.0477 (0.0011)	-0.0020 (0.0015)	0.9500 (0.0069)	0.0023 (0.0001)	1000
RP (P)	-0.5023	0.0024	0.0477 (0.0011)	-0.0023 (0.0015)	0.9500 (0.0069)	0.0023 (0.0001)	1000
FP (W)	-0.5032	0.0024	0.0477 (0.0011)	-0.0032 (0.0015)	0.9528 (0.0068)	0.0023 (0.0001)	975
FP (k=10)	-0.4997	0.0024	0.0481 (0.0011)	0.0003 (0.0015)	0.9517 (0.0068)	0.0023 (0.0001)	994
FP (k=10000)	-0.5168	0.0022	0.0501 (0.0011)	-0.0168 (0.0016)	0.9259 (0.0083)	0.0028 (0.0001)	999

Table 78: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5015	0.0019	0.0439 (0.0010)	-0.0015 (0.0014)	0.9522 (0.0069)	0.0019 (0.0001)	962
Exp	-0.4328	0.0019	0.0373 (0.0008)	0.0672 (0.0012)	0.6910 (0.0146)	0.0059 (0.0002)	1000
Weibull	-0.4818	0.0019	0.0422 (0.0009)	0.0182 (0.0013)	0.9280 (0.0082)	0.0021 (0.0001)	1000
Gompertz	-0.4422	0.0019	0.0450 (0.0012)	0.0578 (0.0017)	0.7243 (0.0173)	0.0054 (0.0002)	671
RP (3)	-0.5010	0.0019	0.0439 (0.0010)	-0.0010 (0.0014)	0.9500 (0.0069)	0.0019 (0.0001)	1000
RP (5)	-0.5014	0.0019	0.0440 (0.0010)	-0.0014 (0.0014)	0.9510 (0.0068)	0.0019 (0.0001)	1000
RP (9)	-0.5015	0.0019	0.0440 (0.0010)	-0.0015 (0.0014)	0.9520 (0.0068)	0.0019 (0.0001)	1000
RP (P)	-0.4992	0.0019	0.0438 (0.0010)	0.0008 (0.0014)	0.9526 (0.0067)	0.0019 (0.0001)	992
FP (W)	-0.4819	0.0019	0.0421 (0.0009)	0.0181 (0.0013)	0.9276 (0.0082)	0.0021 (0.0001)	995
FP (k=10)	-0.5005	0.0019	0.0439 (0.0010)	-0.0005 (0.0014)	0.9540 (0.0066)	0.0019 (0.0001)	1000
FP (k=10000)	-0.4993	0.0018	0.0438 (0.0010)	0.0007 (0.0014)	0.9430 (0.0073)	0.0019 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5016	0.0019	0.0440 (0.0010)	-0.0016 (0.0014)	0.9530 (0.0067)	0.0019 (0.0001)	1000
Exp	-0.4326	0.0019	0.0373 (0.0008)	0.0674 (0.0012)	0.6957 (0.0146)	0.0059 (0.0002)	999
Weibull	-0.4826	0.0019	0.0422 (0.0009)	0.0174 (0.0013)	0.9299 (0.0081)	0.0021 (0.0001)	998
Gompertz	-0.4424	0.0019	0.0437 (0.0012)	0.0576 (0.0016)	0.7388 (0.0165)	0.0052 (0.0002)	712
RP (3)	-0.5013	0.0019	0.0439 (0.0010)	-0.0013 (0.0014)	0.9510 (0.0068)	0.0019 (0.0001)	1000
RP (5)	-0.5017	0.0019	0.0440 (0.0010)	-0.0017 (0.0014)	0.9530 (0.0067)	0.0019 (0.0001)	1000
RP (9)	-0.5018	0.0019	0.0440 (0.0010)	-0.0018 (0.0014)	0.9540 (0.0066)	0.0019 (0.0001)	1000
RP (P)	-0.4995	0.0019	0.0438 (0.0010)	0.0005 (0.0014)	0.9550 (0.0066)	0.0019 (0.0001)	1000
FP (W)	-0.4822	0.0019	0.0422 (0.0010)	0.0178 (0.0014)	0.9286 (0.0083)	0.0021 (0.0001)	952
FP (k=10)	-0.5011	0.0019	0.0437 (0.0010)	-0.0011 (0.0014)	0.9510 (0.0069)	0.0019 (0.0001)	979
FP (k=10000)	-0.5017	0.0017	0.0443 (0.0010)	-0.0017 (0.0014)	0.9384 (0.0076)	0.0020 (0.0001)	991

Table 79: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5017	0.0020	0.0446 (0.0010)	-0.0017 (0.0014)	0.9504 (0.0070)	0.0020 (0.0001)	968
Exp	-0.3804	0.0019	0.0345 (0.0008)	0.1196 (0.0011)	0.1650 (0.0117)	0.0155 (0.0003)	1000
Weibull	-0.5212	0.0020	0.0462 (0.0010)	-0.0212 (0.0015)	0.9270 (0.0082)	0.0026 (0.0001)	1000
Gompertz	-0.4794	0.0020	0.0503 (0.0011)	0.0206 (0.0016)	0.8951 (0.0098)	0.0029 (0.0002)	982
RP (3)	-0.5020	0.0020	0.0445 (0.0010)	-0.0020 (0.0014)	0.9499 (0.0069)	0.0020 (0.0001)	999
RP (5)	-0.5016	0.0020	0.0444 (0.0010)	-0.0016 (0.0014)	0.9500 (0.0069)	0.0020 (0.0001)	1000
RP (9)	-0.5017	0.0020	0.0444 (0.0010)	-0.0017 (0.0014)	0.9489 (0.0070)	0.0020 (0.0001)	998
RP (P)	-0.5019	0.0020	0.0442 (0.0010)	-0.0019 (0.0014)	0.9498 (0.0070)	0.0020 (0.0001)	977
FP (W)	-0.5212	0.0020	0.0463 (0.0010)	-0.0212 (0.0015)	0.9265 (0.0083)	0.0026 (0.0001)	993
FP (k=10)	-0.4938	0.0020	0.0445 (0.0010)	0.0062 (0.0014)	0.9420 (0.0074)	0.0020 (0.0001)	1000
FP (k=10000)	-0.5418	0.0019	0.0503 (0.0011)	-0.0418 (0.0016)	0.7920 (0.0128)	0.0043 (0.0002)	1000
Model frailty: Normal							
Cox	-0.5018	0.0020	0.0444 (0.0010)	-0.0018 (0.0014)	0.9490 (0.0070)	0.0020 (0.0001)	1000
Exp	-0.3800	0.0019	0.0345 (0.0008)	0.1200 (0.0011)	0.1623 (0.0117)	0.0156 (0.0003)	998
Weibull	-0.5216	0.0020	0.0461 (0.0010)	-0.0216 (0.0015)	0.9238 (0.0084)	0.0026 (0.0001)	998
Gompertz	-0.4787	0.0020	0.0505 (0.0011)	0.0213 (0.0016)	0.8924 (0.0099)	0.0030 (0.0002)	976
RP (3)	-0.5024	0.0020	0.0444 (0.0010)	-0.0024 (0.0014)	0.9490 (0.0070)	0.0020 (0.0001)	1000
RP (5)	-0.5020	0.0020	0.0444 (0.0010)	-0.0020 (0.0014)	0.9490 (0.0070)	0.0020 (0.0001)	1000
RP (9)	-0.5021	0.0020	0.0444 (0.0010)	-0.0021 (0.0014)	0.9500 (0.0069)	0.0020 (0.0001)	1000
RP (P)	-0.5023	0.0020	0.0444 (0.0010)	-0.0023 (0.0014)	0.9500 (0.0069)	0.0020 (0.0001)	1000
FP (W)	-0.5214	0.0020	0.0466 (0.0011)	-0.0214 (0.0015)	0.9214 (0.0088)	0.0026 (0.0001)	929
FP (k=10)	-0.4971	0.0020	0.0444 (0.0010)	0.0029 (0.0014)	0.9493 (0.0070)	0.0020 (0.0001)	986
FP (k=10000)	-0.5240	0.0018	0.0519 (0.0012)	-0.0240 (0.0017)	0.8580 (0.0111)	0.0033 (0.0001)	986

Table 80: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4980	0.0022	0.0490 (0.0011)	0.0020 (0.0016)	0.9380 (0.0078)	0.0024 (0.0001)	968
Exp	-0.5265	0.0022	0.0517 (0.0012)	-0.0265 (0.0016)	0.8910 (0.0099)	0.0034 (0.0001)	1000
Weibull	-0.4989	0.0022	0.0491 (0.0011)	0.0011 (0.0016)	0.9390 (0.0076)	0.0024 (0.0001)	1000
Gompertz	-0.5244	0.0023	0.0539 (0.0019)	-0.0244 (0.0027)	0.8869 (0.0159)	0.0035 (0.0002)	398
RP (3)	-0.4976	0.0022	0.0490 (0.0011)	0.0024 (0.0016)	0.9369 (0.0077)	0.0024 (0.0001)	998
RP (5)	-0.4979	0.0023	0.0491 (0.0011)	0.0021 (0.0016)	0.9370 (0.0077)	0.0024 (0.0001)	1000
RP (9)	-0.4981	0.0023	0.0491 (0.0011)	0.0019 (0.0016)	0.9360 (0.0077)	0.0024 (0.0001)	1000
RP (P)	-0.4980	0.0022	0.0491 (0.0011)	0.0020 (0.0016)	0.9356 (0.0078)	0.0024 (0.0001)	994
FP (W)	-0.4990	0.0022	0.0491 (0.0011)	0.0010 (0.0016)	0.9389 (0.0076)	0.0024 (0.0001)	999
FP (k=10)	-0.4965	0.0023	0.0492 (0.0011)	0.0035 (0.0016)	0.9378 (0.0076)	0.0024 (0.0001)	997
FP (k=10000)	-0.4947	0.0022	0.0488 (0.0011)	0.0053 (0.0015)	0.9290 (0.0081)	0.0024 (0.0001)	1000
Model frailty: Normal							
Cox	-0.4986	0.0022	0.0491 (0.0011)	0.0014 (0.0016)	0.9390 (0.0076)	0.0024 (0.0001)	1000
Exp	-0.5264	0.0022	0.0516 (0.0012)	-0.0264 (0.0016)	0.8928 (0.0098)	0.0034 (0.0001)	998
Weibull	-0.4996	0.0022	0.0492 (0.0011)	0.0004 (0.0016)	0.9380 (0.0076)	0.0024 (0.0001)	1000
Gompertz	-0.5273	0.0023	0.0538 (0.0019)	-0.0273 (0.0027)	0.8769 (0.0165)	0.0036 (0.0003)	398
RP (3)	-0.4983	0.0023	0.0490 (0.0011)	0.0017 (0.0016)	0.9370 (0.0077)	0.0024 (0.0001)	1000
RP (5)	-0.4987	0.0023	0.0491 (0.0011)	0.0013 (0.0016)	0.9390 (0.0076)	0.0024 (0.0001)	1000
RP (9)	-0.4988	0.0023	0.0491 (0.0011)	0.0012 (0.0016)	0.9400 (0.0075)	0.0024 (0.0001)	1000
RP (P)	-0.4988	0.0023	0.0491 (0.0011)	0.0012 (0.0016)	0.9370 (0.0077)	0.0024 (0.0001)	1000
FP (W)	-0.4996	0.0022	0.0493 (0.0011)	0.0004 (0.0016)	0.9351 (0.0079)	0.0024 (0.0001)	970
FP (k=10)	-0.4970	0.0023	0.0494 (0.0011)	0.0030 (0.0016)	0.9383 (0.0077)	0.0024 (0.0001)	988
FP (k=10000)	-0.4960	0.0021	0.0491 (0.0011)	0.0040 (0.0016)	0.9269 (0.0082)	0.0024 (0.0001)	999

Table 81: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4979	0.0027	0.0531 (0.0012)	0.0021 (0.0017)	0.9448 (0.0072)	0.0028 (0.0001)	997
Exp	-0.4979	0.0027	0.0526 (0.0012)	0.0021 (0.0017)	0.9390 (0.0076)	0.0028 (0.0001)	1000
Weibull	-0.4986	0.0027	0.0531 (0.0012)	0.0014 (0.0017)	0.9440 (0.0073)	0.0028 (0.0001)	1000
Gompertz	-0.4975	0.0027	0.0524 (0.0017)	0.0025 (0.0024)	0.9367 (0.0112)	0.0027 (0.0002)	474
RP (3)	-0.4982	0.0027	0.0532 (0.0012)	0.0018 (0.0017)	0.9440 (0.0073)	0.0028 (0.0001)	1000
RP (5)	-0.4983	0.0027	0.0532 (0.0012)	0.0017 (0.0017)	0.9450 (0.0072)	0.0028 (0.0001)	1000
RP (9)	-0.4982	0.0027	0.0531 (0.0012)	0.0018 (0.0017)	0.9458 (0.0072)	0.0028 (0.0001)	996
RP (P)	-0.4990	0.0027	0.0538 (0.0013)	0.0010 (0.0018)	0.9402 (0.0080)	0.0029 (0.0001)	887
FP (W)	-0.4986	0.0027	0.0531 (0.0012)	0.0014 (0.0017)	0.9440 (0.0073)	0.0028 (0.0001)	1000
FP (k=10)	-0.4966	0.0027	0.0532 (0.0012)	0.0034 (0.0017)	0.9437 (0.0073)	0.0028 (0.0001)	994
FP (k=10000)	-0.4974	0.0026	0.0532 (0.0012)	0.0026 (0.0017)	0.9398 (0.0075)	0.0028 (0.0001)	996
Model frailty: Normal							
Cox	-0.4990	0.0027	0.0533 (0.0012)	0.0010 (0.0017)	0.9410 (0.0075)	0.0028 (0.0001)	1000
Exp	-0.4981	0.0027	0.0527 (0.0012)	0.0019 (0.0017)	0.9399 (0.0075)	0.0028 (0.0001)	998
Weibull	-0.4995	0.0027	0.0533 (0.0012)	0.0005 (0.0017)	0.9388 (0.0076)	0.0028 (0.0001)	997
Gompertz	-0.4976	0.0027	0.0508 (0.0016)	0.0024 (0.0023)	0.9449 (0.0101)	0.0026 (0.0002)	508
RP (3)	-0.4991	0.0027	0.0533 (0.0012)	0.0009 (0.0017)	0.9420 (0.0074)	0.0028 (0.0001)	1000
RP (5)	-0.4992	0.0027	0.0533 (0.0012)	0.0008 (0.0017)	0.9450 (0.0072)	0.0028 (0.0001)	1000
RP (9)	-0.4996	0.0027	0.0542 (0.0012)	0.0004 (0.0017)	0.9410 (0.0075)	0.0029 (0.0002)	1000
RP (P)	-0.4992	0.0027	0.0538 (0.0012)	0.0008 (0.0017)	0.9379 (0.0076)	0.0029 (0.0001)	999
FP (W)	-0.4989	0.0027	0.0534 (0.0012)	0.0011 (0.0017)	0.9421 (0.0075)	0.0029 (0.0001)	967
FP (k=10)	-0.4971	0.0027	0.0536 (0.0012)	0.0029 (0.0017)	0.9377 (0.0077)	0.0029 (0.0001)	995
FP (k=10000)	-0.4983	0.0026	0.0533 (0.0012)	0.0017 (0.0017)	0.9349 (0.0078)	0.0028 (0.0001)	998

Table 82: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4981	0.0031	0.0558 (0.0013)	0.0019 (0.0018)	0.9457 (0.0072)	0.0031 (0.0001)	994
Exp	-0.5558	0.0031	0.0626 (0.0014)	-0.0558 (0.0020)	0.7940 (0.0128)	0.0070 (0.0003)	1000
Weibull	-0.4995	0.0031	0.0557 (0.0012)	0.0005 (0.0018)	0.9470 (0.0071)	0.0031 (0.0001)	1000
Gompertz	-0.5580	0.0031	0.0597 (0.0021)	-0.0580 (0.0029)	0.8146 (0.0192)	0.0069 (0.0005)	410
RP (3)	-0.4981	0.0031	0.0557 (0.0012)	0.0019 (0.0018)	0.9450 (0.0072)	0.0031 (0.0001)	1000
RP (5)	-0.4982	0.0031	0.0557 (0.0012)	0.0018 (0.0018)	0.9460 (0.0071)	0.0031 (0.0001)	1000
RP (9)	-0.4982	0.0031	0.0557 (0.0012)	0.0018 (0.0018)	0.9469 (0.0071)	0.0031 (0.0001)	998
RP (P)	-0.4993	0.0031	0.0563 (0.0013)	0.0007 (0.0019)	0.9438 (0.0076)	0.0032 (0.0001)	925
FP (W)	-0.4995	0.0031	0.0557 (0.0012)	0.0005 (0.0018)	0.9469 (0.0071)	0.0031 (0.0001)	999
FP (k=10)	-0.4950	0.0031	0.0561 (0.0013)	0.0050 (0.0018)	0.9443 (0.0073)	0.0032 (0.0001)	987
FP (k=10000)	-0.5111	0.0030	0.0577 (0.0013)	-0.0111 (0.0018)	0.9378 (0.0076)	0.0035 (0.0002)	997
Model frailty: Normal							
Cox	-0.4993	0.0031	0.0558 (0.0012)	0.0007 (0.0018)	0.9480 (0.0070)	0.0031 (0.0001)	1000
Exp	-0.5566	0.0031	0.0627 (0.0014)	-0.0566 (0.0020)	0.7938 (0.0128)	0.0071 (0.0003)	999
Weibull	-0.5006	0.0031	0.0558 (0.0013)	-0.0006 (0.0018)	0.9467 (0.0071)	0.0031 (0.0001)	994
Gompertz	-0.5591	0.0031	0.0598 (0.0020)	-0.0591 (0.0029)	0.8023 (0.0191)	0.0071 (0.0004)	435
RP (3)	-0.4994	0.0031	0.0558 (0.0012)	0.0006 (0.0018)	0.9470 (0.0071)	0.0031 (0.0001)	1000
RP (5)	-0.4995	0.0031	0.0558 (0.0012)	0.0005 (0.0018)	0.9480 (0.0070)	0.0031 (0.0001)	1000
RP (9)	-0.4996	0.0031	0.0559 (0.0012)	0.0004 (0.0018)	0.9480 (0.0070)	0.0031 (0.0001)	1000
RP (P)	-0.4998	0.0031	0.0561 (0.0013)	0.0002 (0.0018)	0.9480 (0.0070)	0.0031 (0.0001)	1000
FP (W)	-0.5007	0.0031	0.0560 (0.0013)	-0.0007 (0.0018)	0.9472 (0.0071)	0.0031 (0.0001)	984
FP (k=10)	-0.4959	0.0031	0.0564 (0.0013)	0.0041 (0.0018)	0.9459 (0.0072)	0.0032 (0.0001)	998
FP (k=10000)	-0.5062	0.0030	0.0579 (0.0013)	-0.0062 (0.0018)	0.9320 (0.0080)	0.0034 (0.0002)	1000

Table 83: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5001	0.0023	0.0497 (0.0011)	-0.0001 (0.0016)	0.9489 (0.0070)	0.0025 (0.0001)	998
Exp	-0.4362	0.0023	0.0433 (0.0010)	0.0638 (0.0014)	0.7400 (0.0139)	0.0059 (0.0002)	1000
Weibull	-0.4839	0.0023	0.0478 (0.0011)	0.0161 (0.0015)	0.9410 (0.0075)	0.0025 (0.0001)	1000
Gompertz	-0.4346	0.0023	0.0455 (0.0016)	0.0654 (0.0023)	0.7080 (0.0231)	0.0063 (0.0003)	387
RP (3)	-0.5003	0.0023	0.0497 (0.0011)	-0.0003 (0.0016)	0.9489 (0.0070)	0.0025 (0.0001)	998
RP (5)	-0.5004	0.0023	0.0497 (0.0011)	-0.0004 (0.0016)	0.9490 (0.0070)	0.0025 (0.0001)	1000
RP (9)	-0.5005	0.0023	0.0497 (0.0011)	-0.0005 (0.0016)	0.9490 (0.0070)	0.0025 (0.0001)	1000
RP (P)	-0.4978	0.0023	0.0492 (0.0011)	0.0022 (0.0016)	0.9527 (0.0070)	0.0024 (0.0001)	930
FP (W)	-0.4837	0.0023	0.0478 (0.0011)	0.0163 (0.0015)	0.9405 (0.0075)	0.0026 (0.0001)	991
FP (k=10)	-0.4991	0.0023	0.0496 (0.0011)	0.0009 (0.0016)	0.9508 (0.0069)	0.0025 (0.0001)	996
FP (k=10000)	-0.4988	0.0023	0.0495 (0.0011)	0.0012 (0.0016)	0.9460 (0.0071)	0.0024 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5010	0.0023	0.0498 (0.0011)	-0.0010 (0.0016)	0.9480 (0.0070)	0.0025 (0.0001)	1000
Exp	-0.4362	0.0023	0.0433 (0.0010)	0.0638 (0.0014)	0.7390 (0.0139)	0.0059 (0.0002)	1000
Weibull	-0.4848	0.0023	0.0479 (0.0011)	0.0152 (0.0015)	0.9408 (0.0075)	0.0025 (0.0001)	997
Gompertz	-0.4341	0.0023	0.0436 (0.0013)	0.0659 (0.0018)	0.7167 (0.0185)	0.0062 (0.0002)	593
RP (3)	-0.5010	0.0023	0.0498 (0.0011)	-0.0010 (0.0016)	0.9510 (0.0068)	0.0025 (0.0001)	1000
RP (5)	-0.5011	0.0023	0.0498 (0.0011)	-0.0011 (0.0016)	0.9499 (0.0069)	0.0025 (0.0001)	999
RP (9)	-0.5013	0.0023	0.0498 (0.0011)	-0.0013 (0.0016)	0.9500 (0.0069)	0.0025 (0.0001)	1000
RP (P)	-0.4989	0.0023	0.0497 (0.0011)	0.0011 (0.0016)	0.9520 (0.0068)	0.0025 (0.0001)	1000
FP (W)	-0.4839	0.0023	0.0482 (0.0011)	0.0161 (0.0016)	0.9407 (0.0078)	0.0026 (0.0001)	927
FP (k=10)	-0.5000	0.0023	0.0501 (0.0011)	-0.0000 (0.0016)	0.9464 (0.0072)	0.0025 (0.0001)	988
FP (k=10000)	-0.5018	0.0022	0.0502 (0.0011)	-0.0018 (0.0016)	0.9395 (0.0076)	0.0025 (0.0001)	991

Table 84: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4978	0.0024	0.0502 (0.0011)	0.0022 (0.0016)	0.9439 (0.0073)	0.0025 (0.0001)	998
Exp	-0.3892	0.0024	0.0400 (0.0009)	0.1108 (0.0013)	0.3440 (0.0150)	0.0139 (0.0003)	1000
Weibull	-0.5139	0.0024	0.0520 (0.0012)	-0.0139 (0.0016)	0.9320 (0.0080)	0.0029 (0.0001)	1000
Gompertz	-0.4005	0.0024	0.0519 (0.0014)	0.0995 (0.0020)	0.4185 (0.0189)	0.0126 (0.0004)	681
RP (3)	-0.4989	0.0024	0.0503 (0.0011)	0.0011 (0.0016)	0.9410 (0.0075)	0.0025 (0.0001)	1000
RP (5)	-0.4980	0.0024	0.0502 (0.0011)	0.0020 (0.0016)	0.9439 (0.0073)	0.0025 (0.0001)	999
RP (9)	-0.4982	0.0024	0.0501 (0.0011)	0.0018 (0.0016)	0.9431 (0.0074)	0.0025 (0.0001)	985
RP (P)	-0.4982	0.0024	0.0494 (0.0012)	0.0018 (0.0017)	0.9455 (0.0077)	0.0024 (0.0001)	880
FP (W)	-0.5140	0.0024	0.0520 (0.0012)	-0.0140 (0.0017)	0.9314 (0.0080)	0.0029 (0.0001)	991
FP (k=10)	-0.4919	0.0024	0.0503 (0.0011)	0.0081 (0.0016)	0.9408 (0.0075)	0.0026 (0.0001)	996
FP (k=10000)	-0.5244	0.0024	0.0566 (0.0013)	-0.0244 (0.0018)	0.8751 (0.0105)	0.0038 (0.0002)	985
Model frailty: Normal							
Cox	-0.4987	0.0024	0.0502 (0.0011)	0.0013 (0.0016)	0.9430 (0.0073)	0.0025 (0.0001)	1000
Exp	-0.3890	0.0024	0.0400 (0.0009)	0.1110 (0.0013)	0.3420 (0.0150)	0.0139 (0.0003)	997
Weibull	-0.5146	0.0024	0.0520 (0.0012)	-0.0146 (0.0016)	0.9319 (0.0080)	0.0029 (0.0001)	999
Gompertz	-0.3976	0.0024	0.0483 (0.0013)	0.1024 (0.0019)	0.4056 (0.0193)	0.0128 (0.0004)	646
RP (3)	-0.4998	0.0024	0.0503 (0.0011)	0.0002 (0.0016)	0.9399 (0.0075)	0.0025 (0.0001)	999
RP (5)	-0.4989	0.0024	0.0502 (0.0011)	0.0011 (0.0016)	0.9430 (0.0073)	0.0025 (0.0001)	1000
RP (9)	-0.4990	0.0024	0.0503 (0.0011)	0.0010 (0.0016)	0.9430 (0.0073)	0.0025 (0.0001)	1000
RP (P)	-0.4987	0.0024	0.0532 (0.0012)	0.0013 (0.0017)	0.9429 (0.0073)	0.0028 (0.0003)	999
FP (W)	-0.5138	0.0024	0.0520 (0.0012)	-0.0138 (0.0017)	0.9373 (0.0081)	0.0029 (0.0001)	893
FP (k=10)	-0.4949	0.0024	0.0508 (0.0011)	0.0051 (0.0016)	0.9482 (0.0071)	0.0026 (0.0001)	985
FP (k=10000)	-0.4875	0.0024	0.0550 (0.0012)	0.0125 (0.0017)	0.9100 (0.0091)	0.0032 (0.0001)	989

Table 85: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5012	0.0029	0.0533 (0.0012)	-0.0012 (0.0017)	0.9619 (0.0061)	0.0028 (0.0001)	997
Exp	-0.5276	0.0028	0.0559 (0.0013)	-0.0276 (0.0018)	0.9140 (0.0089)	0.0039 (0.0002)	1000
Weibull	-0.5025	0.0029	0.0536 (0.0012)	-0.0025 (0.0017)	0.9590 (0.0063)	0.0029 (0.0001)	1000
Gompertz	-0.5237	0.0029	0.0578 (0.0026)	-0.0237 (0.0036)	0.9134 (0.0176)	0.0039 (0.0003)	254
RP (3)	-0.5005	0.0029	0.0533 (0.0012)	-0.0005 (0.0017)	0.9599 (0.0062)	0.0028 (0.0001)	998
RP (5)	-0.5013	0.0029	0.0534 (0.0012)	-0.0013 (0.0017)	0.9610 (0.0061)	0.0028 (0.0001)	1000
RP (9)	-0.5014	0.0029	0.0534 (0.0012)	-0.0014 (0.0017)	0.9620 (0.0060)	0.0029 (0.0001)	1000
RP (P)	-0.5024	0.0029	0.0534 (0.0012)	-0.0024 (0.0018)	0.9586 (0.0066)	0.0029 (0.0001)	918
FP (W)	-0.5025	0.0029	0.0536 (0.0012)	-0.0025 (0.0017)	0.9590 (0.0063)	0.0029 (0.0001)	1000
FP (k=10)	-0.4993	0.0029	0.0534 (0.0012)	0.0007 (0.0017)	0.9568 (0.0064)	0.0028 (0.0001)	996
FP (k=10000)	-0.4975	0.0028	0.0531 (0.0012)	0.0025 (0.0017)	0.9559 (0.0065)	0.0028 (0.0001)	997
Model frailty: Normal							
Cox	-0.5023	0.0029	0.0535 (0.0012)	-0.0023 (0.0017)	0.9600 (0.0062)	0.0029 (0.0001)	1000
Exp	-0.5280	0.0028	0.0560 (0.0013)	-0.0280 (0.0018)	0.9148 (0.0088)	0.0039 (0.0002)	998
Weibull	-0.5034	0.0029	0.0536 (0.0012)	-0.0034 (0.0017)	0.9558 (0.0065)	0.0029 (0.0001)	995
Gompertz	-0.5243	0.0029	0.0579 (0.0020)	-0.0243 (0.0028)	0.9147 (0.0134)	0.0039 (0.0003)	434
RP (3)	-0.5018	0.0029	0.0535 (0.0012)	-0.0018 (0.0017)	0.9620 (0.0060)	0.0029 (0.0001)	1000
RP (5)	-0.5024	0.0029	0.0535 (0.0012)	-0.0024 (0.0017)	0.9610 (0.0061)	0.0029 (0.0001)	1000
RP (9)	-0.5026	0.0029	0.0536 (0.0012)	-0.0026 (0.0017)	0.9600 (0.0062)	0.0029 (0.0001)	1000
RP (P)	-0.5021	0.0029	0.0540 (0.0012)	-0.0021 (0.0017)	0.9600 (0.0062)	0.0029 (0.0001)	999
FP (W)	-0.5039	0.0029	0.0534 (0.0012)	-0.0039 (0.0017)	0.9579 (0.0064)	0.0029 (0.0001)	975
FP (k=10)	-0.4998	0.0029	0.0537 (0.0012)	0.0002 (0.0017)	0.9598 (0.0062)	0.0029 (0.0001)	995
FP (k=10000)	-0.4986	0.0027	0.0533 (0.0012)	0.0014 (0.0017)	0.9580 (0.0063)	0.0028 (0.0001)	1000

Table 86: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4961	0.0022	0.0468 (0.0010)	0.0039 (0.0015)	0.9539 (0.0066)	0.0022 (0.0001)	997
Exp	-0.4976	0.0022	0.0463 (0.0010)	0.0024 (0.0015)	0.9490 (0.0070)	0.0022 (0.0001)	1000
Weibull	-0.4969	0.0022	0.0466 (0.0010)	0.0031 (0.0015)	0.9510 (0.0068)	0.0022 (0.0001)	1000
Gompertz	-0.5002	0.0022	0.0478 (0.0016)	-0.0002 (0.0023)	0.9410 (0.0114)	0.0023 (0.0002)	424
RP (3)	-0.4963	0.0022	0.0468 (0.0010)	0.0037 (0.0015)	0.9540 (0.0066)	0.0022 (0.0001)	999
RP (5)	-0.4964	0.0022	0.0468 (0.0010)	0.0036 (0.0015)	0.9540 (0.0066)	0.0022 (0.0001)	1000
RP (9)	-0.4964	0.0022	0.0468 (0.0010)	0.0036 (0.0015)	0.9540 (0.0066)	0.0022 (0.0001)	1000
RP (P)	-0.4968	0.0022	0.0467 (0.0011)	0.0032 (0.0015)	0.9527 (0.0068)	0.0022 (0.0001)	973
FP (W)	-0.4970	0.0022	0.0465 (0.0010)	0.0030 (0.0015)	0.9508 (0.0069)	0.0022 (0.0001)	996
FP (k=10)	-0.4954	0.0022	0.0468 (0.0010)	0.0046 (0.0015)	0.9478 (0.0070)	0.0022 (0.0001)	997
FP (k=10000)	-0.4957	0.0021	0.0467 (0.0010)	0.0043 (0.0015)	0.9449 (0.0072)	0.0022 (0.0001)	998
Model frailty: Normal							
Cox	-0.4970	0.0022	0.0469 (0.0010)	0.0030 (0.0015)	0.9530 (0.0067)	0.0022 (0.0001)	1000
Exp	-0.4974	0.0022	0.0463 (0.0010)	0.0026 (0.0015)	0.9489 (0.0070)	0.0022 (0.0001)	999
Weibull	-0.4979	0.0022	0.0467 (0.0010)	0.0021 (0.0015)	0.9489 (0.0070)	0.0022 (0.0001)	999
Gompertz	-0.4985	0.0022	0.0470 (0.0016)	0.0015 (0.0023)	0.9500 (0.0106)	0.0022 (0.0002)	420
RP (3)	-0.4973	0.0022	0.0468 (0.0010)	0.0027 (0.0015)	0.9540 (0.0066)	0.0022 (0.0001)	1000
RP (5)	-0.4973	0.0022	0.0469 (0.0010)	0.0027 (0.0015)	0.9540 (0.0066)	0.0022 (0.0001)	1000
RP (9)	-0.4974	0.0022	0.0469 (0.0010)	0.0026 (0.0015)	0.9530 (0.0067)	0.0022 (0.0001)	1000
RP (P)	-0.4976	0.0022	0.0468 (0.0010)	0.0024 (0.0015)	0.9530 (0.0067)	0.0022 (0.0001)	999
FP (W)	-0.4981	0.0022	0.0471 (0.0011)	0.0019 (0.0015)	0.9474 (0.0072)	0.0022 (0.0001)	950
FP (k=10)	-0.4958	0.0022	0.0472 (0.0011)	0.0042 (0.0015)	0.9481 (0.0071)	0.0022 (0.0001)	982
FP (k=10000)	-0.4973	0.0020	0.0469 (0.0011)	0.0027 (0.0015)	0.9385 (0.0076)	0.0022 (0.0001)	992

Table 87: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4994	0.0024	0.0481 (0.0011)	0.0006 (0.0015)	0.9607 (0.0062)	0.0023 (0.0001)	992
Exp	-0.5704	0.0024	0.0554 (0.0012)	-0.0704 (0.0018)	0.6820 (0.0147)	0.0080 (0.0003)	1000
Weibull	-0.5019	0.0024	0.0483 (0.0011)	-0.0019 (0.0015)	0.9590 (0.0063)	0.0023 (0.0001)	1000
Gompertz	-0.5671	0.0025	0.0551 (0.0025)	-0.0671 (0.0036)	0.7000 (0.0296)	0.0075 (0.0005)	240
RP (3)	-0.5001	0.0024	0.0482 (0.0011)	-0.0001 (0.0015)	0.9580 (0.0063)	0.0023 (0.0001)	1000
RP (5)	-0.5001	0.0024	0.0482 (0.0011)	-0.0001 (0.0015)	0.9590 (0.0063)	0.0023 (0.0001)	1000
RP (9)	-0.5001	0.0024	0.0482 (0.0011)	-0.0001 (0.0015)	0.9590 (0.0063)	0.0023 (0.0001)	1000
RP (P)	-0.5003	0.0024	0.0482 (0.0011)	-0.0003 (0.0015)	0.9598 (0.0063)	0.0023 (0.0001)	971
FP (W)	-0.5020	0.0024	0.0482 (0.0011)	-0.0020 (0.0015)	0.9603 (0.0062)	0.0023 (0.0001)	982
FP (k=10)	-0.4999	0.0025	0.0490 (0.0011)	0.0001 (0.0016)	0.9559 (0.0065)	0.0024 (0.0001)	997
FP (k=10000)	-0.5248	0.0024	0.0508 (0.0011)	-0.0248 (0.0016)	0.9062 (0.0093)	0.0032 (0.0001)	991
Model frailty: Normal							
Cox	-0.5009	0.0024	0.0482 (0.0011)	-0.0009 (0.0015)	0.9580 (0.0063)	0.0023 (0.0001)	1000
Exp	-0.5706	0.0024	0.0554 (0.0012)	-0.0706 (0.0018)	0.6807 (0.0148)	0.0080 (0.0003)	999
Weibull	-0.5031	0.0024	0.0485 (0.0011)	-0.0031 (0.0015)	0.9577 (0.0064)	0.0024 (0.0001)	994
Gompertz	-0.5712	0.0025	0.0553 (0.0020)	-0.0712 (0.0028)	0.6842 (0.0238)	0.0081 (0.0005)	380
RP (3)	-0.5013	0.0024	0.0483 (0.0011)	-0.0013 (0.0015)	0.9590 (0.0063)	0.0023 (0.0001)	1000
RP (5)	-0.5013	0.0024	0.0483 (0.0011)	-0.0013 (0.0015)	0.9590 (0.0063)	0.0023 (0.0001)	1000
RP (9)	-0.5013	0.0024	0.0483 (0.0011)	-0.0013 (0.0015)	0.9590 (0.0063)	0.0023 (0.0001)	1000
RP (P)	-0.5014	0.0024	0.0483 (0.0011)	-0.0014 (0.0015)	0.9590 (0.0063)	0.0023 (0.0001)	1000
FP (W)	-0.5034	0.0024	0.0485 (0.0011)	-0.0034 (0.0016)	0.9579 (0.0065)	0.0024 (0.0001)	950
FP (k=10)	-0.5008	0.0025	0.0490 (0.0011)	-0.0008 (0.0016)	0.9535 (0.0067)	0.0024 (0.0001)	990
FP (k=10000)	-0.5226	0.0023	0.0515 (0.0012)	-0.0226 (0.0016)	0.8997 (0.0095)	0.0032 (0.0001)	997

Table 88: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4993	0.0020	0.0439 (0.0010)	0.0007 (0.0014)	0.9539 (0.0066)	0.0019 (0.0001)	998
Exp	-0.4366	0.0019	0.0381 (0.0009)	0.0634 (0.0012)	0.7200 (0.0142)	0.0055 (0.0002)	1000
Weibull	-0.4825	0.0020	0.0426 (0.0010)	0.0175 (0.0013)	0.9360 (0.0077)	0.0021 (0.0001)	1000
Gompertz	-0.4344	0.0020	0.0393 (0.0013)	0.0656 (0.0018)	0.6974 (0.0213)	0.0059 (0.0002)	466
RP (3)	-0.4992	0.0020	0.0440 (0.0010)	0.0008 (0.0014)	0.9510 (0.0068)	0.0019 (0.0001)	1000
RP (5)	-0.4995	0.0020	0.0440 (0.0010)	0.0005 (0.0014)	0.9550 (0.0066)	0.0019 (0.0001)	1000
RP (9)	-0.4997	0.0020	0.0440 (0.0010)	0.0003 (0.0014)	0.9550 (0.0066)	0.0019 (0.0001)	1000
RP (P)	-0.4979	0.0020	0.0439 (0.0010)	0.0021 (0.0014)	0.9515 (0.0068)	0.0019 (0.0001)	989
FP (W)	-0.4821	0.0020	0.0425 (0.0010)	0.0179 (0.0014)	0.9354 (0.0078)	0.0021 (0.0001)	990
FP (k=10)	-0.4986	0.0020	0.0439 (0.0010)	0.0014 (0.0014)	0.9520 (0.0068)	0.0019 (0.0001)	999
FP (k=10000)	-0.4978	0.0019	0.0438 (0.0010)	0.0022 (0.0014)	0.9460 (0.0071)	0.0019 (0.0001)	1000
Model frailty: Normal							
Cox	-0.4997	0.0020	0.0440 (0.0010)	0.0003 (0.0014)	0.9530 (0.0067)	0.0019 (0.0001)	1000
Exp	-0.4364	0.0019	0.0382 (0.0009)	0.0636 (0.0012)	0.7199 (0.0142)	0.0055 (0.0002)	996
Weibull	-0.4835	0.0020	0.0428 (0.0010)	0.0165 (0.0014)	0.9358 (0.0078)	0.0021 (0.0001)	997
Gompertz	-0.4362	0.0020	0.0386 (0.0013)	0.0638 (0.0018)	0.7168 (0.0210)	0.0056 (0.0002)	459
RP (3)	-0.4997	0.0020	0.0440 (0.0010)	0.0003 (0.0014)	0.9510 (0.0068)	0.0019 (0.0001)	1000
RP (5)	-0.5000	0.0020	0.0441 (0.0010)	-0.0000 (0.0014)	0.9540 (0.0066)	0.0019 (0.0001)	1000
RP (9)	-0.5002	0.0020	0.0441 (0.0010)	-0.0002 (0.0014)	0.9530 (0.0067)	0.0019 (0.0001)	1000
RP (P)	-0.4984	0.0020	0.0439 (0.0010)	0.0016 (0.0014)	0.9510 (0.0068)	0.0019 (0.0001)	1000
FP (W)	-0.4836	0.0020	0.0426 (0.0010)	0.0164 (0.0014)	0.9385 (0.0078)	0.0021 (0.0001)	960
FP (k=10)	-0.4997	0.0020	0.0444 (0.0010)	0.0003 (0.0014)	0.9490 (0.0070)	0.0020 (0.0001)	981
FP (k=10000)	-0.5016	0.0018	0.0450 (0.0010)	-0.0016 (0.0014)	0.9384 (0.0076)	0.0020 (0.0001)	990

Table 89: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5001	0.0020	0.0473 (0.0011)	-0.0001 (0.0015)	0.9416 (0.0074)	0.0022 (0.0001)	994
Exp	-0.3730	0.0020	0.0368 (0.0008)	0.1270 (0.0012)	0.1490 (0.0113)	0.0175 (0.0003)	1000
Weibull	-0.5155	0.0020	0.0490 (0.0011)	-0.0155 (0.0015)	0.9170 (0.0087)	0.0026 (0.0001)	1000
Gompertz	-0.4019	0.0020	0.0609 (0.0016)	0.0981 (0.0022)	0.3628 (0.0177)	0.0133 (0.0004)	736
RP (3)	-0.5006	0.0020	0.0474 (0.0011)	-0.0006 (0.0015)	0.9450 (0.0072)	0.0022 (0.0001)	1000
RP (5)	-0.5004	0.0020	0.0473 (0.0011)	-0.0004 (0.0015)	0.9450 (0.0072)	0.0022 (0.0001)	1000
RP (9)	-0.5004	0.0020	0.0474 (0.0011)	-0.0004 (0.0015)	0.9429 (0.0073)	0.0022 (0.0001)	999
RP (P)	-0.5008	0.0020	0.0476 (0.0011)	-0.0008 (0.0015)	0.9439 (0.0075)	0.0023 (0.0001)	945
FP (W)	-0.5153	0.0020	0.0490 (0.0011)	-0.0153 (0.0016)	0.9181 (0.0087)	0.0026 (0.0001)	989
FP (k=10)	-0.4908	0.0020	0.0475 (0.0011)	0.0092 (0.0015)	0.9289 (0.0081)	0.0023 (0.0001)	999
FP (k=10000)	-0.5406	0.0020	0.0532 (0.0012)	-0.0406 (0.0017)	0.7956 (0.0128)	0.0045 (0.0002)	998
Model frailty: Normal							
Cox	-0.5006	0.0020	0.0473 (0.0011)	-0.0006 (0.0015)	0.9400 (0.0075)	0.0022 (0.0001)	1000
Exp	-0.3726	0.0020	0.0367 (0.0008)	0.1274 (0.0012)	0.1420 (0.0110)	0.0176 (0.0003)	1000
Weibull	-0.5157	0.0020	0.0489 (0.0011)	-0.0157 (0.0016)	0.9175 (0.0087)	0.0026 (0.0001)	994
Gompertz	-0.3994	0.0020	0.0597 (0.0016)	0.1006 (0.0022)	0.3465 (0.0176)	0.0137 (0.0004)	733
RP (3)	-0.5012	0.0020	0.0474 (0.0011)	-0.0012 (0.0015)	0.9420 (0.0074)	0.0022 (0.0001)	1000
RP (5)	-0.5010	0.0020	0.0474 (0.0011)	-0.0010 (0.0015)	0.9430 (0.0073)	0.0022 (0.0001)	1000
RP (9)	-0.5011	0.0020	0.0474 (0.0011)	-0.0011 (0.0015)	0.9410 (0.0075)	0.0022 (0.0001)	1000
RP (P)	-0.5010	0.0020	0.0474 (0.0011)	-0.0010 (0.0015)	0.9450 (0.0072)	0.0022 (0.0001)	1000
FP (W)	-0.5165	0.0020	0.0489 (0.0011)	-0.0165 (0.0016)	0.9173 (0.0090)	0.0027 (0.0001)	943
FP (k=10)	-0.4952	0.0020	0.0479 (0.0011)	0.0048 (0.0015)	0.9332 (0.0080)	0.0023 (0.0001)	973
FP (k=10000)	-0.5119	0.0019	0.0542 (0.0012)	-0.0119 (0.0017)	0.8822 (0.0103)	0.0031 (0.0001)	985

Table 90: Simulation results for treatment effect, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4994	0.0023	0.0485 (0.0011)	0.0006 (0.0015)	0.9548 (0.0066)	0.0024 (0.0001)	996
Exp	-0.5287	0.0023	0.0510 (0.0011)	-0.0287 (0.0016)	0.8830 (0.0102)	0.0034 (0.0001)	1000
Weibull	-0.4984	0.0023	0.0485 (0.0011)	0.0016 (0.0015)	0.9510 (0.0068)	0.0024 (0.0001)	1000
Gompertz	-0.5283	0.0023	0.0505 (0.0018)	-0.0283 (0.0025)	0.8870 (0.0155)	0.0033 (0.0002)	416
RP (3)	-0.4990	0.0023	0.0485 (0.0011)	0.0010 (0.0015)	0.9499 (0.0069)	0.0024 (0.0001)	999
RP (5)	-0.4995	0.0023	0.0487 (0.0011)	0.0005 (0.0015)	0.9520 (0.0068)	0.0024 (0.0001)	1000
RP (9)	-0.4996	0.0023	0.0487 (0.0011)	0.0004 (0.0015)	0.9530 (0.0067)	0.0024 (0.0001)	1000
RP (P)	-0.4993	0.0023	0.0486 (0.0011)	0.0007 (0.0015)	0.9522 (0.0068)	0.0024 (0.0001)	984
FP (W)	-0.4984	0.0023	0.0486 (0.0011)	0.0016 (0.0015)	0.9507 (0.0069)	0.0024 (0.0001)	994
FP (k=10)	-0.4993	0.0023	0.0489 (0.0011)	0.0007 (0.0015)	0.9517 (0.0068)	0.0024 (0.0001)	994
FP (k=10000)	-0.4982	0.0022	0.0484 (0.0011)	0.0018 (0.0015)	0.9438 (0.0073)	0.0023 (0.0001)	997
Model frailty: Normal							
Cox	-0.5002	0.0023	0.0488 (0.0011)	-0.0002 (0.0015)	0.9520 (0.0068)	0.0024 (0.0001)	999
Exp	-0.5286	0.0023	0.0509 (0.0011)	-0.0286 (0.0016)	0.8839 (0.0101)	0.0034 (0.0001)	999
Weibull	-0.4997	0.0023	0.0486 (0.0011)	0.0003 (0.0015)	0.9529 (0.0067)	0.0024 (0.0001)	997
Gompertz	-0.5273	0.0023	0.0494 (0.0017)	-0.0273 (0.0025)	0.8933 (0.0154)	0.0032 (0.0002)	403
RP (3)	-0.5002	0.0023	0.0487 (0.0011)	-0.0002 (0.0015)	0.9530 (0.0067)	0.0024 (0.0001)	1000
RP (5)	-0.5006	0.0023	0.0488 (0.0011)	-0.0006 (0.0015)	0.9540 (0.0066)	0.0024 (0.0001)	1000
RP (9)	-0.5007	0.0023	0.0488 (0.0011)	-0.0007 (0.0015)	0.9540 (0.0066)	0.0024 (0.0001)	1000
RP (P)	-0.5005	0.0023	0.0488 (0.0011)	-0.0005 (0.0015)	0.9540 (0.0066)	0.0024 (0.0001)	1000
FP (W)	-0.4994	0.0023	0.0486 (0.0011)	0.0006 (0.0016)	0.9517 (0.0070)	0.0024 (0.0001)	952
FP (k=10)	-0.5003	0.0023	0.0491 (0.0011)	-0.0003 (0.0016)	0.9485 (0.0070)	0.0024 (0.0001)	990
FP (k=10000)	-0.5003	0.0021	0.0488 (0.0011)	-0.0003 (0.0015)	0.9399 (0.0075)	0.0024 (0.0001)	998

Table 91: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5009	0.0014	0.0376 (0.0009)	-0.0009 (0.0012)	0.9376 (0.0077)	0.0014 (0.0001)	977
Exp	-0.5010	0.0014	0.0374 (0.0008)	-0.0010 (0.0012)	0.9390 (0.0076)	0.0014 (0.0001)	1000
Weibull	-0.5013	0.0014	0.0377 (0.0008)	-0.0013 (0.0012)	0.9400 (0.0075)	0.0014 (0.0001)	1000
Gompertz	-0.4994	0.0014	0.0374 (0.0014)	0.0006 (0.0020)	0.9446 (0.0120)	0.0014 (0.0001)	361
RP (3)	-0.5011	0.0014	0.0377 (0.0008)	-0.0011 (0.0012)	0.9379 (0.0076)	0.0014 (0.0001)	998
RP (5)	-0.5011	0.0014	0.0377 (0.0008)	-0.0011 (0.0012)	0.9390 (0.0076)	0.0014 (0.0001)	1000
RP (9)	-0.5011	0.0014	0.0377 (0.0008)	-0.0011 (0.0012)	0.9380 (0.0076)	0.0014 (0.0001)	1000
RP (P)	-0.5012	0.0014	0.0377 (0.0008)	-0.0012 (0.0012)	0.9380 (0.0076)	0.0014 (0.0001)	1000
FP (W)	-0.5013	0.0014	0.0377 (0.0008)	-0.0013 (0.0012)	0.9399 (0.0075)	0.0014 (0.0001)	998
FP (k=10)	-0.5002	0.0014	0.0377 (0.0008)	-0.0002 (0.0012)	0.9390 (0.0076)	0.0014 (0.0001)	1000
FP (k=10000)	-0.5006	0.0014	0.0377 (0.0008)	-0.0006 (0.0012)	0.9350 (0.0078)	0.0014 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5011	0.0014	0.0377 (0.0008)	-0.0011 (0.0012)	0.9390 (0.0076)	0.0014 (0.0001)	1000
Exp	-0.5010	0.0014	0.0374 (0.0008)	-0.0010 (0.0012)	0.9390 (0.0076)	0.0014 (0.0001)	1000
Weibull	-0.5013	0.0014	0.0377 (0.0008)	-0.0013 (0.0012)	0.9400 (0.0075)	0.0014 (0.0001)	1000
Gompertz	-0.4991	0.0014	0.0372 (0.0013)	0.0009 (0.0019)	0.9421 (0.0120)	0.0014 (0.0001)	380
RP (3)	-0.5011	0.0014	0.0377 (0.0008)	-0.0011 (0.0012)	0.9390 (0.0076)	0.0014 (0.0001)	1000
RP (5)	-0.5011	0.0014	0.0377 (0.0008)	-0.0011 (0.0012)	0.9390 (0.0076)	0.0014 (0.0001)	1000
RP (9)	-0.5011	0.0014	0.0377 (0.0008)	-0.0011 (0.0012)	0.9380 (0.0076)	0.0014 (0.0001)	1000
RP (P)	-0.5012	0.0014	0.0377 (0.0008)	-0.0012 (0.0012)	0.9380 (0.0076)	0.0014 (0.0001)	1000
FP (W)	-0.5018	0.0014	0.0364 (0.0010)	-0.0018 (0.0015)	0.9493 (0.0089)	0.0013 (0.0001)	612
FP (k=10)	-0.4996	0.0014	0.0379 (0.0009)	0.0004 (0.0012)	0.9362 (0.0080)	0.0014 (0.0001)	941
FP (k=10000)	-0.5010	0.0013	0.0382 (0.0009)	-0.0010 (0.0012)	0.9291 (0.0082)	0.0015 (0.0001)	973

Table 92: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5010	0.0016	0.0393 (0.0009)	-0.0010 (0.0013)	0.9521 (0.0068)	0.0015 (0.0001)	981
Exp	-0.5484	0.0016	0.0428 (0.0010)	-0.0484 (0.0014)	0.7550 (0.0136)	0.0042 (0.0002)	1000
Weibull	-0.5018	0.0016	0.0390 (0.0009)	-0.0018 (0.0012)	0.9560 (0.0065)	0.0015 (0.0001)	1000
Gompertz	-0.5502	0.0016	0.0419 (0.0014)	-0.0502 (0.0019)	0.7645 (0.0196)	0.0043 (0.0002)	467
RP (3)	-0.5009	0.0016	0.0391 (0.0009)	-0.0009 (0.0012)	0.9530 (0.0067)	0.0015 (0.0001)	1000
RP (5)	-0.5010	0.0016	0.0391 (0.0009)	-0.0010 (0.0012)	0.9529 (0.0067)	0.0015 (0.0001)	998
RP (9)	-0.5008	0.0016	0.0393 (0.0009)	-0.0008 (0.0013)	0.9512 (0.0069)	0.0015 (0.0001)	964
RP (P)	-0.5012	0.0016	0.0391 (0.0009)	-0.0012 (0.0012)	0.9540 (0.0066)	0.0015 (0.0001)	1000
FP (W)	-0.5018	0.0016	0.0390 (0.0009)	-0.0018 (0.0012)	0.9560 (0.0065)	0.0015 (0.0001)	1000
FP (k=10)	-0.4981	0.0016	0.0392 (0.0009)	0.0019 (0.0012)	0.9520 (0.0068)	0.0015 (0.0001)	1000
FP (k=10000)	-0.5041	0.0016	0.0398 (0.0009)	-0.0041 (0.0013)	0.9460 (0.0071)	0.0016 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5010	0.0016	0.0391 (0.0009)	-0.0010 (0.0012)	0.9530 (0.0067)	0.0015 (0.0001)	1000
Exp	-0.5484	0.0016	0.0428 (0.0010)	-0.0484 (0.0014)	0.7540 (0.0136)	0.0042 (0.0002)	1000
Weibull	-0.5018	0.0016	0.0390 (0.0009)	-0.0018 (0.0012)	0.9560 (0.0065)	0.0015 (0.0001)	1000
Gompertz	-0.5488	0.0016	0.0408 (0.0014)	-0.0488 (0.0019)	0.7711 (0.0198)	0.0040 (0.0002)	450
RP (3)	-0.5010	0.0016	0.0391 (0.0009)	-0.0010 (0.0012)	0.9530 (0.0067)	0.0015 (0.0001)	1000
RP (5)	-0.5010	0.0016	0.0391 (0.0009)	-0.0010 (0.0012)	0.9530 (0.0067)	0.0015 (0.0001)	1000
RP (9)	-0.5011	0.0016	0.0391 (0.0009)	-0.0011 (0.0012)	0.9530 (0.0067)	0.0015 (0.0001)	1000
RP (P)	-0.5013	0.0016	0.0391 (0.0009)	-0.0013 (0.0012)	0.9540 (0.0066)	0.0015 (0.0001)	1000
FP (W)	-0.5021	0.0016	0.0388 (0.0010)	-0.0021 (0.0015)	0.9490 (0.0083)	0.0015 (0.0001)	706
FP (k=10)	-0.4977	0.0016	0.0397 (0.0009)	0.0023 (0.0013)	0.9443 (0.0074)	0.0016 (0.0001)	952
FP (k=10000)	-0.5032	0.0015	0.0405 (0.0009)	-0.0032 (0.0013)	0.9356 (0.0078)	0.0016 (0.0001)	979

Table 93: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4995	0.0012	0.0349 (0.0008)	0.0005 (0.0011)	0.9499 (0.0070)	0.0012 (0.0001)	978
Exp	-0.4246	0.0012	0.0302 (0.0007)	0.0754 (0.0010)	0.4010 (0.0155)	0.0066 (0.0001)	1000
Weibull	-0.4766	0.0012	0.0335 (0.0008)	0.0234 (0.0011)	0.9050 (0.0093)	0.0017 (0.0001)	1000
Gompertz	-0.4988	0.0012	0.0357 (0.0008)	0.0012 (0.0011)	0.9478 (0.0070)	0.0013 (0.0001)	996
RP (3)	-0.4990	0.0012	0.0350 (0.0008)	0.0010 (0.0011)	0.9490 (0.0070)	0.0012 (0.0001)	1000
RP (5)	-0.4996	0.0012	0.0350 (0.0008)	0.0004 (0.0011)	0.9500 (0.0069)	0.0012 (0.0001)	1000
RP (9)	-0.4998	0.0012	0.0350 (0.0008)	0.0002 (0.0011)	0.9510 (0.0068)	0.0012 (0.0001)	1000
RP (P)	-0.4974	0.0012	0.0348 (0.0008)	0.0026 (0.0011)	0.9499 (0.0069)	0.0012 (0.0001)	999
FP (W)	-0.4766	0.0012	0.0335 (0.0008)	0.0234 (0.0011)	0.9050 (0.0093)	0.0017 (0.0001)	1000
FP (k=10)	-0.4990	0.0012	0.0349 (0.0008)	0.0010 (0.0011)	0.9490 (0.0070)	0.0012 (0.0001)	1000
FP (k=10000)	-0.4967	0.0012	0.0348 (0.0008)	0.0033 (0.0011)	0.9440 (0.0073)	0.0012 (0.0001)	1000
Model frailty: Normal							
Cox	-0.4997	0.0012	0.0350 (0.0008)	0.0003 (0.0011)	0.9490 (0.0070)	0.0012 (0.0001)	1000
Exp	-0.4246	0.0012	0.0302 (0.0007)	0.0754 (0.0010)	0.3990 (0.0155)	0.0066 (0.0001)	1000
Weibull	-0.4766	0.0012	0.0335 (0.0008)	0.0234 (0.0011)	0.9050 (0.0093)	0.0017 (0.0001)	1000
Gompertz	-0.4990	0.0012	0.0358 (0.0008)	0.0010 (0.0011)	0.9462 (0.0072)	0.0013 (0.0001)	985
RP (3)	-0.4990	0.0012	0.0350 (0.0008)	0.0010 (0.0011)	0.9500 (0.0069)	0.0012 (0.0001)	1000
RP (5)	-0.4996	0.0012	0.0350 (0.0008)	0.0004 (0.0011)	0.9500 (0.0069)	0.0012 (0.0001)	1000
RP (9)	-0.4998	0.0012	0.0350 (0.0008)	0.0002 (0.0011)	0.9510 (0.0068)	0.0012 (0.0001)	1000
RP (P)	-0.4973	0.0012	0.0348 (0.0008)	0.0027 (0.0011)	0.9500 (0.0069)	0.0012 (0.0001)	1000
FP (W)	-0.4798	0.0012	0.0332 (0.0011)	0.0202 (0.0016)	0.9356 (0.0116)	0.0015 (0.0001)	450
FP (k=10)	-0.4981	0.0012	0.0358 (0.0008)	0.0019 (0.0012)	0.9481 (0.0074)	0.0013 (0.0001)	905
FP (k=10000)	-0.4964	0.0011	0.0356 (0.0008)	0.0036 (0.0012)	0.9268 (0.0085)	0.0013 (0.0001)	942

Table 94: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5006	0.0013	0.0354 (0.0008)	-0.0006 (0.0011)	0.9510 (0.0069)	0.0013 (0.0001)	980
Exp	-0.3952	0.0012	0.0296 (0.0007)	0.1048 (0.0009)	0.1150 (0.0101)	0.0119 (0.0002)	1000
Weibull	-0.5245	0.0013	0.0372 (0.0008)	-0.0245 (0.0012)	0.8760 (0.0104)	0.0020 (0.0001)	1000
Gompertz	-0.5026	0.0013	0.0361 (0.0008)	-0.0026 (0.0011)	0.9450 (0.0072)	0.0013 (0.0001)	1000
RP (3)	-0.5011	0.0013	0.0355 (0.0008)	-0.0011 (0.0011)	0.9540 (0.0067)	0.0013 (0.0001)	979
RP (5)	-0.5008	0.0013	0.0354 (0.0008)	-0.0008 (0.0011)	0.9520 (0.0068)	0.0013 (0.0001)	999
RP (9)	-0.5008	0.0013	0.0354 (0.0008)	-0.0008 (0.0011)	0.9510 (0.0068)	0.0013 (0.0001)	1000
RP (P)	-0.5012	0.0013	0.0354 (0.0008)	-0.0012 (0.0011)	0.9520 (0.0068)	0.0013 (0.0001)	999
FP (W)	-0.5245	0.0013	0.0372 (0.0008)	-0.0245 (0.0012)	0.8760 (0.0104)	0.0020 (0.0001)	1000
FP (k=10)	-0.4973	0.0013	0.0354 (0.0008)	0.0027 (0.0011)	0.9520 (0.0068)	0.0013 (0.0001)	1000
FP (k=10000)	-0.4959	0.0013	0.0358 (0.0008)	0.0041 (0.0011)	0.9511 (0.0069)	0.0013 (0.0001)	981
Model frailty: Normal							
Cox	-0.5008	0.0013	0.0354 (0.0008)	-0.0008 (0.0011)	0.9520 (0.0068)	0.0013 (0.0001)	1000
Exp	-0.3952	0.0012	0.0296 (0.0007)	0.1048 (0.0009)	0.1150 (0.0101)	0.0119 (0.0002)	1000
Weibull	-0.5245	0.0013	0.0372 (0.0008)	-0.0245 (0.0012)	0.8750 (0.0105)	0.0020 (0.0001)	1000
Gompertz	-0.5025	0.0013	0.0361 (0.0008)	-0.0025 (0.0011)	0.9440 (0.0073)	0.0013 (0.0001)	1000
RP (3)	-0.5010	0.0013	0.0354 (0.0008)	-0.0010 (0.0011)	0.9540 (0.0066)	0.0013 (0.0001)	1000
RP (5)	-0.5008	0.0013	0.0354 (0.0008)	-0.0008 (0.0011)	0.9520 (0.0068)	0.0013 (0.0001)	1000
RP (9)	-0.5008	0.0013	0.0354 (0.0008)	-0.0008 (0.0011)	0.9510 (0.0068)	0.0013 (0.0001)	1000
RP (P)	-0.5013	0.0013	0.0354 (0.0008)	-0.0013 (0.0011)	0.9520 (0.0068)	0.0013 (0.0001)	1000
FP (W)	-0.5251	0.0013	0.0362 (0.0012)	-0.0251 (0.0016)	0.8717 (0.0151)	0.0019 (0.0001)	491
FP (k=10)	-0.4971	0.0013	0.0359 (0.0008)	0.0029 (0.0012)	0.9479 (0.0073)	0.0013 (0.0001)	922
FP (k=10000)	-0.5191	0.0011	0.0413 (0.0010)	-0.0191 (0.0013)	0.8443 (0.0118)	0.0021 (0.0001)	944

Table 95: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5009	0.0015	0.0398 (0.0009)	-0.0009 (0.0013)	0.9421 (0.0074)	0.0016 (0.0001)	985
Exp	-0.5288	0.0014	0.0417 (0.0009)	-0.0288 (0.0013)	0.8530 (0.0112)	0.0026 (0.0001)	1000
Weibull	-0.5059	0.0015	0.0401 (0.0009)	-0.0059 (0.0013)	0.9420 (0.0074)	0.0016 (0.0001)	1000
Gompertz	-0.5341	0.0015	0.0422 (0.0025)	-0.0341 (0.0036)	0.8085 (0.0331)	0.0029 (0.0003)	141
RP (3)	-0.5008	0.0015	0.0397 (0.0009)	-0.0008 (0.0013)	0.9429 (0.0073)	0.0016 (0.0001)	999
RP (5)	-0.5009	0.0015	0.0397 (0.0009)	-0.0009 (0.0013)	0.9430 (0.0073)	0.0016 (0.0001)	1000
RP (9)	-0.5009	0.0015	0.0397 (0.0009)	-0.0009 (0.0013)	0.9427 (0.0074)	0.0016 (0.0001)	994
RP (P)	-0.5012	0.0015	0.0397 (0.0009)	-0.0012 (0.0013)	0.9430 (0.0073)	0.0016 (0.0001)	1000
FP (W)	-0.5059	0.0015	0.0401 (0.0009)	-0.0059 (0.0013)	0.9409 (0.0075)	0.0016 (0.0001)	999
FP (k=10)	-0.4993	0.0015	0.0397 (0.0009)	0.0007 (0.0013)	0.9410 (0.0075)	0.0016 (0.0001)	1000
FP (k=10000)	-0.4975	0.0014	0.0395 (0.0009)	0.0025 (0.0012)	0.9400 (0.0075)	0.0016 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5009	0.0015	0.0397 (0.0009)	-0.0009 (0.0013)	0.9430 (0.0073)	0.0016 (0.0001)	1000
Exp	-0.5288	0.0014	0.0417 (0.0009)	-0.0288 (0.0013)	0.8530 (0.0112)	0.0026 (0.0001)	1000
Weibull	-0.5059	0.0015	0.0401 (0.0009)	-0.0059 (0.0013)	0.9410 (0.0075)	0.0016 (0.0001)	1000
Gompertz	-0.5282	0.0015	0.0409 (0.0014)	-0.0282 (0.0019)	0.8742 (0.0157)	0.0025 (0.0002)	445
RP (3)	-0.5008	0.0015	0.0397 (0.0009)	-0.0008 (0.0013)	0.9410 (0.0075)	0.0016 (0.0001)	1000
RP (5)	-0.5009	0.0015	0.0397 (0.0009)	-0.0009 (0.0013)	0.9430 (0.0073)	0.0016 (0.0001)	1000
RP (9)	-0.5009	0.0015	0.0397 (0.0009)	-0.0009 (0.0013)	0.9430 (0.0073)	0.0016 (0.0001)	1000
RP (P)	-0.5012	0.0015	0.0397 (0.0009)	-0.0012 (0.0013)	0.9430 (0.0073)	0.0016 (0.0001)	1000
FP (W)	-0.5073	0.0015	0.0404 (0.0011)	-0.0073 (0.0015)	0.9334 (0.0095)	0.0017 (0.0001)	691
FP (k=10)	-0.4985	0.0015	0.0400 (0.0009)	0.0015 (0.0013)	0.9360 (0.0080)	0.0016 (0.0001)	938
FP (k=10000)	-0.4982	0.0014	0.0395 (0.0009)	0.0018 (0.0013)	0.9291 (0.0083)	0.0016 (0.0001)	959

Table 96: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4991	0.0013	0.0352 (0.0008)	0.0009 (0.0011)	0.9520 (0.0068)	0.0012 (0.0001)	979
Exp	-0.4991	0.0013	0.0350 (0.0008)	0.0009 (0.0011)	0.9540 (0.0066)	0.0012 (0.0001)	1000
Weibull	-0.4994	0.0013	0.0352 (0.0008)	0.0006 (0.0011)	0.9520 (0.0068)	0.0012 (0.0001)	1000
Gompertz	-0.5000	0.0013	0.0339 (0.0015)	-0.0000 (0.0021)	0.9641 (0.0117)	0.0011 (0.0001)	251
RP (3)	-0.4990	0.0013	0.0352 (0.0008)	0.0010 (0.0011)	0.9510 (0.0068)	0.0012 (0.0001)	999
RP (5)	-0.4990	0.0013	0.0352 (0.0008)	0.0010 (0.0011)	0.9520 (0.0068)	0.0012 (0.0001)	1000
RP (9)	-0.4990	0.0013	0.0352 (0.0008)	0.0010 (0.0011)	0.9520 (0.0068)	0.0012 (0.0001)	1000
RP (P)	-0.4992	0.0013	0.0351 (0.0008)	0.0008 (0.0011)	0.9510 (0.0068)	0.0012 (0.0001)	1000
FP (W)	-0.4994	0.0013	0.0352 (0.0008)	0.0006 (0.0011)	0.9520 (0.0068)	0.0012 (0.0001)	1000
FP (k=10)	-0.4982	0.0013	0.0352 (0.0008)	0.0018 (0.0011)	0.9500 (0.0069)	0.0012 (0.0001)	1000
FP (k=10000)	-0.4986	0.0013	0.0351 (0.0008)	0.0014 (0.0011)	0.9480 (0.0070)	0.0012 (0.0001)	1000
Model frailty: Normal							
Cox	-0.4990	0.0013	0.0352 (0.0008)	0.0010 (0.0011)	0.9510 (0.0068)	0.0012 (0.0001)	1000
Exp	-0.4992	0.0013	0.0350 (0.0008)	0.0008 (0.0011)	0.9540 (0.0066)	0.0012 (0.0001)	1000
Weibull	-0.4994	0.0013	0.0352 (0.0008)	0.0006 (0.0011)	0.9520 (0.0068)	0.0012 (0.0001)	1000
Gompertz	-0.4987	0.0013	0.0342 (0.0010)	0.0013 (0.0014)	0.9636 (0.0078)	0.0012 (0.0001)	577
RP (3)	-0.4990	0.0013	0.0351 (0.0008)	0.0010 (0.0011)	0.9510 (0.0068)	0.0012 (0.0001)	1000
RP (5)	-0.4990	0.0013	0.0352 (0.0008)	0.0010 (0.0011)	0.9520 (0.0068)	0.0012 (0.0001)	1000
RP (9)	-0.4991	0.0013	0.0352 (0.0008)	0.0009 (0.0011)	0.9510 (0.0068)	0.0012 (0.0001)	1000
RP (P)	-0.4992	0.0013	0.0351 (0.0008)	0.0008 (0.0011)	0.9510 (0.0068)	0.0012 (0.0001)	1000
FP (W)	-0.5002	0.0013	0.0362 (0.0010)	-0.0002 (0.0015)	0.9420 (0.0094)	0.0013 (0.0001)	621
FP (k=10)	-0.4962	0.0013	0.0356 (0.0008)	0.0038 (0.0012)	0.9483 (0.0073)	0.0013 (0.0001)	929
FP (k=10000)	-0.4987	0.0012	0.0362 (0.0008)	0.0013 (0.0012)	0.9363 (0.0079)	0.0013 (0.0001)	957

Table 97: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4980	0.0015	0.0386 (0.0009)	0.0020 (0.0012)	0.9468 (0.0072)	0.0015 (0.0001)	977
Exp	-0.5499	0.0015	0.0424 (0.0009)	-0.0499 (0.0013)	0.7140 (0.0143)	0.0043 (0.0002)	1000
Weibull	-0.4992	0.0015	0.0384 (0.0009)	0.0008 (0.0012)	0.9530 (0.0067)	0.0015 (0.0001)	1000
Gompertz	-0.5492	0.0015	0.0438 (0.0015)	-0.0492 (0.0021)	0.7310 (0.0216)	0.0043 (0.0002)	420
RP (3)	-0.4982	0.0015	0.0385 (0.0009)	0.0018 (0.0012)	0.9480 (0.0070)	0.0015 (0.0001)	1000
RP (5)	-0.4982	0.0015	0.0385 (0.0009)	0.0018 (0.0012)	0.9480 (0.0070)	0.0015 (0.0001)	1000
RP (9)	-0.4985	0.0015	0.0385 (0.0009)	0.0015 (0.0012)	0.9480 (0.0071)	0.0015 (0.0001)	980
RP (P)	-0.4985	0.0015	0.0385 (0.0009)	0.0015 (0.0012)	0.9500 (0.0069)	0.0015 (0.0001)	1000
FP (W)	-0.4992	0.0015	0.0384 (0.0009)	0.0008 (0.0012)	0.9530 (0.0067)	0.0015 (0.0001)	1000
FP (k=10)	-0.4954	0.0015	0.0386 (0.0009)	0.0046 (0.0012)	0.9480 (0.0070)	0.0015 (0.0001)	1000
FP (k=10000)	-0.5034	0.0015	0.0395 (0.0009)	-0.0034 (0.0013)	0.9448 (0.0072)	0.0016 (0.0001)	997
Model frailty: Normal							
Cox	-0.4983	0.0015	0.0385 (0.0009)	0.0017 (0.0012)	0.9480 (0.0070)	0.0015 (0.0001)	1000
Exp	-0.5499	0.0015	0.0424 (0.0009)	-0.0499 (0.0013)	0.7110 (0.0143)	0.0043 (0.0002)	1000
Weibull	-0.4993	0.0015	0.0384 (0.0009)	0.0007 (0.0012)	0.9530 (0.0067)	0.0015 (0.0001)	1000
Gompertz	-0.5500	0.0015	0.0431 (0.0015)	-0.0500 (0.0021)	0.7212 (0.0220)	0.0044 (0.0002)	416
RP (3)	-0.4982	0.0015	0.0385 (0.0009)	0.0018 (0.0012)	0.9480 (0.0070)	0.0015 (0.0001)	1000
RP (5)	-0.4983	0.0015	0.0385 (0.0009)	0.0017 (0.0012)	0.9480 (0.0070)	0.0015 (0.0001)	1000
RP (9)	-0.4983	0.0015	0.0385 (0.0009)	0.0017 (0.0012)	0.9490 (0.0070)	0.0015 (0.0001)	1000
RP (P)	-0.4985	0.0015	0.0385 (0.0009)	0.0015 (0.0012)	0.9500 (0.0069)	0.0015 (0.0001)	1000
FP (W)	-0.4989	0.0015	0.0395 (0.0011)	0.0011 (0.0015)	0.9459 (0.0085)	0.0016 (0.0001)	703
FP (k=10)	-0.4948	0.0015	0.0393 (0.0009)	0.0052 (0.0013)	0.9430 (0.0075)	0.0016 (0.0001)	947
FP (k=10000)	-0.5017	0.0014	0.0402 (0.0009)	-0.0017 (0.0013)	0.9354 (0.0079)	0.0016 (0.0001)	975

Table 98: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5003	0.0012	0.0343 (0.0008)	-0.0003 (0.0011)	0.9613 (0.0062)	0.0012 (0.0001)	981
Exp	-0.4238	0.0012	0.0292 (0.0007)	0.0762 (0.0009)	0.3660 (0.0152)	0.0067 (0.0001)	1000
Weibull	-0.4761	0.0012	0.0328 (0.0007)	0.0239 (0.0010)	0.8980 (0.0096)	0.0016 (0.0001)	1000
Gompertz	-0.4997	0.0012	0.0348 (0.0008)	0.0003 (0.0011)	0.9549 (0.0066)	0.0012 (0.0001)	998
RP (3)	-0.4992	0.0012	0.0343 (0.0008)	0.0008 (0.0011)	0.9590 (0.0063)	0.0012 (0.0001)	1000
RP (5)	-0.4999	0.0012	0.0343 (0.0008)	0.0001 (0.0011)	0.9610 (0.0061)	0.0012 (0.0001)	1000
RP (9)	-0.5001	0.0012	0.0343 (0.0008)	-0.0001 (0.0011)	0.9600 (0.0062)	0.0012 (0.0001)	1000
RP (P)	-0.4976	0.0012	0.0342 (0.0008)	0.0024 (0.0011)	0.9610 (0.0061)	0.0012 (0.0000)	1000
FP (W)	-0.4761	0.0012	0.0328 (0.0007)	0.0239 (0.0010)	0.8980 (0.0096)	0.0016 (0.0001)	1000
FP (k=10)	-0.4994	0.0012	0.0343 (0.0008)	0.0006 (0.0011)	0.9610 (0.0061)	0.0012 (0.0001)	1000
FP (k=10000)	-0.4970	0.0012	0.0342 (0.0008)	0.0030 (0.0011)	0.9580 (0.0063)	0.0012 (0.0000)	1000
Model frailty: Normal							
Cox	-0.5001	0.0012	0.0343 (0.0008)	-0.0001 (0.0011)	0.9600 (0.0062)	0.0012 (0.0001)	1000
Exp	-0.4238	0.0012	0.0292 (0.0007)	0.0762 (0.0009)	0.3650 (0.0152)	0.0067 (0.0001)	1000
Weibull	-0.4762	0.0012	0.0328 (0.0007)	0.0238 (0.0010)	0.8990 (0.0095)	0.0016 (0.0001)	1000
Gompertz	-0.4996	0.0012	0.0349 (0.0008)	0.0004 (0.0011)	0.9546 (0.0066)	0.0012 (0.0001)	991
RP (3)	-0.4992	0.0012	0.0343 (0.0008)	0.0008 (0.0011)	0.9590 (0.0063)	0.0012 (0.0001)	1000
RP (5)	-0.4999	0.0012	0.0343 (0.0008)	0.0001 (0.0011)	0.9610 (0.0061)	0.0012 (0.0001)	1000
RP (9)	-0.5001	0.0012	0.0343 (0.0008)	-0.0001 (0.0011)	0.9600 (0.0062)	0.0012 (0.0001)	1000
RP (P)	-0.4976	0.0012	0.0342 (0.0008)	0.0024 (0.0011)	0.9610 (0.0061)	0.0012 (0.0000)	1000
FP (W)	-0.4756	0.0012	0.0326 (0.0012)	0.0244 (0.0016)	0.9005 (0.0151)	0.0017 (0.0001)	392
FP (k=10)	-0.4994	0.0012	0.0355 (0.0008)	0.0006 (0.0012)	0.9456 (0.0075)	0.0013 (0.0001)	919
FP (k=10000)	-0.4969	0.0010	0.0355 (0.0008)	0.0031 (0.0012)	0.9278 (0.0084)	0.0013 (0.0001)	942

Table 99: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5004	0.0012	0.0336 (0.0008)	-0.0004 (0.0011)	0.9590 (0.0064)	0.0011 (0.0001)	975
Exp	-0.3875	0.0012	0.0280 (0.0006)	0.1125 (0.0009)	0.0580 (0.0074)	0.0134 (0.0002)	1000
Weibull	-0.5255	0.0012	0.0353 (0.0008)	-0.0255 (0.0011)	0.8910 (0.0099)	0.0019 (0.0001)	1000
Gompertz	-0.5011	0.0012	0.0342 (0.0008)	-0.0011 (0.0011)	0.9580 (0.0063)	0.0012 (0.0001)	1000
RP (3)	-0.5005	0.0012	0.0336 (0.0008)	-0.0005 (0.0011)	0.9588 (0.0063)	0.0011 (0.0001)	995
RP (5)	-0.5005	0.0012	0.0336 (0.0008)	-0.0005 (0.0011)	0.9590 (0.0063)	0.0011 (0.0001)	1000
RP (9)	-0.5006	0.0012	0.0336 (0.0008)	-0.0006 (0.0011)	0.9600 (0.0062)	0.0011 (0.0001)	1000
RP (P)	-0.5010	0.0012	0.0336 (0.0008)	-0.0010 (0.0011)	0.9600 (0.0062)	0.0011 (0.0001)	1000
FP (W)	-0.5255	0.0012	0.0353 (0.0008)	-0.0255 (0.0011)	0.8908 (0.0099)	0.0019 (0.0001)	998
FP (k=10)	-0.4966	0.0012	0.0337 (0.0008)	0.0034 (0.0011)	0.9570 (0.0064)	0.0011 (0.0001)	1000
FP (k=10000)	-0.4959	0.0012	0.0340 (0.0008)	0.0041 (0.0011)	0.9559 (0.0066)	0.0012 (0.0001)	974
Model frailty: Normal							
Cox	-0.5005	0.0012	0.0336 (0.0008)	-0.0005 (0.0011)	0.9590 (0.0063)	0.0011 (0.0001)	1000
Exp	-0.3875	0.0012	0.0280 (0.0006)	0.1125 (0.0009)	0.0580 (0.0074)	0.0134 (0.0002)	1000
Weibull	-0.5255	0.0012	0.0353 (0.0008)	-0.0255 (0.0011)	0.8910 (0.0099)	0.0019 (0.0001)	1000
Gompertz	-0.5011	0.0012	0.0342 (0.0008)	-0.0011 (0.0011)	0.9580 (0.0063)	0.0012 (0.0001)	1000
RP (3)	-0.5006	0.0012	0.0336 (0.0008)	-0.0006 (0.0011)	0.9580 (0.0063)	0.0011 (0.0001)	1000
RP (5)	-0.5005	0.0012	0.0336 (0.0008)	-0.0005 (0.0011)	0.9590 (0.0063)	0.0011 (0.0001)	1000
RP (9)	-0.5006	0.0012	0.0336 (0.0008)	-0.0006 (0.0011)	0.9600 (0.0062)	0.0011 (0.0001)	1000
RP (P)	-0.5010	0.0012	0.0336 (0.0008)	-0.0010 (0.0011)	0.9590 (0.0063)	0.0011 (0.0001)	1000
FP (W)	-0.5257	0.0012	0.0356 (0.0012)	-0.0257 (0.0017)	0.8778 (0.0154)	0.0019 (0.0001)	450
FP (k=10)	-0.4956	0.0012	0.0340 (0.0008)	0.0044 (0.0011)	0.9582 (0.0066)	0.0012 (0.0001)	909
FP (k=10000)	-0.5257	0.0011	0.0384 (0.0009)	-0.0257 (0.0012)	0.8379 (0.0120)	0.0021 (0.0001)	950

Table 100: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5001	0.0014	0.0373 (0.0008)	-0.0001 (0.0012)	0.9579 (0.0064)	0.0014 (0.0001)	973
Exp	-0.5291	0.0014	0.0388 (0.0009)	-0.0291 (0.0012)	0.8740 (0.0105)	0.0024 (0.0001)	1000
Weibull	-0.5051	0.0014	0.0375 (0.0008)	-0.0051 (0.0012)	0.9480 (0.0070)	0.0014 (0.0001)	1000
Gompertz	-0.5307	0.0014	0.0378 (0.0012)	-0.0307 (0.0017)	0.8805 (0.0145)	0.0024 (0.0001)	502
RP (3)	-0.5004	0.0014	0.0372 (0.0008)	-0.0004 (0.0012)	0.9580 (0.0063)	0.0014 (0.0001)	999
RP (5)	-0.5004	0.0014	0.0372 (0.0008)	-0.0004 (0.0012)	0.9590 (0.0063)	0.0014 (0.0001)	1000
RP (9)	-0.5003	0.0014	0.0372 (0.0008)	-0.0003 (0.0012)	0.9578 (0.0064)	0.0014 (0.0001)	996
RP (P)	-0.5006	0.0014	0.0372 (0.0008)	-0.0006 (0.0012)	0.9570 (0.0064)	0.0014 (0.0001)	1000
FP (W)	-0.5051	0.0014	0.0375 (0.0008)	-0.0051 (0.0012)	0.9480 (0.0070)	0.0014 (0.0001)	1000
FP (k=10)	-0.4988	0.0014	0.0372 (0.0008)	0.0012 (0.0012)	0.9560 (0.0065)	0.0014 (0.0001)	1000
FP (k=10000)	-0.4970	0.0014	0.0369 (0.0008)	0.0030 (0.0012)	0.9520 (0.0068)	0.0014 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5004	0.0014	0.0372 (0.0008)	-0.0004 (0.0012)	0.9600 (0.0062)	0.0014 (0.0001)	1000
Exp	-0.5291	0.0014	0.0388 (0.0009)	-0.0291 (0.0012)	0.8740 (0.0105)	0.0024 (0.0001)	1000
Weibull	-0.5052	0.0014	0.0375 (0.0008)	-0.0052 (0.0012)	0.9490 (0.0070)	0.0014 (0.0001)	1000
Gompertz	-0.5300	0.0014	0.0382 (0.0012)	-0.0300 (0.0017)	0.8810 (0.0145)	0.0024 (0.0001)	496
RP (3)	-0.5004	0.0014	0.0372 (0.0008)	-0.0004 (0.0012)	0.9590 (0.0063)	0.0014 (0.0001)	1000
RP (5)	-0.5004	0.0014	0.0372 (0.0008)	-0.0004 (0.0012)	0.9590 (0.0063)	0.0014 (0.0001)	1000
RP (9)	-0.5005	0.0014	0.0372 (0.0008)	-0.0005 (0.0012)	0.9600 (0.0062)	0.0014 (0.0001)	1000
RP (P)	-0.5007	0.0014	0.0372 (0.0008)	-0.0007 (0.0012)	0.9590 (0.0063)	0.0014 (0.0001)	1000
FP (W)	-0.5063	0.0014	0.0376 (0.0011)	-0.0063 (0.0015)	0.9454 (0.0091)	0.0014 (0.0001)	623
FP (k=10)	-0.4983	0.0014	0.0380 (0.0009)	0.0017 (0.0012)	0.9465 (0.0074)	0.0014 (0.0001)	934
FP (k=10000)	-0.4969	0.0013	0.0376 (0.0009)	0.0031 (0.0012)	0.9410 (0.0076)	0.0014 (0.0001)	966

Table 101: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5017	0.0016	0.0390 (0.0009)	-0.0017 (0.0013)	0.9512 (0.0069)	0.0015 (0.0001)	963
Exp	-0.5019	0.0016	0.0389 (0.0009)	-0.0019 (0.0012)	0.9490 (0.0070)	0.0015 (0.0001)	1000
Weibull	-0.5023	0.0016	0.0391 (0.0009)	-0.0023 (0.0012)	0.9500 (0.0069)	0.0015 (0.0001)	1000
Gompertz	-0.5023	0.0016	0.0387 (0.0012)	-0.0023 (0.0017)	0.9500 (0.0097)	0.0015 (0.0001)	500
RP (3)	-0.5020	0.0016	0.0391 (0.0009)	-0.0020 (0.0012)	0.9522 (0.0068)	0.0015 (0.0001)	984
RP (5)	-0.5018	0.0016	0.0392 (0.0009)	-0.0018 (0.0013)	0.9496 (0.0070)	0.0015 (0.0001)	973
RP (9)	-0.5018	0.0016	0.0390 (0.0009)	-0.0018 (0.0013)	0.9522 (0.0069)	0.0015 (0.0001)	963
RP (P)	-0.5022	0.0016	0.0391 (0.0009)	-0.0022 (0.0012)	0.9497 (0.0069)	0.0015 (0.0001)	995
FP (W)	-0.5023	0.0016	0.0391 (0.0009)	-0.0023 (0.0012)	0.9500 (0.0069)	0.0015 (0.0001)	1000
FP (k=10)	-0.5010	0.0016	0.0391 (0.0009)	-0.0010 (0.0012)	0.9510 (0.0068)	0.0015 (0.0001)	1000
FP (k=10000)	-0.5014	0.0016	0.0391 (0.0009)	-0.0014 (0.0012)	0.9510 (0.0068)	0.0015 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5020	0.0016	0.0391 (0.0009)	-0.0020 (0.0012)	0.9510 (0.0068)	0.0015 (0.0001)	1000
Exp	-0.5019	0.0016	0.0389 (0.0009)	-0.0019 (0.0012)	0.9490 (0.0070)	0.0015 (0.0001)	1000
Weibull	-0.5024	0.0016	0.0390 (0.0009)	-0.0024 (0.0012)	0.9510 (0.0068)	0.0015 (0.0001)	999
Gompertz	-0.5030	0.0016	0.0377 (0.0012)	-0.0030 (0.0017)	0.9517 (0.0098)	0.0014 (0.0001)	476
RP (3)	-0.5020	0.0016	0.0391 (0.0009)	-0.0020 (0.0012)	0.9510 (0.0068)	0.0015 (0.0001)	1000
RP (5)	-0.5021	0.0016	0.0391 (0.0009)	-0.0021 (0.0012)	0.9510 (0.0068)	0.0015 (0.0001)	1000
RP (9)	-0.5021	0.0016	0.0391 (0.0009)	-0.0021 (0.0012)	0.9510 (0.0068)	0.0015 (0.0001)	1000
RP (P)	-0.5023	0.0016	0.0391 (0.0009)	-0.0023 (0.0012)	0.9500 (0.0069)	0.0015 (0.0001)	1000
FP (W)	-0.5031	0.0016	0.0389 (0.0012)	-0.0031 (0.0017)	0.9503 (0.0093)	0.0015 (0.0001)	543
FP (k=10)	-0.5006	0.0016	0.0392 (0.0009)	-0.0006 (0.0013)	0.9571 (0.0068)	0.0015 (0.0001)	886
FP (k=10000)	-0.5010	0.0015	0.0396 (0.0009)	-0.0010 (0.0013)	0.9461 (0.0074)	0.0016 (0.0001)	927

Table 102: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4977	0.0018	0.0426 (0.0010)	0.0023 (0.0014)	0.9531 (0.0068)	0.0018 (0.0001)	960
Exp	-0.5493	0.0018	0.0474 (0.0011)	-0.0493 (0.0015)	0.7630 (0.0134)	0.0047 (0.0002)	1000
Weibull	-0.4985	0.0018	0.0426 (0.0010)	0.0015 (0.0013)	0.9530 (0.0067)	0.0018 (0.0001)	1000
Gompertz	-0.5491	0.0018	0.0490 (0.0017)	-0.0491 (0.0024)	0.7696 (0.0202)	0.0048 (0.0003)	434
RP (3)	-0.4975	0.0018	0.0426 (0.0010)	0.0025 (0.0014)	0.9526 (0.0067)	0.0018 (0.0001)	992
RP (5)	-0.4979	0.0018	0.0429 (0.0010)	0.0021 (0.0014)	0.9506 (0.0070)	0.0018 (0.0001)	952
RP (9)	-0.4974	0.0018	0.0426 (0.0010)	0.0026 (0.0014)	0.9529 (0.0068)	0.0018 (0.0001)	977
RP (P)	-0.4978	0.0018	0.0427 (0.0010)	0.0022 (0.0014)	0.9518 (0.0068)	0.0018 (0.0001)	996
FP (W)	-0.4985	0.0018	0.0426 (0.0010)	0.0015 (0.0013)	0.9530 (0.0067)	0.0018 (0.0001)	1000
FP (k=10)	-0.4947	0.0018	0.0427 (0.0010)	0.0053 (0.0014)	0.9500 (0.0069)	0.0019 (0.0001)	1000
FP (k=10000)	-0.5026	0.0018	0.0441 (0.0010)	-0.0026 (0.0014)	0.9396 (0.0076)	0.0020 (0.0001)	994
Model frailty: Normal							
Cox	-0.4976	0.0018	0.0426 (0.0010)	0.0024 (0.0013)	0.9530 (0.0067)	0.0018 (0.0001)	1000
Exp	-0.5494	0.0018	0.0474 (0.0011)	-0.0494 (0.0015)	0.7610 (0.0135)	0.0047 (0.0002)	1000
Weibull	-0.4986	0.0018	0.0426 (0.0010)	0.0014 (0.0013)	0.9529 (0.0067)	0.0018 (0.0001)	998
Gompertz	-0.5523	0.0018	0.0472 (0.0016)	-0.0523 (0.0023)	0.7640 (0.0209)	0.0050 (0.0003)	411
RP (3)	-0.4975	0.0018	0.0426 (0.0010)	0.0025 (0.0013)	0.9530 (0.0067)	0.0018 (0.0001)	1000
RP (5)	-0.4976	0.0018	0.0427 (0.0010)	0.0024 (0.0013)	0.9530 (0.0067)	0.0018 (0.0001)	1000
RP (9)	-0.4977	0.0018	0.0426 (0.0010)	0.0023 (0.0013)	0.9520 (0.0068)	0.0018 (0.0001)	1000
RP (P)	-0.4979	0.0018	0.0426 (0.0010)	0.0021 (0.0013)	0.9530 (0.0067)	0.0018 (0.0001)	1000
FP (W)	-0.4983	0.0018	0.0423 (0.0012)	0.0017 (0.0017)	0.9576 (0.0080)	0.0018 (0.0001)	637
FP (k=10)	-0.4944	0.0018	0.0427 (0.0010)	0.0056 (0.0014)	0.9507 (0.0072)	0.0019 (0.0001)	913
FP (k=10000)	-0.5013	0.0018	0.0439 (0.0010)	-0.0013 (0.0014)	0.9384 (0.0078)	0.0019 (0.0001)	941

Table 103: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5010	0.0014	0.0362 (0.0008)	-0.0010 (0.0012)	0.9510 (0.0070)	0.0013 (0.0001)	959
Exp	-0.4336	0.0013	0.0310 (0.0007)	0.0664 (0.0010)	0.5690 (0.0157)	0.0054 (0.0001)	1000
Weibull	-0.4827	0.0014	0.0346 (0.0008)	0.0173 (0.0011)	0.9410 (0.0075)	0.0015 (0.0001)	1000
Gompertz	-0.4562	0.0014	0.0456 (0.0013)	0.0438 (0.0019)	0.7042 (0.0187)	0.0040 (0.0002)	595
RP (3)	-0.5011	0.0014	0.0359 (0.0008)	-0.0011 (0.0011)	0.9534 (0.0067)	0.0013 (0.0001)	988
RP (5)	-0.5013	0.0014	0.0359 (0.0008)	-0.0013 (0.0011)	0.9518 (0.0068)	0.0013 (0.0001)	995
RP (9)	-0.5014	0.0014	0.0355 (0.0008)	-0.0014 (0.0012)	0.9543 (0.0068)	0.0013 (0.0001)	940
RP (P)	-0.4996	0.0014	0.0357 (0.0008)	0.0004 (0.0011)	0.9547 (0.0066)	0.0013 (0.0001)	993
FP (W)	-0.4827	0.0014	0.0346 (0.0008)	0.0173 (0.0011)	0.9410 (0.0075)	0.0015 (0.0001)	1000
FP (k=10)	-0.5006	0.0014	0.0359 (0.0008)	-0.0006 (0.0011)	0.9510 (0.0068)	0.0013 (0.0001)	1000
FP (k=10000)	-0.4996	0.0014	0.0358 (0.0008)	0.0004 (0.0011)	0.9500 (0.0069)	0.0013 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5015	0.0014	0.0359 (0.0008)	-0.0015 (0.0011)	0.9530 (0.0067)	0.0013 (0.0001)	999
Exp	-0.4336	0.0013	0.0310 (0.0007)	0.0664 (0.0010)	0.5700 (0.0157)	0.0054 (0.0001)	1000
Weibull	-0.4828	0.0014	0.0346 (0.0008)	0.0172 (0.0011)	0.9420 (0.0074)	0.0015 (0.0001)	1000
Gompertz	-0.4565	0.0014	0.0442 (0.0012)	0.0435 (0.0017)	0.7147 (0.0170)	0.0038 (0.0002)	708
RP (3)	-0.5011	0.0014	0.0358 (0.0008)	-0.0011 (0.0011)	0.9530 (0.0067)	0.0013 (0.0001)	1000
RP (5)	-0.5014	0.0014	0.0359 (0.0008)	-0.0014 (0.0011)	0.9530 (0.0067)	0.0013 (0.0001)	1000
RP (9)	-0.5015	0.0014	0.0359 (0.0008)	-0.0015 (0.0011)	0.9530 (0.0067)	0.0013 (0.0001)	1000
RP (P)	-0.4997	0.0014	0.0357 (0.0008)	0.0003 (0.0011)	0.9540 (0.0066)	0.0013 (0.0001)	1000
FP (W)	-0.4843	0.0014	0.0364 (0.0012)	0.0157 (0.0017)	0.9232 (0.0123)	0.0016 (0.0001)	469
FP (k=10)	-0.4989	0.0014	0.0365 (0.0009)	0.0011 (0.0013)	0.9561 (0.0071)	0.0013 (0.0001)	842
FP (k=10000)	-0.4985	0.0012	0.0368 (0.0009)	0.0015 (0.0012)	0.9360 (0.0081)	0.0014 (0.0001)	906

Table 104: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4997	0.0014	0.0381 (0.0009)	0.0003 (0.0012)	0.9514 (0.0069)	0.0015 (0.0001)	967
Exp	-0.3943	0.0014	0.0326 (0.0007)	0.1057 (0.0010)	0.1640 (0.0117)	0.0122 (0.0002)	1000
Weibull	-0.5194	0.0014	0.0396 (0.0009)	-0.0194 (0.0013)	0.9060 (0.0092)	0.0019 (0.0001)	1000
Gompertz	-0.4694	0.0014	0.0570 (0.0013)	0.0306 (0.0019)	0.7637 (0.0138)	0.0042 (0.0002)	948
RP (3)	-0.5008	0.0014	0.0380 (0.0009)	-0.0008 (0.0013)	0.9514 (0.0073)	0.0014 (0.0001)	865
RP (5)	-0.5001	0.0014	0.0381 (0.0009)	-0.0001 (0.0012)	0.9506 (0.0069)	0.0015 (0.0001)	992
RP (9)	-0.4999	0.0014	0.0381 (0.0009)	0.0001 (0.0012)	0.9501 (0.0071)	0.0014 (0.0001)	941
RP (P)	-0.5004	0.0014	0.0381 (0.0009)	-0.0004 (0.0012)	0.9515 (0.0068)	0.0015 (0.0001)	990
FP (W)	-0.5194	0.0014	0.0396 (0.0009)	-0.0194 (0.0013)	0.9060 (0.0092)	0.0019 (0.0001)	1000
FP (k=10)	-0.4967	0.0014	0.0381 (0.0009)	0.0033 (0.0012)	0.9520 (0.0068)	0.0015 (0.0001)	1000
FP (k=10000)	-0.4939	0.0014	0.0384 (0.0009)	0.0061 (0.0012)	0.9500 (0.0069)	0.0015 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5002	0.0014	0.0381 (0.0009)	-0.0002 (0.0012)	0.9510 (0.0068)	0.0015 (0.0001)	999
Exp	-0.3943	0.0014	0.0326 (0.0007)	0.1057 (0.0010)	0.1640 (0.0117)	0.0122 (0.0002)	1000
Weibull	-0.5194	0.0014	0.0396 (0.0009)	-0.0194 (0.0013)	0.9070 (0.0092)	0.0019 (0.0001)	1000
Gompertz	-0.4687	0.0014	0.0573 (0.0014)	0.0313 (0.0019)	0.7597 (0.0145)	0.0043 (0.0002)	874
RP (3)	-0.5010	0.0014	0.0382 (0.0009)	-0.0010 (0.0012)	0.9500 (0.0069)	0.0015 (0.0001)	1000
RP (5)	-0.5002	0.0014	0.0381 (0.0009)	-0.0002 (0.0012)	0.9510 (0.0068)	0.0015 (0.0001)	1000
RP (9)	-0.5002	0.0014	0.0381 (0.0009)	-0.0002 (0.0012)	0.9510 (0.0068)	0.0015 (0.0001)	1000
RP (P)	-0.5005	0.0014	0.0381 (0.0009)	-0.0005 (0.0012)	0.9510 (0.0068)	0.0015 (0.0001)	1000
FP (W)	-0.5214	0.0014	0.0395 (0.0013)	-0.0214 (0.0019)	0.9037 (0.0141)	0.0020 (0.0001)	436
FP (k=10)	-0.4962	0.0014	0.0390 (0.0009)	0.0038 (0.0013)	0.9457 (0.0077)	0.0015 (0.0001)	865
FP (k=10000)	-0.5023	0.0013	0.0448 (0.0011)	-0.0023 (0.0015)	0.8944 (0.0104)	0.0020 (0.0001)	881

Table 105: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5018	0.0017	0.0417 (0.0010)	-0.0018 (0.0013)	0.9583 (0.0064)	0.0017 (0.0001)	960
Exp	-0.5286	0.0017	0.0435 (0.0010)	-0.0286 (0.0014)	0.8600 (0.0110)	0.0027 (0.0001)	1000
Weibull	-0.5047	0.0017	0.0418 (0.0009)	-0.0047 (0.0013)	0.9580 (0.0063)	0.0018 (0.0001)	1000
Gompertz	-0.5309	0.0017	0.0441 (0.0020)	-0.0309 (0.0028)	0.8434 (0.0230)	0.0029 (0.0002)	249
RP (3)	-0.5021	0.0017	0.0413 (0.0009)	-0.0021 (0.0013)	0.9593 (0.0063)	0.0017 (0.0001)	984
RP (5)	-0.5022	0.0017	0.0416 (0.0009)	-0.0022 (0.0013)	0.9572 (0.0065)	0.0017 (0.0001)	981
RP (9)	-0.5023	0.0017	0.0412 (0.0009)	-0.0023 (0.0013)	0.9589 (0.0064)	0.0017 (0.0001)	974
RP (P)	-0.5023	0.0017	0.0413 (0.0009)	-0.0023 (0.0013)	0.9579 (0.0064)	0.0017 (0.0001)	997
FP (W)	-0.5047	0.0017	0.0418 (0.0009)	-0.0047 (0.0013)	0.9580 (0.0063)	0.0018 (0.0001)	1000
FP (k=10)	-0.5004	0.0017	0.0415 (0.0009)	-0.0004 (0.0013)	0.9590 (0.0063)	0.0017 (0.0001)	1000
FP (k=10000)	-0.4984	0.0017	0.0412 (0.0009)	0.0016 (0.0013)	0.9570 (0.0064)	0.0017 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5022	0.0017	0.0415 (0.0009)	-0.0022 (0.0013)	0.9580 (0.0063)	0.0017 (0.0001)	1000
Exp	-0.5287	0.0017	0.0435 (0.0010)	-0.0287 (0.0014)	0.8599 (0.0110)	0.0027 (0.0001)	999
Weibull	-0.5049	0.0017	0.0418 (0.0009)	-0.0049 (0.0013)	0.9590 (0.0063)	0.0018 (0.0001)	999
Gompertz	-0.5306	0.0017	0.0449 (0.0015)	-0.0306 (0.0022)	0.8394 (0.0176)	0.0030 (0.0002)	436
RP (3)	-0.5017	0.0017	0.0415 (0.0009)	-0.0017 (0.0013)	0.9590 (0.0063)	0.0017 (0.0001)	1000
RP (5)	-0.5022	0.0017	0.0415 (0.0009)	-0.0022 (0.0013)	0.9580 (0.0063)	0.0017 (0.0001)	1000
RP (9)	-0.5022	0.0017	0.0415 (0.0009)	-0.0022 (0.0013)	0.9570 (0.0064)	0.0017 (0.0001)	1000
RP (P)	-0.5023	0.0017	0.0415 (0.0009)	-0.0023 (0.0013)	0.9570 (0.0064)	0.0017 (0.0001)	1000
FP (W)	-0.5058	0.0017	0.0426 (0.0012)	-0.0058 (0.0017)	0.9585 (0.0081)	0.0018 (0.0001)	602
FP (k=10)	-0.5002	0.0017	0.0424 (0.0010)	-0.0002 (0.0014)	0.9497 (0.0072)	0.0018 (0.0001)	915
FP (k=10000)	-0.4980	0.0016	0.0419 (0.0010)	0.0020 (0.0014)	0.9483 (0.0072)	0.0018 (0.0001)	948

Table 106: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4981	0.0014	0.0373 (0.0009)	0.0019 (0.0012)	0.9476 (0.0072)	0.0014 (0.0001)	954
Exp	-0.4983	0.0014	0.0369 (0.0008)	0.0017 (0.0012)	0.9500 (0.0069)	0.0014 (0.0001)	1000
Weibull	-0.4988	0.0014	0.0372 (0.0008)	0.0012 (0.0012)	0.9490 (0.0070)	0.0014 (0.0001)	1000
Gompertz	-0.4947	0.0014	0.0369 (0.0015)	0.0053 (0.0021)	0.9511 (0.0123)	0.0014 (0.0001)	307
RP (3)	-0.4983	0.0014	0.0372 (0.0008)	0.0017 (0.0012)	0.9478 (0.0070)	0.0014 (0.0001)	996
RP (5)	-0.4983	0.0014	0.0372 (0.0008)	0.0017 (0.0012)	0.9470 (0.0071)	0.0014 (0.0001)	1000
RP (9)	-0.4983	0.0014	0.0372 (0.0008)	0.0017 (0.0012)	0.9469 (0.0071)	0.0014 (0.0001)	998
RP (P)	-0.4986	0.0014	0.0372 (0.0008)	0.0014 (0.0012)	0.9488 (0.0070)	0.0014 (0.0001)	997
FP (W)	-0.4988	0.0014	0.0372 (0.0008)	0.0012 (0.0012)	0.9490 (0.0070)	0.0014 (0.0001)	1000
FP (k=10)	-0.4975	0.0014	0.0372 (0.0008)	0.0025 (0.0012)	0.9470 (0.0071)	0.0014 (0.0001)	1000
FP (k=10000)	-0.4977	0.0014	0.0372 (0.0008)	0.0023 (0.0012)	0.9480 (0.0070)	0.0014 (0.0001)	1000
Model frailty: Normal							
Cox	-0.4984	0.0014	0.0372 (0.0008)	0.0016 (0.0012)	0.9480 (0.0070)	0.0014 (0.0001)	1000
Exp	-0.4984	0.0014	0.0368 (0.0008)	0.0016 (0.0012)	0.9499 (0.0069)	0.0014 (0.0001)	999
Weibull	-0.4989	0.0014	0.0372 (0.0008)	0.0011 (0.0012)	0.9479 (0.0070)	0.0014 (0.0001)	999
Gompertz	-0.4947	0.0014	0.0360 (0.0015)	0.0053 (0.0021)	0.9514 (0.0127)	0.0013 (0.0001)	288
RP (3)	-0.4984	0.0014	0.0372 (0.0008)	0.0016 (0.0012)	0.9490 (0.0070)	0.0014 (0.0001)	1000
RP (5)	-0.4984	0.0014	0.0372 (0.0008)	0.0016 (0.0012)	0.9480 (0.0070)	0.0014 (0.0001)	1000
RP (9)	-0.4985	0.0014	0.0372 (0.0008)	0.0015 (0.0012)	0.9470 (0.0071)	0.0014 (0.0001)	1000
RP (P)	-0.4987	0.0014	0.0372 (0.0008)	0.0013 (0.0012)	0.9480 (0.0070)	0.0014 (0.0001)	1000
FP (W)	-0.5003	0.0014	0.0385 (0.0012)	-0.0003 (0.0017)	0.9409 (0.0106)	0.0015 (0.0001)	491
FP (k=10)	-0.4961	0.0014	0.0378 (0.0009)	0.0039 (0.0013)	0.9423 (0.0078)	0.0014 (0.0001)	884
FP (k=10000)	-0.4961	0.0013	0.0382 (0.0009)	0.0039 (0.0013)	0.9288 (0.0084)	0.0015 (0.0001)	927

Table 107: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5021	0.0016	0.0403 (0.0009)	-0.0021 (0.0013)	0.9440 (0.0074)	0.0016 (0.0001)	965
Exp	-0.5638	0.0015	0.0456 (0.0010)	-0.0638 (0.0014)	0.6030 (0.0155)	0.0061 (0.0002)	1000
Weibull	-0.5032	0.0016	0.0404 (0.0009)	-0.0032 (0.0013)	0.9450 (0.0072)	0.0016 (0.0001)	1000
Gompertz	-0.5668	0.0016	0.0456 (0.0018)	-0.0668 (0.0025)	0.5621 (0.0276)	0.0065 (0.0004)	322
RP (3)	-0.5018	0.0016	0.0404 (0.0009)	-0.0018 (0.0013)	0.9448 (0.0072)	0.0016 (0.0001)	996
RP (5)	-0.5019	0.0016	0.0403 (0.0009)	-0.0019 (0.0013)	0.9418 (0.0074)	0.0016 (0.0001)	996
RP (9)	-0.5018	0.0016	0.0403 (0.0009)	-0.0018 (0.0013)	0.9449 (0.0072)	0.0016 (0.0001)	998
RP (P)	-0.5019	0.0016	0.0402 (0.0009)	-0.0019 (0.0013)	0.9429 (0.0073)	0.0016 (0.0001)	999
FP (W)	-0.5032	0.0016	0.0404 (0.0009)	-0.0032 (0.0013)	0.9450 (0.0072)	0.0016 (0.0001)	1000
FP (k=10)	-0.4998	0.0016	0.0406 (0.0009)	0.0002 (0.0013)	0.9459 (0.0072)	0.0016 (0.0001)	999
FP (k=10000)	-0.5156	0.0015	0.0423 (0.0009)	-0.0156 (0.0013)	0.9134 (0.0089)	0.0020 (0.0001)	993
Model frailty: Normal							
Cox	-0.5020	0.0016	0.0404 (0.0009)	-0.0020 (0.0013)	0.9420 (0.0074)	0.0016 (0.0001)	1000
Exp	-0.5638	0.0015	0.0456 (0.0010)	-0.0638 (0.0014)	0.6020 (0.0155)	0.0062 (0.0002)	1000
Weibull	-0.5034	0.0016	0.0405 (0.0009)	-0.0034 (0.0013)	0.9449 (0.0072)	0.0016 (0.0001)	999
Gompertz	-0.5677	0.0016	0.0454 (0.0016)	-0.0677 (0.0023)	0.5567 (0.0249)	0.0066 (0.0003)	397
RP (3)	-0.5019	0.0016	0.0403 (0.0009)	-0.0019 (0.0013)	0.9440 (0.0073)	0.0016 (0.0001)	1000
RP (5)	-0.5020	0.0016	0.0403 (0.0009)	-0.0020 (0.0013)	0.9420 (0.0074)	0.0016 (0.0001)	1000
RP (9)	-0.5020	0.0016	0.0404 (0.0009)	-0.0020 (0.0013)	0.9430 (0.0073)	0.0016 (0.0001)	1000
RP (P)	-0.5022	0.0016	0.0404 (0.0009)	-0.0022 (0.0013)	0.9430 (0.0073)	0.0016 (0.0001)	1000
FP (W)	-0.5040	0.0016	0.0417 (0.0012)	-0.0040 (0.0017)	0.9375 (0.0101)	0.0018 (0.0001)	576
FP (k=10)	-0.4999	0.0015	0.0410 (0.0010)	0.0001 (0.0014)	0.9384 (0.0080)	0.0017 (0.0001)	893
FP (k=10000)	-0.5119	0.0015	0.0425 (0.0010)	-0.0119 (0.0014)	0.9070 (0.0095)	0.0019 (0.0001)	935

Table 108: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5004	0.0013	0.0343 (0.0008)	-0.0004 (0.0011)	0.9567 (0.0066)	0.0012 (0.0001)	946
Exp	-0.4325	0.0012	0.0298 (0.0007)	0.0675 (0.0009)	0.5040 (0.0158)	0.0054 (0.0001)	1000
Weibull	-0.4813	0.0012	0.0333 (0.0007)	0.0187 (0.0011)	0.9390 (0.0076)	0.0015 (0.0001)	1000
Gompertz	-0.4602	0.0012	0.0442 (0.0014)	0.0398 (0.0020)	0.7092 (0.0208)	0.0035 (0.0002)	478
RP (3)	-0.5000	0.0013	0.0344 (0.0008)	-0.0000 (0.0011)	0.9550 (0.0066)	0.0012 (0.0001)	999
RP (5)	-0.5004	0.0013	0.0344 (0.0008)	-0.0004 (0.0011)	0.9540 (0.0066)	0.0012 (0.0001)	1000
RP (9)	-0.5005	0.0013	0.0343 (0.0008)	-0.0005 (0.0011)	0.9529 (0.0067)	0.0012 (0.0001)	997
RP (P)	-0.4990	0.0012	0.0343 (0.0008)	0.0010 (0.0011)	0.9549 (0.0066)	0.0012 (0.0001)	998
FP (W)	-0.4813	0.0012	0.0333 (0.0007)	0.0187 (0.0011)	0.9390 (0.0076)	0.0015 (0.0001)	1000
FP (k=10)	-0.4998	0.0013	0.0344 (0.0008)	0.0002 (0.0011)	0.9540 (0.0066)	0.0012 (0.0001)	1000
FP (k=10000)	-0.4988	0.0012	0.0343 (0.0008)	0.0012 (0.0011)	0.9508 (0.0069)	0.0012 (0.0001)	996
Model frailty: Normal							
Cox	-0.5005	0.0013	0.0344 (0.0008)	-0.0005 (0.0011)	0.9550 (0.0066)	0.0012 (0.0001)	1000
Exp	-0.4325	0.0012	0.0298 (0.0007)	0.0675 (0.0009)	0.5030 (0.0158)	0.0054 (0.0001)	1000
Weibull	-0.4814	0.0012	0.0333 (0.0007)	0.0186 (0.0011)	0.9389 (0.0076)	0.0015 (0.0001)	999
Gompertz	-0.4603	0.0012	0.0437 (0.0018)	0.0397 (0.0025)	0.7172 (0.0261)	0.0035 (0.0002)	297
RP (3)	-0.5001	0.0013	0.0344 (0.0008)	-0.0001 (0.0011)	0.9560 (0.0065)	0.0012 (0.0001)	1000
RP (5)	-0.5005	0.0013	0.0344 (0.0008)	-0.0005 (0.0011)	0.9540 (0.0066)	0.0012 (0.0001)	1000
RP (9)	-0.5006	0.0013	0.0344 (0.0008)	-0.0006 (0.0011)	0.9540 (0.0066)	0.0012 (0.0001)	1000
RP (P)	-0.4990	0.0012	0.0343 (0.0008)	0.0010 (0.0011)	0.9550 (0.0066)	0.0012 (0.0001)	1000
FP (W)	-0.4801	0.0012	0.0340 (0.0012)	0.0199 (0.0018)	0.9332 (0.0129)	0.0016 (0.0001)	374
FP (k=10)	-0.4969	0.0012	0.0355 (0.0009)	0.0031 (0.0012)	0.9421 (0.0080)	0.0013 (0.0001)	846
FP (k=10000)	-0.4978	0.0011	0.0347 (0.0008)	0.0022 (0.0012)	0.9351 (0.0083)	0.0012 (0.0001)	878

Table 109: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4996	0.0013	0.0364 (0.0008)	0.0004 (0.0012)	0.9470 (0.0073)	0.0013 (0.0001)	944
Exp	-0.3791	0.0012	0.0309 (0.0007)	0.1209 (0.0010)	0.0530 (0.0071)	0.0156 (0.0002)	1000
Weibull	-0.5190	0.0013	0.0379 (0.0008)	-0.0190 (0.0012)	0.9020 (0.0094)	0.0018 (0.0001)	1000
Gompertz	-0.4713	0.0013	0.0529 (0.0012)	0.0287 (0.0017)	0.8135 (0.0125)	0.0036 (0.0002)	965
RP (3)	-0.5000	0.0013	0.0362 (0.0008)	-0.0000 (0.0012)	0.9503 (0.0070)	0.0013 (0.0001)	965
RP (5)	-0.4999	0.0013	0.0363 (0.0008)	0.0001 (0.0011)	0.9489 (0.0070)	0.0013 (0.0001)	999
RP (9)	-0.5000	0.0013	0.0363 (0.0008)	-0.0000 (0.0012)	0.9489 (0.0070)	0.0013 (0.0001)	998
RP (P)	-0.5001	0.0013	0.0363 (0.0008)	-0.0001 (0.0012)	0.9489 (0.0070)	0.0013 (0.0001)	998
FP (W)	-0.5190	0.0013	0.0379 (0.0008)	-0.0190 (0.0012)	0.9020 (0.0094)	0.0018 (0.0001)	1000
FP (k=10)	-0.4955	0.0013	0.0364 (0.0008)	0.0045 (0.0012)	0.9459 (0.0072)	0.0013 (0.0001)	999
FP (k=10000)	-0.4940	0.0013	0.0366 (0.0008)	0.0060 (0.0012)	0.9419 (0.0074)	0.0014 (0.0001)	999
Model frailty: Normal							
Cox	-0.5000	0.0013	0.0363 (0.0008)	0.0000 (0.0011)	0.9500 (0.0069)	0.0013 (0.0001)	1000
Exp	-0.3790	0.0012	0.0309 (0.0007)	0.1210 (0.0010)	0.0521 (0.0070)	0.0156 (0.0002)	999
Weibull	-0.5190	0.0013	0.0379 (0.0008)	-0.0190 (0.0012)	0.9019 (0.0094)	0.0018 (0.0001)	999
Gompertz	-0.4713	0.0013	0.0538 (0.0013)	0.0287 (0.0018)	0.8180 (0.0128)	0.0037 (0.0002)	912
RP (3)	-0.5003	0.0013	0.0364 (0.0008)	-0.0003 (0.0012)	0.9500 (0.0069)	0.0013 (0.0001)	1000
RP (5)	-0.5000	0.0013	0.0363 (0.0008)	0.0000 (0.0011)	0.9490 (0.0070)	0.0013 (0.0001)	1000
RP (9)	-0.5001	0.0013	0.0363 (0.0008)	-0.0001 (0.0011)	0.9490 (0.0070)	0.0013 (0.0001)	1000
RP (P)	-0.5002	0.0013	0.0363 (0.0008)	-0.0002 (0.0011)	0.9490 (0.0070)	0.0013 (0.0001)	1000
FP (W)	-0.5193	0.0013	0.0392 (0.0015)	-0.0193 (0.0021)	0.8966 (0.0161)	0.0019 (0.0001)	358
FP (k=10)	-0.4941	0.0013	0.0381 (0.0009)	0.0059 (0.0013)	0.9249 (0.0092)	0.0015 (0.0001)	826
FP (k=10000)	-0.5133	0.0011	0.0437 (0.0011)	-0.0133 (0.0015)	0.8442 (0.0124)	0.0021 (0.0001)	860

Table 110: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4977	0.0015	0.0402 (0.0009)	0.0023 (0.0013)	0.9376 (0.0079)	0.0016 (0.0001)	945
Exp	-0.5249	0.0015	0.0420 (0.0009)	-0.0249 (0.0013)	0.8680 (0.0107)	0.0024 (0.0001)	1000
Weibull	-0.4985	0.0015	0.0402 (0.0009)	0.0015 (0.0013)	0.9430 (0.0073)	0.0016 (0.0001)	1000
Gompertz	-0.5245	0.0015	0.0407 (0.0019)	-0.0245 (0.0026)	0.8678 (0.0218)	0.0022 (0.0002)	242
RP (3)	-0.4973	0.0015	0.0401 (0.0009)	0.0027 (0.0013)	0.9395 (0.0076)	0.0016 (0.0001)	992
RP (5)	-0.4976	0.0015	0.0400 (0.0009)	0.0024 (0.0013)	0.9389 (0.0076)	0.0016 (0.0001)	999
RP (9)	-0.4977	0.0015	0.0400 (0.0009)	0.0023 (0.0013)	0.9390 (0.0076)	0.0016 (0.0001)	1000
RP (P)	-0.4978	0.0015	0.0401 (0.0009)	0.0022 (0.0013)	0.9388 (0.0076)	0.0016 (0.0001)	996
FP (W)	-0.4985	0.0015	0.0402 (0.0009)	0.0015 (0.0013)	0.9430 (0.0073)	0.0016 (0.0001)	1000
FP (k=10)	-0.4964	0.0015	0.0401 (0.0009)	0.0036 (0.0013)	0.9370 (0.0077)	0.0016 (0.0001)	1000
FP (k=10000)	-0.4946	0.0015	0.0399 (0.0009)	0.0054 (0.0013)	0.9419 (0.0074)	0.0016 (0.0001)	999
Model frailty: Normal							
Cox	-0.4978	0.0015	0.0401 (0.0009)	0.0022 (0.0013)	0.9380 (0.0076)	0.0016 (0.0001)	1000
Exp	-0.5249	0.0015	0.0421 (0.0009)	-0.0249 (0.0013)	0.8679 (0.0107)	0.0024 (0.0001)	999
Weibull	-0.4987	0.0015	0.0402 (0.0009)	0.0013 (0.0013)	0.9429 (0.0073)	0.0016 (0.0001)	998
Gompertz	-0.5251	0.0015	0.0407 (0.0014)	-0.0251 (0.0020)	0.8824 (0.0156)	0.0023 (0.0002)	425
RP (3)	-0.4974	0.0015	0.0400 (0.0009)	0.0026 (0.0013)	0.9389 (0.0076)	0.0016 (0.0001)	999
RP (5)	-0.4978	0.0015	0.0400 (0.0009)	0.0022 (0.0013)	0.9389 (0.0076)	0.0016 (0.0001)	999
RP (9)	-0.4979	0.0015	0.0400 (0.0009)	0.0021 (0.0013)	0.9379 (0.0076)	0.0016 (0.0001)	999
RP (P)	-0.4979	0.0015	0.0400 (0.0009)	0.0021 (0.0013)	0.9379 (0.0076)	0.0016 (0.0001)	999
FP (W)	-0.4991	0.0015	0.0401 (0.0013)	0.0009 (0.0018)	0.9437 (0.0102)	0.0016 (0.0001)	515
FP (k=10)	-0.4949	0.0015	0.0414 (0.0010)	0.0051 (0.0014)	0.9305 (0.0085)	0.0017 (0.0001)	892
FP (k=10000)	-0.4938	0.0014	0.0408 (0.0009)	0.0062 (0.0013)	0.9235 (0.0087)	0.0017 (0.0001)	928

Table 111: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5000	0.0018	0.0428 (0.0010)	0.0000 (0.0014)	0.9410 (0.0075)	0.0018 (0.0001)	983
Exp	-0.5002	0.0018	0.0425 (0.0010)	-0.0002 (0.0013)	0.9390 (0.0076)	0.0018 (0.0001)	1000
Weibull	-0.5005	0.0018	0.0427 (0.0010)	-0.0005 (0.0013)	0.9410 (0.0075)	0.0018 (0.0001)	1000
Gompertz	-0.5004	0.0018	0.0426 (0.0013)	-0.0004 (0.0019)	0.9373 (0.0107)	0.0018 (0.0001)	510
RP (3)	-0.5000	0.0018	0.0427 (0.0010)	-0.0000 (0.0014)	0.9419 (0.0075)	0.0018 (0.0001)	964
RP (5)	-0.4991	0.0018	0.0423 (0.0010)	0.0009 (0.0014)	0.9408 (0.0080)	0.0018 (0.0001)	862
RP (9)	-0.5005	0.0018	0.0431 (0.0011)	-0.0005 (0.0015)	0.9405 (0.0083)	0.0019 (0.0001)	807
RP (P)	-0.5003	0.0018	0.0427 (0.0010)	-0.0003 (0.0014)	0.9431 (0.0074)	0.0018 (0.0001)	984
FP (W)	-0.5005	0.0018	0.0427 (0.0010)	-0.0005 (0.0013)	0.9410 (0.0075)	0.0018 (0.0001)	1000
FP (k=10)	-0.4991	0.0018	0.0427 (0.0010)	0.0009 (0.0014)	0.9420 (0.0074)	0.0018 (0.0001)	1000
FP (k=10000)	-0.4996	0.0018	0.0427 (0.0010)	0.0004 (0.0014)	0.9420 (0.0074)	0.0018 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5003	0.0018	0.0427 (0.0010)	-0.0003 (0.0014)	0.9420 (0.0074)	0.0018 (0.0001)	1000
Exp	-0.5004	0.0018	0.0426 (0.0010)	-0.0004 (0.0013)	0.9389 (0.0076)	0.0018 (0.0001)	998
Weibull	-0.5007	0.0018	0.0427 (0.0010)	-0.0007 (0.0014)	0.9410 (0.0075)	0.0018 (0.0001)	1000
Gompertz	-0.4995	0.0018	0.0428 (0.0021)	0.0005 (0.0030)	0.9372 (0.0169)	0.0018 (0.0002)	207
RP (3)	-0.5003	0.0018	0.0427 (0.0010)	-0.0003 (0.0014)	0.9439 (0.0073)	0.0018 (0.0001)	999
RP (5)	-0.5004	0.0018	0.0427 (0.0010)	-0.0004 (0.0014)	0.9420 (0.0074)	0.0018 (0.0001)	1000
RP (9)	-0.5005	0.0018	0.0427 (0.0010)	-0.0005 (0.0014)	0.9430 (0.0073)	0.0018 (0.0001)	1000
RP (P)	-0.5009	0.0018	0.0429 (0.0010)	-0.0009 (0.0014)	0.9430 (0.0073)	0.0018 (0.0001)	1000
FP (W)	-0.4989	0.0018	0.0418 (0.0013)	0.0011 (0.0018)	0.9405 (0.0102)	0.0017 (0.0001)	538
FP (k=10)	-0.4975	0.0018	0.0433 (0.0010)	0.0025 (0.0015)	0.9499 (0.0074)	0.0019 (0.0001)	878
FP (k=10000)	-0.4974	0.0017	0.0434 (0.0010)	0.0026 (0.0014)	0.9407 (0.0078)	0.0019 (0.0001)	928

Table 112: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4986	0.0020	0.0452 (0.0010)	0.0014 (0.0014)	0.9453 (0.0072)	0.0020 (0.0001)	987
Exp	-0.5546	0.0020	0.0515 (0.0012)	-0.0546 (0.0016)	0.7300 (0.0140)	0.0056 (0.0002)	1000
Weibull	-0.5000	0.0020	0.0454 (0.0010)	-0.0000 (0.0014)	0.9390 (0.0076)	0.0021 (0.0001)	1000
Gompertz	-0.5527	0.0020	0.0517 (0.0017)	-0.0527 (0.0024)	0.7473 (0.0204)	0.0054 (0.0003)	455
RP (3)	-0.4981	0.0020	0.0453 (0.0010)	0.0019 (0.0014)	0.9419 (0.0075)	0.0021 (0.0001)	981
RP (5)	-0.4995	0.0020	0.0450 (0.0010)	0.0005 (0.0015)	0.9435 (0.0076)	0.0020 (0.0001)	921
RP (9)	-0.4987	0.0020	0.0461 (0.0011)	0.0013 (0.0016)	0.9408 (0.0080)	0.0021 (0.0001)	878
RP (P)	-0.4993	0.0020	0.0450 (0.0010)	0.0007 (0.0014)	0.9442 (0.0073)	0.0020 (0.0001)	986
FP (W)	-0.5000	0.0020	0.0454 (0.0010)	-0.0000 (0.0014)	0.9390 (0.0076)	0.0021 (0.0001)	1000
FP (k=10)	-0.4961	0.0020	0.0456 (0.0010)	0.0039 (0.0014)	0.9390 (0.0076)	0.0021 (0.0001)	1000
FP (k=10000)	-0.5052	0.0020	0.0474 (0.0011)	-0.0052 (0.0015)	0.9225 (0.0085)	0.0023 (0.0001)	994
Model frailty: Normal							
Cox	-0.4990	0.0020	0.0454 (0.0010)	0.0010 (0.0014)	0.9430 (0.0073)	0.0021 (0.0001)	1000
Exp	-0.5547	0.0020	0.0515 (0.0012)	-0.0547 (0.0016)	0.7307 (0.0140)	0.0056 (0.0002)	999
Weibull	-0.5002	0.0020	0.0454 (0.0010)	-0.0002 (0.0014)	0.9409 (0.0075)	0.0021 (0.0001)	999
Gompertz	-0.5531	0.0021	0.0532 (0.0018)	-0.0531 (0.0026)	0.7333 (0.0212)	0.0056 (0.0003)	435
RP (3)	-0.4990	0.0020	0.0454 (0.0010)	0.0010 (0.0014)	0.9420 (0.0074)	0.0021 (0.0001)	1000
RP (5)	-0.4991	0.0020	0.0454 (0.0010)	0.0009 (0.0014)	0.9420 (0.0074)	0.0021 (0.0001)	1000
RP (9)	-0.4992	0.0020	0.0454 (0.0010)	0.0008 (0.0014)	0.9420 (0.0074)	0.0021 (0.0001)	1000
RP (P)	-0.4994	0.0020	0.0454 (0.0010)	0.0006 (0.0014)	0.9410 (0.0075)	0.0021 (0.0001)	1000
FP (W)	-0.4998	0.0020	0.0440 (0.0013)	0.0002 (0.0018)	0.9529 (0.0085)	0.0019 (0.0001)	616
FP (k=10)	-0.4955	0.0020	0.0462 (0.0011)	0.0045 (0.0015)	0.9321 (0.0084)	0.0022 (0.0001)	899
FP (k=10000)	-0.5042	0.0019	0.0469 (0.0011)	-0.0042 (0.0015)	0.9273 (0.0085)	0.0022 (0.0001)	922

Table 113: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5004	0.0015	0.0405 (0.0009)	-0.0004 (0.0013)	0.9356 (0.0079)	0.0016 (0.0001)	978
Exp	-0.4368	0.0015	0.0351 (0.0008)	0.0632 (0.0011)	0.6390 (0.0152)	0.0052 (0.0002)	1000
Weibull	-0.4844	0.0015	0.0389 (0.0009)	0.0156 (0.0012)	0.9340 (0.0079)	0.0018 (0.0001)	1000
Gompertz	-0.4406	0.0015	0.0397 (0.0015)	0.0594 (0.0021)	0.6657 (0.0255)	0.0051 (0.0003)	341
RP (3)	-0.5003	0.0015	0.0402 (0.0009)	-0.0003 (0.0013)	0.9372 (0.0078)	0.0016 (0.0001)	972
RP (5)	-0.5003	0.0015	0.0404 (0.0009)	-0.0003 (0.0013)	0.9333 (0.0082)	0.0016 (0.0001)	930
RP (9)	-0.5011	0.0015	0.0401 (0.0010)	-0.0011 (0.0014)	0.9335 (0.0090)	0.0016 (0.0001)	767
RP (P)	-0.4992	0.0015	0.0401 (0.0009)	0.0008 (0.0013)	0.9371 (0.0079)	0.0016 (0.0001)	938
FP (W)	-0.4844	0.0015	0.0389 (0.0009)	0.0156 (0.0012)	0.9340 (0.0079)	0.0018 (0.0001)	1000
FP (k=10)	-0.4999	0.0015	0.0403 (0.0009)	0.0001 (0.0013)	0.9360 (0.0077)	0.0016 (0.0001)	1000
FP (k=10000)	-0.4994	0.0015	0.0402 (0.0009)	0.0006 (0.0013)	0.9340 (0.0079)	0.0016 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5009	0.0015	0.0403 (0.0009)	-0.0009 (0.0013)	0.9360 (0.0077)	0.0016 (0.0001)	1000
Exp	-0.4368	0.0015	0.0351 (0.0008)	0.0632 (0.0011)	0.6396 (0.0152)	0.0052 (0.0002)	999
Weibull	-0.4845	0.0015	0.0389 (0.0009)	0.0155 (0.0012)	0.9349 (0.0078)	0.0018 (0.0001)	999
Gompertz	-0.4436	0.0015	0.0402 (0.0011)	0.0564 (0.0016)	0.6792 (0.0185)	0.0048 (0.0002)	639
RP (3)	-0.5008	0.0015	0.0403 (0.0009)	-0.0008 (0.0013)	0.9362 (0.0078)	0.0016 (0.0001)	988
RP (5)	-0.5009	0.0015	0.0403 (0.0009)	-0.0009 (0.0013)	0.9360 (0.0077)	0.0016 (0.0001)	1000
RP (9)	-0.5010	0.0015	0.0403 (0.0009)	-0.0010 (0.0013)	0.9350 (0.0078)	0.0016 (0.0001)	1000
RP (P)	-0.4996	0.0015	0.0414 (0.0009)	0.0004 (0.0013)	0.9339 (0.0079)	0.0017 (0.0001)	999
FP (W)	-0.4832	0.0015	0.0394 (0.0013)	0.0168 (0.0019)	0.9236 (0.0128)	0.0018 (0.0001)	432
FP (k=10)	-0.4975	0.0015	0.0420 (0.0010)	0.0025 (0.0014)	0.9311 (0.0087)	0.0018 (0.0001)	856
FP (k=10000)	-0.4980	0.0014	0.0420 (0.0010)	0.0020 (0.0014)	0.9171 (0.0094)	0.0018 (0.0001)	869

Table 114: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4981	0.0016	0.0400 (0.0009)	0.0019 (0.0013)	0.9562 (0.0065)	0.0016 (0.0001)	982
Exp	-0.3907	0.0016	0.0350 (0.0008)	0.1093 (0.0011)	0.1840 (0.0123)	0.0132 (0.0002)	1000
Weibull	-0.5140	0.0016	0.0415 (0.0009)	-0.0140 (0.0013)	0.9210 (0.0085)	0.0019 (0.0001)	1000
Gompertz	-0.4232	0.0016	0.0613 (0.0017)	0.0768 (0.0024)	0.4315 (0.0198)	0.0097 (0.0003)	628
RP (3)	-0.4985	0.0016	0.0400 (0.0010)	0.0015 (0.0014)	0.9539 (0.0074)	0.0016 (0.0001)	802
RP (5)	-0.4986	0.0016	0.0396 (0.0009)	0.0014 (0.0013)	0.9583 (0.0066)	0.0016 (0.0001)	912
RP (9)	-0.4976	0.0016	0.0390 (0.0010)	0.0024 (0.0014)	0.9565 (0.0073)	0.0015 (0.0001)	782
RP (P)	-0.4977	0.0016	0.0397 (0.0009)	0.0023 (0.0013)	0.9542 (0.0067)	0.0016 (0.0001)	960
FP (W)	-0.5140	0.0016	0.0415 (0.0009)	-0.0140 (0.0013)	0.9209 (0.0085)	0.0019 (0.0001)	999
FP (k=10)	-0.4945	0.0016	0.0400 (0.0009)	0.0055 (0.0013)	0.9540 (0.0066)	0.0016 (0.0001)	1000
FP (k=10000)	-0.4907	0.0016	0.0404 (0.0009)	0.0093 (0.0013)	0.9480 (0.0070)	0.0017 (0.0001)	1000
Model frailty: Normal							
Cox	-0.4980	0.0016	0.0400 (0.0009)	0.0020 (0.0013)	0.9550 (0.0066)	0.0016 (0.0001)	999
Exp	-0.3906	0.0016	0.0350 (0.0008)	0.1094 (0.0011)	0.1840 (0.0123)	0.0132 (0.0002)	1000
Weibull	-0.5141	0.0016	0.0415 (0.0009)	-0.0141 (0.0013)	0.9200 (0.0086)	0.0019 (0.0001)	1000
Gompertz	-0.4179	0.0016	0.0597 (0.0026)	0.0821 (0.0037)	0.3992 (0.0305)	0.0103 (0.0005)	258
RP (3)	-0.4989	0.0016	0.0401 (0.0009)	0.0011 (0.0013)	0.9530 (0.0067)	0.0016 (0.0001)	1000
RP (5)	-0.4981	0.0016	0.0400 (0.0009)	0.0019 (0.0013)	0.9550 (0.0066)	0.0016 (0.0001)	1000
RP (9)	-0.4982	0.0016	0.0400 (0.0009)	0.0018 (0.0013)	0.9550 (0.0066)	0.0016 (0.0001)	999
RP (P)	-0.4983	0.0016	0.0400 (0.0009)	0.0017 (0.0013)	0.9560 (0.0065)	0.0016 (0.0001)	1000
FP (W)	-0.5187	0.0016	0.0408 (0.0015)	-0.0187 (0.0022)	0.9037 (0.0157)	0.0020 (0.0001)	353
FP (k=10)	-0.4927	0.0016	0.0415 (0.0010)	0.0073 (0.0014)	0.9394 (0.0082)	0.0018 (0.0001)	841
FP (k=10000)	-0.4921	0.0015	0.0484 (0.0012)	0.0079 (0.0017)	0.8796 (0.0112)	0.0024 (0.0001)	847

Table 115: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4998	0.0019	0.0445 (0.0010)	0.0002 (0.0014)	0.9472 (0.0071)	0.0020 (0.0001)	985
Exp	-0.5256	0.0019	0.0465 (0.0010)	-0.0256 (0.0015)	0.8890 (0.0099)	0.0028 (0.0001)	1000
Weibull	-0.5013	0.0019	0.0447 (0.0010)	-0.0013 (0.0014)	0.9480 (0.0070)	0.0020 (0.0001)	1000
Gompertz	-0.5282	0.0019	0.0503 (0.0023)	-0.0282 (0.0033)	0.8511 (0.0232)	0.0033 (0.0003)	235
RP (3)	-0.4995	0.0019	0.0446 (0.0010)	0.0005 (0.0014)	0.9480 (0.0072)	0.0020 (0.0001)	961
RP (5)	-0.5000	0.0019	0.0444 (0.0010)	0.0000 (0.0015)	0.9486 (0.0072)	0.0020 (0.0001)	934
RP (9)	-0.5005	0.0019	0.0444 (0.0011)	-0.0005 (0.0015)	0.9480 (0.0075)	0.0020 (0.0001)	866
RP (P)	-0.4999	0.0019	0.0443 (0.0010)	0.0001 (0.0014)	0.9472 (0.0071)	0.0020 (0.0001)	985
FP (W)	-0.5013	0.0019	0.0447 (0.0010)	-0.0013 (0.0014)	0.9480 (0.0070)	0.0020 (0.0001)	1000
FP (k=10)	-0.4983	0.0019	0.0445 (0.0010)	0.0017 (0.0014)	0.9490 (0.0070)	0.0020 (0.0001)	1000
FP (k=10000)	-0.4962	0.0019	0.0440 (0.0010)	0.0038 (0.0014)	0.9470 (0.0071)	0.0020 (0.0001)	1000
Model frailty: Normal							
Cox	-0.5003	0.0019	0.0445 (0.0010)	-0.0003 (0.0014)	0.9479 (0.0070)	0.0020 (0.0001)	999
Exp	-0.5256	0.0019	0.0465 (0.0010)	-0.0256 (0.0015)	0.8909 (0.0099)	0.0028 (0.0001)	999
Weibull	-0.5015	0.0019	0.0448 (0.0010)	-0.0015 (0.0014)	0.9479 (0.0070)	0.0020 (0.0001)	999
Gompertz	-0.5253	0.0019	0.0497 (0.0023)	-0.0253 (0.0032)	0.8719 (0.0215)	0.0031 (0.0003)	242
RP (3)	-0.4996	0.0019	0.0444 (0.0010)	0.0004 (0.0014)	0.9499 (0.0069)	0.0020 (0.0001)	999
RP (5)	-0.5003	0.0019	0.0445 (0.0010)	-0.0003 (0.0014)	0.9480 (0.0070)	0.0020 (0.0001)	1000
RP (9)	-0.5003	0.0019	0.0447 (0.0010)	-0.0003 (0.0014)	0.9470 (0.0071)	0.0020 (0.0001)	1000
RP (P)	-0.5003	0.0019	0.0444 (0.0010)	-0.0003 (0.0014)	0.9470 (0.0071)	0.0020 (0.0001)	1000
FP (W)	-0.5004	0.0019	0.0444 (0.0013)	-0.0004 (0.0019)	0.9420 (0.0098)	0.0020 (0.0001)	569
FP (k=10)	-0.4974	0.0019	0.0444 (0.0011)	0.0026 (0.0015)	0.9459 (0.0076)	0.0020 (0.0001)	888
FP (k=10000)	-0.4955	0.0018	0.0446 (0.0010)	0.0045 (0.0015)	0.9360 (0.0080)	0.0020 (0.0001)	938

Table 116: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5001	0.0015	0.0397 (0.0009)	-0.0001 (0.0013)	0.9442 (0.0074)	0.0016 (0.0001)	967
Exp	-0.5001	0.0014	0.0392 (0.0009)	-0.0001 (0.0012)	0.9410 (0.0075)	0.0015 (0.0001)	1000
Weibull	-0.5008	0.0014	0.0394 (0.0009)	-0.0008 (0.0012)	0.9410 (0.0075)	0.0016 (0.0001)	1000
Gompertz	-0.5010	0.0015	0.0398 (0.0013)	-0.0010 (0.0018)	0.9403 (0.0109)	0.0016 (0.0001)	469
RP (3)	-0.5000	0.0015	0.0394 (0.0009)	-0.0000 (0.0013)	0.9437 (0.0073)	0.0016 (0.0001)	994
RP (5)	-0.5000	0.0015	0.0394 (0.0009)	-0.0000 (0.0013)	0.9455 (0.0072)	0.0016 (0.0001)	990
RP (9)	-0.5002	0.0015	0.0394 (0.0009)	-0.0002 (0.0013)	0.9450 (0.0073)	0.0016 (0.0001)	982
RP (P)	-0.5005	0.0014	0.0395 (0.0009)	-0.0005 (0.0013)	0.9448 (0.0072)	0.0016 (0.0001)	996
FP (W)	-0.5008	0.0014	0.0394 (0.0009)	-0.0008 (0.0012)	0.9410 (0.0075)	0.0016 (0.0001)	1000
FP (k=10)	-0.4993	0.0015	0.0394 (0.0009)	0.0007 (0.0012)	0.9440 (0.0073)	0.0016 (0.0001)	1000
FP (k=10000)	-0.4996	0.0014	0.0393 (0.0009)	0.0004 (0.0013)	0.9400 (0.0076)	0.0015 (0.0001)	984
Model frailty: Normal							
Cox	-0.5002	0.0015	0.0395 (0.0009)	-0.0002 (0.0013)	0.9448 (0.0072)	0.0016 (0.0001)	997
Exp	-0.5000	0.0014	0.0392 (0.0009)	-0.0000 (0.0012)	0.9409 (0.0075)	0.0015 (0.0001)	998
Weibull	-0.5010	0.0014	0.0395 (0.0009)	-0.0010 (0.0012)	0.9400 (0.0075)	0.0016 (0.0001)	1000
Gompertz	-0.5020	0.0015	0.0398 (0.0013)	-0.0020 (0.0019)	0.9356 (0.0116)	0.0016 (0.0001)	450
RP (3)	-0.5002	0.0015	0.0394 (0.0009)	-0.0002 (0.0012)	0.9440 (0.0073)	0.0016 (0.0001)	1000
RP (5)	-0.5002	0.0015	0.0395 (0.0009)	-0.0002 (0.0012)	0.9450 (0.0072)	0.0016 (0.0001)	1000
RP (9)	-0.5003	0.0015	0.0395 (0.0009)	-0.0003 (0.0012)	0.9440 (0.0073)	0.0016 (0.0001)	1000
RP (P)	-0.5006	0.0015	0.0394 (0.0009)	-0.0006 (0.0012)	0.9450 (0.0072)	0.0016 (0.0001)	1000
FP (W)	-0.4996	0.0014	0.0424 (0.0014)	0.0004 (0.0020)	0.9302 (0.0121)	0.0018 (0.0001)	444
FP (k=10)	-0.4972	0.0014	0.0406 (0.0010)	0.0028 (0.0014)	0.9357 (0.0085)	0.0017 (0.0001)	824
FP (k=10000)	-0.4981	0.0013	0.0400 (0.0010)	0.0019 (0.0013)	0.9244 (0.0089)	0.0016 (0.0001)	886

Table 117: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5007	0.0016	0.0401 (0.0009)	-0.0007 (0.0013)	0.9363 (0.0078)	0.0016 (0.0001)	974
Exp	-0.5682	0.0016	0.0463 (0.0010)	-0.0682 (0.0015)	0.5730 (0.0156)	0.0068 (0.0002)	1000
Weibull	-0.5027	0.0016	0.0401 (0.0009)	-0.0027 (0.0013)	0.9390 (0.0076)	0.0016 (0.0001)	1000
Gompertz	-0.5685	0.0016	0.0459 (0.0016)	-0.0685 (0.0022)	0.5769 (0.0242)	0.0068 (0.0003)	416
RP (3)	-0.5007	0.0016	0.0402 (0.0009)	-0.0007 (0.0013)	0.9374 (0.0077)	0.0016 (0.0001)	990
RP (5)	-0.5012	0.0016	0.0400 (0.0009)	-0.0012 (0.0013)	0.9363 (0.0078)	0.0016 (0.0001)	989
RP (9)	-0.5009	0.0016	0.0401 (0.0009)	-0.0009 (0.0013)	0.9365 (0.0077)	0.0016 (0.0001)	992
RP (P)	-0.5009	0.0016	0.0401 (0.0009)	-0.0009 (0.0013)	0.9377 (0.0077)	0.0016 (0.0001)	995
FP (W)	-0.5027	0.0016	0.0401 (0.0009)	-0.0027 (0.0013)	0.9390 (0.0076)	0.0016 (0.0001)	1000
FP (k=10)	-0.5002	0.0016	0.0406 (0.0009)	-0.0002 (0.0013)	0.9369 (0.0077)	0.0016 (0.0001)	998
FP (k=10000)	-0.5210	0.0016	0.0432 (0.0010)	-0.0210 (0.0014)	0.8922 (0.0099)	0.0023 (0.0001)	974
Model frailty: Normal							
Cox	-0.5010	0.0016	0.0401 (0.0009)	-0.0010 (0.0013)	0.9359 (0.0077)	0.0016 (0.0001)	999
Exp	-0.5682	0.0016	0.0463 (0.0010)	-0.0682 (0.0015)	0.5737 (0.0157)	0.0068 (0.0002)	997
Weibull	-0.5029	0.0016	0.0401 (0.0009)	-0.0029 (0.0013)	0.9380 (0.0076)	0.0016 (0.0001)	1000
Gompertz	-0.5662	0.0016	0.0472 (0.0022)	-0.0662 (0.0030)	0.5851 (0.0317)	0.0066 (0.0004)	241
RP (3)	-0.5010	0.0016	0.0401 (0.0009)	-0.0010 (0.0013)	0.9379 (0.0076)	0.0016 (0.0001)	998
RP (5)	-0.5011	0.0016	0.0402 (0.0009)	-0.0011 (0.0013)	0.9359 (0.0078)	0.0016 (0.0001)	998
RP (9)	-0.5011	0.0016	0.0401 (0.0009)	-0.0011 (0.0013)	0.9359 (0.0078)	0.0016 (0.0001)	998
RP (P)	-0.5013	0.0016	0.0401 (0.0009)	-0.0013 (0.0013)	0.9358 (0.0078)	0.0016 (0.0001)	997
FP (W)	-0.5026	0.0016	0.0395 (0.0012)	-0.0026 (0.0017)	0.9419 (0.0101)	0.0016 (0.0001)	534
FP (k=10)	-0.5002	0.0016	0.0407 (0.0010)	-0.0002 (0.0014)	0.9359 (0.0084)	0.0017 (0.0001)	858
FP (k=10000)	-0.5165	0.0015	0.0436 (0.0010)	-0.0165 (0.0015)	0.8886 (0.0106)	0.0022 (0.0001)	889

Table 118: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.4998	0.0013	0.0361 (0.0008)	0.0002 (0.0012)	0.9551 (0.0067)	0.0013 (0.0001)	957
Exp	-0.4375	0.0013	0.0319 (0.0007)	0.0625 (0.0010)	0.5930 (0.0155)	0.0049 (0.0001)	1000
Weibull	-0.4837	0.0013	0.0351 (0.0008)	0.0163 (0.0011)	0.9250 (0.0083)	0.0015 (0.0001)	1000
Gompertz	-0.4454	0.0013	0.0370 (0.0011)	0.0546 (0.0015)	0.6489 (0.0198)	0.0043 (0.0002)	581
RP (3)	-0.4998	0.0013	0.0360 (0.0008)	0.0002 (0.0011)	0.9539 (0.0066)	0.0013 (0.0001)	998
RP (5)	-0.5001	0.0013	0.0360 (0.0008)	-0.0001 (0.0011)	0.9540 (0.0066)	0.0013 (0.0001)	1000
RP (9)	-0.5003	0.0013	0.0360 (0.0008)	-0.0003 (0.0011)	0.9533 (0.0067)	0.0013 (0.0001)	986
RP (P)	-0.4990	0.0013	0.0360 (0.0008)	0.0010 (0.0011)	0.9539 (0.0066)	0.0013 (0.0001)	998
FP (W)	-0.4837	0.0013	0.0351 (0.0008)	0.0163 (0.0011)	0.9250 (0.0083)	0.0015 (0.0001)	1000
FP (k=10)	-0.4994	0.0013	0.0359 (0.0008)	0.0006 (0.0011)	0.9530 (0.0067)	0.0013 (0.0001)	1000
FP (k=10000)	-0.4986	0.0013	0.0362 (0.0008)	0.0014 (0.0012)	0.9517 (0.0070)	0.0013 (0.0001)	932
Model frailty: Normal							
Cox	-0.5002	0.0013	0.0360 (0.0008)	-0.0002 (0.0011)	0.9520 (0.0068)	0.0013 (0.0001)	999
Exp	-0.4375	0.0013	0.0319 (0.0007)	0.0625 (0.0010)	0.5910 (0.0155)	0.0049 (0.0001)	1000
Weibull	-0.4839	0.0013	0.0351 (0.0008)	0.0161 (0.0011)	0.9240 (0.0084)	0.0015 (0.0001)	1000
Gompertz	-0.4436	0.0013	0.0359 (0.0011)	0.0564 (0.0015)	0.6344 (0.0202)	0.0045 (0.0002)	569
RP (3)	-0.4998	0.0013	0.0360 (0.0008)	0.0002 (0.0011)	0.9540 (0.0066)	0.0013 (0.0001)	1000
RP (5)	-0.5002	0.0013	0.0360 (0.0008)	-0.0002 (0.0011)	0.9540 (0.0066)	0.0013 (0.0001)	1000
RP (9)	-0.5003	0.0013	0.0360 (0.0008)	-0.0003 (0.0011)	0.9530 (0.0067)	0.0013 (0.0001)	1000
RP (P)	-0.4991	0.0013	0.0360 (0.0008)	0.0009 (0.0011)	0.9540 (0.0066)	0.0013 (0.0001)	1000
FP (W)	-0.4816	0.0013	0.0358 (0.0014)	0.0184 (0.0020)	0.9279 (0.0142)	0.0016 (0.0001)	333
FP (k=10)	-0.4961	0.0013	0.0370 (0.0009)	0.0039 (0.0013)	0.9420 (0.0082)	0.0014 (0.0001)	810
FP (k=10000)	-0.4957	0.0011	0.0376 (0.0009)	0.0043 (0.0013)	0.9247 (0.0092)	0.0014 (0.0001)	823

Table 119: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5004	0.0013	0.0369 (0.0008)	-0.0004 (0.0012)	0.9399 (0.0077)	0.0014 (0.0001)	949
Exp	-0.3747	0.0013	0.0313 (0.0007)	0.1253 (0.0010)	0.0440 (0.0065)	0.0167 (0.0002)	1000
Weibull	-0.5153	0.0013	0.0380 (0.0009)	-0.0153 (0.0012)	0.9140 (0.0089)	0.0017 (0.0001)	1000
Gompertz	-0.4248	0.0013	0.0656 (0.0016)	0.0752 (0.0023)	0.4559 (0.0174)	0.0100 (0.0003)	816
RP (3)	-0.5003	0.0013	0.0365 (0.0008)	-0.0003 (0.0012)	0.9390 (0.0077)	0.0013 (0.0001)	968
RP (5)	-0.5006	0.0013	0.0366 (0.0008)	-0.0006 (0.0012)	0.9378 (0.0076)	0.0013 (0.0001)	997
RP (9)	-0.5004	0.0013	0.0368 (0.0008)	-0.0004 (0.0012)	0.9389 (0.0076)	0.0014 (0.0001)	982
RP (P)	-0.5002	0.0013	0.0367 (0.0008)	-0.0002 (0.0012)	0.9392 (0.0076)	0.0013 (0.0001)	987
FP (W)	-0.5153	0.0013	0.0380 (0.0009)	-0.0153 (0.0012)	0.9140 (0.0089)	0.0017 (0.0001)	1000
FP (k=10)	-0.4955	0.0013	0.0367 (0.0008)	0.0045 (0.0012)	0.9460 (0.0071)	0.0014 (0.0001)	1000
FP (k=10000)	-0.4936	0.0013	0.0368 (0.0008)	0.0064 (0.0012)	0.9468 (0.0071)	0.0014 (0.0001)	996
Model frailty: Normal							
Cox	-0.5004	0.0013	0.0367 (0.0008)	-0.0004 (0.0012)	0.9399 (0.0075)	0.0013 (0.0001)	999
Exp	-0.3746	0.0013	0.0313 (0.0007)	0.1254 (0.0010)	0.0441 (0.0065)	0.0167 (0.0003)	998
Weibull	-0.5154	0.0013	0.0380 (0.0009)	-0.0154 (0.0012)	0.9130 (0.0089)	0.0017 (0.0001)	1000
Gompertz	-0.4212	0.0013	0.0659 (0.0017)	0.0788 (0.0024)	0.4267 (0.0181)	0.0105 (0.0004)	750
RP (3)	-0.5006	0.0013	0.0367 (0.0008)	-0.0006 (0.0012)	0.9380 (0.0076)	0.0013 (0.0001)	1000
RP (5)	-0.5005	0.0013	0.0367 (0.0008)	-0.0005 (0.0012)	0.9370 (0.0077)	0.0013 (0.0001)	1000
RP (9)	-0.5006	0.0013	0.0367 (0.0008)	-0.0006 (0.0012)	0.9400 (0.0075)	0.0013 (0.0001)	1000
RP (P)	-0.5005	0.0013	0.0367 (0.0008)	-0.0005 (0.0012)	0.9400 (0.0075)	0.0013 (0.0001)	1000
FP (W)	-0.5176	0.0013	0.0387 (0.0016)	-0.0176 (0.0022)	0.8907 (0.0180)	0.0018 (0.0001)	302
FP (k=10)	-0.4932	0.0013	0.0380 (0.0010)	0.0068 (0.0013)	0.9249 (0.0093)	0.0015 (0.0001)	799
FP (k=10000)	-0.5090	0.0012	0.0452 (0.0011)	-0.0090 (0.0016)	0.8575 (0.0124)	0.0021 (0.0001)	793

Table 120: Simulation results for treatment effect, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	-0.5002	0.0015	0.0389 (0.0009)	-0.0002 (0.0012)	0.9464 (0.0072)	0.0015 (0.0001)	971
Exp	-0.5281	0.0015	0.0408 (0.0009)	-0.0281 (0.0013)	0.8740 (0.0105)	0.0025 (0.0001)	1000
Weibull	-0.4996	0.0015	0.0389 (0.0009)	0.0004 (0.0012)	0.9450 (0.0072)	0.0015 (0.0001)	1000
Gompertz	-0.5294	0.0015	0.0399 (0.0013)	-0.0294 (0.0019)	0.8659 (0.0160)	0.0025 (0.0002)	455
RP (3)	-0.5001	0.0015	0.0391 (0.0009)	-0.0001 (0.0013)	0.9467 (0.0072)	0.0015 (0.0001)	975
RP (5)	-0.5005	0.0015	0.0389 (0.0009)	-0.0005 (0.0012)	0.9467 (0.0071)	0.0015 (0.0001)	995
RP (9)	-0.5003	0.0015	0.0390 (0.0009)	-0.0003 (0.0012)	0.9465 (0.0071)	0.0015 (0.0001)	991
RP (P)	-0.5003	0.0015	0.0390 (0.0009)	-0.0003 (0.0012)	0.9467 (0.0071)	0.0015 (0.0001)	995
FP (W)	-0.4996	0.0015	0.0389 (0.0009)	0.0004 (0.0012)	0.9450 (0.0072)	0.0015 (0.0001)	1000
FP (k=10)	-0.5002	0.0015	0.0392 (0.0009)	-0.0002 (0.0012)	0.9450 (0.0072)	0.0015 (0.0001)	1000
FP (k=10000)	-0.4985	0.0015	0.0391 (0.0009)	0.0015 (0.0012)	0.9392 (0.0076)	0.0015 (0.0001)	987
Model frailty: Normal							
Cox	-0.5005	0.0015	0.0389 (0.0009)	-0.0005 (0.0012)	0.9469 (0.0071)	0.0015 (0.0001)	999
Exp	-0.5282	0.0015	0.0408 (0.0009)	-0.0282 (0.0013)	0.8739 (0.0105)	0.0025 (0.0001)	999
Weibull	-0.4997	0.0015	0.0389 (0.0009)	0.0003 (0.0012)	0.9449 (0.0072)	0.0015 (0.0001)	999
Gompertz	-0.5286	0.0015	0.0394 (0.0013)	-0.0286 (0.0019)	0.8696 (0.0161)	0.0024 (0.0002)	437
RP (3)	-0.5001	0.0015	0.0389 (0.0009)	-0.0001 (0.0012)	0.9490 (0.0070)	0.0015 (0.0001)	1000
RP (5)	-0.5005	0.0015	0.0389 (0.0009)	-0.0005 (0.0012)	0.9469 (0.0071)	0.0015 (0.0001)	999
RP (9)	-0.5006	0.0015	0.0389 (0.0009)	-0.0006 (0.0012)	0.9469 (0.0071)	0.0015 (0.0001)	999
RP (P)	-0.5005	0.0015	0.0390 (0.0009)	-0.0005 (0.0012)	0.9469 (0.0071)	0.0015 (0.0001)	998
FP (W)	-0.5019	0.0015	0.0393 (0.0013)	-0.0019 (0.0018)	0.9475 (0.0104)	0.0015 (0.0001)	457
FP (k=10)	-0.4963	0.0015	0.0386 (0.0010)	0.0037 (0.0013)	0.9561 (0.0072)	0.0015 (0.0001)	820
FP (k=10000)	-0.4971	0.0014	0.0394 (0.0009)	0.0029 (0.0013)	0.9342 (0.0083)	0.0016 (0.0001)	897

Results: loss in life expectancy, LLE

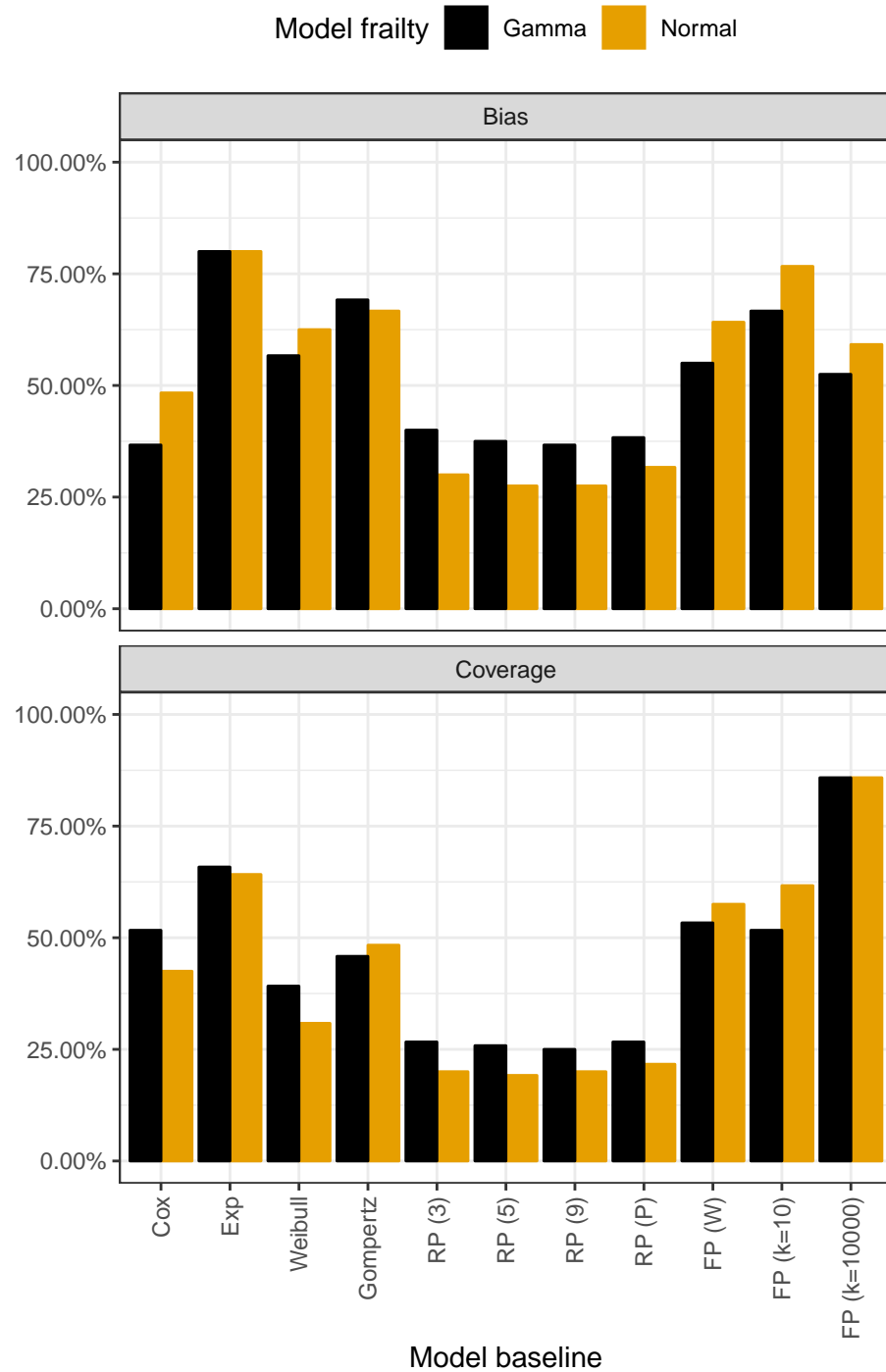


Figure 5: Percentage of simulated scenarios in which bias (top panel) or coverage (lower panel) for the estimated LLE was statistically different than the target value of 0 (for bias) or 95% (coverage), using Z tests based on Monte Carlo standard errors.

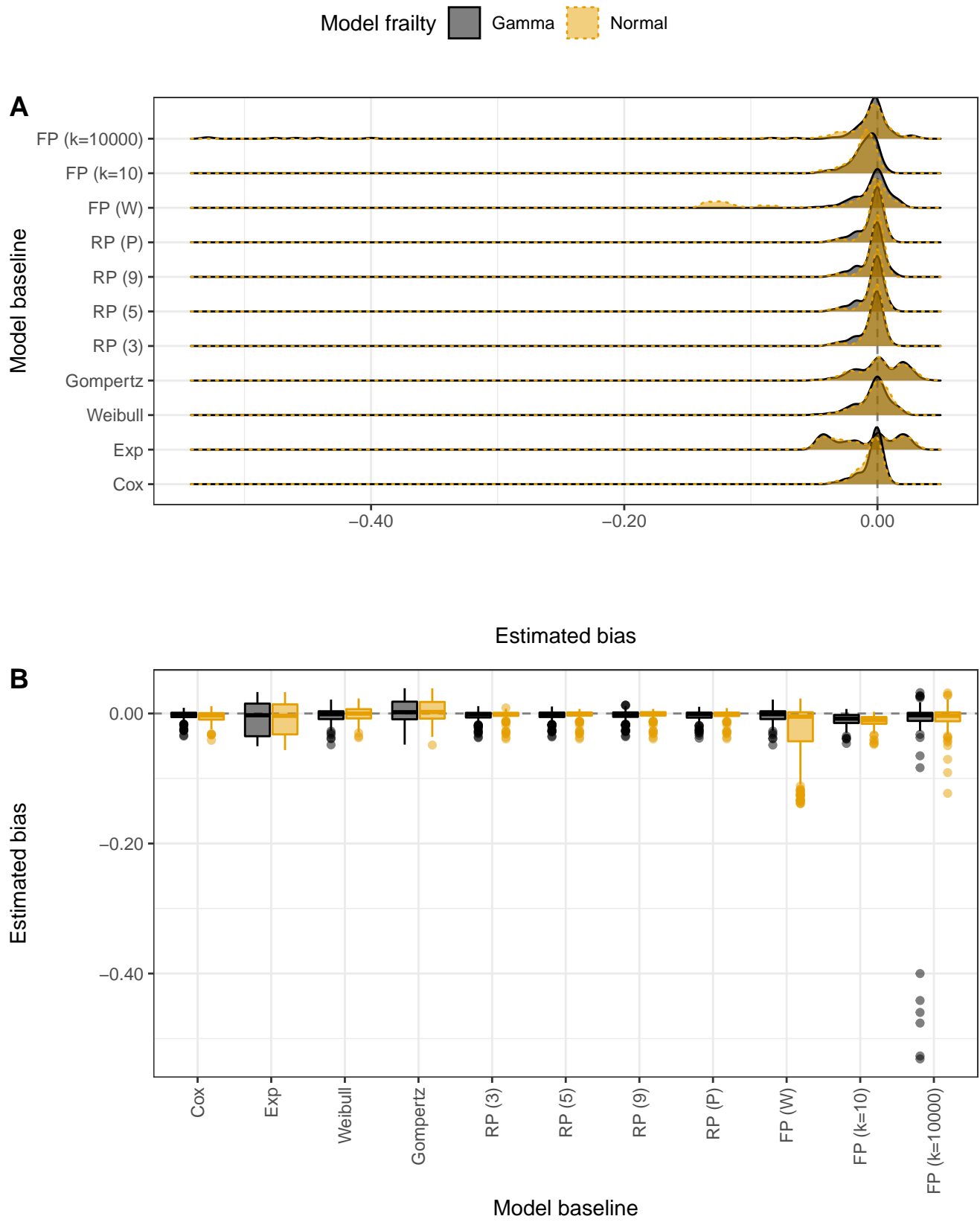


Figure 6: Bias distribution for the estimated LLE under each data-generating mechanisms by fitted model using ridgeline plots (panel A) or box plots (panel B).

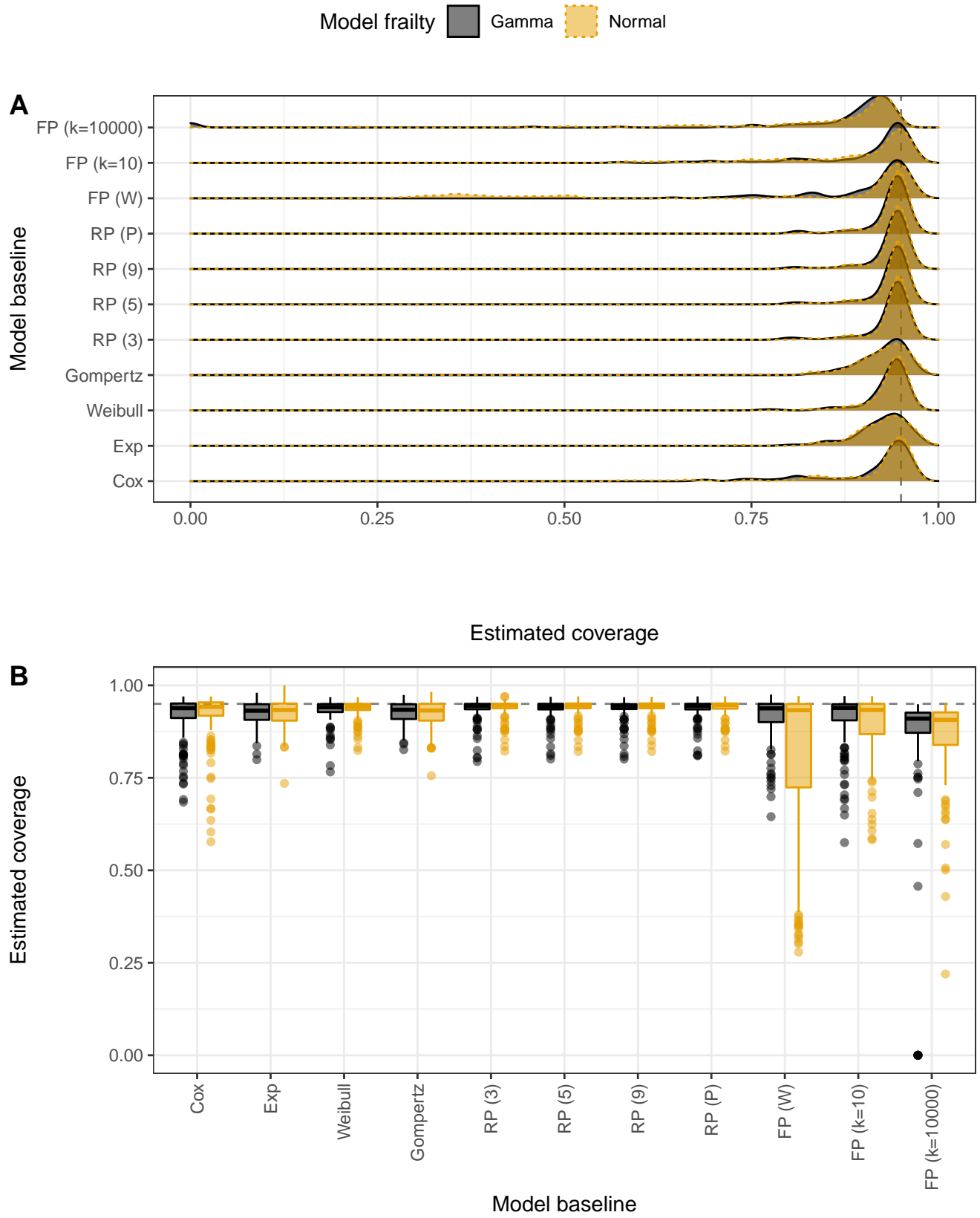


Figure 7: Coverage distribution for the estimated treatment effect under each data-generating mechanisms by fitted model using ridgeline plots (panel A) or box plots (panel B).

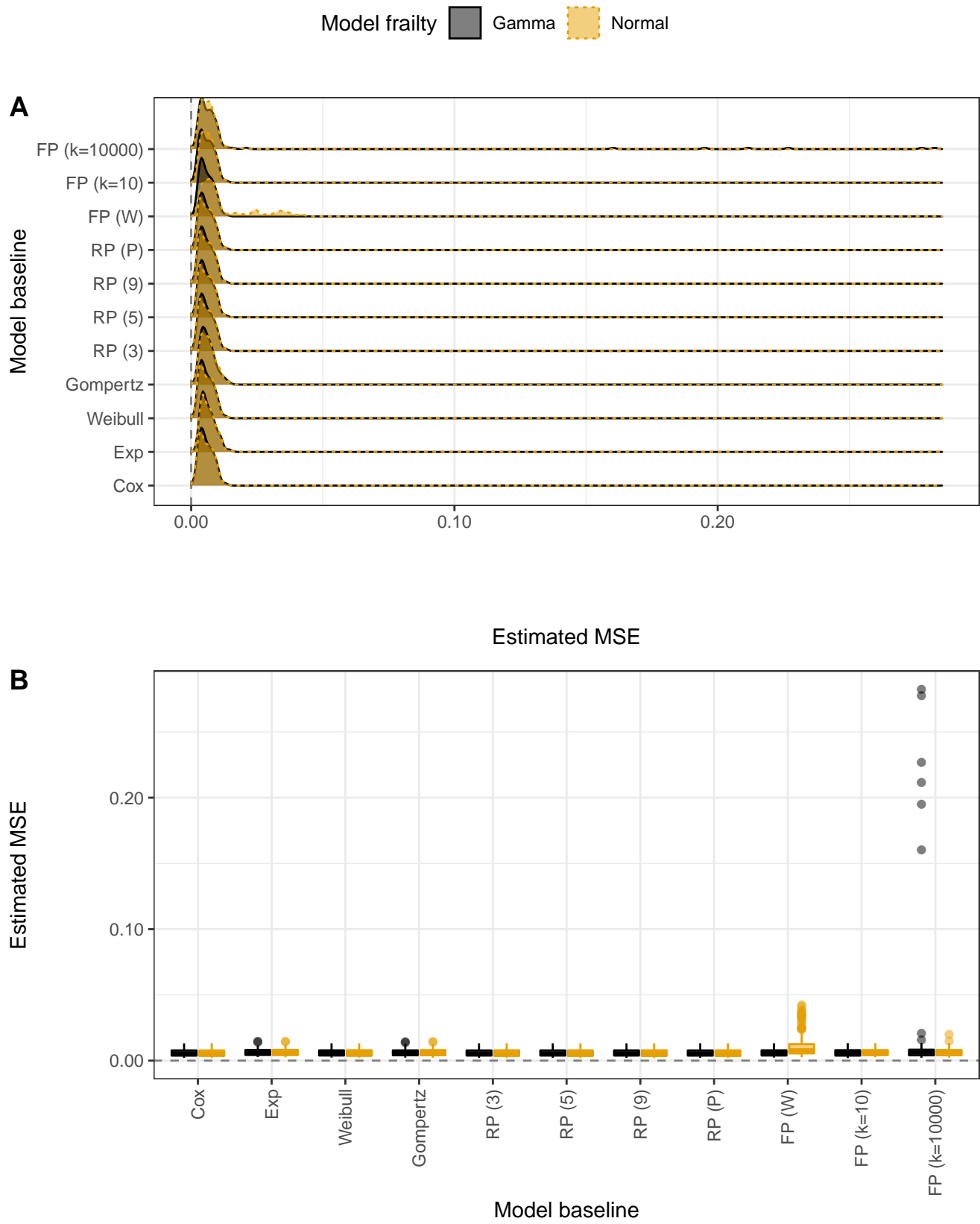


Figure 8: Mean squared error distribution for the estimated LLE under each data-generating mechanisms by fitted model using ridgeline plots (panel A) or box plots (panel B).

Table 121: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6764	0.0078	0.0872 (0.0020)	0.0013 (0.0028)	0.9449 (0.0072)	0.0076 (0.0004)	999
Exp	0.6766	0.0076	0.0870 (0.0019)	0.0015 (0.0028)	0.9450 (0.0072)	0.0076 (0.0004)	1000
Weibull	0.6770	0.0076	0.0872 (0.0020)	0.0019 (0.0028)	0.9440 (0.0073)	0.0076 (0.0004)	1000
Gompertz	0.6770	0.0077	0.0871 (0.0025)	0.0019 (0.0035)	0.9480 (0.0090)	0.0076 (0.0004)	615
RP (3)	0.6769	0.0076	0.0872 (0.0020)	0.0018 (0.0028)	0.9439 (0.0073)	0.0076 (0.0004)	998
RP (5)	0.6770	0.0076	0.0873 (0.0020)	0.0019 (0.0028)	0.9429 (0.0073)	0.0076 (0.0004)	999
RP (9)	0.6769	0.0076	0.0873 (0.0020)	0.0018 (0.0028)	0.9429 (0.0073)	0.0076 (0.0004)	999
RP (P)	0.6769	0.0076	0.0872 (0.0020)	0.0018 (0.0028)	0.9440 (0.0073)	0.0076 (0.0004)	1000
FP (W)	0.6774	0.0080	0.0873 (0.0020)	0.0023 (0.0028)	0.9495 (0.0070)	0.0076 (0.0004)	990
FP (k=10)	0.6739	0.0081	0.0874 (0.0020)	-0.0012 (0.0028)	0.9470 (0.0071)	0.0076 (0.0004)	1000
FP (k=10000)	0.6756	0.0063	0.0872 (0.0020)	0.0005 (0.0028)	0.9240 (0.0084)	0.0076 (0.0004)	1000
Model frailty: Normal							
Cox	0.6682	0.0078	0.0865 (0.0019)	-0.0069 (0.0027)	0.9440 (0.0073)	0.0075 (0.0003)	1000
Exp	0.6730	0.0076	0.0869 (0.0019)	-0.0021 (0.0027)	0.9449 (0.0072)	0.0075 (0.0003)	999
Weibull	0.6749	0.0076	0.0872 (0.0020)	-0.0002 (0.0028)	0.9420 (0.0074)	0.0076 (0.0004)	1000
Gompertz	0.6745	0.0077	0.0867 (0.0027)	-0.0006 (0.0039)	0.9405 (0.0105)	0.0075 (0.0005)	504
RP (3)	0.6752	0.0076	0.0872 (0.0020)	0.0001 (0.0028)	0.9410 (0.0075)	0.0076 (0.0004)	1000
RP (5)	0.6751	0.0076	0.0872 (0.0020)	0.0001 (0.0028)	0.9410 (0.0075)	0.0076 (0.0004)	1000
RP (9)	0.6751	0.0076	0.0873 (0.0020)	0.0000 (0.0028)	0.9400 (0.0075)	0.0076 (0.0004)	1000
RP (P)	0.6753	0.0076	0.0872 (0.0020)	0.0002 (0.0028)	0.9420 (0.0074)	0.0076 (0.0004)	1000
FP (W)	0.6751	0.0079	0.0874 (0.0020)	0.0000 (0.0028)	0.9484 (0.0070)	0.0076 (0.0004)	989
FP (k=10)	0.6720	0.0081	0.0874 (0.0020)	-0.0031 (0.0028)	0.9450 (0.0072)	0.0076 (0.0004)	1000
FP (k=10000)	0.6742	0.0065	0.0872 (0.0020)	-0.0009 (0.0028)	0.9270 (0.0082)	0.0076 (0.0004)	1000

Table 122: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6926	0.0085	0.0997 (0.0022)	-0.0064 (0.0032)	0.9260 (0.0083)	0.0100 (0.0004)	1000
Exp	0.7239	0.0082	0.1044 (0.0023)	0.0249 (0.0033)	0.9000 (0.0095)	0.0115 (0.0005)	1000
Weibull	0.6937	0.0089	0.0998 (0.0022)	-0.0052 (0.0032)	0.9330 (0.0079)	0.0100 (0.0004)	1000
Gompertz	0.7185	0.0083	0.1062 (0.0036)	0.0196 (0.0051)	0.8886 (0.0150)	0.0116 (0.0007)	440
RP (3)	0.6936	0.0090	0.0997 (0.0022)	-0.0054 (0.0032)	0.9337 (0.0079)	0.0100 (0.0004)	996
RP (5)	0.6931	0.0090	0.0999 (0.0022)	-0.0058 (0.0032)	0.9337 (0.0079)	0.0100 (0.0004)	995
RP (9)	0.6935	0.0090	0.0999 (0.0022)	-0.0055 (0.0032)	0.9336 (0.0079)	0.0100 (0.0004)	994
RP (P)	0.6935	0.0089	0.0998 (0.0022)	-0.0054 (0.0032)	0.9350 (0.0078)	0.0100 (0.0004)	1000
FP (W)	0.6937	0.0087	0.0999 (0.0022)	-0.0053 (0.0032)	0.9273 (0.0082)	0.0100 (0.0004)	991
FP (k=10)	0.6847	0.0088	0.1002 (0.0022)	-0.0142 (0.0032)	0.9250 (0.0083)	0.0102 (0.0004)	1000
FP (k=10000)	0.6959	0.0071	0.1010 (0.0023)	-0.0030 (0.0032)	0.8930 (0.0098)	0.0102 (0.0004)	1000
Model frailty: Normal							
Cox	0.6931	0.0087	0.0998 (0.0022)	-0.0058 (0.0032)	0.9320 (0.0080)	0.0100 (0.0004)	1000
Exp	0.7157	0.0082	0.1032 (0.0023)	0.0168 (0.0033)	0.9140 (0.0089)	0.0109 (0.0005)	1000
Weibull	0.6916	0.0089	0.0995 (0.0022)	-0.0074 (0.0031)	0.9309 (0.0080)	0.0100 (0.0004)	999
Gompertz	0.7166	0.0083	0.1097 (0.0038)	0.0177 (0.0054)	0.8854 (0.0157)	0.0123 (0.0008)	410
RP (3)	0.6919	0.0089	0.0997 (0.0022)	-0.0071 (0.0032)	0.9347 (0.0078)	0.0100 (0.0004)	996
RP (5)	0.6918	0.0089	0.0997 (0.0022)	-0.0072 (0.0032)	0.9358 (0.0078)	0.0100 (0.0004)	997
RP (9)	0.6917	0.0089	0.0995 (0.0022)	-0.0072 (0.0032)	0.9348 (0.0078)	0.0100 (0.0004)	997
RP (P)	0.6922	0.0089	0.0996 (0.0022)	-0.0067 (0.0031)	0.9340 (0.0079)	0.0100 (0.0004)	1000
FP (W)	0.6925	0.0087	0.0995 (0.0022)	-0.0064 (0.0032)	0.9284 (0.0082)	0.0099 (0.0004)	992
FP (k=10)	0.6838	0.0088	0.1000 (0.0022)	-0.0151 (0.0032)	0.9250 (0.0083)	0.0102 (0.0004)	1000
FP (k=10000)	0.6946	0.0074	0.1008 (0.0023)	-0.0044 (0.0032)	0.9010 (0.0094)	0.0102 (0.0004)	1000

Table 123: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6151	0.0065	0.0769 (0.0017)	0.0026 (0.0024)	0.9620 (0.0060)	0.0059 (0.0003)	1000
Exp	0.5746	0.0062	0.0723 (0.0016)	-0.0379 (0.0023)	0.9379 (0.0077)	0.0067 (0.0003)	982
Weibull	0.5954	0.0059	0.0741 (0.0017)	-0.0170 (0.0023)	0.9520 (0.0068)	0.0058 (0.0003)	1000
Gompertz	0.6154	0.0058	0.0768 (0.0017)	0.0030 (0.0024)	0.9480 (0.0070)	0.0059 (0.0003)	1000
RP (3)	0.6132	0.0058	0.0763 (0.0017)	0.0008 (0.0024)	0.9478 (0.0070)	0.0058 (0.0003)	997
RP (5)	0.6149	0.0058	0.0768 (0.0017)	0.0024 (0.0024)	0.9450 (0.0072)	0.0059 (0.0003)	1000
RP (9)	0.6153	0.0058	0.0769 (0.0017)	0.0029 (0.0024)	0.9430 (0.0073)	0.0059 (0.0003)	1000
RP (P)	0.6103	0.0058	0.0761 (0.0017)	-0.0022 (0.0024)	0.9440 (0.0073)	0.0058 (0.0003)	1000
FP (W)	0.5954	0.0068	0.0741 (0.0017)	-0.0170 (0.0023)	0.9620 (0.0060)	0.0058 (0.0003)	1000
FP (k=10)	0.6129	0.0068	0.0769 (0.0017)	0.0004 (0.0024)	0.9650 (0.0058)	0.0059 (0.0003)	1000
FP (k=10000)	0.6098	0.0050	0.0762 (0.0017)	-0.0026 (0.0024)	0.9290 (0.0081)	0.0058 (0.0003)	1000
Model frailty: Normal							
Cox	0.5985	0.0063	0.0748 (0.0017)	-0.0140 (0.0024)	0.9560 (0.0065)	0.0058 (0.0003)	1000
Exp	0.5756	0.0063	0.0729 (0.0018)	-0.0369 (0.0025)	0.9362 (0.0083)	0.0067 (0.0003)	862
Weibull	0.5950	0.0059	0.0741 (0.0017)	-0.0175 (0.0023)	0.9510 (0.0068)	0.0058 (0.0003)	999
Gompertz	0.6144	0.0058	0.0766 (0.0017)	0.0020 (0.0024)	0.9469 (0.0071)	0.0059 (0.0003)	999
RP (3)	0.6119	0.0058	0.0762 (0.0017)	-0.0006 (0.0024)	0.9459 (0.0072)	0.0058 (0.0003)	998
RP (5)	0.6130	0.0058	0.0766 (0.0017)	0.0005 (0.0024)	0.9470 (0.0071)	0.0059 (0.0003)	1000
RP (9)	0.6134	0.0058	0.0767 (0.0017)	0.0009 (0.0024)	0.9460 (0.0071)	0.0059 (0.0003)	1000
RP (P)	0.6086	0.0058	0.0759 (0.0017)	-0.0039 (0.0024)	0.9460 (0.0071)	0.0058 (0.0003)	1000
FP (W)	0.5949	0.0068	0.0741 (0.0017)	-0.0176 (0.0023)	0.9600 (0.0062)	0.0058 (0.0003)	1000
FP (k=10)	0.6110	0.0068	0.0767 (0.0017)	-0.0015 (0.0024)	0.9650 (0.0058)	0.0059 (0.0003)	1000
FP (k=10000)	0.6091	0.0049	0.0761 (0.0017)	-0.0034 (0.0024)	0.9300 (0.0081)	0.0058 (0.0003)	1000

Table 124: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5906	0.0061	0.0727 (0.0016)	0.0019 (0.0023)	0.9630 (0.0060)	0.0053 (0.0002)	999
Exp	0.5528	0.0065	0.0694 (0.0020)	-0.0359 (0.0029)	0.9618 (0.0080)	0.0061 (0.0004)	576
Weibull	0.6059	0.0053	0.0751 (0.0017)	0.0172 (0.0024)	0.9390 (0.0076)	0.0059 (0.0003)	1000
Gompertz	0.6087	0.0059	0.0755 (0.0017)	0.0200 (0.0024)	0.9460 (0.0071)	0.0061 (0.0003)	1000
RP (3)	0.5885	0.0054	0.0724 (0.0016)	-0.0002 (0.0023)	0.9540 (0.0066)	0.0052 (0.0002)	1000
RP (5)	0.5907	0.0055	0.0726 (0.0016)	0.0020 (0.0023)	0.9560 (0.0065)	0.0053 (0.0002)	999
RP (9)	0.5909	0.0055	0.0727 (0.0016)	0.0021 (0.0023)	0.9560 (0.0065)	0.0053 (0.0002)	1000
RP (P)	0.5914	0.0055	0.0727 (0.0016)	0.0027 (0.0023)	0.9560 (0.0065)	0.0053 (0.0002)	1000
FP (W)	0.6059	0.0060	0.0751 (0.0017)	0.0172 (0.0024)	0.9510 (0.0068)	0.0059 (0.0003)	1000
FP (k=10)	0.5776	0.0063	0.0729 (0.0016)	-0.0111 (0.0023)	0.9660 (0.0057)	0.0054 (0.0003)	1000
FP (k=10000)	0.6127	0.0041	0.0779 (0.0017)	0.0239 (0.0025)	0.8838 (0.0101)	0.0066 (0.0003)	998
Model frailty: Normal							
Cox	0.5757	0.0059	0.0709 (0.0016)	-0.0130 (0.0022)	0.9600 (0.0062)	0.0052 (0.0002)	1000
Exp	0.5439	0.0067	0.0615 (0.0045)	-0.0448 (0.0063)	0.9787 (0.0149)	0.0057 (0.0010)	94
Weibull	0.6047	0.0053	0.0747 (0.0017)	0.0160 (0.0024)	0.9409 (0.0075)	0.0058 (0.0003)	998
Gompertz	0.6067	0.0059	0.0750 (0.0017)	0.0180 (0.0024)	0.9499 (0.0069)	0.0059 (0.0003)	999
RP (3)	0.5870	0.0054	0.0722 (0.0016)	-0.0017 (0.0023)	0.9540 (0.0066)	0.0052 (0.0002)	999
RP (5)	0.5893	0.0055	0.0724 (0.0016)	0.0006 (0.0023)	0.9540 (0.0066)	0.0052 (0.0002)	1000
RP (9)	0.5895	0.0055	0.0724 (0.0016)	0.0008 (0.0023)	0.9580 (0.0063)	0.0052 (0.0002)	1000
RP (P)	0.5901	0.0055	0.0725 (0.0016)	0.0013 (0.0023)	0.9550 (0.0066)	0.0053 (0.0002)	1000
FP (W)	0.6046	0.0060	0.0748 (0.0017)	0.0158 (0.0024)	0.9523 (0.0068)	0.0058 (0.0003)	986
FP (k=10)	0.5781	0.0063	0.0726 (0.0016)	-0.0107 (0.0023)	0.9650 (0.0058)	0.0054 (0.0003)	1000
FP (k=10000)	0.6104	0.0039	0.0772 (0.0017)	0.0217 (0.0024)	0.8820 (0.0102)	0.0064 (0.0003)	1000

Table 125: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6849	0.0082	0.0897 (0.0020)	-0.0015 (0.0028)	0.9500 (0.0069)	0.0080 (0.0004)	1000
Exp	0.7030	0.0079	0.0918 (0.0021)	0.0166 (0.0029)	0.9400 (0.0075)	0.0087 (0.0004)	1000
Weibull	0.6926	0.0082	0.0905 (0.0020)	0.0062 (0.0029)	0.9490 (0.0070)	0.0082 (0.0004)	1000
Gompertz	0.7029	0.0080	0.0887 (0.0029)	0.0165 (0.0041)	0.9476 (0.0102)	0.0081 (0.0005)	477
RP (3)	0.6870	0.0083	0.0901 (0.0020)	0.0006 (0.0029)	0.9497 (0.0069)	0.0081 (0.0004)	995
RP (5)	0.6858	0.0082	0.0898 (0.0020)	-0.0006 (0.0028)	0.9499 (0.0069)	0.0081 (0.0004)	998
RP (9)	0.6856	0.0082	0.0898 (0.0020)	-0.0008 (0.0028)	0.9498 (0.0069)	0.0081 (0.0004)	996
RP (P)	0.6874	0.0082	0.0900 (0.0020)	0.0010 (0.0028)	0.9500 (0.0069)	0.0081 (0.0004)	1000
FP (W)	0.6924	0.0084	0.0907 (0.0020)	0.0061 (0.0029)	0.9484 (0.0070)	0.0083 (0.0004)	988
FP (k=10)	0.6810	0.0085	0.0899 (0.0020)	-0.0054 (0.0028)	0.9540 (0.0066)	0.0081 (0.0004)	999
FP (k=10000)	0.6835	0.0069	0.0896 (0.0020)	-0.0029 (0.0028)	0.9360 (0.0077)	0.0080 (0.0004)	1000
Model frailty: Normal							
Cox	0.6795	0.0083	0.0889 (0.0020)	-0.0069 (0.0028)	0.9540 (0.0066)	0.0079 (0.0004)	1000
Exp	0.6981	0.0080	0.0911 (0.0020)	0.0117 (0.0029)	0.9439 (0.0073)	0.0084 (0.0004)	998
Weibull	0.6899	0.0082	0.0901 (0.0020)	0.0036 (0.0029)	0.9499 (0.0069)	0.0081 (0.0004)	999
Gompertz	0.6927	0.0080	0.0894 (0.0031)	0.0063 (0.0044)	0.9501 (0.0106)	0.0080 (0.0005)	421
RP (3)	0.6859	0.0083	0.0899 (0.0020)	-0.0005 (0.0028)	0.9508 (0.0069)	0.0081 (0.0004)	996
RP (5)	0.6847	0.0082	0.0896 (0.0020)	-0.0017 (0.0028)	0.9499 (0.0069)	0.0080 (0.0004)	999
RP (9)	0.6844	0.0082	0.0896 (0.0020)	-0.0020 (0.0028)	0.9488 (0.0070)	0.0080 (0.0004)	996
RP (P)	0.6859	0.0082	0.0897 (0.0020)	-0.0004 (0.0028)	0.9520 (0.0068)	0.0080 (0.0004)	1000
FP (W)	0.6905	0.0083	0.0902 (0.0020)	0.0041 (0.0029)	0.9527 (0.0067)	0.0081 (0.0004)	994
FP (k=10)	0.6796	0.0085	0.0896 (0.0020)	-0.0068 (0.0028)	0.9520 (0.0068)	0.0081 (0.0004)	1000
FP (k=10000)	0.6825	0.0071	0.0894 (0.0020)	-0.0039 (0.0028)	0.9380 (0.0076)	0.0080 (0.0004)	1000

Table 126: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6771	0.0077	0.0862 (0.0019)	0.0007 (0.0027)	0.9539 (0.0066)	0.0074 (0.0003)	998
Exp	0.6784	0.0073	0.0862 (0.0019)	0.0019 (0.0027)	0.9540 (0.0066)	0.0074 (0.0003)	1000
Weibull	0.6779	0.0073	0.0862 (0.0019)	0.0015 (0.0027)	0.9500 (0.0069)	0.0074 (0.0003)	1000
Gompertz	0.6775	0.0074	0.0861 (0.0025)	0.0011 (0.0036)	0.9558 (0.0085)	0.0074 (0.0004)	588
RP (3)	0.6776	0.0074	0.0862 (0.0019)	0.0012 (0.0027)	0.9489 (0.0070)	0.0074 (0.0003)	998
RP (5)	0.6775	0.0074	0.0861 (0.0019)	0.0010 (0.0027)	0.9488 (0.0070)	0.0074 (0.0003)	997
RP (9)	0.6777	0.0074	0.0862 (0.0019)	0.0013 (0.0027)	0.9480 (0.0070)	0.0074 (0.0003)	1000
RP (P)	0.6778	0.0073	0.0862 (0.0019)	0.0013 (0.0027)	0.9490 (0.0070)	0.0074 (0.0003)	1000
FP (W)	0.6779	0.0080	0.0862 (0.0019)	0.0015 (0.0027)	0.9590 (0.0063)	0.0074 (0.0003)	1000
FP (k=10)	0.6750	0.0081	0.0863 (0.0019)	-0.0014 (0.0027)	0.9610 (0.0061)	0.0074 (0.0003)	1000
FP (k=10000)	0.6764	0.0062	0.0861 (0.0019)	0.0000 (0.0027)	0.9320 (0.0080)	0.0074 (0.0003)	1000
Model frailty: Normal							
Cox	0.6667	0.0077	0.0849 (0.0019)	-0.0098 (0.0027)	0.9580 (0.0063)	0.0073 (0.0003)	1000
Exp	0.6749	0.0073	0.0857 (0.0019)	-0.0015 (0.0027)	0.9560 (0.0065)	0.0073 (0.0003)	1000
Weibull	0.6764	0.0073	0.0859 (0.0019)	-0.0001 (0.0027)	0.9489 (0.0070)	0.0074 (0.0003)	999
Gompertz	0.6744	0.0074	0.0852 (0.0026)	-0.0021 (0.0037)	0.9532 (0.0091)	0.0073 (0.0005)	534
RP (3)	0.6768	0.0073	0.0857 (0.0019)	0.0003 (0.0027)	0.9507 (0.0069)	0.0073 (0.0003)	994
RP (5)	0.6765	0.0073	0.0862 (0.0019)	0.0001 (0.0027)	0.9478 (0.0070)	0.0074 (0.0003)	996
RP (9)	0.6765	0.0073	0.0860 (0.0019)	0.0001 (0.0027)	0.9480 (0.0070)	0.0074 (0.0003)	1000
RP (P)	0.6767	0.0073	0.0860 (0.0019)	0.0002 (0.0027)	0.9500 (0.0069)	0.0074 (0.0003)	1000
FP (W)	0.6767	0.0079	0.0859 (0.0019)	0.0003 (0.0027)	0.9599 (0.0062)	0.0074 (0.0003)	997
FP (k=10)	0.6737	0.0081	0.0861 (0.0019)	-0.0027 (0.0027)	0.9610 (0.0061)	0.0074 (0.0003)	1000
FP (k=10000)	0.6757	0.0063	0.0860 (0.0019)	-0.0007 (0.0027)	0.9320 (0.0080)	0.0074 (0.0003)	1000

Table 127: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7092	0.0086	0.0968 (0.0022)	-0.0012 (0.0031)	0.9360 (0.0077)	0.0094 (0.0004)	1000
Exp	0.7435	0.0081	0.1024 (0.0023)	0.0330 (0.0032)	0.8950 (0.0097)	0.0116 (0.0005)	1000
Weibull	0.7108	0.0088	0.0971 (0.0022)	0.0004 (0.0031)	0.9390 (0.0076)	0.0094 (0.0004)	1000
Gompertz	0.7426	0.0081	0.1080 (0.0036)	0.0322 (0.0051)	0.8808 (0.0152)	0.0127 (0.0008)	453
RP (3)	0.7097	0.0088	0.0971 (0.0022)	-0.0007 (0.0031)	0.9395 (0.0076)	0.0094 (0.0004)	992
RP (5)	0.7097	0.0088	0.0971 (0.0022)	-0.0007 (0.0031)	0.9394 (0.0076)	0.0094 (0.0004)	990
RP (9)	0.7099	0.0088	0.0971 (0.0022)	-0.0006 (0.0031)	0.9396 (0.0076)	0.0094 (0.0004)	994
RP (P)	0.7103	0.0088	0.0970 (0.0022)	-0.0001 (0.0031)	0.9400 (0.0075)	0.0094 (0.0004)	1000
FP (W)	0.7112	0.0088	0.0973 (0.0022)	0.0008 (0.0031)	0.9383 (0.0077)	0.0095 (0.0004)	988
FP (k=10)	0.7013	0.0090	0.0975 (0.0022)	-0.0092 (0.0031)	0.9420 (0.0074)	0.0096 (0.0004)	1000
FP (k=10000)	0.7134	0.0071	0.0982 (0.0022)	0.0030 (0.0031)	0.9110 (0.0090)	0.0096 (0.0004)	1000
Model frailty: Normal							
Cox	0.7064	0.0088	0.0965 (0.0022)	-0.0040 (0.0031)	0.9410 (0.0075)	0.0093 (0.0004)	1000
Exp	0.7356	0.0081	0.1013 (0.0023)	0.0252 (0.0032)	0.8978 (0.0096)	0.0109 (0.0005)	998
Weibull	0.7091	0.0088	0.0969 (0.0022)	-0.0013 (0.0031)	0.9410 (0.0075)	0.0094 (0.0004)	1000
Gompertz	0.7386	0.0081	0.1084 (0.0039)	0.0282 (0.0054)	0.8816 (0.0162)	0.0125 (0.0009)	397
RP (3)	0.7091	0.0088	0.0968 (0.0022)	-0.0013 (0.0031)	0.9408 (0.0075)	0.0094 (0.0004)	997
RP (5)	0.7087	0.0088	0.0968 (0.0022)	-0.0017 (0.0031)	0.9396 (0.0076)	0.0094 (0.0004)	994
RP (9)	0.7088	0.0088	0.0968 (0.0022)	-0.0016 (0.0031)	0.9397 (0.0075)	0.0094 (0.0004)	995
RP (P)	0.7094	0.0088	0.0968 (0.0022)	-0.0010 (0.0031)	0.9390 (0.0076)	0.0094 (0.0004)	1000
FP (W)	0.7095	0.0088	0.0971 (0.0022)	-0.0010 (0.0031)	0.9392 (0.0076)	0.0094 (0.0004)	987
FP (k=10)	0.7008	0.0089	0.0974 (0.0022)	-0.0096 (0.0031)	0.9400 (0.0075)	0.0096 (0.0004)	1000
FP (k=10000)	0.7125	0.0074	0.0981 (0.0022)	0.0020 (0.0031)	0.9230 (0.0084)	0.0096 (0.0004)	1000

Table 128: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6036	0.0062	0.0757 (0.0017)	0.0022 (0.0024)	0.9620 (0.0060)	0.0057 (0.0003)	1000
Exp	0.5657	0.0058	0.0712 (0.0016)	-0.0358 (0.0023)	0.9377 (0.0079)	0.0063 (0.0003)	931
Weibull	0.5832	0.0055	0.0731 (0.0016)	-0.0182 (0.0023)	0.9540 (0.0066)	0.0057 (0.0003)	1000
Gompertz	0.6034	0.0054	0.0756 (0.0017)	0.0019 (0.0024)	0.9500 (0.0069)	0.0057 (0.0003)	1000
RP (3)	0.6012	0.0054	0.0754 (0.0017)	-0.0003 (0.0024)	0.9479 (0.0070)	0.0057 (0.0003)	998
RP (5)	0.6029	0.0054	0.0754 (0.0017)	0.0014 (0.0024)	0.9489 (0.0070)	0.0057 (0.0003)	999
RP (9)	0.6037	0.0054	0.0756 (0.0017)	0.0023 (0.0024)	0.9470 (0.0071)	0.0057 (0.0003)	1000
RP (P)	0.5984	0.0054	0.0751 (0.0017)	-0.0030 (0.0024)	0.9510 (0.0068)	0.0056 (0.0003)	1000
FP (W)	0.5833	0.0065	0.0732 (0.0016)	-0.0182 (0.0023)	0.9669 (0.0057)	0.0057 (0.0003)	996
FP (k=10)	0.6014	0.0066	0.0755 (0.0017)	-0.0000 (0.0024)	0.9660 (0.0057)	0.0057 (0.0003)	1000
FP (k=10000)	0.5975	0.0047	0.0749 (0.0017)	-0.0040 (0.0024)	0.9400 (0.0075)	0.0056 (0.0003)	1000
Model frailty: Normal							
Cox	0.5870	0.0060	0.0737 (0.0016)	-0.0145 (0.0023)	0.9580 (0.0063)	0.0056 (0.0003)	1000
Exp	0.5631	0.0058	0.0708 (0.0019)	-0.0383 (0.0027)	0.9369 (0.0092)	0.0065 (0.0004)	697
Weibull	0.5831	0.0055	0.0730 (0.0016)	-0.0183 (0.0023)	0.9549 (0.0066)	0.0057 (0.0003)	997
Gompertz	0.6030	0.0054	0.0753 (0.0017)	0.0016 (0.0024)	0.9509 (0.0068)	0.0057 (0.0003)	998
RP (3)	0.6002	0.0054	0.0751 (0.0017)	-0.0013 (0.0024)	0.9458 (0.0072)	0.0056 (0.0003)	997
RP (5)	0.6020	0.0054	0.0753 (0.0017)	0.0006 (0.0024)	0.9459 (0.0072)	0.0057 (0.0003)	999
RP (9)	0.6025	0.0054	0.0754 (0.0017)	0.0010 (0.0024)	0.9469 (0.0071)	0.0057 (0.0003)	999
RP (P)	0.5975	0.0054	0.0749 (0.0017)	-0.0039 (0.0024)	0.9500 (0.0069)	0.0056 (0.0003)	1000
FP (W)	0.5830	0.0065	0.0730 (0.0016)	-0.0185 (0.0023)	0.9660 (0.0057)	0.0057 (0.0003)	999
FP (k=10)	0.6004	0.0065	0.0753 (0.0017)	-0.0010 (0.0024)	0.9660 (0.0057)	0.0057 (0.0003)	1000
FP (k=10000)	0.5973	0.0046	0.0748 (0.0017)	-0.0041 (0.0024)	0.9350 (0.0078)	0.0056 (0.0003)	1000

Table 129: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5772	0.0058	0.0722 (0.0016)	-0.0018 (0.0023)	0.9620 (0.0060)	0.0052 (0.0002)	1000
Exp	0.5390	0.0062	0.0697 (0.0021)	-0.0400 (0.0030)	0.9490 (0.0096)	0.0064 (0.0004)	529
Weibull	0.5912	0.0049	0.0746 (0.0017)	0.0122 (0.0024)	0.9290 (0.0081)	0.0057 (0.0003)	1000
Gompertz	0.5970	0.0055	0.0755 (0.0017)	0.0181 (0.0024)	0.9370 (0.0077)	0.0060 (0.0003)	1000
RP (3)	0.5742	0.0050	0.0719 (0.0016)	-0.0047 (0.0023)	0.9450 (0.0072)	0.0052 (0.0002)	1000
RP (5)	0.5769	0.0051	0.0722 (0.0016)	-0.0021 (0.0023)	0.9479 (0.0070)	0.0052 (0.0002)	999
RP (9)	0.5774	0.0051	0.0722 (0.0016)	-0.0016 (0.0023)	0.9480 (0.0070)	0.0052 (0.0002)	1000
RP (P)	0.5777	0.0051	0.0723 (0.0016)	-0.0013 (0.0023)	0.9470 (0.0071)	0.0052 (0.0002)	1000
FP (W)	0.5909	0.0058	0.0742 (0.0017)	0.0119 (0.0024)	0.9526 (0.0067)	0.0056 (0.0002)	992
FP (k=10)	0.5629	0.0061	0.0724 (0.0016)	-0.0161 (0.0023)	0.9650 (0.0058)	0.0055 (0.0002)	1000
FP (k=10000)	0.5962	0.0039	0.0774 (0.0017)	0.0172 (0.0024)	0.8879 (0.0100)	0.0063 (0.0003)	999
Model frailty: Normal							
Cox	0.5619	0.0056	0.0703 (0.0016)	-0.0171 (0.0022)	0.9620 (0.0060)	0.0052 (0.0002)	1000
Exp	0.5469	0.0064	0.0620 (0.0155)	-0.0321 (0.0207)	1.0000 (0.0000)	0.0045 (0.0027)	9
Weibull	0.5911	0.0049	0.0744 (0.0017)	0.0122 (0.0024)	0.9329 (0.0079)	0.0057 (0.0002)	998
Gompertz	0.5963	0.0055	0.0752 (0.0017)	0.0173 (0.0024)	0.9380 (0.0076)	0.0060 (0.0003)	1000
RP (3)	0.5736	0.0050	0.0718 (0.0016)	-0.0053 (0.0023)	0.9470 (0.0071)	0.0052 (0.0002)	1000
RP (5)	0.5764	0.0051	0.0721 (0.0016)	-0.0026 (0.0023)	0.9500 (0.0069)	0.0052 (0.0002)	1000
RP (9)	0.5768	0.0051	0.0722 (0.0016)	-0.0022 (0.0023)	0.9490 (0.0070)	0.0052 (0.0002)	1000
RP (P)	0.5772	0.0051	0.0722 (0.0016)	-0.0018 (0.0023)	0.9490 (0.0070)	0.0052 (0.0002)	1000
FP (W)	0.5924	0.0057	0.0739 (0.0017)	0.0134 (0.0024)	0.9546 (0.0067)	0.0056 (0.0002)	969
FP (k=10)	0.5643	0.0061	0.0723 (0.0016)	-0.0147 (0.0023)	0.9660 (0.0057)	0.0054 (0.0002)	1000
FP (k=10000)	0.5970	0.0036	0.0770 (0.0017)	0.0180 (0.0024)	0.8770 (0.0104)	0.0062 (0.0003)	1000

Table 130: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6963	0.0082	0.0869 (0.0019)	0.0064 (0.0027)	0.9670 (0.0056)	0.0076 (0.0003)	1000
Exp	0.7163	0.0077	0.0895 (0.0020)	0.0264 (0.0028)	0.9340 (0.0079)	0.0087 (0.0004)	1000
Weibull	0.7052	0.0080	0.0879 (0.0020)	0.0152 (0.0028)	0.9490 (0.0070)	0.0080 (0.0003)	1000
Gompertz	0.7168	0.0077	0.0869 (0.0027)	0.0269 (0.0038)	0.9368 (0.0107)	0.0083 (0.0005)	522
RP (3)	0.6989	0.0080	0.0873 (0.0020)	0.0089 (0.0028)	0.9565 (0.0065)	0.0077 (0.0003)	988
RP (5)	0.6977	0.0080	0.0870 (0.0020)	0.0078 (0.0028)	0.9575 (0.0064)	0.0076 (0.0003)	989
RP (9)	0.6973	0.0079	0.0870 (0.0020)	0.0074 (0.0028)	0.9578 (0.0064)	0.0076 (0.0003)	995
RP (P)	0.6992	0.0080	0.0873 (0.0020)	0.0093 (0.0028)	0.9550 (0.0066)	0.0077 (0.0003)	1000
FP (W)	0.7053	0.0084	0.0879 (0.0020)	0.0154 (0.0028)	0.9617 (0.0061)	0.0079 (0.0003)	993
FP (k=10)	0.6926	0.0085	0.0872 (0.0020)	0.0026 (0.0028)	0.9690 (0.0055)	0.0076 (0.0003)	999
FP (k=10000)	0.6953	0.0068	0.0870 (0.0019)	0.0054 (0.0028)	0.9350 (0.0078)	0.0076 (0.0003)	1000
Model frailty: Normal							
Cox	0.6879	0.0082	0.0861 (0.0019)	-0.0020 (0.0027)	0.9640 (0.0059)	0.0074 (0.0003)	1000
Exp	0.7121	0.0077	0.0889 (0.0020)	0.0221 (0.0028)	0.9409 (0.0075)	0.0084 (0.0003)	999
Weibull	0.7030	0.0080	0.0877 (0.0020)	0.0131 (0.0028)	0.9550 (0.0066)	0.0078 (0.0003)	999
Gompertz	0.7138	0.0077	0.0871 (0.0030)	0.0239 (0.0042)	0.9314 (0.0123)	0.0081 (0.0005)	423
RP (3)	0.6986	0.0080	0.0874 (0.0020)	0.0086 (0.0028)	0.9576 (0.0064)	0.0077 (0.0003)	990
RP (5)	0.6967	0.0079	0.0869 (0.0020)	0.0068 (0.0028)	0.9567 (0.0065)	0.0076 (0.0003)	992
RP (9)	0.6962	0.0079	0.0869 (0.0019)	0.0063 (0.0027)	0.9560 (0.0065)	0.0076 (0.0003)	1000
RP (P)	0.6983	0.0080	0.0872 (0.0020)	0.0084 (0.0028)	0.9580 (0.0063)	0.0077 (0.0003)	1000
FP (W)	0.7043	0.0084	0.0880 (0.0020)	0.0144 (0.0028)	0.9615 (0.0061)	0.0079 (0.0003)	986
FP (k=10)	0.6918	0.0085	0.0871 (0.0019)	0.0018 (0.0028)	0.9670 (0.0056)	0.0076 (0.0003)	1000
FP (k=10000)	0.6948	0.0070	0.0869 (0.0019)	0.0049 (0.0027)	0.9370 (0.0077)	0.0076 (0.0003)	1000

Table 131: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5757	0.0078	0.0884 (0.0020)	-0.0005 (0.0028)	0.9450 (0.0072)	0.0078 (0.0004)	1000
Exp	0.5764	0.0078	0.0883 (0.0020)	0.0001 (0.0028)	0.9460 (0.0071)	0.0078 (0.0004)	1000
Weibull	0.5764	0.0078	0.0885 (0.0020)	0.0002 (0.0028)	0.9450 (0.0072)	0.0078 (0.0004)	1000
Gompertz	0.5808	0.0078	0.0888 (0.0052)	0.0045 (0.0073)	0.9456 (0.0187)	0.0079 (0.0009)	147
RP (3)	0.5762	0.0078	0.0884 (0.0020)	-0.0000 (0.0028)	0.9450 (0.0072)	0.0078 (0.0004)	1000
RP (5)	0.5762	0.0078	0.0884 (0.0020)	-0.0000 (0.0028)	0.9450 (0.0072)	0.0078 (0.0004)	1000
RP (9)	0.5762	0.0078	0.0885 (0.0020)	-0.0000 (0.0028)	0.9440 (0.0073)	0.0078 (0.0004)	1000
RP (P)	0.5763	0.0078	0.0885 (0.0020)	0.0001 (0.0028)	0.9450 (0.0072)	0.0078 (0.0004)	1000
FP (W)	0.5760	0.0079	0.0883 (0.0020)	-0.0002 (0.0028)	0.9458 (0.0072)	0.0078 (0.0004)	996
FP (k=10)	0.5728	0.0080	0.0886 (0.0020)	-0.0035 (0.0028)	0.9470 (0.0071)	0.0079 (0.0004)	1000
FP (k=10000)	0.5748	0.0062	0.0883 (0.0020)	-0.0015 (0.0028)	0.9208 (0.0085)	0.0078 (0.0004)	998
Model frailty: Normal							
Cox	0.5692	0.0081	0.0881 (0.0020)	-0.0070 (0.0028)	0.9540 (0.0066)	0.0078 (0.0004)	1000
Exp	0.5730	0.0080	0.0887 (0.0020)	-0.0032 (0.0028)	0.9540 (0.0066)	0.0079 (0.0004)	1000
Weibull	0.5740	0.0080	0.0890 (0.0020)	-0.0022 (0.0028)	0.9489 (0.0070)	0.0079 (0.0004)	998
Gompertz	0.5820	0.0080	0.0899 (0.0058)	0.0057 (0.0082)	0.9504 (0.0197)	0.0080 (0.0010)	121
RP (3)	0.5719	0.0079	0.0886 (0.0020)	-0.0044 (0.0028)	0.9460 (0.0071)	0.0079 (0.0004)	1000
RP (5)	0.5718	0.0079	0.0886 (0.0020)	-0.0045 (0.0028)	0.9460 (0.0071)	0.0079 (0.0004)	1000
RP (9)	0.5717	0.0079	0.0886 (0.0020)	-0.0045 (0.0028)	0.9460 (0.0071)	0.0079 (0.0004)	1000
RP (P)	0.5720	0.0079	0.0887 (0.0020)	-0.0043 (0.0028)	0.9460 (0.0071)	0.0079 (0.0004)	1000
FP (W)	0.5718	0.0078	0.0886 (0.0020)	-0.0044 (0.0029)	0.9478 (0.0072)	0.0079 (0.0004)	958
FP (k=10)	0.5672	0.0079	0.0887 (0.0020)	-0.0091 (0.0028)	0.9455 (0.0072)	0.0079 (0.0004)	991
FP (k=10000)	0.5700	0.0066	0.0884 (0.0020)	-0.0063 (0.0028)	0.9260 (0.0083)	0.0079 (0.0004)	1000

Table 132: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5920	0.0084	0.0956 (0.0021)	0.0012 (0.0030)	0.9390 (0.0076)	0.0091 (0.0004)	1000
Exp	0.6205	0.0079	0.1009 (0.0023)	0.0297 (0.0032)	0.9060 (0.0092)	0.0110 (0.0005)	1000
Weibull	0.5933	0.0089	0.0958 (0.0021)	0.0025 (0.0030)	0.9470 (0.0071)	0.0092 (0.0004)	1000
Gompertz	0.6205	0.0080	0.1035 (0.0036)	0.0297 (0.0050)	0.9106 (0.0138)	0.0116 (0.0009)	425
RP (3)	0.5926	0.0089	0.0957 (0.0021)	0.0017 (0.0030)	0.9480 (0.0070)	0.0091 (0.0004)	1000
RP (5)	0.5923	0.0089	0.0956 (0.0021)	0.0015 (0.0030)	0.9489 (0.0070)	0.0091 (0.0004)	998
RP (9)	0.5926	0.0089	0.0957 (0.0021)	0.0017 (0.0030)	0.9480 (0.0070)	0.0091 (0.0004)	1000
RP (P)	0.5930	0.0089	0.0957 (0.0021)	0.0021 (0.0030)	0.9470 (0.0071)	0.0092 (0.0004)	1000
FP (W)	0.5933	0.0085	0.0958 (0.0021)	0.0025 (0.0030)	0.9450 (0.0072)	0.0092 (0.0004)	1000
FP (k=10)	0.5838	0.0086	0.0963 (0.0022)	-0.0070 (0.0030)	0.9430 (0.0073)	0.0093 (0.0004)	1000
FP (k=10000)	0.6004	0.0067	0.0980 (0.0022)	0.0096 (0.0031)	0.8988 (0.0095)	0.0097 (0.0004)	998
Model frailty: Normal							
Cox	0.5941	0.0090	0.0961 (0.0021)	0.0033 (0.0030)	0.9490 (0.0070)	0.0092 (0.0004)	1000
Exp	0.6102	0.0081	0.0993 (0.0022)	0.0194 (0.0032)	0.9183 (0.0087)	0.0102 (0.0005)	991
Weibull	0.5889	0.0089	0.0953 (0.0021)	-0.0019 (0.0030)	0.9480 (0.0070)	0.0091 (0.0004)	1000
Gompertz	0.6154	0.0081	0.0980 (0.0041)	0.0245 (0.0058)	0.9201 (0.0160)	0.0102 (0.0009)	288
RP (3)	0.5877	0.0089	0.0951 (0.0021)	-0.0031 (0.0030)	0.9470 (0.0071)	0.0091 (0.0004)	1000
RP (5)	0.5876	0.0089	0.0952 (0.0021)	-0.0032 (0.0030)	0.9470 (0.0071)	0.0091 (0.0004)	1000
RP (9)	0.5876	0.0089	0.0952 (0.0021)	-0.0032 (0.0030)	0.9460 (0.0071)	0.0091 (0.0004)	1000
RP (P)	0.5879	0.0089	0.0952 (0.0021)	-0.0029 (0.0030)	0.9470 (0.0071)	0.0091 (0.0004)	1000
FP (W)	0.5883	0.0084	0.0956 (0.0022)	-0.0026 (0.0031)	0.9432 (0.0074)	0.0091 (0.0004)	968
FP (k=10)	0.5796	0.0084	0.0957 (0.0021)	-0.0112 (0.0030)	0.9409 (0.0075)	0.0093 (0.0004)	999
FP (k=10000)	0.5922	0.0072	0.0965 (0.0022)	0.0014 (0.0031)	0.9218 (0.0085)	0.0093 (0.0004)	998

Table 133: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5435	0.0068	0.0824 (0.0018)	-0.0002 (0.0026)	0.9479 (0.0070)	0.0068 (0.0003)	999
Exp	0.5200	0.0073	0.0788 (0.0018)	-0.0237 (0.0025)	0.9560 (0.0065)	0.0068 (0.0003)	1000
Weibull	0.5360	0.0067	0.0809 (0.0018)	-0.0077 (0.0026)	0.9480 (0.0070)	0.0066 (0.0003)	1000
Gompertz	0.5221	0.0073	0.0792 (0.0022)	-0.0216 (0.0031)	0.9612 (0.0075)	0.0067 (0.0004)	670
RP (3)	0.5431	0.0064	0.0823 (0.0018)	-0.0006 (0.0026)	0.9389 (0.0076)	0.0068 (0.0003)	999
RP (5)	0.5436	0.0064	0.0824 (0.0018)	-0.0001 (0.0026)	0.9390 (0.0076)	0.0068 (0.0003)	1000
RP (9)	0.5438	0.0064	0.0825 (0.0018)	0.0001 (0.0026)	0.9390 (0.0076)	0.0068 (0.0003)	1000
RP (P)	0.5420	0.0065	0.0821 (0.0018)	-0.0017 (0.0026)	0.9400 (0.0075)	0.0067 (0.0003)	1000
FP (W)	0.5362	0.0072	0.0811 (0.0018)	-0.0075 (0.0026)	0.9546 (0.0066)	0.0066 (0.0003)	991
FP (k=10)	0.5411	0.0070	0.0824 (0.0018)	-0.0026 (0.0026)	0.9500 (0.0069)	0.0068 (0.0003)	1000
FP (k=10000)	0.5405	0.0052	0.0819 (0.0018)	-0.0032 (0.0026)	0.9037 (0.0093)	0.0067 (0.0003)	997
Model frailty: Normal							
Cox	0.5279	0.0068	0.0802 (0.0018)	-0.0158 (0.0025)	0.9480 (0.0070)	0.0067 (0.0003)	1000
Exp	0.5182	0.0074	0.0791 (0.0018)	-0.0255 (0.0025)	0.9610 (0.0061)	0.0069 (0.0003)	1000
Weibull	0.5361	0.0069	0.0812 (0.0018)	-0.0076 (0.0026)	0.9509 (0.0068)	0.0066 (0.0003)	998
Gompertz	0.5174	0.0074	0.0796 (0.0027)	-0.0263 (0.0039)	0.9625 (0.0092)	0.0070 (0.0005)	427
RP (3)	0.5408	0.0065	0.0821 (0.0018)	-0.0029 (0.0026)	0.9390 (0.0076)	0.0067 (0.0003)	1000
RP (5)	0.5411	0.0065	0.0822 (0.0018)	-0.0026 (0.0026)	0.9410 (0.0075)	0.0068 (0.0003)	1000
RP (9)	0.5412	0.0065	0.0823 (0.0018)	-0.0025 (0.0026)	0.9400 (0.0075)	0.0068 (0.0003)	1000
RP (P)	0.5395	0.0066	0.0819 (0.0018)	-0.0042 (0.0026)	0.9430 (0.0073)	0.0067 (0.0003)	1000
FP (W)	0.5350	0.0072	0.0820 (0.0019)	-0.0087 (0.0027)	0.9525 (0.0069)	0.0068 (0.0003)	948
FP (k=10)	0.5380	0.0070	0.0822 (0.0018)	-0.0057 (0.0026)	0.9490 (0.0070)	0.0068 (0.0003)	1000
FP (k=10000)	0.5391	0.0053	0.0821 (0.0018)	-0.0046 (0.0026)	0.9140 (0.0089)	0.0067 (0.0003)	1000

Table 134: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5188	0.0063	0.0802 (0.0018)	0.0008 (0.0025)	0.9439 (0.0073)	0.0064 (0.0003)	999
Exp	0.4866	0.0076	0.0790 (0.0018)	-0.0314 (0.0025)	0.9550 (0.0066)	0.0072 (0.0003)	1000
Weibull	0.5232	0.0057	0.0810 (0.0018)	0.0052 (0.0026)	0.9270 (0.0082)	0.0066 (0.0003)	1000
Gompertz	0.5120	0.0065	0.0810 (0.0018)	-0.0060 (0.0026)	0.9490 (0.0070)	0.0066 (0.0003)	980
RP (3)	0.5181	0.0059	0.0801 (0.0018)	0.0001 (0.0025)	0.9390 (0.0076)	0.0064 (0.0003)	1000
RP (5)	0.5190	0.0060	0.0802 (0.0018)	0.0009 (0.0025)	0.9390 (0.0076)	0.0064 (0.0003)	1000
RP (9)	0.5190	0.0060	0.0803 (0.0018)	0.0010 (0.0025)	0.9380 (0.0076)	0.0064 (0.0003)	1000
RP (P)	0.5189	0.0059	0.0802 (0.0018)	0.0009 (0.0025)	0.9390 (0.0076)	0.0064 (0.0003)	1000
FP (W)	0.5230	0.0060	0.0808 (0.0018)	0.0050 (0.0026)	0.9378 (0.0076)	0.0065 (0.0003)	997
FP (k=10)	0.5028	0.0064	0.0800 (0.0018)	-0.0153 (0.0025)	0.9440 (0.0073)	0.0066 (0.0003)	1000
FP (k=10000)	0.5240	0.0041	0.0823 (0.0018)	0.0059 (0.0026)	0.8709 (0.0106)	0.0068 (0.0003)	999
Model frailty: Normal							
Cox	0.5064	0.0063	0.0789 (0.0018)	-0.0116 (0.0025)	0.9500 (0.0069)	0.0064 (0.0003)	1000
Exp	0.4864	0.0076	0.0798 (0.0018)	-0.0317 (0.0025)	0.9529 (0.0067)	0.0074 (0.0003)	998
Weibull	0.5265	0.0059	0.0817 (0.0018)	0.0084 (0.0026)	0.9297 (0.0081)	0.0067 (0.0003)	996
Gompertz	0.5122	0.0068	0.0819 (0.0019)	-0.0058 (0.0027)	0.9505 (0.0070)	0.0067 (0.0003)	949
RP (3)	0.5173	0.0060	0.0800 (0.0018)	-0.0007 (0.0025)	0.9410 (0.0075)	0.0064 (0.0003)	1000
RP (5)	0.5183	0.0061	0.0803 (0.0018)	0.0003 (0.0025)	0.9459 (0.0072)	0.0064 (0.0003)	999
RP (9)	0.5183	0.0061	0.0803 (0.0018)	0.0003 (0.0025)	0.9460 (0.0071)	0.0064 (0.0003)	1000
RP (P)	0.5182	0.0061	0.0802 (0.0018)	0.0002 (0.0025)	0.9450 (0.0072)	0.0064 (0.0003)	1000
FP (W)	0.5218	0.0061	0.0802 (0.0019)	0.0037 (0.0026)	0.9478 (0.0073)	0.0064 (0.0003)	939
FP (k=10)	0.5063	0.0064	0.0799 (0.0018)	-0.0117 (0.0025)	0.9469 (0.0071)	0.0065 (0.0003)	998
FP (k=10000)	0.5221	0.0040	0.0828 (0.0019)	0.0041 (0.0026)	0.8769 (0.0104)	0.0069 (0.0003)	999

Table 135: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5802	0.0081	0.0921 (0.0021)	-0.0027 (0.0029)	0.9380 (0.0076)	0.0085 (0.0004)	1000
Exp	0.5908	0.0079	0.0941 (0.0021)	-0.0078 (0.0030)	0.9320 (0.0080)	0.0089 (0.0004)	1000
Weibull	0.5818	0.0083	0.0924 (0.0021)	-0.0012 (0.0029)	0.9400 (0.0075)	0.0085 (0.0004)	1000
Gompertz	0.5899	0.0079	0.0968 (0.0032)	0.0069 (0.0046)	0.9292 (0.0121)	0.0094 (0.0007)	452
RP (3)	0.5812	0.0083	0.0924 (0.0021)	-0.0017 (0.0029)	0.9419 (0.0074)	0.0085 (0.0004)	998
RP (5)	0.5809	0.0083	0.0922 (0.0021)	-0.0020 (0.0029)	0.9410 (0.0075)	0.0085 (0.0004)	1000
RP (9)	0.5808	0.0083	0.0922 (0.0021)	-0.0022 (0.0029)	0.9410 (0.0075)	0.0085 (0.0004)	1000
RP (P)	0.5810	0.0083	0.0923 (0.0021)	-0.0019 (0.0029)	0.9420 (0.0074)	0.0085 (0.0004)	1000
FP (W)	0.5820	0.0082	0.0925 (0.0021)	-0.0009 (0.0029)	0.9387 (0.0076)	0.0086 (0.0004)	995
FP (k=10)	0.5760	0.0083	0.0923 (0.0021)	-0.0070 (0.0029)	0.9390 (0.0076)	0.0086 (0.0004)	1000
FP (k=10000)	0.5781	0.0066	0.0922 (0.0021)	-0.0048 (0.0029)	0.9139 (0.0089)	0.0085 (0.0004)	999
Model frailty: Normal							
Cox	0.5772	0.0085	0.0922 (0.0021)	-0.0057 (0.0029)	0.9510 (0.0068)	0.0085 (0.0004)	1000
Exp	0.5882	0.0081	0.0941 (0.0021)	0.0053 (0.0030)	0.9358 (0.0078)	0.0089 (0.0004)	997
Weibull	0.5800	0.0084	0.0927 (0.0021)	-0.0029 (0.0029)	0.9468 (0.0071)	0.0086 (0.0004)	997
Gompertz	0.5914	0.0081	0.0995 (0.0039)	0.0084 (0.0054)	0.9189 (0.0150)	0.0099 (0.0008)	333
RP (3)	0.5783	0.0084	0.0924 (0.0021)	-0.0046 (0.0029)	0.9470 (0.0071)	0.0086 (0.0004)	1000
RP (5)	0.5781	0.0084	0.0923 (0.0021)	-0.0049 (0.0029)	0.9459 (0.0072)	0.0085 (0.0004)	999
RP (9)	0.5779	0.0084	0.0923 (0.0021)	-0.0050 (0.0029)	0.9470 (0.0071)	0.0085 (0.0004)	1000
RP (P)	0.5780	0.0084	0.0924 (0.0021)	-0.0050 (0.0029)	0.9470 (0.0071)	0.0085 (0.0004)	1000
FP (W)	0.5786	0.0081	0.0925 (0.0021)	-0.0043 (0.0030)	0.9396 (0.0077)	0.0086 (0.0004)	961
FP (k=10)	0.5725	0.0082	0.0926 (0.0021)	-0.0104 (0.0029)	0.9478 (0.0070)	0.0087 (0.0004)	997
FP (k=10000)	0.5745	0.0071	0.0923 (0.0021)	-0.0085 (0.0029)	0.9198 (0.0086)	0.0086 (0.0004)	998

Table 136: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5971	0.0079	0.0858 (0.0019)	0.0011 (0.0027)	0.9540 (0.0066)	0.0074 (0.0003)	999
Exp	0.5996	0.0073	0.0863 (0.0019)	0.0037 (0.0027)	0.9410 (0.0075)	0.0075 (0.0003)	1000
Weibull	0.5972	0.0075	0.0858 (0.0019)	0.0013 (0.0027)	0.9440 (0.0073)	0.0074 (0.0003)	1000
Gompertz	0.6012	0.0074	0.0918 (0.0045)	0.0053 (0.0063)	0.9429 (0.0160)	0.0084 (0.0008)	210
RP (3)	0.5973	0.0075	0.0858 (0.0019)	0.0013 (0.0027)	0.9450 (0.0072)	0.0074 (0.0003)	1000
RP (5)	0.5974	0.0075	0.0858 (0.0019)	0.0015 (0.0027)	0.9470 (0.0071)	0.0074 (0.0003)	1000
RP (9)	0.5974	0.0075	0.0859 (0.0019)	0.0015 (0.0027)	0.9460 (0.0071)	0.0074 (0.0003)	1000
RP (P)	0.5973	0.0075	0.0858 (0.0019)	0.0014 (0.0027)	0.9449 (0.0072)	0.0074 (0.0003)	999
FP (W)	0.5975	0.0081	0.0858 (0.0019)	0.0015 (0.0027)	0.9558 (0.0065)	0.0074 (0.0003)	996
FP (k=10)	0.5948	0.0082	0.0859 (0.0019)	-0.0011 (0.0027)	0.9549 (0.0066)	0.0074 (0.0003)	997
FP (k=10000)	0.5964	0.0061	0.0860 (0.0019)	0.0005 (0.0027)	0.9190 (0.0086)	0.0074 (0.0003)	1000
Model frailty: Normal							
Cox	0.5814	0.0078	0.0831 (0.0019)	-0.0145 (0.0026)	0.9550 (0.0066)	0.0071 (0.0003)	1000
Exp	0.5994	0.0075	0.0854 (0.0019)	0.0035 (0.0027)	0.9509 (0.0068)	0.0073 (0.0003)	998
Weibull	0.5989	0.0075	0.0853 (0.0019)	0.0029 (0.0027)	0.9498 (0.0069)	0.0073 (0.0003)	997
Gompertz	0.6015	0.0075	0.0881 (0.0049)	0.0056 (0.0069)	0.9444 (0.0180)	0.0077 (0.0009)	162
RP (3)	0.5968	0.0075	0.0850 (0.0019)	0.0009 (0.0027)	0.9500 (0.0069)	0.0072 (0.0003)	1000
RP (5)	0.5968	0.0075	0.0850 (0.0019)	0.0009 (0.0027)	0.9480 (0.0070)	0.0072 (0.0003)	1000
RP (9)	0.5967	0.0075	0.0850 (0.0019)	0.0008 (0.0027)	0.9490 (0.0070)	0.0072 (0.0003)	1000
RP (P)	0.5969	0.0075	0.0850 (0.0019)	0.0010 (0.0027)	0.9490 (0.0070)	0.0072 (0.0003)	1000
FP (W)	0.5973	0.0080	0.0850 (0.0019)	0.0014 (0.0027)	0.9560 (0.0066)	0.0072 (0.0003)	977
FP (k=10)	0.5937	0.0080	0.0851 (0.0019)	-0.0022 (0.0027)	0.9580 (0.0063)	0.0072 (0.0003)	1000
FP (k=10000)	0.5956	0.0062	0.0850 (0.0019)	-0.0003 (0.0027)	0.9230 (0.0084)	0.0072 (0.0003)	1000

Table 137: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6222	0.0089	0.0988 (0.0022)	-0.0016 (0.0031)	0.9379 (0.0076)	0.0098 (0.0004)	999
Exp	0.6499	0.0076	0.1043 (0.0023)	0.0261 (0.0033)	0.8920 (0.0098)	0.0115 (0.0005)	1000
Weibull	0.6234	0.0088	0.0991 (0.0022)	-0.0004 (0.0031)	0.9340 (0.0079)	0.0098 (0.0004)	1000
Gompertz	0.6426	0.0076	0.0994 (0.0051)	0.0188 (0.0072)	0.9062 (0.0210)	0.0102 (0.0011)	192
RP (3)	0.6225	0.0088	0.0988 (0.0022)	-0.0013 (0.0031)	0.9389 (0.0076)	0.0098 (0.0004)	999
RP (5)	0.6226	0.0088	0.0989 (0.0022)	-0.0012 (0.0031)	0.9370 (0.0077)	0.0098 (0.0004)	1000
RP (9)	0.6227	0.0088	0.0989 (0.0022)	-0.0011 (0.0031)	0.9379 (0.0076)	0.0098 (0.0004)	999
RP (P)	0.6230	0.0088	0.0989 (0.0022)	-0.0008 (0.0031)	0.9360 (0.0077)	0.0098 (0.0004)	1000
FP (W)	0.6244	0.0090	0.0990 (0.0022)	0.0006 (0.0032)	0.9412 (0.0075)	0.0098 (0.0004)	986
FP (k=10)	0.6121	0.0092	0.0996 (0.0022)	-0.0117 (0.0031)	0.9360 (0.0077)	0.0100 (0.0005)	1000
FP (k=10000)	0.6315	0.0067	0.1013 (0.0023)	0.0077 (0.0032)	0.8849 (0.0101)	0.0103 (0.0005)	999
Model frailty: Normal							
Cox	0.6132	0.0090	0.0972 (0.0022)	-0.0106 (0.0031)	0.9460 (0.0071)	0.0096 (0.0004)	1000
Exp	0.6480	0.0079	0.1031 (0.0023)	0.0242 (0.0033)	0.9000 (0.0095)	0.0112 (0.0005)	990
Weibull	0.6233	0.0088	0.0986 (0.0022)	-0.0005 (0.0031)	0.9389 (0.0076)	0.0097 (0.0004)	999
Gompertz	0.6407	0.0079	0.1015 (0.0040)	0.0169 (0.0057)	0.9054 (0.0164)	0.0106 (0.0008)	317
RP (3)	0.6213	0.0088	0.0982 (0.0022)	-0.0025 (0.0031)	0.9379 (0.0076)	0.0096 (0.0004)	999
RP (5)	0.6211	0.0088	0.0982 (0.0022)	-0.0027 (0.0031)	0.9380 (0.0076)	0.0096 (0.0004)	1000
RP (9)	0.6211	0.0088	0.0982 (0.0022)	-0.0027 (0.0031)	0.9380 (0.0076)	0.0096 (0.0004)	1000
RP (P)	0.6215	0.0087	0.0983 (0.0022)	-0.0023 (0.0031)	0.9370 (0.0077)	0.0097 (0.0004)	1000
FP (W)	0.6211	0.0089	0.0989 (0.0022)	-0.0027 (0.0032)	0.9374 (0.0078)	0.0098 (0.0004)	975
FP (k=10)	0.6124	0.0090	0.0987 (0.0022)	-0.0114 (0.0031)	0.9408 (0.0075)	0.0099 (0.0004)	997
FP (k=10000)	0.6269	0.0070	0.0998 (0.0022)	0.0031 (0.0032)	0.8967 (0.0096)	0.0100 (0.0004)	997

Table 138: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5462	0.0065	0.0787 (0.0018)	0.0012 (0.0025)	0.9650 (0.0058)	0.0062 (0.0003)	1000
Exp	0.5295	0.0064	0.0768 (0.0017)	-0.0155 (0.0024)	0.9630 (0.0060)	0.0061 (0.0003)	1000
Weibull	0.5372	0.0061	0.0775 (0.0017)	-0.0078 (0.0025)	0.9550 (0.0066)	0.0061 (0.0003)	1000
Gompertz	0.5297	0.0064	0.0755 (0.0021)	-0.0152 (0.0029)	0.9713 (0.0065)	0.0059 (0.0003)	661
RP (3)	0.5445	0.0058	0.0786 (0.0018)	-0.0005 (0.0025)	0.9490 (0.0070)	0.0062 (0.0003)	1000
RP (5)	0.5456	0.0058	0.0786 (0.0018)	0.0006 (0.0025)	0.9490 (0.0070)	0.0062 (0.0003)	1000
RP (9)	0.5461	0.0058	0.0787 (0.0018)	0.0012 (0.0025)	0.9480 (0.0070)	0.0062 (0.0003)	1000
RP (P)	0.5441	0.0058	0.0783 (0.0018)	-0.0009 (0.0025)	0.9510 (0.0068)	0.0061 (0.0003)	999
FP (W)	0.5372	0.0070	0.0775 (0.0017)	-0.0078 (0.0025)	0.9750 (0.0049)	0.0061 (0.0003)	1000
FP (k=10)	0.5435	0.0067	0.0787 (0.0018)	-0.0015 (0.0025)	0.9660 (0.0057)	0.0062 (0.0003)	1000
FP (k=10000)	0.5422	0.0049	0.0786 (0.0018)	-0.0028 (0.0025)	0.9208 (0.0085)	0.0062 (0.0003)	998
Model frailty: Normal							
Cox	0.5256	0.0062	0.0759 (0.0017)	-0.0194 (0.0024)	0.9580 (0.0063)	0.0061 (0.0003)	1000
Exp	0.5281	0.0065	0.0768 (0.0017)	-0.0168 (0.0024)	0.9630 (0.0060)	0.0062 (0.0003)	1000
Weibull	0.5387	0.0061	0.0778 (0.0017)	-0.0063 (0.0025)	0.9538 (0.0067)	0.0061 (0.0003)	996
Gompertz	0.5302	0.0065	0.0759 (0.0029)	-0.0148 (0.0041)	0.9822 (0.0072)	0.0060 (0.0004)	338
RP (3)	0.5460	0.0058	0.0788 (0.0018)	0.0010 (0.0025)	0.9489 (0.0070)	0.0062 (0.0003)	999
RP (5)	0.5469	0.0058	0.0788 (0.0018)	0.0019 (0.0025)	0.9500 (0.0069)	0.0062 (0.0003)	1000
RP (9)	0.5473	0.0058	0.0788 (0.0018)	0.0024 (0.0025)	0.9500 (0.0069)	0.0062 (0.0003)	1000
RP (P)	0.5448	0.0058	0.0785 (0.0018)	-0.0002 (0.0025)	0.9500 (0.0069)	0.0062 (0.0003)	1000
FP (W)	0.5379	0.0069	0.0775 (0.0017)	-0.0071 (0.0025)	0.9709 (0.0053)	0.0061 (0.0003)	998
FP (k=10)	0.5449	0.0067	0.0789 (0.0018)	-0.0000 (0.0025)	0.9690 (0.0055)	0.0062 (0.0003)	1000
FP (k=10000)	0.5439	0.0048	0.0788 (0.0018)	-0.0010 (0.0025)	0.9200 (0.0086)	0.0062 (0.0003)	1000

Table 139: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5216	0.0060	0.0747 (0.0017)	-0.0001 (0.0024)	0.9580 (0.0063)	0.0056 (0.0003)	999
Exp	0.4973	0.0069	0.0747 (0.0017)	-0.0243 (0.0024)	0.9660 (0.0057)	0.0062 (0.0003)	1000
Weibull	0.5248	0.0051	0.0755 (0.0017)	0.0032 (0.0024)	0.9300 (0.0081)	0.0057 (0.0003)	1000
Gompertz	0.5236	0.0058	0.0760 (0.0017)	0.0020 (0.0024)	0.9490 (0.0070)	0.0058 (0.0003)	1000
RP (3)	0.5193	0.0053	0.0744 (0.0017)	-0.0023 (0.0024)	0.9420 (0.0074)	0.0055 (0.0002)	1000
RP (5)	0.5211	0.0054	0.0746 (0.0017)	-0.0005 (0.0024)	0.9430 (0.0073)	0.0056 (0.0003)	1000
RP (9)	0.5215	0.0054	0.0745 (0.0017)	-0.0002 (0.0024)	0.9429 (0.0073)	0.0055 (0.0003)	999
RP (P)	0.5212	0.0054	0.0746 (0.0017)	-0.0005 (0.0024)	0.9420 (0.0074)	0.0056 (0.0003)	1000
FP (W)	0.5248	0.0058	0.0755 (0.0017)	0.0032 (0.0024)	0.9480 (0.0070)	0.0057 (0.0003)	1000
FP (k=10)	0.5005	0.0062	0.0747 (0.0017)	-0.0211 (0.0024)	0.9450 (0.0072)	0.0060 (0.0003)	1000
FP (k=10000)	0.5232	0.0039	0.0767 (0.0017)	0.0016 (0.0024)	0.8824 (0.0102)	0.0059 (0.0003)	995
Model frailty: Normal							
Cox	0.5028	0.0058	0.0717 (0.0016)	-0.0188 (0.0023)	0.9520 (0.0068)	0.0055 (0.0002)	1000
Exp	0.4969	0.0069	0.0748 (0.0017)	-0.0247 (0.0024)	0.9640 (0.0059)	0.0062 (0.0003)	1000
Weibull	0.5331	0.0053	0.0755 (0.0017)	0.0114 (0.0024)	0.9337 (0.0079)	0.0058 (0.0003)	995
Gompertz	0.5270	0.0061	0.0764 (0.0017)	0.0053 (0.0024)	0.9539 (0.0066)	0.0059 (0.0003)	997
RP (3)	0.5213	0.0054	0.0740 (0.0017)	-0.0004 (0.0023)	0.9460 (0.0071)	0.0055 (0.0002)	1000
RP (5)	0.5232	0.0054	0.0742 (0.0017)	0.0016 (0.0023)	0.9470 (0.0071)	0.0055 (0.0002)	1000
RP (9)	0.5237	0.0054	0.0742 (0.0017)	0.0020 (0.0023)	0.9480 (0.0070)	0.0055 (0.0002)	1000
RP (P)	0.5234	0.0054	0.0742 (0.0017)	0.0018 (0.0023)	0.9460 (0.0071)	0.0055 (0.0002)	1000
FP (W)	0.5290	0.0058	0.0755 (0.0018)	0.0073 (0.0026)	0.9498 (0.0075)	0.0058 (0.0003)	857
FP (k=10)	0.5082	0.0061	0.0741 (0.0017)	-0.0135 (0.0023)	0.9520 (0.0068)	0.0057 (0.0003)	1000
FP (k=10000)	0.5331	0.0037	0.0767 (0.0017)	0.0114 (0.0024)	0.8600 (0.0110)	0.0060 (0.0003)	1000

Table 140: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6001	0.0083	0.0914 (0.0020)	-0.0055 (0.0029)	0.9530 (0.0067)	0.0084 (0.0004)	1000
Exp	0.6124	0.0074	0.0935 (0.0021)	-0.0068 (0.0030)	0.9350 (0.0078)	0.0088 (0.0004)	1000
Weibull	0.6032	0.0080	0.0917 (0.0021)	-0.0024 (0.0029)	0.9480 (0.0070)	0.0084 (0.0004)	1000
Gompertz	0.6128	0.0075	0.0872 (0.0029)	0.0073 (0.0041)	0.9558 (0.0097)	0.0076 (0.0005)	452
RP (3)	0.6023	0.0080	0.0916 (0.0020)	-0.0033 (0.0029)	0.9490 (0.0070)	0.0084 (0.0004)	1000
RP (5)	0.6011	0.0080	0.0916 (0.0020)	-0.0045 (0.0029)	0.9479 (0.0070)	0.0084 (0.0004)	999
RP (9)	0.6006	0.0079	0.0915 (0.0020)	-0.0049 (0.0029)	0.9490 (0.0070)	0.0084 (0.0004)	1000
RP (P)	0.6016	0.0080	0.0916 (0.0020)	-0.0040 (0.0029)	0.9480 (0.0070)	0.0084 (0.0004)	1000
FP (W)	0.6042	0.0085	0.0916 (0.0021)	-0.0014 (0.0029)	0.9564 (0.0065)	0.0084 (0.0004)	986
FP (k=10)	0.5966	0.0086	0.0919 (0.0021)	-0.0090 (0.0029)	0.9540 (0.0066)	0.0085 (0.0004)	1000
FP (k=10000)	0.6006	0.0066	0.0915 (0.0020)	-0.0050 (0.0029)	0.9149 (0.0088)	0.0084 (0.0004)	999
Model frailty: Normal							
Cox	0.5869	0.0083	0.0892 (0.0020)	-0.0187 (0.0028)	0.9460 (0.0071)	0.0083 (0.0004)	1000
Exp	0.6150	0.0077	0.0930 (0.0021)	-0.0094 (0.0030)	0.9385 (0.0076)	0.0087 (0.0004)	992
Weibull	0.6060	0.0081	0.0917 (0.0021)	0.0004 (0.0029)	0.9489 (0.0070)	0.0084 (0.0004)	999
Gompertz	0.6202	0.0077	0.0863 (0.0032)	-0.0146 (0.0045)	0.9595 (0.0103)	0.0076 (0.0005)	370
RP (3)	0.6028	0.0080	0.0913 (0.0020)	-0.0028 (0.0029)	0.9520 (0.0068)	0.0083 (0.0004)	1000
RP (5)	0.6013	0.0080	0.0912 (0.0020)	-0.0042 (0.0029)	0.9520 (0.0068)	0.0083 (0.0004)	1000
RP (9)	0.6010	0.0079	0.0911 (0.0020)	-0.0046 (0.0029)	0.9510 (0.0068)	0.0083 (0.0004)	1000
RP (P)	0.6019	0.0080	0.0913 (0.0020)	-0.0036 (0.0029)	0.9520 (0.0068)	0.0083 (0.0004)	1000
FP (W)	0.6047	0.0084	0.0908 (0.0021)	-0.0009 (0.0029)	0.9592 (0.0063)	0.0082 (0.0004)	981
FP (k=10)	0.5964	0.0084	0.0914 (0.0020)	-0.0092 (0.0029)	0.9510 (0.0068)	0.0084 (0.0004)	999
FP (k=10000)	0.6007	0.0068	0.0911 (0.0020)	-0.0049 (0.0029)	0.9230 (0.0084)	0.0083 (0.0004)	1000

Table 141: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5011	0.0072	0.0892 (0.0020)	-0.0026 (0.0028)	0.9339 (0.0079)	0.0080 (0.0004)	998
Exp	0.5014	0.0074	0.0891 (0.0020)	-0.0023 (0.0028)	0.9430 (0.0073)	0.0079 (0.0004)	1000
Weibull	0.5018	0.0074	0.0891 (0.0020)	-0.0019 (0.0028)	0.9390 (0.0076)	0.0079 (0.0004)	1000
Gompertz	0.5063	0.0074	0.0913 (0.0031)	0.0026 (0.0043)	0.9376 (0.0114)	0.0083 (0.0006)	449
RP (3)	0.5016	0.0074	0.0893 (0.0020)	-0.0021 (0.0028)	0.9379 (0.0076)	0.0080 (0.0004)	998
RP (5)	0.5015	0.0074	0.0892 (0.0020)	-0.0022 (0.0028)	0.9380 (0.0076)	0.0080 (0.0004)	1000
RP (9)	0.5015	0.0074	0.0892 (0.0020)	-0.0022 (0.0028)	0.9380 (0.0076)	0.0080 (0.0004)	1000
RP (P)	0.5016	0.0074	0.0892 (0.0020)	-0.0021 (0.0028)	0.9390 (0.0076)	0.0079 (0.0004)	1000
FP (W)	0.5018	0.0074	0.0892 (0.0020)	-0.0019 (0.0028)	0.9369 (0.0077)	0.0079 (0.0004)	998
FP (k=10)	0.4981	0.0074	0.0894 (0.0020)	-0.0056 (0.0028)	0.9367 (0.0077)	0.0080 (0.0004)	996
FP (k=10000)	0.4998	0.0057	0.0891 (0.0020)	-0.0039 (0.0028)	0.9020 (0.0094)	0.0079 (0.0004)	1000
Model frailty: Normal							
Cox	0.5023	0.0079	0.0902 (0.0020)	-0.0014 (0.0029)	0.9390 (0.0076)	0.0081 (0.0004)	1000
Exp	0.4986	0.0078	0.0896 (0.0020)	-0.0051 (0.0028)	0.9398 (0.0075)	0.0080 (0.0004)	997
Weibull	0.4999	0.0077	0.0900 (0.0020)	-0.0038 (0.0028)	0.9389 (0.0076)	0.0081 (0.0004)	999
Gompertz	0.5000	0.0078	0.0941 (0.0038)	-0.0037 (0.0054)	0.9342 (0.0142)	0.0088 (0.0008)	304
RP (3)	0.4959	0.0075	0.0895 (0.0020)	-0.0078 (0.0028)	0.9400 (0.0075)	0.0081 (0.0004)	1000
RP (5)	0.4959	0.0075	0.0894 (0.0020)	-0.0078 (0.0028)	0.9410 (0.0075)	0.0081 (0.0004)	1000
RP (9)	0.4958	0.0075	0.0894 (0.0020)	-0.0079 (0.0028)	0.9390 (0.0076)	0.0081 (0.0004)	1000
RP (P)	0.4956	0.0075	0.0894 (0.0020)	-0.0081 (0.0028)	0.9400 (0.0075)	0.0081 (0.0004)	1000
FP (W)	0.4968	0.0072	0.0894 (0.0020)	-0.0069 (0.0029)	0.9365 (0.0078)	0.0080 (0.0004)	976
FP (k=10)	0.4917	0.0073	0.0896 (0.0020)	-0.0120 (0.0028)	0.9369 (0.0077)	0.0082 (0.0004)	998
FP (k=10000)	0.4930	0.0063	0.0891 (0.0020)	-0.0107 (0.0028)	0.9157 (0.0088)	0.0080 (0.0004)	996

Table 142: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5161	0.0078	0.0880 (0.0020)	0.0019 (0.0028)	0.9499 (0.0069)	0.0077 (0.0003)	999
Exp	0.5402	0.0073	0.0924 (0.0021)	0.0260 (0.0029)	0.9120 (0.0090)	0.0092 (0.0004)	1000
Weibull	0.5174	0.0083	0.0881 (0.0020)	0.0032 (0.0028)	0.9570 (0.0064)	0.0078 (0.0003)	1000
Gompertz	0.5445	0.0073	0.0942 (0.0033)	0.0302 (0.0047)	0.8894 (0.0157)	0.0098 (0.0007)	398
RP (3)	0.5168	0.0083	0.0880 (0.0020)	0.0025 (0.0028)	0.9559 (0.0065)	0.0077 (0.0003)	998
RP (5)	0.5167	0.0083	0.0880 (0.0020)	0.0025 (0.0028)	0.9570 (0.0064)	0.0077 (0.0003)	1000
RP (9)	0.5168	0.0083	0.0880 (0.0020)	0.0026 (0.0028)	0.9560 (0.0065)	0.0077 (0.0003)	1000
RP (P)	0.5171	0.0083	0.0880 (0.0020)	0.0029 (0.0028)	0.9570 (0.0064)	0.0078 (0.0003)	1000
FP (W)	0.5174	0.0079	0.0881 (0.0020)	0.0032 (0.0028)	0.9490 (0.0070)	0.0078 (0.0003)	1000
FP (k=10)	0.5079	0.0080	0.0890 (0.0020)	-0.0063 (0.0028)	0.9490 (0.0070)	0.0079 (0.0003)	1000
FP (k=10000)	0.5262	0.0061	0.0905 (0.0020)	0.0120 (0.0029)	0.8980 (0.0096)	0.0083 (0.0004)	1000
Model frailty: Normal							
Cox	0.5255	0.0088	0.0902 (0.0020)	0.0113 (0.0029)	0.9590 (0.0063)	0.0083 (0.0004)	1000
Exp	0.5315	0.0077	0.0917 (0.0021)	0.0173 (0.0029)	0.9305 (0.0081)	0.0087 (0.0004)	993
Weibull	0.5136	0.0085	0.0886 (0.0020)	-0.0006 (0.0028)	0.9579 (0.0064)	0.0078 (0.0003)	997
Gompertz	0.5328	0.0077	0.0944 (0.0040)	0.0185 (0.0056)	0.9155 (0.0165)	0.0092 (0.0008)	284
RP (3)	0.5110	0.0084	0.0881 (0.0020)	-0.0032 (0.0028)	0.9550 (0.0066)	0.0078 (0.0003)	1000
RP (5)	0.5110	0.0084	0.0882 (0.0020)	-0.0032 (0.0028)	0.9580 (0.0063)	0.0078 (0.0003)	1000
RP (9)	0.5110	0.0084	0.0881 (0.0020)	-0.0032 (0.0028)	0.9570 (0.0064)	0.0078 (0.0003)	1000
RP (P)	0.5109	0.0083	0.0881 (0.0020)	-0.0033 (0.0028)	0.9560 (0.0065)	0.0078 (0.0003)	1000
FP (W)	0.5110	0.0077	0.0879 (0.0020)	-0.0032 (0.0028)	0.9476 (0.0071)	0.0077 (0.0003)	974
FP (k=10)	0.5031	0.0078	0.0888 (0.0020)	-0.0111 (0.0028)	0.9440 (0.0073)	0.0080 (0.0003)	1000
FP (k=10000)	0.5158	0.0068	0.0899 (0.0020)	0.0015 (0.0028)	0.9228 (0.0084)	0.0081 (0.0003)	998

Table 143: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4859	0.0064	0.0806 (0.0018)	0.0022 (0.0026)	0.9479 (0.0070)	0.0065 (0.0003)	998
Exp	0.4711	0.0073	0.0790 (0.0018)	-0.0127 (0.0025)	0.9640 (0.0059)	0.0064 (0.0003)	1000
Weibull	0.4838	0.0066	0.0805 (0.0018)	0.0000 (0.0025)	0.9530 (0.0067)	0.0065 (0.0003)	1000
Gompertz	0.4689	0.0073	0.0795 (0.0024)	-0.0149 (0.0034)	0.9545 (0.0089)	0.0065 (0.0004)	549
RP (3)	0.4855	0.0063	0.0810 (0.0018)	0.0018 (0.0026)	0.9450 (0.0072)	0.0066 (0.0003)	1000
RP (5)	0.4858	0.0063	0.0810 (0.0018)	0.0021 (0.0026)	0.9450 (0.0072)	0.0066 (0.0003)	1000
RP (9)	0.4860	0.0063	0.0810 (0.0018)	0.0022 (0.0026)	0.9440 (0.0073)	0.0066 (0.0003)	1000
RP (P)	0.4854	0.0063	0.0809 (0.0018)	0.0017 (0.0026)	0.9450 (0.0072)	0.0065 (0.0003)	1000
FP (W)	0.4838	0.0069	0.0805 (0.0018)	0.0000 (0.0025)	0.9580 (0.0063)	0.0065 (0.0003)	1000
FP (k=10)	0.4833	0.0066	0.0812 (0.0018)	-0.0004 (0.0026)	0.9469 (0.0071)	0.0066 (0.0003)	998
FP (k=10000)	0.4839	0.0049	0.0810 (0.0018)	0.0001 (0.0026)	0.9100 (0.0090)	0.0066 (0.0003)	1000
Model frailty: Normal							
Cox	0.4801	0.0068	0.0814 (0.0018)	-0.0036 (0.0026)	0.9520 (0.0068)	0.0066 (0.0003)	1000
Exp	0.4711	0.0076	0.0810 (0.0018)	-0.0126 (0.0026)	0.9659 (0.0058)	0.0067 (0.0003)	996
Weibull	0.4854	0.0070	0.0816 (0.0018)	0.0017 (0.0026)	0.9547 (0.0066)	0.0067 (0.0003)	994
Gompertz	0.4725	0.0076	0.0821 (0.0028)	-0.0112 (0.0039)	0.9707 (0.0080)	0.0068 (0.0005)	443
RP (3)	0.4847	0.0065	0.0822 (0.0018)	0.0010 (0.0026)	0.9480 (0.0070)	0.0068 (0.0003)	1000
RP (5)	0.4848	0.0065	0.0822 (0.0018)	0.0010 (0.0026)	0.9470 (0.0071)	0.0067 (0.0003)	1000
RP (9)	0.4848	0.0065	0.0822 (0.0018)	0.0011 (0.0026)	0.9470 (0.0071)	0.0067 (0.0003)	1000
RP (P)	0.4841	0.0066	0.0821 (0.0018)	0.0004 (0.0026)	0.9500 (0.0069)	0.0067 (0.0003)	1000
FP (W)	0.4828	0.0069	0.0820 (0.0018)	-0.0009 (0.0026)	0.9535 (0.0067)	0.0067 (0.0003)	989
FP (k=10)	0.4807	0.0067	0.0823 (0.0018)	-0.0031 (0.0026)	0.9498 (0.0069)	0.0068 (0.0003)	997
FP (k=10000)	0.4822	0.0052	0.0820 (0.0018)	-0.0015 (0.0026)	0.9129 (0.0089)	0.0067 (0.0003)	999

Table 144: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4563	0.0059	0.0763 (0.0017)	-0.0029 (0.0024)	0.9598 (0.0062)	0.0058 (0.0002)	994
Exp	0.4245	0.0076	0.0730 (0.0016)	-0.0347 (0.0023)	0.9660 (0.0057)	0.0065 (0.0003)	1000
Weibull	0.4562	0.0054	0.0766 (0.0017)	-0.0030 (0.0024)	0.9510 (0.0068)	0.0059 (0.0002)	1000
Gompertz	0.4231	0.0076	0.0726 (0.0021)	-0.0361 (0.0030)	0.9668 (0.0073)	0.0066 (0.0003)	603
RP (3)	0.4557	0.0057	0.0762 (0.0017)	-0.0035 (0.0024)	0.9570 (0.0064)	0.0058 (0.0002)	1000
RP (5)	0.4565	0.0058	0.0764 (0.0017)	-0.0027 (0.0024)	0.9580 (0.0063)	0.0058 (0.0002)	999
RP (9)	0.4565	0.0058	0.0764 (0.0017)	-0.0027 (0.0024)	0.9580 (0.0063)	0.0058 (0.0002)	1000
RP (P)	0.4560	0.0057	0.0763 (0.0017)	-0.0033 (0.0024)	0.9580 (0.0063)	0.0058 (0.0002)	1000
FP (W)	0.4561	0.0056	0.0763 (0.0017)	-0.0031 (0.0024)	0.9539 (0.0066)	0.0058 (0.0002)	998
FP (k=10)	0.4384	0.0060	0.0762 (0.0017)	-0.0208 (0.0024)	0.9489 (0.0070)	0.0062 (0.0003)	999
FP (k=10000)	0.4546	0.0038	0.0778 (0.0017)	-0.0046 (0.0025)	0.8840 (0.0101)	0.0061 (0.0002)	1000
Model frailty: Normal							
Cox	0.4534	0.0063	0.0764 (0.0017)	-0.0058 (0.0024)	0.9620 (0.0060)	0.0059 (0.0002)	1000
Exp	0.4256	0.0078	0.0750 (0.0017)	-0.0337 (0.0024)	0.9680 (0.0056)	0.0068 (0.0003)	999
Weibull	0.4598	0.0060	0.0775 (0.0017)	0.0006 (0.0025)	0.9486 (0.0070)	0.0060 (0.0002)	993
Gompertz	0.4232	0.0078	0.0743 (0.0023)	-0.0360 (0.0032)	0.9613 (0.0083)	0.0068 (0.0004)	542
RP (3)	0.4558	0.0060	0.0769 (0.0017)	-0.0034 (0.0024)	0.9540 (0.0066)	0.0059 (0.0002)	1000
RP (5)	0.4562	0.0060	0.0771 (0.0017)	-0.0030 (0.0024)	0.9550 (0.0066)	0.0059 (0.0002)	1000
RP (9)	0.4564	0.0060	0.0770 (0.0017)	-0.0028 (0.0024)	0.9550 (0.0066)	0.0059 (0.0002)	999
RP (P)	0.4557	0.0060	0.0769 (0.0017)	-0.0035 (0.0024)	0.9550 (0.0066)	0.0059 (0.0002)	1000
FP (W)	0.4554	0.0057	0.0770 (0.0017)	-0.0038 (0.0024)	0.9479 (0.0070)	0.0059 (0.0002)	998
FP (k=10)	0.4443	0.0061	0.0773 (0.0017)	-0.0149 (0.0025)	0.9513 (0.0069)	0.0062 (0.0003)	986
FP (k=10000)	0.4478	0.0040	0.0796 (0.0018)	-0.0114 (0.0025)	0.8819 (0.0102)	0.0065 (0.0003)	999

Table 145: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5069	0.0075	0.0892 (0.0020)	-0.0014 (0.0028)	0.9488 (0.0070)	0.0080 (0.0003)	997
Exp	0.5136	0.0073	0.0906 (0.0020)	0.0052 (0.0029)	0.9430 (0.0073)	0.0082 (0.0004)	1000
Weibull	0.5059	0.0077	0.0893 (0.0020)	-0.0025 (0.0028)	0.9480 (0.0070)	0.0080 (0.0003)	1000
Gompertz	0.5203	0.0073	0.0877 (0.0031)	0.0119 (0.0044)	0.9436 (0.0117)	0.0078 (0.0005)	390
RP (3)	0.5072	0.0078	0.0895 (0.0020)	-0.0012 (0.0028)	0.9500 (0.0069)	0.0080 (0.0003)	1000
RP (5)	0.5072	0.0078	0.0895 (0.0020)	-0.0012 (0.0028)	0.9500 (0.0069)	0.0080 (0.0003)	1000
RP (9)	0.5071	0.0078	0.0894 (0.0020)	-0.0012 (0.0028)	0.9500 (0.0069)	0.0080 (0.0003)	1000
RP (P)	0.5068	0.0078	0.0894 (0.0020)	-0.0016 (0.0028)	0.9490 (0.0070)	0.0080 (0.0003)	1000
FP (W)	0.5059	0.0076	0.0893 (0.0020)	-0.0025 (0.0028)	0.9500 (0.0069)	0.0080 (0.0003)	1000
FP (k=10)	0.5025	0.0077	0.0895 (0.0020)	-0.0059 (0.0028)	0.9516 (0.0068)	0.0080 (0.0003)	992
FP (k=10000)	0.5048	0.0061	0.0891 (0.0020)	-0.0036 (0.0028)	0.9200 (0.0086)	0.0079 (0.0003)	1000
Model frailty: Normal							
Cox	0.5121	0.0084	0.0912 (0.0020)	0.0038 (0.0029)	0.9530 (0.0067)	0.0083 (0.0004)	1000
Exp	0.5126	0.0078	0.0921 (0.0021)	0.0042 (0.0029)	0.9424 (0.0074)	0.0085 (0.0004)	989
Weibull	0.5056	0.0081	0.0907 (0.0020)	-0.0028 (0.0029)	0.9489 (0.0070)	0.0082 (0.0004)	998
Gompertz	0.5129	0.0078	0.0900 (0.0039)	0.0045 (0.0055)	0.9515 (0.0131)	0.0081 (0.0007)	268
RP (3)	0.5037	0.0080	0.0904 (0.0020)	-0.0047 (0.0029)	0.9510 (0.0068)	0.0082 (0.0004)	1000
RP (5)	0.5037	0.0080	0.0904 (0.0020)	-0.0047 (0.0029)	0.9510 (0.0068)	0.0082 (0.0004)	1000
RP (9)	0.5037	0.0079	0.0904 (0.0020)	-0.0047 (0.0029)	0.9500 (0.0069)	0.0082 (0.0004)	1000
RP (P)	0.5030	0.0080	0.0904 (0.0020)	-0.0053 (0.0029)	0.9510 (0.0068)	0.0082 (0.0004)	1000
FP (W)	0.5018	0.0075	0.0903 (0.0021)	-0.0066 (0.0029)	0.9399 (0.0077)	0.0082 (0.0004)	965
FP (k=10)	0.4984	0.0076	0.0908 (0.0020)	-0.0100 (0.0029)	0.9418 (0.0074)	0.0083 (0.0004)	997
FP (k=10000)	0.4996	0.0068	0.0901 (0.0020)	-0.0088 (0.0028)	0.9260 (0.0083)	0.0082 (0.0004)	1000

Table 146: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5408	0.0076	0.0840 (0.0019)	-0.0013 (0.0027)	0.9610 (0.0061)	0.0071 (0.0003)	999
Exp	0.5432	0.0069	0.0845 (0.0019)	0.0012 (0.0027)	0.9510 (0.0068)	0.0071 (0.0003)	1000
Weibull	0.5407	0.0071	0.0841 (0.0019)	-0.0014 (0.0027)	0.9560 (0.0065)	0.0071 (0.0003)	1000
Gompertz	0.5412	0.0069	0.0817 (0.0027)	-0.0008 (0.0039)	0.9485 (0.0104)	0.0067 (0.0004)	447
RP (3)	0.5408	0.0071	0.0840 (0.0019)	-0.0012 (0.0027)	0.9580 (0.0063)	0.0071 (0.0003)	999
RP (5)	0.5408	0.0071	0.0842 (0.0019)	-0.0013 (0.0027)	0.9570 (0.0064)	0.0071 (0.0003)	1000
RP (9)	0.5408	0.0071	0.0842 (0.0019)	-0.0013 (0.0027)	0.9570 (0.0064)	0.0071 (0.0003)	1000
RP (P)	0.5407	0.0071	0.0841 (0.0019)	-0.0014 (0.0027)	0.9560 (0.0065)	0.0071 (0.0003)	1000
FP (W)	0.5410	0.0077	0.0842 (0.0019)	-0.0011 (0.0027)	0.9615 (0.0061)	0.0071 (0.0003)	988
FP (k=10)	0.5383	0.0078	0.0844 (0.0019)	-0.0038 (0.0027)	0.9640 (0.0059)	0.0071 (0.0003)	1000
FP (k=10000)	0.5403	0.0057	0.0844 (0.0019)	-0.0017 (0.0027)	0.9250 (0.0083)	0.0071 (0.0003)	1000
Model frailty: Normal							
Cox	0.5289	0.0076	0.0819 (0.0018)	-0.0131 (0.0026)	0.9620 (0.0060)	0.0069 (0.0003)	1000
Exp	0.5502	0.0073	0.0848 (0.0019)	0.0081 (0.0027)	0.9558 (0.0065)	0.0073 (0.0003)	995
Weibull	0.5487	0.0074	0.0846 (0.0019)	0.0066 (0.0027)	0.9570 (0.0064)	0.0072 (0.0003)	999
Gompertz	0.5393	0.0073	0.0814 (0.0045)	-0.0028 (0.0063)	0.9697 (0.0133)	0.0066 (0.0006)	165
RP (3)	0.5446	0.0072	0.0839 (0.0019)	0.0025 (0.0027)	0.9550 (0.0066)	0.0070 (0.0003)	1000
RP (5)	0.5445	0.0072	0.0839 (0.0019)	0.0024 (0.0027)	0.9550 (0.0066)	0.0070 (0.0003)	1000
RP (9)	0.5446	0.0072	0.0838 (0.0019)	0.0025 (0.0027)	0.9550 (0.0066)	0.0070 (0.0003)	999
RP (P)	0.5446	0.0072	0.0839 (0.0019)	0.0025 (0.0027)	0.9540 (0.0066)	0.0070 (0.0003)	1000
FP (W)	0.5440	0.0076	0.0838 (0.0019)	0.0020 (0.0027)	0.9581 (0.0066)	0.0070 (0.0003)	930
FP (k=10)	0.5415	0.0077	0.0836 (0.0019)	-0.0005 (0.0027)	0.9623 (0.0061)	0.0070 (0.0003)	981
FP (k=10000)	0.5429	0.0060	0.0838 (0.0019)	0.0008 (0.0027)	0.9330 (0.0079)	0.0070 (0.0003)	1000

Table 147: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5649	0.0085	0.0925 (0.0021)	0.0001 (0.0029)	0.9479 (0.0070)	0.0085 (0.0004)	999
Exp	0.5833	0.0068	0.0973 (0.0022)	0.0185 (0.0031)	0.8960 (0.0097)	0.0098 (0.0004)	1000
Weibull	0.5659	0.0083	0.0927 (0.0021)	0.0011 (0.0029)	0.9460 (0.0071)	0.0086 (0.0004)	1000
Gompertz	0.5775	0.0068	0.0996 (0.0037)	0.0126 (0.0052)	0.8895 (0.0165)	0.0100 (0.0008)	362
RP (3)	0.5653	0.0083	0.0925 (0.0021)	0.0005 (0.0029)	0.9450 (0.0072)	0.0086 (0.0004)	1000
RP (5)	0.5653	0.0083	0.0925 (0.0021)	0.0005 (0.0029)	0.9429 (0.0073)	0.0086 (0.0004)	999
RP (9)	0.5652	0.0083	0.0925 (0.0021)	0.0004 (0.0029)	0.9440 (0.0073)	0.0086 (0.0004)	1000
RP (P)	0.5654	0.0083	0.0926 (0.0021)	0.0006 (0.0029)	0.9450 (0.0072)	0.0086 (0.0004)	1000
FP (W)	0.5659	0.0087	0.0927 (0.0021)	0.0011 (0.0029)	0.9479 (0.0070)	0.0086 (0.0004)	999
FP (k=10)	0.5525	0.0087	0.0941 (0.0021)	-0.0123 (0.0030)	0.9430 (0.0073)	0.0090 (0.0004)	1000
FP (k=10000)	0.5743	0.0060	0.0951 (0.0021)	0.0095 (0.0030)	0.8910 (0.0099)	0.0091 (0.0004)	1000
Model frailty: Normal							
Cox	0.5576	0.0087	0.0909 (0.0020)	-0.0072 (0.0029)	0.9530 (0.0067)	0.0083 (0.0004)	1000
Exp	0.5918	0.0074	0.0968 (0.0022)	0.0270 (0.0031)	0.9039 (0.0094)	0.0101 (0.0005)	989
Weibull	0.5717	0.0085	0.0928 (0.0021)	0.0069 (0.0029)	0.9439 (0.0073)	0.0087 (0.0004)	999
Gompertz	0.5856	0.0074	0.0972 (0.0041)	0.0208 (0.0058)	0.9029 (0.0178)	0.0098 (0.0009)	278
RP (3)	0.5662	0.0083	0.0919 (0.0021)	0.0014 (0.0029)	0.9470 (0.0071)	0.0084 (0.0004)	1000
RP (5)	0.5661	0.0083	0.0919 (0.0021)	0.0012 (0.0029)	0.9480 (0.0070)	0.0084 (0.0004)	1000
RP (9)	0.5659	0.0083	0.0919 (0.0021)	0.0011 (0.0029)	0.9450 (0.0072)	0.0084 (0.0004)	1000
RP (P)	0.5662	0.0083	0.0920 (0.0021)	0.0013 (0.0029)	0.9480 (0.0070)	0.0085 (0.0004)	1000
FP (W)	0.5670	0.0085	0.0927 (0.0021)	0.0021 (0.0030)	0.9469 (0.0072)	0.0086 (0.0004)	961
FP (k=10)	0.5579	0.0084	0.0927 (0.0021)	-0.0069 (0.0029)	0.9409 (0.0075)	0.0086 (0.0004)	999
FP (k=10000)	0.5729	0.0065	0.0938 (0.0021)	0.0081 (0.0030)	0.9088 (0.0091)	0.0089 (0.0004)	998

Table 148: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4947	0.0063	0.0754 (0.0017)	-0.0091 (0.0024)	0.9659 (0.0057)	0.0058 (0.0002)	998
Exp	0.4876	0.0064	0.0742 (0.0017)	-0.0163 (0.0023)	0.9660 (0.0057)	0.0058 (0.0002)	1000
Weibull	0.4911	0.0060	0.0748 (0.0017)	-0.0128 (0.0024)	0.9610 (0.0061)	0.0057 (0.0002)	1000
Gompertz	0.4869	0.0064	0.0720 (0.0022)	-0.0169 (0.0031)	0.9705 (0.0073)	0.0055 (0.0003)	542
RP (3)	0.4931	0.0057	0.0752 (0.0017)	-0.0107 (0.0024)	0.9510 (0.0068)	0.0058 (0.0002)	1000
RP (5)	0.4942	0.0057	0.0754 (0.0017)	-0.0097 (0.0024)	0.9530 (0.0067)	0.0058 (0.0002)	1000
RP (9)	0.4946	0.0057	0.0754 (0.0017)	-0.0092 (0.0024)	0.9530 (0.0067)	0.0058 (0.0002)	1000
RP (P)	0.4934	0.0057	0.0753 (0.0017)	-0.0104 (0.0024)	0.9540 (0.0066)	0.0058 (0.0002)	1000
FP (W)	0.4911	0.0069	0.0748 (0.0017)	-0.0128 (0.0024)	0.9700 (0.0054)	0.0057 (0.0002)	1000
FP (k=10)	0.4915	0.0064	0.0755 (0.0017)	-0.0124 (0.0024)	0.9630 (0.0060)	0.0059 (0.0003)	1000
FP (k=10000)	0.4919	0.0047	0.0753 (0.0017)	-0.0119 (0.0024)	0.9208 (0.0086)	0.0058 (0.0003)	997
Model frailty: Normal							
Cox	0.4796	0.0061	0.0729 (0.0016)	-0.0243 (0.0023)	0.9520 (0.0068)	0.0059 (0.0002)	1000
Exp	0.4897	0.0065	0.0746 (0.0017)	-0.0141 (0.0024)	0.9679 (0.0056)	0.0058 (0.0003)	997
Weibull	0.4973	0.0061	0.0755 (0.0017)	-0.0065 (0.0024)	0.9617 (0.0061)	0.0057 (0.0003)	991
Gompertz	0.4900	0.0066	0.0726 (0.0023)	-0.0138 (0.0033)	0.9691 (0.0078)	0.0055 (0.0003)	486
RP (3)	0.4998	0.0058	0.0758 (0.0017)	-0.0041 (0.0024)	0.9499 (0.0069)	0.0058 (0.0003)	999
RP (5)	0.5006	0.0058	0.0760 (0.0017)	-0.0033 (0.0024)	0.9490 (0.0070)	0.0058 (0.0003)	1000
RP (9)	0.5009	0.0058	0.0760 (0.0017)	-0.0030 (0.0024)	0.9490 (0.0070)	0.0058 (0.0003)	1000
RP (P)	0.4991	0.0058	0.0757 (0.0017)	-0.0047 (0.0024)	0.9510 (0.0068)	0.0058 (0.0003)	1000
FP (W)	0.4945	0.0067	0.0753 (0.0018)	-0.0094 (0.0025)	0.9663 (0.0059)	0.0058 (0.0003)	921
FP (k=10)	0.4982	0.0065	0.0760 (0.0017)	-0.0056 (0.0024)	0.9660 (0.0057)	0.0058 (0.0003)	1000
FP (k=10000)	0.4977	0.0047	0.0757 (0.0017)	-0.0062 (0.0024)	0.9270 (0.0082)	0.0058 (0.0003)	1000

Table 149: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4779	0.0058	0.0717 (0.0016)	-0.0040 (0.0023)	0.9640 (0.0059)	0.0052 (0.0002)	999
Exp	0.4600	0.0071	0.0708 (0.0016)	-0.0218 (0.0022)	0.9760 (0.0048)	0.0055 (0.0002)	1000
Weibull	0.4769	0.0049	0.0720 (0.0016)	-0.0049 (0.0023)	0.9500 (0.0069)	0.0052 (0.0002)	1000
Gompertz	0.4618	0.0070	0.0713 (0.0019)	-0.0201 (0.0026)	0.9739 (0.0059)	0.0055 (0.0003)	727
RP (3)	0.4759	0.0052	0.0715 (0.0016)	-0.0060 (0.0023)	0.9540 (0.0066)	0.0051 (0.0002)	1000
RP (5)	0.4775	0.0052	0.0717 (0.0016)	-0.0044 (0.0023)	0.9540 (0.0066)	0.0052 (0.0002)	1000
RP (9)	0.4780	0.0052	0.0718 (0.0016)	-0.0038 (0.0023)	0.9550 (0.0066)	0.0052 (0.0002)	999
RP (P)	0.4772	0.0052	0.0717 (0.0016)	-0.0047 (0.0023)	0.9540 (0.0066)	0.0052 (0.0002)	999
FP (W)	0.4777	0.0055	0.0714 (0.0016)	-0.0042 (0.0023)	0.9657 (0.0058)	0.0051 (0.0002)	990
FP (k=10)	0.4533	0.0059	0.0720 (0.0016)	-0.0286 (0.0023)	0.9470 (0.0071)	0.0060 (0.0003)	1000
FP (k=10000)	0.4712	0.0037	0.0726 (0.0016)	-0.0107 (0.0023)	0.8899 (0.0099)	0.0054 (0.0002)	999
Model frailty: Normal							
Cox	0.4650	0.0057	0.0692 (0.0015)	-0.0169 (0.0022)	0.9640 (0.0059)	0.0051 (0.0002)	1000
Exp	0.4617	0.0071	0.0715 (0.0016)	-0.0202 (0.0023)	0.9779 (0.0047)	0.0055 (0.0002)	997
Weibull	0.4925	0.0053	0.0734 (0.0016)	0.0106 (0.0023)	0.9439 (0.0073)	0.0055 (0.0002)	998
Gompertz	0.4643	0.0071	0.0735 (0.0020)	-0.0176 (0.0029)	0.9758 (0.0060)	0.0057 (0.0003)	660
RP (3)	0.4835	0.0053	0.0718 (0.0016)	0.0016 (0.0023)	0.9510 (0.0068)	0.0051 (0.0002)	1000
RP (5)	0.4850	0.0054	0.0719 (0.0016)	0.0031 (0.0023)	0.9489 (0.0070)	0.0052 (0.0002)	999
RP (9)	0.4852	0.0054	0.0720 (0.0016)	0.0034 (0.0023)	0.9480 (0.0070)	0.0052 (0.0002)	1000
RP (P)	0.4849	0.0054	0.0720 (0.0016)	0.0030 (0.0023)	0.9490 (0.0070)	0.0052 (0.0002)	1000
FP (W)	0.4893	0.0056	0.0723 (0.0019)	0.0074 (0.0026)	0.9617 (0.0070)	0.0053 (0.0003)	757
FP (k=10)	0.4686	0.0059	0.0720 (0.0016)	-0.0133 (0.0023)	0.9600 (0.0062)	0.0053 (0.0002)	999
FP (k=10000)	0.4894	0.0036	0.0744 (0.0017)	0.0075 (0.0024)	0.8690 (0.0107)	0.0056 (0.0002)	1000

Table 150: Simulation results for LLE, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5417	0.0079	0.0880 (0.0020)	-0.0080 (0.0028)	0.9540 (0.0066)	0.0078 (0.0003)	1000
Exp	0.5506	0.0069	0.0898 (0.0020)	0.0010 (0.0028)	0.9320 (0.0080)	0.0081 (0.0003)	1000
Weibull	0.5435	0.0076	0.0882 (0.0020)	-0.0061 (0.0028)	0.9520 (0.0068)	0.0078 (0.0003)	1000
Gompertz	0.5552	0.0069	0.0893 (0.0031)	0.0055 (0.0044)	0.9405 (0.0115)	0.0080 (0.0005)	420
RP (3)	0.5439	0.0076	0.0883 (0.0020)	-0.0057 (0.0028)	0.9510 (0.0068)	0.0078 (0.0003)	999
RP (5)	0.5425	0.0075	0.0881 (0.0020)	-0.0072 (0.0028)	0.9510 (0.0068)	0.0078 (0.0003)	1000
RP (9)	0.5420	0.0075	0.0880 (0.0020)	-0.0076 (0.0028)	0.9520 (0.0068)	0.0078 (0.0003)	1000
RP (P)	0.5428	0.0076	0.0881 (0.0020)	-0.0068 (0.0028)	0.9510 (0.0068)	0.0078 (0.0003)	1000
FP (W)	0.5440	0.0081	0.0884 (0.0020)	-0.0056 (0.0028)	0.9584 (0.0064)	0.0078 (0.0003)	986
FP (k=10)	0.5380	0.0082	0.0888 (0.0020)	-0.0116 (0.0028)	0.9570 (0.0064)	0.0080 (0.0003)	1000
FP (k=10000)	0.5442	0.0061	0.0885 (0.0020)	-0.0054 (0.0028)	0.9140 (0.0089)	0.0079 (0.0003)	1000
Model frailty: Normal							
Cox	0.5323	0.0080	0.0859 (0.0019)	-0.0173 (0.0027)	0.9620 (0.0060)	0.0077 (0.0003)	1000
Exp	0.5620	0.0074	0.0905 (0.0020)	0.0123 (0.0029)	0.9314 (0.0080)	0.0083 (0.0004)	991
Weibull	0.5527	0.0079	0.0892 (0.0020)	0.0030 (0.0028)	0.9567 (0.0065)	0.0080 (0.0003)	993
Gompertz	0.5555	0.0074	0.0904 (0.0057)	0.0059 (0.0080)	0.9134 (0.0250)	0.0081 (0.0010)	127
RP (3)	0.5483	0.0077	0.0884 (0.0020)	-0.0013 (0.0028)	0.9550 (0.0066)	0.0078 (0.0003)	1000
RP (5)	0.5470	0.0076	0.0882 (0.0020)	-0.0026 (0.0028)	0.9540 (0.0066)	0.0078 (0.0003)	1000
RP (9)	0.5466	0.0076	0.0881 (0.0020)	-0.0031 (0.0028)	0.9540 (0.0066)	0.0078 (0.0003)	1000
RP (P)	0.5472	0.0076	0.0882 (0.0020)	-0.0024 (0.0028)	0.9540 (0.0066)	0.0078 (0.0003)	1000
FP (W)	0.5488	0.0080	0.0886 (0.0021)	-0.0008 (0.0029)	0.9610 (0.0064)	0.0078 (0.0003)	924
FP (k=10)	0.5419	0.0080	0.0885 (0.0020)	-0.0077 (0.0028)	0.9597 (0.0062)	0.0079 (0.0003)	992
FP (k=10000)	0.5473	0.0064	0.0883 (0.0020)	-0.0024 (0.0028)	0.9290 (0.0081)	0.0078 (0.0003)	1000

Table 151: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6735	0.0103	0.1021 (0.0023)	-0.0016 (0.0032)	0.9389 (0.0076)	0.0104 (0.0005)	999
Exp	0.6744	0.0102	0.1021 (0.0023)	-0.0007 (0.0032)	0.9370 (0.0077)	0.0104 (0.0005)	1000
Weibull	0.6746	0.0102	0.1020 (0.0023)	-0.0005 (0.0032)	0.9380 (0.0076)	0.0104 (0.0005)	1000
Gompertz	0.6730	0.0102	0.0978 (0.0031)	-0.0021 (0.0043)	0.9487 (0.0098)	0.0096 (0.0007)	507
RP (3)	0.6745	0.0102	0.1018 (0.0023)	-0.0006 (0.0032)	0.9399 (0.0075)	0.0104 (0.0005)	999
RP (5)	0.6742	0.0102	0.1021 (0.0023)	-0.0009 (0.0032)	0.9389 (0.0076)	0.0104 (0.0005)	999
RP (9)	0.6741	0.0102	0.1022 (0.0023)	-0.0010 (0.0032)	0.9389 (0.0076)	0.0104 (0.0005)	999
RP (P)	0.6744	0.0102	0.1020 (0.0023)	-0.0007 (0.0032)	0.9390 (0.0076)	0.0104 (0.0005)	1000
FP (W)	0.6746	0.0103	0.1020 (0.0023)	-0.0005 (0.0032)	0.9390 (0.0076)	0.0104 (0.0005)	1000
FP (k=10)	0.6706	0.0104	0.1022 (0.0023)	-0.0045 (0.0032)	0.9390 (0.0076)	0.0105 (0.0005)	1000
FP (k=10000)	0.6726	0.0086	0.1019 (0.0023)	-0.0025 (0.0032)	0.9260 (0.0083)	0.0104 (0.0005)	1000
Model frailty: Normal							
Cox	0.6726	0.0104	0.1019 (0.0023)	-0.0025 (0.0032)	0.9390 (0.0076)	0.0104 (0.0005)	1000
Exp	0.6743	0.0102	0.1021 (0.0023)	-0.0008 (0.0032)	0.9370 (0.0077)	0.0104 (0.0005)	1000
Weibull	0.6747	0.0102	0.1021 (0.0023)	-0.0004 (0.0032)	0.9378 (0.0076)	0.0104 (0.0005)	997
Gompertz	0.6741	0.0102	0.1041 (0.0033)	-0.0010 (0.0047)	0.9360 (0.0111)	0.0108 (0.0007)	484
RP (3)	0.6739	0.0102	0.1020 (0.0023)	-0.0012 (0.0032)	0.9380 (0.0076)	0.0104 (0.0005)	1000
RP (5)	0.6737	0.0102	0.1020 (0.0023)	-0.0014 (0.0032)	0.9380 (0.0076)	0.0104 (0.0005)	1000
RP (9)	0.6737	0.0102	0.1021 (0.0023)	-0.0014 (0.0032)	0.9380 (0.0076)	0.0104 (0.0005)	1000
RP (P)	0.6741	0.0102	0.1020 (0.0023)	-0.0010 (0.0032)	0.9380 (0.0076)	0.0104 (0.0005)	1000
FP (W)	0.6735	0.0103	0.1025 (0.0023)	-0.0015 (0.0033)	0.9377 (0.0077)	0.0105 (0.0005)	979
FP (k=10)	0.6700	0.0103	0.1021 (0.0023)	-0.0051 (0.0032)	0.9380 (0.0076)	0.0104 (0.0005)	1000
FP (k=10000)	0.6725	0.0088	0.1019 (0.0023)	-0.0026 (0.0032)	0.9300 (0.0081)	0.0104 (0.0005)	1000

Table 152: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6976	0.0114	0.1148 (0.0026)	-0.0013 (0.0036)	0.9279 (0.0082)	0.0132 (0.0006)	999
Exp	0.7222	0.0108	0.1192 (0.0027)	0.0233 (0.0038)	0.9130 (0.0089)	0.0147 (0.0006)	1000
Weibull	0.6987	0.0122	0.1150 (0.0026)	-0.0003 (0.0036)	0.9350 (0.0078)	0.0132 (0.0006)	1000
Gompertz	0.7241	0.0108	0.1176 (0.0041)	0.0251 (0.0058)	0.9240 (0.0131)	0.0144 (0.0010)	408
RP (3)	0.6983	0.0122	0.1150 (0.0026)	-0.0006 (0.0036)	0.9370 (0.0077)	0.0132 (0.0006)	1000
RP (5)	0.6981	0.0122	0.1149 (0.0026)	-0.0008 (0.0036)	0.9359 (0.0077)	0.0132 (0.0006)	999
RP (9)	0.6983	0.0122	0.1149 (0.0026)	-0.0007 (0.0036)	0.9370 (0.0077)	0.0132 (0.0006)	1000
RP (P)	0.6984	0.0122	0.1149 (0.0026)	-0.0005 (0.0036)	0.9360 (0.0077)	0.0132 (0.0006)	1000
FP (W)	0.6987	0.0115	0.1150 (0.0026)	-0.0003 (0.0036)	0.9290 (0.0081)	0.0132 (0.0006)	1000
FP (k=10)	0.6886	0.0115	0.1150 (0.0026)	-0.0103 (0.0036)	0.9310 (0.0080)	0.0133 (0.0006)	1000
FP (k=10000)	0.6977	0.0097	0.1157 (0.0026)	-0.0013 (0.0037)	0.9108 (0.0090)	0.0134 (0.0006)	998
Model frailty: Normal							
Cox	0.7009	0.0117	0.1153 (0.0026)	0.0020 (0.0036)	0.9320 (0.0080)	0.0133 (0.0006)	1000
Exp	0.7218	0.0108	0.1194 (0.0027)	0.0229 (0.0038)	0.9116 (0.0090)	0.0148 (0.0006)	996
Weibull	0.6982	0.0122	0.1149 (0.0026)	-0.0007 (0.0036)	0.9357 (0.0078)	0.0132 (0.0006)	996
Gompertz	0.7202	0.0108	0.1190 (0.0042)	0.0212 (0.0060)	0.9194 (0.0137)	0.0146 (0.0010)	397
RP (3)	0.6976	0.0122	0.1149 (0.0026)	-0.0013 (0.0036)	0.9360 (0.0077)	0.0132 (0.0006)	1000
RP (5)	0.6974	0.0122	0.1149 (0.0026)	-0.0015 (0.0036)	0.9349 (0.0078)	0.0132 (0.0006)	999
RP (9)	0.6975	0.0122	0.1149 (0.0026)	-0.0014 (0.0036)	0.9380 (0.0076)	0.0132 (0.0006)	1000
RP (P)	0.6977	0.0122	0.1149 (0.0026)	-0.0012 (0.0036)	0.9360 (0.0077)	0.0132 (0.0006)	1000
FP (W)	0.6974	0.0114	0.1151 (0.0026)	-0.0015 (0.0037)	0.9281 (0.0082)	0.0132 (0.0006)	988
FP (k=10)	0.6877	0.0114	0.1150 (0.0026)	-0.0112 (0.0036)	0.9260 (0.0083)	0.0133 (0.0006)	1000
FP (k=10000)	0.6977	0.0099	0.1157 (0.0026)	-0.0013 (0.0037)	0.9110 (0.0090)	0.0134 (0.0006)	1000

Table 153: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6139	0.0084	0.0883 (0.0020)	0.0014 (0.0028)	0.9639 (0.0059)	0.0078 (0.0003)	998
Exp	0.5695	0.0088	0.0826 (0.0018)	-0.0430 (0.0026)	0.9590 (0.0063)	0.0087 (0.0004)	1000
Weibull	0.5945	0.0077	0.0853 (0.0019)	-0.0180 (0.0027)	0.9610 (0.0061)	0.0076 (0.0003)	1000
Gompertz	0.6140	0.0075	0.0880 (0.0020)	0.0015 (0.0028)	0.9520 (0.0068)	0.0077 (0.0003)	1000
RP (3)	0.6120	0.0075	0.0878 (0.0020)	-0.0005 (0.0028)	0.9530 (0.0067)	0.0077 (0.0003)	999
RP (5)	0.6135	0.0075	0.0881 (0.0020)	0.0011 (0.0028)	0.9520 (0.0068)	0.0078 (0.0003)	1000
RP (9)	0.6141	0.0075	0.0883 (0.0020)	0.0016 (0.0028)	0.9510 (0.0068)	0.0078 (0.0003)	1000
RP (P)	0.6082	0.0075	0.0873 (0.0020)	-0.0043 (0.0028)	0.9540 (0.0066)	0.0076 (0.0003)	1000
FP (W)	0.5945	0.0086	0.0853 (0.0019)	-0.0180 (0.0027)	0.9700 (0.0054)	0.0076 (0.0003)	1000
FP (k=10)	0.6113	0.0084	0.0882 (0.0020)	-0.0011 (0.0028)	0.9650 (0.0058)	0.0078 (0.0003)	1000
FP (k=10000)	0.6078	0.0067	0.0873 (0.0020)	-0.0047 (0.0028)	0.9390 (0.0076)	0.0076 (0.0003)	1000
Model frailty: Normal							
Cox	0.6098	0.0084	0.0878 (0.0020)	-0.0027 (0.0028)	0.9650 (0.0058)	0.0077 (0.0003)	1000
Exp	0.5704	0.0088	0.0827 (0.0019)	-0.0421 (0.0026)	0.9609 (0.0061)	0.0086 (0.0004)	997
Weibull	0.5963	0.0078	0.0858 (0.0019)	-0.0162 (0.0027)	0.9598 (0.0062)	0.0076 (0.0003)	995
Gompertz	0.6156	0.0076	0.0884 (0.0020)	0.0031 (0.0028)	0.9518 (0.0068)	0.0078 (0.0003)	995
RP (3)	0.6133	0.0076	0.0880 (0.0020)	0.0008 (0.0028)	0.9530 (0.0067)	0.0077 (0.0003)	1000
RP (5)	0.6146	0.0076	0.0883 (0.0020)	0.0021 (0.0028)	0.9510 (0.0068)	0.0078 (0.0003)	1000
RP (9)	0.6151	0.0076	0.0885 (0.0020)	0.0026 (0.0028)	0.9490 (0.0070)	0.0078 (0.0003)	1000
RP (P)	0.6094	0.0076	0.0876 (0.0020)	-0.0031 (0.0028)	0.9540 (0.0066)	0.0077 (0.0003)	1000
FP (W)	0.5962	0.0087	0.0856 (0.0019)	-0.0163 (0.0027)	0.9698 (0.0054)	0.0076 (0.0003)	993
FP (k=10)	0.6124	0.0084	0.0884 (0.0020)	-0.0000 (0.0028)	0.9620 (0.0060)	0.0078 (0.0003)	1000
FP (k=10000)	0.6096	0.0068	0.0876 (0.0020)	-0.0028 (0.0028)	0.9420 (0.0074)	0.0077 (0.0003)	1000

Table 154: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5863	0.0079	0.0817 (0.0018)	-0.0024 (0.0026)	0.9689 (0.0055)	0.0067 (0.0003)	997
Exp	0.5424	0.0095	0.0764 (0.0017)	-0.0464 (0.0024)	0.9740 (0.0050)	0.0080 (0.0003)	1000
Weibull	0.6048	0.0069	0.0842 (0.0019)	0.0161 (0.0027)	0.9440 (0.0073)	0.0073 (0.0003)	1000
Gompertz	0.6096	0.0076	0.0855 (0.0019)	0.0208 (0.0027)	0.9510 (0.0068)	0.0077 (0.0004)	1000
RP (3)	0.5843	0.0070	0.0810 (0.0018)	-0.0044 (0.0026)	0.9620 (0.0061)	0.0066 (0.0003)	999
RP (5)	0.5866	0.0071	0.0816 (0.0018)	-0.0021 (0.0026)	0.9600 (0.0062)	0.0067 (0.0003)	1000
RP (9)	0.5870	0.0071	0.0818 (0.0018)	-0.0018 (0.0026)	0.9589 (0.0063)	0.0067 (0.0003)	997
RP (P)	0.5880	0.0071	0.0817 (0.0018)	-0.0008 (0.0026)	0.9599 (0.0062)	0.0067 (0.0003)	998
FP (W)	0.6046	0.0075	0.0842 (0.0019)	0.0159 (0.0027)	0.9530 (0.0067)	0.0073 (0.0003)	999
FP (k=10)	0.5736	0.0079	0.0821 (0.0018)	-0.0151 (0.0026)	0.9610 (0.0061)	0.0070 (0.0003)	1000
FP (k=10000)	0.6156	0.0058	0.0871 (0.0019)	0.0269 (0.0028)	0.8990 (0.0095)	0.0083 (0.0004)	1000
Model frailty: Normal							
Cox	0.5831	0.0078	0.0813 (0.0018)	-0.0057 (0.0026)	0.9680 (0.0056)	0.0066 (0.0003)	1000
Exp	0.5426	0.0096	0.0766 (0.0017)	-0.0461 (0.0024)	0.9730 (0.0051)	0.0080 (0.0004)	1000
Weibull	0.6066	0.0069	0.0845 (0.0019)	0.0179 (0.0027)	0.9427 (0.0074)	0.0075 (0.0004)	994
Gompertz	0.6095	0.0077	0.0856 (0.0019)	0.0207 (0.0027)	0.9488 (0.0070)	0.0077 (0.0004)	997
RP (3)	0.5857	0.0071	0.0814 (0.0018)	-0.0031 (0.0026)	0.9620 (0.0060)	0.0066 (0.0003)	1000
RP (5)	0.5879	0.0072	0.0818 (0.0018)	-0.0008 (0.0026)	0.9610 (0.0061)	0.0067 (0.0003)	1000
RP (9)	0.5882	0.0072	0.0819 (0.0018)	-0.0006 (0.0026)	0.9630 (0.0060)	0.0067 (0.0003)	1000
RP (P)	0.5891	0.0071	0.0819 (0.0018)	0.0004 (0.0026)	0.9610 (0.0061)	0.0067 (0.0003)	1000
FP (W)	0.6059	0.0076	0.0841 (0.0019)	0.0172 (0.0027)	0.9537 (0.0067)	0.0074 (0.0004)	971
FP (k=10)	0.5766	0.0079	0.0822 (0.0018)	-0.0122 (0.0026)	0.9630 (0.0060)	0.0069 (0.0003)	1000
FP (k=10000)	0.6164	0.0059	0.0873 (0.0020)	0.0277 (0.0028)	0.9020 (0.0094)	0.0084 (0.0004)	1000

Table 155: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6809	0.0110	0.1015 (0.0023)	-0.0055 (0.0032)	0.9670 (0.0057)	0.0103 (0.0005)	999
Exp	0.7016	0.0105	0.1041 (0.0023)	0.0152 (0.0033)	0.9520 (0.0068)	0.0111 (0.0005)	1000
Weibull	0.6894	0.0111	0.1026 (0.0023)	0.0031 (0.0032)	0.9640 (0.0059)	0.0105 (0.0005)	1000
Gompertz	0.7084	0.0105	0.1075 (0.0062)	0.0220 (0.0088)	0.9404 (0.0193)	0.0120 (0.0015)	151
RP (3)	0.6834	0.0111	0.1019 (0.0023)	-0.0030 (0.0032)	0.9690 (0.0055)	0.0104 (0.0005)	1000
RP (5)	0.6820	0.0111	0.1017 (0.0023)	-0.0044 (0.0032)	0.9690 (0.0055)	0.0103 (0.0005)	999
RP (9)	0.6816	0.0111	0.1016 (0.0023)	-0.0048 (0.0032)	0.9680 (0.0056)	0.0103 (0.0005)	1000
RP (P)	0.6841	0.0111	0.1019 (0.0023)	-0.0023 (0.0032)	0.9700 (0.0054)	0.0104 (0.0005)	1000
FP (W)	0.6894	0.0109	0.1026 (0.0023)	0.0031 (0.0032)	0.9630 (0.0060)	0.0105 (0.0005)	1000
FP (k=10)	0.6766	0.0111	0.1017 (0.0023)	-0.0097 (0.0032)	0.9690 (0.0055)	0.0104 (0.0005)	1000
FP (k=10000)	0.6800	0.0094	0.1016 (0.0023)	-0.0064 (0.0032)	0.9420 (0.0074)	0.0104 (0.0005)	1000
Model frailty: Normal							
Cox	0.6813	0.0111	0.1017 (0.0023)	-0.0050 (0.0032)	0.9700 (0.0054)	0.0104 (0.0005)	1000
Exp	0.7018	0.0105	0.1044 (0.0023)	0.0155 (0.0033)	0.9558 (0.0065)	0.0111 (0.0005)	996
Weibull	0.6896	0.0111	0.1029 (0.0023)	0.0032 (0.0033)	0.9658 (0.0058)	0.0106 (0.0005)	995
Gompertz	0.7066	0.0105	0.1042 (0.0038)	0.0202 (0.0054)	0.9564 (0.0107)	0.0112 (0.0008)	367
RP (3)	0.6834	0.0111	0.1021 (0.0023)	-0.0030 (0.0032)	0.9700 (0.0054)	0.0104 (0.0005)	1000
RP (5)	0.6821	0.0111	0.1018 (0.0023)	-0.0043 (0.0032)	0.9700 (0.0054)	0.0104 (0.0005)	1000
RP (9)	0.6818	0.0111	0.1018 (0.0023)	-0.0046 (0.0032)	0.9690 (0.0055)	0.0104 (0.0005)	1000
RP (P)	0.6840	0.0111	0.1021 (0.0023)	-0.0024 (0.0032)	0.9700 (0.0054)	0.0104 (0.0005)	1000
FP (W)	0.6892	0.0109	0.1030 (0.0023)	0.0029 (0.0033)	0.9641 (0.0060)	0.0106 (0.0005)	975
FP (k=10)	0.6764	0.0110	0.1019 (0.0023)	-0.0100 (0.0032)	0.9670 (0.0056)	0.0105 (0.0005)	1000
FP (k=10000)	0.6802	0.0096	0.1018 (0.0023)	-0.0062 (0.0032)	0.9460 (0.0071)	0.0104 (0.0005)	1000

Table 156: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6707	0.0103	0.0980 (0.0022)	-0.0057 (0.0031)	0.9578 (0.0064)	0.0096 (0.0004)	996
Exp	0.6715	0.0098	0.0980 (0.0022)	-0.0050 (0.0031)	0.9490 (0.0070)	0.0096 (0.0004)	1000
Weibull	0.6713	0.0098	0.0979 (0.0022)	-0.0051 (0.0031)	0.9500 (0.0069)	0.0096 (0.0004)	1000
Gompertz	0.6708	0.0099	0.0980 (0.0031)	-0.0056 (0.0044)	0.9466 (0.0100)	0.0096 (0.0006)	506
RP (3)	0.6713	0.0099	0.0980 (0.0022)	-0.0051 (0.0031)	0.9499 (0.0069)	0.0096 (0.0004)	999
RP (5)	0.6713	0.0099	0.0980 (0.0022)	-0.0051 (0.0031)	0.9510 (0.0068)	0.0096 (0.0004)	1000
RP (9)	0.6714	0.0099	0.0980 (0.0022)	-0.0050 (0.0031)	0.9520 (0.0068)	0.0096 (0.0004)	999
RP (P)	0.6712	0.0098	0.0979 (0.0022)	-0.0052 (0.0031)	0.9500 (0.0069)	0.0096 (0.0004)	1000
FP (W)	0.6713	0.0103	0.0979 (0.0022)	-0.0051 (0.0031)	0.9540 (0.0066)	0.0096 (0.0004)	1000
FP (k=10)	0.6683	0.0104	0.0981 (0.0022)	-0.0082 (0.0031)	0.9550 (0.0066)	0.0097 (0.0004)	1000
FP (k=10000)	0.6695	0.0085	0.0979 (0.0022)	-0.0070 (0.0031)	0.9320 (0.0080)	0.0096 (0.0004)	1000
Model frailty: Normal							
Cox	0.6691	0.0103	0.0976 (0.0022)	-0.0074 (0.0031)	0.9590 (0.0063)	0.0096 (0.0004)	1000
Exp	0.6724	0.0098	0.0979 (0.0022)	-0.0040 (0.0031)	0.9489 (0.0070)	0.0096 (0.0004)	999
Weibull	0.6725	0.0099	0.0979 (0.0022)	-0.0039 (0.0031)	0.9489 (0.0070)	0.0096 (0.0004)	998
Gompertz	0.6726	0.0099	0.0968 (0.0031)	-0.0038 (0.0043)	0.9578 (0.0090)	0.0094 (0.0006)	498
RP (3)	0.6722	0.0099	0.0979 (0.0022)	-0.0042 (0.0031)	0.9480 (0.0070)	0.0096 (0.0004)	1000
RP (5)	0.6721	0.0099	0.0979 (0.0022)	-0.0043 (0.0031)	0.9540 (0.0066)	0.0096 (0.0004)	1000
RP (9)	0.6721	0.0099	0.0979 (0.0022)	-0.0043 (0.0031)	0.9520 (0.0068)	0.0096 (0.0004)	1000
RP (P)	0.6721	0.0099	0.0978 (0.0022)	-0.0044 (0.0031)	0.9500 (0.0069)	0.0096 (0.0004)	1000
FP (W)	0.6719	0.0103	0.0979 (0.0022)	-0.0045 (0.0031)	0.9524 (0.0068)	0.0096 (0.0004)	988
FP (k=10)	0.6688	0.0104	0.0979 (0.0022)	-0.0076 (0.0031)	0.9570 (0.0064)	0.0096 (0.0004)	1000
FP (k=10000)	0.6706	0.0087	0.0978 (0.0022)	-0.0059 (0.0031)	0.9350 (0.0078)	0.0096 (0.0004)	1000

Table 157: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7074	0.0117	0.1111 (0.0025)	-0.0031 (0.0035)	0.9448 (0.0072)	0.0123 (0.0005)	997
Exp	0.7365	0.0106	0.1156 (0.0026)	0.0261 (0.0037)	0.9180 (0.0087)	0.0140 (0.0006)	1000
Weibull	0.7087	0.0120	0.1112 (0.0025)	-0.0017 (0.0035)	0.9460 (0.0071)	0.0123 (0.0005)	1000
Gompertz	0.7284	0.0106	0.1156 (0.0042)	0.0179 (0.0060)	0.9225 (0.0138)	0.0136 (0.0009)	374
RP (3)	0.7082	0.0121	0.1112 (0.0025)	-0.0022 (0.0035)	0.9480 (0.0070)	0.0124 (0.0005)	1000
RP (5)	0.7080	0.0121	0.1112 (0.0025)	-0.0024 (0.0035)	0.9479 (0.0070)	0.0124 (0.0005)	999
RP (9)	0.7081	0.0121	0.1111 (0.0025)	-0.0024 (0.0035)	0.9480 (0.0070)	0.0123 (0.0005)	1000
RP (P)	0.7084	0.0120	0.1111 (0.0025)	-0.0020 (0.0035)	0.9480 (0.0070)	0.0123 (0.0005)	1000
FP (W)	0.7088	0.0117	0.1112 (0.0025)	-0.0017 (0.0035)	0.9420 (0.0074)	0.0123 (0.0005)	1000
FP (k=10)	0.6984	0.0118	0.1114 (0.0025)	-0.0120 (0.0035)	0.9370 (0.0077)	0.0125 (0.0006)	1000
FP (k=10000)	0.7079	0.0098	0.1115 (0.0025)	-0.0026 (0.0035)	0.9180 (0.0087)	0.0124 (0.0005)	1000
Model frailty: Normal							
Cox	0.7090	0.0119	0.1113 (0.0025)	-0.0014 (0.0035)	0.9450 (0.0072)	0.0124 (0.0005)	1000
Exp	0.7375	0.0106	0.1161 (0.0026)	0.0271 (0.0037)	0.9147 (0.0088)	0.0142 (0.0006)	997
Weibull	0.7092	0.0120	0.1114 (0.0025)	-0.0012 (0.0035)	0.9448 (0.0072)	0.0124 (0.0005)	997
Gompertz	0.7328	0.0106	0.1164 (0.0042)	0.0223 (0.0059)	0.9065 (0.0148)	0.0140 (0.0010)	385
RP (3)	0.7083	0.0120	0.1113 (0.0025)	-0.0021 (0.0035)	0.9460 (0.0071)	0.0124 (0.0005)	1000
RP (5)	0.7082	0.0120	0.1113 (0.0025)	-0.0023 (0.0035)	0.9450 (0.0072)	0.0124 (0.0005)	1000
RP (9)	0.7082	0.0120	0.1113 (0.0025)	-0.0023 (0.0035)	0.9450 (0.0072)	0.0124 (0.0005)	1000
RP (P)	0.7085	0.0120	0.1113 (0.0025)	-0.0019 (0.0035)	0.9450 (0.0072)	0.0124 (0.0005)	1000
FP (W)	0.7081	0.0117	0.1112 (0.0025)	-0.0023 (0.0035)	0.9420 (0.0075)	0.0124 (0.0005)	983
FP (k=10)	0.6985	0.0117	0.1115 (0.0025)	-0.0119 (0.0035)	0.9360 (0.0077)	0.0126 (0.0006)	1000
FP (k=10000)	0.7086	0.0100	0.1117 (0.0025)	-0.0018 (0.0035)	0.9210 (0.0085)	0.0125 (0.0005)	1000

Table 158: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5954	0.0081	0.0799 (0.0018)	-0.0061 (0.0025)	0.9699 (0.0054)	0.0064 (0.0003)	997
Exp	0.5533	0.0082	0.0749 (0.0017)	-0.0481 (0.0024)	0.9560 (0.0065)	0.0079 (0.0003)	1000
Weibull	0.5756	0.0073	0.0774 (0.0017)	-0.0259 (0.0024)	0.9550 (0.0066)	0.0067 (0.0003)	1000
Gompertz	0.5951	0.0071	0.0800 (0.0018)	-0.0063 (0.0025)	0.9610 (0.0061)	0.0064 (0.0003)	1000
RP (3)	0.5929	0.0070	0.0795 (0.0018)	-0.0086 (0.0025)	0.9599 (0.0062)	0.0064 (0.0003)	997
RP (5)	0.5949	0.0071	0.0799 (0.0018)	-0.0066 (0.0025)	0.9610 (0.0061)	0.0064 (0.0003)	999
RP (9)	0.5955	0.0071	0.0799 (0.0018)	-0.0060 (0.0025)	0.9620 (0.0060)	0.0064 (0.0003)	1000
RP (P)	0.5896	0.0071	0.0792 (0.0018)	-0.0119 (0.0025)	0.9620 (0.0061)	0.0064 (0.0003)	999
FP (W)	0.5755	0.0084	0.0773 (0.0017)	-0.0260 (0.0024)	0.9660 (0.0057)	0.0067 (0.0003)	999
FP (k=10)	0.5930	0.0081	0.0799 (0.0018)	-0.0085 (0.0025)	0.9710 (0.0053)	0.0065 (0.0003)	1000
FP (k=10000)	0.5887	0.0063	0.0793 (0.0018)	-0.0127 (0.0025)	0.9460 (0.0071)	0.0064 (0.0003)	1000
Model frailty: Normal							
Cox	0.5908	0.0080	0.0792 (0.0018)	-0.0106 (0.0025)	0.9690 (0.0055)	0.0064 (0.0003)	1000
Exp	0.5539	0.0083	0.0749 (0.0017)	-0.0476 (0.0024)	0.9570 (0.0064)	0.0079 (0.0003)	1000
Weibull	0.5776	0.0073	0.0776 (0.0017)	-0.0239 (0.0025)	0.9570 (0.0064)	0.0066 (0.0003)	999
Gompertz	0.5974	0.0071	0.0803 (0.0018)	-0.0040 (0.0025)	0.9629 (0.0060)	0.0065 (0.0003)	998
RP (3)	0.5950	0.0071	0.0797 (0.0018)	-0.0064 (0.0025)	0.9630 (0.0060)	0.0064 (0.0003)	1000
RP (5)	0.5967	0.0071	0.0801 (0.0018)	-0.0047 (0.0025)	0.9610 (0.0061)	0.0064 (0.0003)	1000
RP (9)	0.5972	0.0071	0.0800 (0.0018)	-0.0043 (0.0025)	0.9640 (0.0059)	0.0064 (0.0003)	1000
RP (P)	0.5913	0.0071	0.0793 (0.0018)	-0.0102 (0.0025)	0.9600 (0.0062)	0.0064 (0.0003)	1000
FP (W)	0.5759	0.0084	0.0778 (0.0018)	-0.0256 (0.0025)	0.9705 (0.0055)	0.0067 (0.0003)	948
FP (k=10)	0.5948	0.0082	0.0801 (0.0018)	-0.0066 (0.0025)	0.9710 (0.0053)	0.0064 (0.0003)	1000
FP (k=10000)	0.5912	0.0064	0.0794 (0.0018)	-0.0103 (0.0025)	0.9500 (0.0069)	0.0064 (0.0003)	1000

Table 159: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5735	0.0076	0.0856 (0.0019)	-0.0055 (0.0027)	0.9539 (0.0066)	0.0073 (0.0003)	997
Exp	0.5303	0.0092	0.0805 (0.0018)	-0.0487 (0.0025)	0.9560 (0.0065)	0.0088 (0.0004)	1000
Weibull	0.5921	0.0064	0.0886 (0.0020)	0.0131 (0.0028)	0.9120 (0.0090)	0.0080 (0.0004)	1000
Gompertz	0.5987	0.0072	0.0900 (0.0020)	0.0197 (0.0028)	0.9230 (0.0084)	0.0085 (0.0004)	1000
RP (3)	0.5703	0.0066	0.0852 (0.0019)	-0.0086 (0.0027)	0.9390 (0.0076)	0.0073 (0.0003)	1000
RP (5)	0.5732	0.0067	0.0855 (0.0019)	-0.0058 (0.0027)	0.9430 (0.0073)	0.0073 (0.0003)	1000
RP (9)	0.5737	0.0067	0.0855 (0.0019)	-0.0053 (0.0027)	0.9430 (0.0073)	0.0073 (0.0003)	1000
RP (P)	0.5745	0.0067	0.0858 (0.0019)	-0.0045 (0.0027)	0.9380 (0.0076)	0.0074 (0.0003)	1000
FP (W)	0.5921	0.0073	0.0886 (0.0020)	0.0131 (0.0028)	0.9390 (0.0076)	0.0080 (0.0004)	1000
FP (k=10)	0.5598	0.0076	0.0861 (0.0019)	-0.0192 (0.0027)	0.9480 (0.0070)	0.0078 (0.0004)	1000
FP (k=10000)	0.6049	0.0056	0.0917 (0.0021)	0.0259 (0.0029)	0.8700 (0.0106)	0.0091 (0.0004)	1000
Model frailty: Normal							
Cox	0.5697	0.0076	0.0847 (0.0019)	-0.0093 (0.0027)	0.9570 (0.0064)	0.0073 (0.0003)	1000
Exp	0.5306	0.0092	0.0806 (0.0018)	-0.0484 (0.0025)	0.9580 (0.0063)	0.0088 (0.0004)	999
Weibull	0.5950	0.0065	0.0886 (0.0020)	0.0160 (0.0028)	0.9139 (0.0089)	0.0081 (0.0004)	999
Gompertz	0.5996	0.0073	0.0898 (0.0020)	0.0207 (0.0028)	0.9258 (0.0083)	0.0085 (0.0004)	997
RP (3)	0.5728	0.0067	0.0852 (0.0019)	-0.0062 (0.0027)	0.9390 (0.0076)	0.0073 (0.0003)	1000
RP (5)	0.5755	0.0067	0.0855 (0.0019)	-0.0035 (0.0027)	0.9420 (0.0074)	0.0073 (0.0003)	1000
RP (9)	0.5760	0.0067	0.0855 (0.0019)	-0.0030 (0.0027)	0.9400 (0.0075)	0.0073 (0.0003)	1000
RP (P)	0.5768	0.0067	0.0857 (0.0019)	-0.0022 (0.0027)	0.9370 (0.0077)	0.0074 (0.0003)	1000
FP (W)	0.5955	0.0073	0.0881 (0.0020)	0.0165 (0.0028)	0.9322 (0.0081)	0.0080 (0.0004)	958
FP (k=10)	0.5638	0.0076	0.0859 (0.0019)	-0.0152 (0.0027)	0.9510 (0.0068)	0.0076 (0.0004)	1000
FP (k=10000)	0.6074	0.0056	0.0915 (0.0020)	0.0284 (0.0029)	0.8690 (0.0107)	0.0092 (0.0004)	1000

Table 160: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6851	0.0110	0.1004 (0.0022)	-0.0048 (0.0032)	0.9599 (0.0062)	0.0101 (0.0004)	998
Exp	0.7072	0.0101	0.1037 (0.0023)	0.0173 (0.0033)	0.9440 (0.0073)	0.0110 (0.0005)	1000
Weibull	0.6944	0.0107	0.1021 (0.0023)	0.0045 (0.0032)	0.9540 (0.0066)	0.0104 (0.0004)	1000
Gompertz	0.7049	0.0102	0.1067 (0.0037)	0.0150 (0.0052)	0.9340 (0.0121)	0.0116 (0.0008)	424
RP (3)	0.6881	0.0108	0.1010 (0.0023)	-0.0018 (0.0032)	0.9570 (0.0064)	0.0102 (0.0004)	1000
RP (5)	0.6861	0.0107	0.1007 (0.0023)	-0.0038 (0.0032)	0.9590 (0.0063)	0.0101 (0.0004)	1000
RP (9)	0.6857	0.0107	0.1007 (0.0023)	-0.0043 (0.0032)	0.9580 (0.0063)	0.0101 (0.0004)	999
RP (P)	0.6887	0.0107	0.1012 (0.0023)	-0.0013 (0.0032)	0.9580 (0.0063)	0.0102 (0.0004)	1000
FP (W)	0.6944	0.0110	0.1021 (0.0023)	0.0045 (0.0032)	0.9570 (0.0064)	0.0104 (0.0004)	1000
FP (k=10)	0.6810	0.0111	0.1009 (0.0023)	-0.0089 (0.0032)	0.9620 (0.0060)	0.0103 (0.0004)	1000
FP (k=10000)	0.6845	0.0093	0.1007 (0.0023)	-0.0055 (0.0032)	0.9490 (0.0070)	0.0102 (0.0004)	1000
Model frailty: Normal							
Cox	0.6840	0.0111	0.1004 (0.0022)	-0.0060 (0.0032)	0.9630 (0.0060)	0.0101 (0.0004)	1000
Exp	0.7082	0.0102	0.1038 (0.0023)	0.0182 (0.0033)	0.9428 (0.0074)	0.0111 (0.0005)	996
Weibull	0.6952	0.0108	0.1022 (0.0023)	0.0053 (0.0032)	0.9529 (0.0067)	0.0105 (0.0004)	998
Gompertz	0.7089	0.0102	0.1042 (0.0037)	0.0190 (0.0052)	0.9380 (0.0120)	0.0112 (0.0008)	403
RP (3)	0.6890	0.0108	0.1011 (0.0023)	-0.0010 (0.0032)	0.9580 (0.0063)	0.0102 (0.0004)	1000
RP (5)	0.6870	0.0107	0.1008 (0.0023)	-0.0029 (0.0032)	0.9590 (0.0063)	0.0102 (0.0004)	1000
RP (9)	0.6865	0.0107	0.1007 (0.0023)	-0.0034 (0.0032)	0.9580 (0.0063)	0.0101 (0.0004)	1000
RP (P)	0.6894	0.0108	0.1012 (0.0023)	-0.0005 (0.0032)	0.9580 (0.0063)	0.0102 (0.0004)	1000
FP (W)	0.6960	0.0110	0.1016 (0.0023)	0.0061 (0.0032)	0.9612 (0.0062)	0.0103 (0.0004)	979
FP (k=10)	0.6816	0.0111	0.1010 (0.0023)	-0.0083 (0.0032)	0.9630 (0.0060)	0.0103 (0.0004)	1000
FP (k=10000)	0.6854	0.0095	0.1008 (0.0023)	-0.0045 (0.0032)	0.9520 (0.0068)	0.0102 (0.0004)	1000

Table 161: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5774	0.0087	0.0918 (0.0021)	0.0012 (0.0029)	0.9477 (0.0071)	0.0084 (0.0004)	994
Exp	0.5777	0.0089	0.0914 (0.0020)	0.0015 (0.0029)	0.9550 (0.0066)	0.0083 (0.0004)	1000
Weibull	0.5781	0.0089	0.0915 (0.0020)	0.0019 (0.0029)	0.9540 (0.0066)	0.0084 (0.0004)	1000
Gompertz	0.5764	0.0089	0.0908 (0.0038)	0.0002 (0.0053)	0.9555 (0.0121)	0.0082 (0.0007)	292
RP (3)	0.5783	0.0090	0.0916 (0.0021)	0.0021 (0.0029)	0.9557 (0.0065)	0.0084 (0.0004)	994
RP (5)	0.5781	0.0090	0.0917 (0.0021)	0.0019 (0.0029)	0.9539 (0.0066)	0.0084 (0.0004)	998
RP (9)	0.5781	0.0090	0.0916 (0.0020)	0.0019 (0.0029)	0.9560 (0.0065)	0.0084 (0.0004)	1000
RP (P)	0.5779	0.0090	0.0915 (0.0020)	0.0017 (0.0029)	0.9559 (0.0065)	0.0084 (0.0004)	998
FP (W)	0.5781	0.0087	0.0915 (0.0020)	0.0018 (0.0029)	0.9499 (0.0069)	0.0084 (0.0004)	999
FP (k=10)	0.5746	0.0087	0.0917 (0.0021)	-0.0016 (0.0029)	0.9490 (0.0070)	0.0084 (0.0004)	1000
FP (k=10000)	0.5761	0.0076	0.0915 (0.0020)	-0.0001 (0.0029)	0.9310 (0.0080)	0.0084 (0.0004)	1000
Model frailty: Normal							
Cox	0.5789	0.0086	0.0921 (0.0021)	0.0026 (0.0029)	0.9430 (0.0073)	0.0085 (0.0004)	1000
Exp	0.5763	0.0089	0.0910 (0.0020)	0.0001 (0.0029)	0.9516 (0.0068)	0.0083 (0.0004)	992
Weibull	0.5765	0.0089	0.0918 (0.0021)	0.0002 (0.0029)	0.9517 (0.0068)	0.0084 (0.0004)	994
Gompertz	0.5814	0.0090	0.0939 (0.0033)	0.0052 (0.0046)	0.9463 (0.0111)	0.0088 (0.0006)	410
RP (3)	0.5755	0.0089	0.0917 (0.0021)	-0.0008 (0.0029)	0.9510 (0.0068)	0.0084 (0.0004)	1000
RP (5)	0.5756	0.0089	0.0917 (0.0021)	-0.0007 (0.0029)	0.9500 (0.0069)	0.0084 (0.0004)	1000
RP (9)	0.5755	0.0089	0.0917 (0.0021)	-0.0007 (0.0029)	0.9510 (0.0068)	0.0084 (0.0004)	1000
RP (P)	0.5755	0.0089	0.0917 (0.0021)	-0.0007 (0.0029)	0.9540 (0.0066)	0.0084 (0.0004)	1000
FP (W)	0.5766	0.0084	0.0919 (0.0021)	0.0004 (0.0029)	0.9439 (0.0073)	0.0084 (0.0004)	981
FP (k=10)	0.5707	0.0084	0.0920 (0.0021)	-0.0055 (0.0029)	0.9448 (0.0073)	0.0085 (0.0004)	979
FP (k=10000)	0.5745	0.0077	0.0916 (0.0021)	-0.0017 (0.0029)	0.9339 (0.0079)	0.0084 (0.0004)	998

Table 162: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5969	0.0097	0.0970 (0.0022)	0.0060 (0.0031)	0.9608 (0.0062)	0.0094 (0.0004)	995
Exp	0.6186	0.0093	0.1006 (0.0022)	0.0278 (0.0032)	0.9370 (0.0077)	0.0109 (0.0005)	1000
Weibull	0.5977	0.0105	0.0971 (0.0022)	0.0069 (0.0031)	0.9680 (0.0056)	0.0095 (0.0004)	1000
Gompertz	0.6297	0.0093	0.1059 (0.0040)	0.0388 (0.0056)	0.9093 (0.0153)	0.0127 (0.0009)	353
RP (3)	0.5975	0.0106	0.0970 (0.0022)	0.0067 (0.0031)	0.9689 (0.0055)	0.0094 (0.0004)	998
RP (5)	0.5972	0.0106	0.0971 (0.0022)	0.0064 (0.0031)	0.9670 (0.0056)	0.0095 (0.0004)	1000
RP (9)	0.5973	0.0106	0.0972 (0.0022)	0.0065 (0.0031)	0.9680 (0.0056)	0.0095 (0.0004)	999
RP (P)	0.5976	0.0105	0.0972 (0.0022)	0.0067 (0.0031)	0.9679 (0.0056)	0.0095 (0.0004)	997
FP (W)	0.5977	0.0097	0.0971 (0.0022)	0.0069 (0.0031)	0.9590 (0.0063)	0.0095 (0.0004)	1000
FP (k=10)	0.5875	0.0097	0.0975 (0.0022)	-0.0033 (0.0031)	0.9570 (0.0064)	0.0095 (0.0004)	1000
FP (k=10000)	0.6001	0.0084	0.0981 (0.0022)	0.0093 (0.0031)	0.9420 (0.0074)	0.0097 (0.0004)	1000
Model frailty: Normal							
Cox	0.5989	0.0097	0.0974 (0.0022)	0.0081 (0.0031)	0.9600 (0.0062)	0.0095 (0.0004)	1000
Exp	0.6143	0.0092	0.1001 (0.0022)	0.0235 (0.0032)	0.9355 (0.0078)	0.0106 (0.0004)	993
Weibull	0.5929	0.0103	0.0966 (0.0022)	0.0021 (0.0031)	0.9677 (0.0056)	0.0093 (0.0004)	991
Gompertz	0.6247	0.0092	0.1019 (0.0041)	0.0339 (0.0058)	0.9231 (0.0151)	0.0115 (0.0009)	312
RP (3)	0.5913	0.0103	0.0963 (0.0022)	0.0004 (0.0030)	0.9690 (0.0055)	0.0093 (0.0004)	1000
RP (5)	0.5913	0.0103	0.0963 (0.0022)	0.0004 (0.0030)	0.9690 (0.0055)	0.0093 (0.0004)	1000
RP (9)	0.5913	0.0103	0.0964 (0.0022)	0.0005 (0.0030)	0.9690 (0.0055)	0.0093 (0.0004)	1000
RP (P)	0.5915	0.0103	0.0963 (0.0022)	0.0007 (0.0030)	0.9700 (0.0054)	0.0093 (0.0004)	1000
FP (W)	0.5916	0.0093	0.0959 (0.0022)	0.0008 (0.0031)	0.9621 (0.0061)	0.0092 (0.0004)	977
FP (k=10)	0.5803	0.0092	0.0967 (0.0022)	-0.0106 (0.0031)	0.9528 (0.0067)	0.0094 (0.0004)	996
FP (k=10000)	0.5960	0.0084	0.0976 (0.0022)	0.0052 (0.0031)	0.9450 (0.0072)	0.0095 (0.0004)	1000

Table 163: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5459	0.0072	0.0828 (0.0019)	0.0022 (0.0026)	0.9559 (0.0065)	0.0069 (0.0003)	997
Exp	0.5184	0.0082	0.0791 (0.0018)	-0.0253 (0.0025)	0.9650 (0.0058)	0.0069 (0.0003)	1000
Weibull	0.5356	0.0072	0.0815 (0.0018)	-0.0081 (0.0026)	0.9590 (0.0063)	0.0067 (0.0003)	1000
Gompertz	0.5270	0.0081	0.0846 (0.0032)	-0.0167 (0.0046)	0.9589 (0.0107)	0.0074 (0.0006)	341
RP (3)	0.5451	0.0069	0.0828 (0.0019)	0.0014 (0.0026)	0.9528 (0.0067)	0.0068 (0.0003)	996
RP (5)	0.5458	0.0070	0.0828 (0.0019)	0.0021 (0.0026)	0.9530 (0.0067)	0.0069 (0.0003)	999
RP (9)	0.5461	0.0070	0.0828 (0.0019)	0.0023 (0.0026)	0.9540 (0.0066)	0.0069 (0.0003)	999
RP (P)	0.5432	0.0070	0.0825 (0.0019)	-0.0005 (0.0026)	0.9557 (0.0065)	0.0068 (0.0003)	993
FP (W)	0.5356	0.0075	0.0815 (0.0018)	-0.0081 (0.0026)	0.9640 (0.0059)	0.0067 (0.0003)	1000
FP (k=10)	0.5437	0.0073	0.0829 (0.0019)	0.0000 (0.0026)	0.9550 (0.0066)	0.0069 (0.0003)	1000
FP (k=10000)	0.5420	0.0063	0.0826 (0.0018)	-0.0017 (0.0026)	0.9370 (0.0077)	0.0068 (0.0003)	1000
Model frailty: Normal							
Cox	0.5483	0.0072	0.0829 (0.0019)	0.0046 (0.0026)	0.9560 (0.0065)	0.0069 (0.0003)	1000
Exp	0.5207	0.0084	0.0795 (0.0018)	-0.0230 (0.0025)	0.9698 (0.0054)	0.0068 (0.0003)	995
Weibull	0.5414	0.0074	0.0825 (0.0019)	-0.0023 (0.0026)	0.9566 (0.0065)	0.0068 (0.0003)	990
Gompertz	0.5288	0.0083	0.0820 (0.0024)	-0.0149 (0.0033)	0.9719 (0.0067)	0.0069 (0.0004)	604
RP (3)	0.5491	0.0071	0.0832 (0.0019)	0.0054 (0.0026)	0.9510 (0.0068)	0.0069 (0.0003)	1000
RP (5)	0.5495	0.0071	0.0832 (0.0019)	0.0058 (0.0026)	0.9530 (0.0067)	0.0070 (0.0003)	1000
RP (9)	0.5497	0.0071	0.0832 (0.0019)	0.0060 (0.0026)	0.9520 (0.0068)	0.0070 (0.0003)	1000
RP (P)	0.5472	0.0071	0.0829 (0.0019)	0.0035 (0.0026)	0.9540 (0.0066)	0.0069 (0.0003)	1000
FP (W)	0.5408	0.0075	0.0820 (0.0019)	-0.0029 (0.0026)	0.9579 (0.0064)	0.0067 (0.0003)	975
FP (k=10)	0.5464	0.0072	0.0832 (0.0019)	0.0027 (0.0026)	0.9537 (0.0067)	0.0069 (0.0003)	993
FP (k=10000)	0.5469	0.0064	0.0831 (0.0019)	0.0032 (0.0026)	0.9349 (0.0078)	0.0069 (0.0003)	998

Table 164: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5164	0.0067	0.0800 (0.0018)	-0.0016 (0.0025)	0.9620 (0.0061)	0.0064 (0.0003)	999
Exp	0.4813	0.0090	0.0751 (0.0017)	-0.0367 (0.0024)	0.9800 (0.0044)	0.0070 (0.0003)	1000
Weibull	0.5265	0.0063	0.0821 (0.0018)	0.0085 (0.0026)	0.9460 (0.0071)	0.0068 (0.0003)	1000
Gompertz	0.5183	0.0074	0.0863 (0.0020)	0.0003 (0.0028)	0.9535 (0.0068)	0.0074 (0.0003)	947
RP (3)	0.5158	0.0065	0.0795 (0.0018)	-0.0022 (0.0025)	0.9608 (0.0062)	0.0063 (0.0003)	994
RP (5)	0.5167	0.0065	0.0799 (0.0018)	-0.0013 (0.0025)	0.9620 (0.0061)	0.0064 (0.0003)	999
RP (9)	0.5165	0.0065	0.0801 (0.0018)	-0.0015 (0.0025)	0.9608 (0.0061)	0.0064 (0.0003)	996
RP (P)	0.5171	0.0065	0.0803 (0.0018)	-0.0009 (0.0025)	0.9597 (0.0062)	0.0064 (0.0003)	992
FP (W)	0.5265	0.0064	0.0821 (0.0018)	0.0084 (0.0026)	0.9499 (0.0069)	0.0068 (0.0003)	998
FP (k=10)	0.5036	0.0067	0.0801 (0.0018)	-0.0144 (0.0025)	0.9560 (0.0065)	0.0066 (0.0003)	1000
FP (k=10000)	0.5313	0.0053	0.0842 (0.0019)	0.0133 (0.0027)	0.9140 (0.0089)	0.0073 (0.0003)	1000
Model frailty: Normal							
Cox	0.5200	0.0067	0.0806 (0.0018)	0.0020 (0.0026)	0.9580 (0.0063)	0.0065 (0.0003)	1000
Exp	0.4795	0.0090	0.0753 (0.0017)	-0.0385 (0.0024)	0.9759 (0.0049)	0.0072 (0.0003)	996
Weibull	0.5301	0.0064	0.0830 (0.0019)	0.0120 (0.0026)	0.9453 (0.0072)	0.0070 (0.0003)	988
Gompertz	0.5157	0.0075	0.0864 (0.0021)	-0.0023 (0.0029)	0.9524 (0.0072)	0.0075 (0.0003)	882
RP (3)	0.5203	0.0066	0.0807 (0.0018)	0.0022 (0.0026)	0.9600 (0.0062)	0.0065 (0.0003)	1000
RP (5)	0.5208	0.0066	0.0809 (0.0018)	0.0028 (0.0026)	0.9590 (0.0063)	0.0065 (0.0003)	1000
RP (9)	0.5209	0.0066	0.0810 (0.0018)	0.0028 (0.0026)	0.9590 (0.0063)	0.0066 (0.0003)	1000
RP (P)	0.5212	0.0066	0.0810 (0.0018)	0.0032 (0.0026)	0.9580 (0.0063)	0.0066 (0.0003)	1000
FP (W)	0.5288	0.0064	0.0830 (0.0019)	0.0108 (0.0027)	0.9473 (0.0073)	0.0070 (0.0003)	948
FP (k=10)	0.5106	0.0066	0.0808 (0.0018)	-0.0074 (0.0026)	0.9576 (0.0064)	0.0066 (0.0003)	991
FP (k=10000)	0.5308	0.0054	0.0853 (0.0019)	0.0128 (0.0027)	0.9193 (0.0087)	0.0074 (0.0003)	991

Table 165: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5822	0.0092	0.1004 (0.0023)	-0.0007 (0.0032)	0.9437 (0.0073)	0.0101 (0.0005)	994
Exp	0.5951	0.0091	0.1026 (0.0023)	0.0122 (0.0032)	0.9310 (0.0080)	0.0107 (0.0005)	1000
Weibull	0.5858	0.0097	0.1010 (0.0023)	0.0029 (0.0032)	0.9480 (0.0070)	0.0102 (0.0005)	1000
Gompertz	0.5973	0.0092	0.1027 (0.0038)	0.0144 (0.0054)	0.9286 (0.0135)	0.0107 (0.0009)	364
RP (3)	0.5837	0.0097	0.1005 (0.0022)	0.0008 (0.0032)	0.9489 (0.0070)	0.0101 (0.0005)	999
RP (5)	0.5831	0.0097	0.1004 (0.0022)	0.0002 (0.0032)	0.9490 (0.0070)	0.0101 (0.0005)	1000
RP (9)	0.5829	0.0097	0.1003 (0.0022)	-0.0000 (0.0032)	0.9490 (0.0070)	0.0101 (0.0005)	1000
RP (P)	0.5840	0.0097	0.1005 (0.0022)	0.0010 (0.0032)	0.9490 (0.0070)	0.0101 (0.0005)	1000
FP (W)	0.5858	0.0092	0.1010 (0.0023)	0.0029 (0.0032)	0.9430 (0.0073)	0.0102 (0.0005)	1000
FP (k=10)	0.5780	0.0093	0.1005 (0.0022)	-0.0049 (0.0032)	0.9460 (0.0071)	0.0101 (0.0005)	1000
FP (k=10000)	0.5805	0.0082	0.1000 (0.0022)	-0.0024 (0.0032)	0.9270 (0.0082)	0.0100 (0.0005)	1000
Model frailty: Normal							
Cox	0.5848	0.0092	0.1010 (0.0023)	0.0018 (0.0032)	0.9430 (0.0073)	0.0102 (0.0005)	1000
Exp	0.5918	0.0091	0.1027 (0.0023)	0.0089 (0.0033)	0.9304 (0.0081)	0.0106 (0.0005)	992
Weibull	0.5825	0.0096	0.1012 (0.0023)	-0.0005 (0.0032)	0.9446 (0.0073)	0.0102 (0.0005)	993
Gompertz	0.5909	0.0091	0.1064 (0.0041)	0.0079 (0.0058)	0.9215 (0.0148)	0.0114 (0.0010)	331
RP (3)	0.5806	0.0096	0.1006 (0.0022)	-0.0023 (0.0032)	0.9460 (0.0071)	0.0101 (0.0005)	1000
RP (5)	0.5804	0.0096	0.1006 (0.0022)	-0.0025 (0.0032)	0.9430 (0.0073)	0.0101 (0.0005)	1000
RP (9)	0.5803	0.0096	0.1006 (0.0022)	-0.0026 (0.0032)	0.9450 (0.0072)	0.0101 (0.0005)	1000
RP (P)	0.5806	0.0096	0.1006 (0.0022)	-0.0024 (0.0032)	0.9440 (0.0073)	0.0101 (0.0005)	1000
FP (W)	0.5804	0.0088	0.1002 (0.0023)	-0.0026 (0.0032)	0.9420 (0.0075)	0.0100 (0.0005)	966
FP (k=10)	0.5737	0.0089	0.1009 (0.0023)	-0.0092 (0.0032)	0.9374 (0.0077)	0.0103 (0.0005)	991
FP (k=10000)	0.5782	0.0083	0.0999 (0.0022)	-0.0048 (0.0032)	0.9320 (0.0080)	0.0100 (0.0005)	1000

Table 166: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5903	0.0087	0.0970 (0.0022)	-0.0056 (0.0031)	0.9355 (0.0078)	0.0094 (0.0004)	992
Exp	0.5912	0.0082	0.0971 (0.0022)	-0.0047 (0.0031)	0.9330 (0.0079)	0.0094 (0.0004)	1000
Weibull	0.5904	0.0083	0.0971 (0.0022)	-0.0055 (0.0031)	0.9330 (0.0079)	0.0094 (0.0004)	1000
Gompertz	0.5971	0.0082	0.0979 (0.0035)	0.0012 (0.0049)	0.9340 (0.0125)	0.0096 (0.0006)	394
RP (3)	0.5906	0.0083	0.0974 (0.0022)	-0.0053 (0.0031)	0.9317 (0.0080)	0.0095 (0.0004)	995
RP (5)	0.5906	0.0083	0.0972 (0.0022)	-0.0054 (0.0031)	0.9319 (0.0080)	0.0095 (0.0004)	998
RP (9)	0.5907	0.0083	0.0972 (0.0022)	-0.0052 (0.0031)	0.9310 (0.0080)	0.0095 (0.0004)	1000
RP (P)	0.5905	0.0083	0.0971 (0.0022)	-0.0054 (0.0031)	0.9330 (0.0079)	0.0094 (0.0004)	1000
FP (W)	0.5905	0.0087	0.0971 (0.0022)	-0.0054 (0.0031)	0.9389 (0.0076)	0.0094 (0.0004)	999
FP (k=10)	0.5884	0.0088	0.0973 (0.0022)	-0.0075 (0.0031)	0.9360 (0.0077)	0.0095 (0.0004)	1000
FP (k=10000)	0.5886	0.0075	0.0971 (0.0022)	-0.0073 (0.0031)	0.9110 (0.0090)	0.0095 (0.0004)	1000
Model frailty: Normal							
Cox	0.5977	0.0088	0.0976 (0.0022)	0.0017 (0.0031)	0.9360 (0.0077)	0.0095 (0.0004)	1000
Exp	0.6012	0.0085	0.0973 (0.0022)	0.0053 (0.0031)	0.9354 (0.0078)	0.0095 (0.0004)	991
Weibull	0.6013	0.0085	0.0978 (0.0022)	0.0054 (0.0031)	0.9336 (0.0079)	0.0096 (0.0004)	994
Gompertz	0.6060	0.0085	0.0985 (0.0036)	0.0101 (0.0051)	0.9299 (0.0133)	0.0098 (0.0007)	371
RP (3)	0.6004	0.0085	0.0980 (0.0022)	0.0044 (0.0031)	0.9330 (0.0079)	0.0096 (0.0004)	1000
RP (5)	0.6003	0.0085	0.0979 (0.0022)	0.0044 (0.0031)	0.9320 (0.0080)	0.0096 (0.0004)	1000
RP (9)	0.6003	0.0085	0.0979 (0.0022)	0.0044 (0.0031)	0.9320 (0.0080)	0.0096 (0.0004)	1000
RP (P)	0.6004	0.0085	0.0979 (0.0022)	0.0045 (0.0031)	0.9340 (0.0079)	0.0096 (0.0004)	1000
FP (W)	0.6012	0.0087	0.0983 (0.0022)	0.0053 (0.0032)	0.9357 (0.0079)	0.0097 (0.0004)	964
FP (k=10)	0.5971	0.0088	0.0981 (0.0022)	0.0012 (0.0031)	0.9387 (0.0077)	0.0096 (0.0004)	978
FP (k=10000)	0.5991	0.0077	0.0979 (0.0022)	0.0032 (0.0031)	0.9198 (0.0086)	0.0096 (0.0004)	998

Table 167: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6228	0.0101	0.1009 (0.0023)	-0.0010 (0.0032)	0.9508 (0.0069)	0.0102 (0.0005)	996
Exp	0.6416	0.0086	0.1047 (0.0023)	0.0178 (0.0033)	0.9210 (0.0085)	0.0113 (0.0005)	1000
Weibull	0.6232	0.0101	0.1011 (0.0023)	-0.0006 (0.0032)	0.9490 (0.0070)	0.0102 (0.0005)	1000
Gompertz	0.6383	0.0087	0.1019 (0.0049)	0.0145 (0.0069)	0.9591 (0.0134)	0.0106 (0.0009)	220
RP (3)	0.6230	0.0102	0.1011 (0.0023)	-0.0008 (0.0032)	0.9519 (0.0068)	0.0102 (0.0005)	998
RP (5)	0.6229	0.0102	0.1011 (0.0023)	-0.0009 (0.0032)	0.9500 (0.0069)	0.0102 (0.0005)	1000
RP (9)	0.6229	0.0102	0.1011 (0.0023)	-0.0009 (0.0032)	0.9500 (0.0069)	0.0102 (0.0005)	1000
RP (P)	0.6230	0.0101	0.1010 (0.0023)	-0.0008 (0.0032)	0.9480 (0.0070)	0.0102 (0.0005)	1000
FP (W)	0.6232	0.0101	0.1011 (0.0023)	-0.0006 (0.0032)	0.9520 (0.0068)	0.0102 (0.0005)	1000
FP (k=10)	0.6140	0.0101	0.1018 (0.0023)	-0.0098 (0.0032)	0.9490 (0.0070)	0.0104 (0.0005)	1000
FP (k=10000)	0.6234	0.0084	0.1017 (0.0023)	-0.0004 (0.0032)	0.9260 (0.0083)	0.0103 (0.0005)	1000
Model frailty: Normal							
Cox	0.6279	0.0101	0.1011 (0.0023)	0.0041 (0.0032)	0.9480 (0.0070)	0.0102 (0.0005)	1000
Exp	0.6540	0.0089	0.1051 (0.0024)	0.0302 (0.0033)	0.9174 (0.0087)	0.0120 (0.0005)	993
Weibull	0.6290	0.0102	0.1011 (0.0023)	0.0052 (0.0032)	0.9486 (0.0070)	0.0102 (0.0005)	992
Gompertz	0.6538	0.0089	0.1024 (0.0039)	0.0300 (0.0055)	0.9415 (0.0127)	0.0114 (0.0008)	342
RP (3)	0.6272	0.0102	0.1008 (0.0023)	0.0034 (0.0032)	0.9490 (0.0070)	0.0102 (0.0005)	1000
RP (5)	0.6272	0.0102	0.1009 (0.0023)	0.0034 (0.0032)	0.9490 (0.0070)	0.0102 (0.0005)	1000
RP (9)	0.6271	0.0102	0.1009 (0.0023)	0.0033 (0.0032)	0.9480 (0.0070)	0.0102 (0.0005)	1000
RP (P)	0.6275	0.0102	0.1009 (0.0023)	0.0037 (0.0032)	0.9490 (0.0070)	0.0102 (0.0005)	1000
FP (W)	0.6259	0.0099	0.1013 (0.0023)	0.0021 (0.0033)	0.9471 (0.0073)	0.0103 (0.0005)	946
FP (k=10)	0.6186	0.0099	0.1014 (0.0023)	-0.0052 (0.0032)	0.9453 (0.0072)	0.0103 (0.0005)	988
FP (k=10000)	0.6330	0.0087	0.1020 (0.0023)	0.0092 (0.0032)	0.9298 (0.0081)	0.0105 (0.0005)	997

Table 168: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5316	0.0068	0.0818 (0.0018)	-0.0134 (0.0026)	0.9465 (0.0071)	0.0069 (0.0003)	991
Exp	0.5080	0.0073	0.0784 (0.0018)	-0.0369 (0.0025)	0.9470 (0.0071)	0.0075 (0.0004)	1000
Weibull	0.5186	0.0064	0.0799 (0.0018)	-0.0264 (0.0025)	0.9350 (0.0078)	0.0071 (0.0003)	1000
Gompertz	0.5180	0.0072	0.0784 (0.0028)	-0.0269 (0.0039)	0.9505 (0.0108)	0.0069 (0.0006)	404
RP (3)	0.5298	0.0061	0.0815 (0.0018)	-0.0152 (0.0026)	0.9380 (0.0076)	0.0069 (0.0003)	1000
RP (5)	0.5310	0.0062	0.0818 (0.0018)	-0.0139 (0.0026)	0.9389 (0.0076)	0.0069 (0.0003)	999
RP (9)	0.5315	0.0062	0.0818 (0.0018)	-0.0134 (0.0026)	0.9390 (0.0076)	0.0069 (0.0003)	1000
RP (P)	0.5276	0.0062	0.0812 (0.0018)	-0.0174 (0.0026)	0.9390 (0.0076)	0.0069 (0.0003)	1000
FP (W)	0.5186	0.0071	0.0799 (0.0018)	-0.0264 (0.0025)	0.9510 (0.0068)	0.0071 (0.0003)	1000
FP (k=10)	0.5295	0.0068	0.0818 (0.0018)	-0.0154 (0.0026)	0.9470 (0.0071)	0.0069 (0.0003)	1000
FP (k=10000)	0.5262	0.0058	0.0813 (0.0018)	-0.0188 (0.0026)	0.9310 (0.0080)	0.0070 (0.0003)	1000
Model frailty: Normal							
Cox	0.5396	0.0069	0.0820 (0.0018)	-0.0054 (0.0026)	0.9540 (0.0066)	0.0068 (0.0003)	1000
Exp	0.5164	0.0076	0.0791 (0.0018)	-0.0286 (0.0025)	0.9618 (0.0061)	0.0071 (0.0003)	995
Weibull	0.5337	0.0067	0.0811 (0.0018)	-0.0113 (0.0026)	0.9506 (0.0069)	0.0067 (0.0003)	992
Gompertz	0.5245	0.0075	0.0825 (0.0024)	-0.0204 (0.0033)	0.9556 (0.0084)	0.0072 (0.0005)	608
RP (3)	0.5436	0.0064	0.0826 (0.0018)	-0.0014 (0.0026)	0.9450 (0.0072)	0.0068 (0.0003)	1000
RP (5)	0.5446	0.0064	0.0828 (0.0019)	-0.0004 (0.0026)	0.9460 (0.0071)	0.0068 (0.0003)	1000
RP (9)	0.5450	0.0064	0.0828 (0.0019)	0.0001 (0.0026)	0.9450 (0.0072)	0.0068 (0.0003)	1000
RP (P)	0.5415	0.0065	0.0822 (0.0018)	-0.0035 (0.0026)	0.9460 (0.0071)	0.0068 (0.0003)	1000
FP (W)	0.5332	0.0073	0.0814 (0.0019)	-0.0118 (0.0026)	0.9606 (0.0063)	0.0068 (0.0003)	964
FP (k=10)	0.5427	0.0070	0.0830 (0.0019)	-0.0022 (0.0026)	0.9534 (0.0067)	0.0069 (0.0003)	987
FP (k=10000)	0.5419	0.0061	0.0820 (0.0018)	-0.0031 (0.0026)	0.9425 (0.0074)	0.0067 (0.0003)	992

Table 169: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5052	0.0064	0.0772 (0.0017)	-0.0165 (0.0024)	0.9486 (0.0070)	0.0062 (0.0003)	993
Exp	0.4791	0.0085	0.0742 (0.0017)	-0.0425 (0.0023)	0.9720 (0.0052)	0.0073 (0.0003)	1000
Weibull	0.5165	0.0056	0.0792 (0.0018)	-0.0051 (0.0025)	0.9380 (0.0076)	0.0063 (0.0003)	1000
Gompertz	0.5200	0.0066	0.0816 (0.0018)	-0.0016 (0.0026)	0.9525 (0.0068)	0.0067 (0.0003)	990
RP (3)	0.5028	0.0057	0.0768 (0.0017)	-0.0188 (0.0024)	0.9389 (0.0076)	0.0062 (0.0003)	999
RP (5)	0.5049	0.0058	0.0772 (0.0017)	-0.0168 (0.0024)	0.9380 (0.0076)	0.0062 (0.0003)	1000
RP (9)	0.5054	0.0058	0.0772 (0.0017)	-0.0163 (0.0024)	0.9380 (0.0076)	0.0062 (0.0003)	1000
RP (P)	0.5056	0.0058	0.0771 (0.0017)	-0.0161 (0.0024)	0.9398 (0.0075)	0.0062 (0.0003)	996
FP (W)	0.5165	0.0061	0.0792 (0.0018)	-0.0052 (0.0025)	0.9469 (0.0071)	0.0063 (0.0003)	999
FP (k=10)	0.4921	0.0064	0.0781 (0.0017)	-0.0296 (0.0025)	0.9410 (0.0075)	0.0070 (0.0003)	1000
FP (k=10000)	0.5242	0.0050	0.0816 (0.0018)	0.0025 (0.0026)	0.9100 (0.0090)	0.0067 (0.0003)	1000
Model frailty: Normal							
Cox	0.5148	0.0065	0.0775 (0.0017)	-0.0069 (0.0025)	0.9610 (0.0061)	0.0061 (0.0003)	1000
Exp	0.4811	0.0086	0.0743 (0.0017)	-0.0406 (0.0024)	0.9730 (0.0051)	0.0072 (0.0003)	999
Weibull	0.5308	0.0058	0.0800 (0.0018)	0.0091 (0.0025)	0.9373 (0.0077)	0.0065 (0.0003)	989
Gompertz	0.5257	0.0068	0.0824 (0.0019)	0.0040 (0.0027)	0.9572 (0.0065)	0.0068 (0.0003)	959
RP (3)	0.5177	0.0060	0.0777 (0.0017)	-0.0040 (0.0025)	0.9530 (0.0067)	0.0061 (0.0003)	1000
RP (5)	0.5195	0.0060	0.0781 (0.0017)	-0.0021 (0.0025)	0.9530 (0.0067)	0.0061 (0.0003)	1000
RP (9)	0.5199	0.0060	0.0782 (0.0017)	-0.0017 (0.0025)	0.9520 (0.0068)	0.0061 (0.0003)	1000
RP (P)	0.5202	0.0060	0.0782 (0.0017)	-0.0015 (0.0025)	0.9530 (0.0067)	0.0061 (0.0003)	1000
FP (W)	0.5299	0.0062	0.0792 (0.0018)	0.0083 (0.0026)	0.9544 (0.0068)	0.0063 (0.0003)	943
FP (k=10)	0.5094	0.0065	0.0786 (0.0018)	-0.0123 (0.0025)	0.9549 (0.0066)	0.0063 (0.0003)	997
FP (k=10000)	0.5381	0.0052	0.0826 (0.0019)	0.0165 (0.0026)	0.8963 (0.0097)	0.0071 (0.0003)	993

Table 170: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6010	0.0093	0.0972 (0.0022)	-0.0046 (0.0031)	0.9518 (0.0068)	0.0095 (0.0004)	996
Exp	0.6148	0.0084	0.0994 (0.0022)	0.0092 (0.0031)	0.9280 (0.0082)	0.0100 (0.0005)	1000
Weibull	0.6066	0.0091	0.0979 (0.0022)	0.0010 (0.0031)	0.9460 (0.0071)	0.0096 (0.0004)	1000
Gompertz	0.6024	0.0084	0.0908 (0.0051)	-0.0032 (0.0072)	0.9490 (0.0176)	0.0082 (0.0010)	157
RP (3)	0.6038	0.0091	0.0974 (0.0022)	-0.0018 (0.0031)	0.9499 (0.0069)	0.0095 (0.0004)	999
RP (5)	0.6019	0.0090	0.0971 (0.0022)	-0.0036 (0.0031)	0.9490 (0.0070)	0.0094 (0.0004)	1000
RP (9)	0.6015	0.0090	0.0970 (0.0022)	-0.0041 (0.0031)	0.9490 (0.0070)	0.0094 (0.0004)	1000
RP (P)	0.6037	0.0091	0.0974 (0.0022)	-0.0019 (0.0031)	0.9499 (0.0069)	0.0095 (0.0004)	998
FP (W)	0.6066	0.0094	0.0979 (0.0022)	0.0010 (0.0031)	0.9510 (0.0068)	0.0096 (0.0004)	1000
FP (k=10)	0.5980	0.0094	0.0972 (0.0022)	-0.0076 (0.0031)	0.9490 (0.0070)	0.0095 (0.0004)	1000
FP (k=10000)	0.6004	0.0082	0.0971 (0.0022)	-0.0052 (0.0031)	0.9310 (0.0080)	0.0094 (0.0004)	1000
Model frailty: Normal							
Cox	0.6079	0.0094	0.0973 (0.0022)	0.0023 (0.0031)	0.9500 (0.0069)	0.0095 (0.0004)	1000
Exp	0.6254	0.0087	0.1001 (0.0022)	0.0198 (0.0032)	0.9225 (0.0085)	0.0104 (0.0005)	994
Weibull	0.6148	0.0093	0.0987 (0.0022)	0.0092 (0.0031)	0.9427 (0.0074)	0.0098 (0.0004)	994
Gompertz	0.6233	0.0087	0.1014 (0.0038)	0.0177 (0.0054)	0.9093 (0.0153)	0.0106 (0.0009)	353
RP (3)	0.6118	0.0092	0.0979 (0.0022)	0.0062 (0.0031)	0.9470 (0.0071)	0.0096 (0.0004)	1000
RP (5)	0.6103	0.0092	0.0977 (0.0022)	0.0048 (0.0031)	0.9470 (0.0071)	0.0096 (0.0004)	1000
RP (9)	0.6100	0.0092	0.0976 (0.0022)	0.0044 (0.0031)	0.9470 (0.0071)	0.0095 (0.0004)	1000
RP (P)	0.6114	0.0092	0.0979 (0.0022)	0.0058 (0.0031)	0.9450 (0.0072)	0.0096 (0.0004)	1000
FP (W)	0.6140	0.0093	0.0979 (0.0023)	0.0084 (0.0032)	0.9468 (0.0073)	0.0097 (0.0005)	939
FP (k=10)	0.6048	0.0093	0.0975 (0.0022)	-0.0008 (0.0031)	0.9488 (0.0071)	0.0095 (0.0004)	976
FP (k=10000)	0.6092	0.0084	0.0974 (0.0022)	0.0037 (0.0031)	0.9357 (0.0078)	0.0095 (0.0004)	995

Table 171: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5043	0.0074	0.0912 (0.0020)	0.0006 (0.0029)	0.9436 (0.0073)	0.0083 (0.0004)	993
Exp	0.5050	0.0079	0.0909 (0.0020)	0.0013 (0.0029)	0.9530 (0.0067)	0.0083 (0.0004)	1000
Weibull	0.5053	0.0079	0.0911 (0.0020)	0.0016 (0.0029)	0.9530 (0.0067)	0.0083 (0.0004)	1000
Gompertz	0.5109	0.0079	0.0930 (0.0033)	0.0072 (0.0047)	0.9520 (0.0107)	0.0087 (0.0006)	396
RP (3)	0.5052	0.0079	0.0912 (0.0020)	0.0015 (0.0029)	0.9557 (0.0065)	0.0083 (0.0004)	993
RP (5)	0.5051	0.0079	0.0911 (0.0020)	0.0014 (0.0029)	0.9539 (0.0066)	0.0083 (0.0004)	998
RP (9)	0.5054	0.0079	0.0911 (0.0020)	0.0017 (0.0029)	0.9529 (0.0067)	0.0083 (0.0004)	997
RP (P)	0.5056	0.0079	0.0906 (0.0021)	0.0019 (0.0029)	0.9570 (0.0065)	0.0082 (0.0004)	977
FP (W)	0.5053	0.0074	0.0911 (0.0020)	0.0016 (0.0029)	0.9410 (0.0075)	0.0083 (0.0004)	1000
FP (k=10)	0.5018	0.0074	0.0911 (0.0020)	-0.0020 (0.0029)	0.9430 (0.0073)	0.0083 (0.0004)	1000
FP (k=10000)	0.5031	0.0066	0.0910 (0.0020)	-0.0006 (0.0029)	0.9230 (0.0084)	0.0083 (0.0004)	1000
Model frailty: Normal							
Cox	0.5049	0.0072	0.0914 (0.0020)	0.0012 (0.0029)	0.9360 (0.0077)	0.0083 (0.0004)	1000
Exp	0.4981	0.0077	0.0903 (0.0020)	-0.0056 (0.0029)	0.9457 (0.0072)	0.0082 (0.0004)	994
Weibull	0.4994	0.0077	0.0910 (0.0020)	-0.0043 (0.0029)	0.9456 (0.0072)	0.0083 (0.0004)	992
Gompertz	0.5052	0.0077	0.0924 (0.0032)	0.0015 (0.0046)	0.9466 (0.0111)	0.0085 (0.0006)	412
RP (3)	0.4967	0.0076	0.0905 (0.0020)	-0.0070 (0.0029)	0.9440 (0.0073)	0.0082 (0.0004)	1000
RP (5)	0.4967	0.0076	0.0905 (0.0020)	-0.0070 (0.0029)	0.9460 (0.0071)	0.0082 (0.0004)	1000
RP (9)	0.4968	0.0076	0.0906 (0.0020)	-0.0069 (0.0029)	0.9450 (0.0072)	0.0082 (0.0004)	1000
RP (P)	0.4968	0.0076	0.0905 (0.0020)	-0.0069 (0.0029)	0.9440 (0.0073)	0.0082 (0.0004)	1000
FP (W)	0.4973	0.0069	0.0906 (0.0020)	-0.0064 (0.0029)	0.9290 (0.0082)	0.0082 (0.0004)	986
FP (k=10)	0.4916	0.0069	0.0901 (0.0020)	-0.0121 (0.0029)	0.9321 (0.0081)	0.0083 (0.0004)	972
FP (k=10000)	0.4977	0.0065	0.0904 (0.0020)	-0.0060 (0.0029)	0.9209 (0.0085)	0.0082 (0.0004)	999

Table 172: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5126	0.0083	0.0991 (0.0022)	-0.0016 (0.0031)	0.9337 (0.0079)	0.0098 (0.0004)	996
Exp	0.5325	0.0081	0.1028 (0.0023)	0.0183 (0.0033)	0.9110 (0.0090)	0.0109 (0.0005)	1000
Weibull	0.5141	0.0092	0.0991 (0.0022)	-0.0001 (0.0031)	0.9440 (0.0073)	0.0098 (0.0004)	1000
Gompertz	0.5308	0.0082	0.0977 (0.0039)	0.0166 (0.0056)	0.9256 (0.0149)	0.0098 (0.0008)	309
RP (3)	0.5138	0.0092	0.0990 (0.0022)	-0.0004 (0.0031)	0.9459 (0.0072)	0.0098 (0.0004)	999
RP (5)	0.5136	0.0092	0.0991 (0.0022)	-0.0006 (0.0031)	0.9449 (0.0072)	0.0098 (0.0004)	999
RP (9)	0.5136	0.0092	0.0991 (0.0022)	-0.0006 (0.0031)	0.9459 (0.0072)	0.0098 (0.0004)	999
RP (P)	0.5137	0.0092	0.0993 (0.0022)	-0.0005 (0.0031)	0.9447 (0.0072)	0.0098 (0.0004)	995
FP (W)	0.5141	0.0083	0.0991 (0.0022)	-0.0001 (0.0031)	0.9320 (0.0080)	0.0098 (0.0004)	1000
FP (k=10)	0.5044	0.0082	0.0993 (0.0022)	-0.0098 (0.0031)	0.9310 (0.0080)	0.0099 (0.0004)	1000
FP (k=10000)	0.5175	0.0073	0.1004 (0.0022)	0.0033 (0.0032)	0.9100 (0.0090)	0.0101 (0.0005)	1000
Model frailty: Normal							
Cox	0.5122	0.0081	0.0990 (0.0022)	-0.0020 (0.0031)	0.9260 (0.0083)	0.0098 (0.0004)	1000
Exp	0.5224	0.0078	0.1018 (0.0023)	0.0082 (0.0032)	0.9081 (0.0092)	0.0104 (0.0005)	990
Weibull	0.5034	0.0088	0.0976 (0.0022)	-0.0108 (0.0031)	0.9416 (0.0074)	0.0096 (0.0004)	993
Gompertz	0.5253	0.0079	0.0989 (0.0038)	0.0111 (0.0053)	0.9155 (0.0150)	0.0099 (0.0007)	343
RP (3)	0.5010	0.0088	0.0973 (0.0022)	-0.0132 (0.0031)	0.9420 (0.0074)	0.0096 (0.0004)	1000
RP (5)	0.5011	0.0088	0.0973 (0.0022)	-0.0132 (0.0031)	0.9430 (0.0073)	0.0096 (0.0004)	1000
RP (9)	0.5011	0.0088	0.0973 (0.0022)	-0.0132 (0.0031)	0.9420 (0.0074)	0.0096 (0.0004)	1000
RP (P)	0.5013	0.0087	0.0973 (0.0022)	-0.0129 (0.0031)	0.9420 (0.0074)	0.0096 (0.0004)	1000
FP (W)	0.5015	0.0076	0.0975 (0.0022)	-0.0127 (0.0031)	0.9248 (0.0085)	0.0097 (0.0004)	971
FP (k=10)	0.4899	0.0075	0.0970 (0.0022)	-0.0244 (0.0031)	0.9124 (0.0090)	0.0100 (0.0004)	993
FP (k=10000)	0.5062	0.0070	0.0997 (0.0022)	-0.0080 (0.0032)	0.8960 (0.0097)	0.0100 (0.0004)	1000

Table 173: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4809	0.0063	0.0761 (0.0017)	-0.0028 (0.0024)	0.9530 (0.0067)	0.0058 (0.0003)	999
Exp	0.4622	0.0075	0.0738 (0.0017)	-0.0215 (0.0023)	0.9710 (0.0053)	0.0059 (0.0003)	1000
Weibull	0.4752	0.0065	0.0752 (0.0017)	-0.0085 (0.0024)	0.9610 (0.0061)	0.0057 (0.0003)	1000
Gompertz	0.4619	0.0075	0.0721 (0.0023)	-0.0218 (0.0033)	0.9730 (0.0074)	0.0057 (0.0004)	481
RP (3)	0.4807	0.0063	0.0759 (0.0017)	-0.0030 (0.0024)	0.9590 (0.0063)	0.0058 (0.0003)	1000
RP (5)	0.4811	0.0063	0.0761 (0.0017)	-0.0027 (0.0024)	0.9579 (0.0064)	0.0058 (0.0003)	998
RP (9)	0.4812	0.0063	0.0761 (0.0017)	-0.0026 (0.0024)	0.9569 (0.0064)	0.0058 (0.0003)	997
RP (P)	0.4800	0.0064	0.0752 (0.0017)	-0.0037 (0.0024)	0.9622 (0.0061)	0.0057 (0.0003)	978
FP (W)	0.4752	0.0065	0.0752 (0.0017)	-0.0085 (0.0024)	0.9600 (0.0062)	0.0057 (0.0003)	1000
FP (k=10)	0.4789	0.0063	0.0760 (0.0017)	-0.0048 (0.0024)	0.9540 (0.0066)	0.0058 (0.0003)	1000
FP (k=10000)	0.4782	0.0056	0.0759 (0.0017)	-0.0055 (0.0024)	0.9450 (0.0072)	0.0058 (0.0003)	1000
Model frailty: Normal							
Cox	0.4844	0.0061	0.0768 (0.0017)	0.0006 (0.0024)	0.9490 (0.0070)	0.0059 (0.0003)	1000
Exp	0.4618	0.0075	0.0743 (0.0017)	-0.0220 (0.0024)	0.9678 (0.0056)	0.0060 (0.0003)	994
Weibull	0.4798	0.0066	0.0759 (0.0017)	-0.0040 (0.0024)	0.9626 (0.0060)	0.0058 (0.0003)	988
Gompertz	0.4640	0.0075	0.0740 (0.0024)	-0.0197 (0.0034)	0.9723 (0.0076)	0.0059 (0.0004)	470
RP (3)	0.4821	0.0063	0.0766 (0.0017)	-0.0017 (0.0024)	0.9490 (0.0070)	0.0059 (0.0003)	1000
RP (5)	0.4820	0.0063	0.0766 (0.0017)	-0.0017 (0.0024)	0.9500 (0.0069)	0.0059 (0.0003)	1000
RP (9)	0.4821	0.0063	0.0767 (0.0017)	-0.0017 (0.0024)	0.9510 (0.0068)	0.0059 (0.0003)	1000
RP (P)	0.4814	0.0064	0.0765 (0.0017)	-0.0024 (0.0024)	0.9520 (0.0068)	0.0059 (0.0003)	1000
FP (W)	0.4790	0.0063	0.0765 (0.0017)	-0.0048 (0.0024)	0.9536 (0.0067)	0.0059 (0.0003)	992
FP (k=10)	0.4781	0.0060	0.0766 (0.0017)	-0.0057 (0.0024)	0.9450 (0.0072)	0.0059 (0.0003)	1000
FP (k=10000)	0.4804	0.0056	0.0766 (0.0017)	-0.0033 (0.0024)	0.9400 (0.0075)	0.0059 (0.0003)	1000

Table 174: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4642	0.0058	0.0782 (0.0018)	0.0049 (0.0025)	0.9385 (0.0076)	0.0061 (0.0003)	992
Exp	0.4330	0.0081	0.0747 (0.0017)	-0.0262 (0.0024)	0.9740 (0.0050)	0.0063 (0.0003)	1000
Weibull	0.4698	0.0057	0.0799 (0.0018)	0.0106 (0.0025)	0.9280 (0.0082)	0.0065 (0.0003)	1000
Gompertz	0.4398	0.0080	0.0802 (0.0029)	-0.0194 (0.0041)	0.9532 (0.0108)	0.0068 (0.0005)	385
RP (3)	0.4632	0.0059	0.0782 (0.0018)	0.0040 (0.0025)	0.9384 (0.0076)	0.0061 (0.0003)	991
RP (5)	0.4639	0.0059	0.0787 (0.0018)	0.0047 (0.0025)	0.9367 (0.0077)	0.0062 (0.0003)	996
RP (9)	0.4638	0.0059	0.0786 (0.0018)	0.0046 (0.0025)	0.9376 (0.0077)	0.0062 (0.0003)	993
RP (P)	0.4649	0.0059	0.0789 (0.0018)	0.0057 (0.0025)	0.9355 (0.0079)	0.0063 (0.0003)	961
FP (W)	0.4699	0.0056	0.0797 (0.0018)	0.0107 (0.0025)	0.9258 (0.0083)	0.0065 (0.0003)	997
FP (k=10)	0.4502	0.0058	0.0788 (0.0018)	-0.0090 (0.0025)	0.9360 (0.0077)	0.0063 (0.0003)	1000
FP (k=10000)	0.4718	0.0047	0.0814 (0.0018)	0.0126 (0.0026)	0.8960 (0.0097)	0.0068 (0.0003)	1000
Model frailty: Normal							
Cox	0.4681	0.0057	0.0793 (0.0018)	0.0089 (0.0025)	0.9280 (0.0082)	0.0064 (0.0003)	1000
Exp	0.4261	0.0080	0.0741 (0.0017)	-0.0331 (0.0024)	0.9678 (0.0056)	0.0066 (0.0003)	994
Weibull	0.4692	0.0057	0.0799 (0.0018)	0.0100 (0.0025)	0.9247 (0.0084)	0.0065 (0.0003)	983
Gompertz	0.4317	0.0079	0.0783 (0.0023)	-0.0276 (0.0033)	0.9628 (0.0080)	0.0069 (0.0004)	565
RP (3)	0.4651	0.0059	0.0790 (0.0018)	0.0059 (0.0025)	0.9370 (0.0077)	0.0063 (0.0003)	1000
RP (5)	0.4650	0.0059	0.0791 (0.0018)	0.0058 (0.0025)	0.9350 (0.0078)	0.0063 (0.0003)	1000
RP (9)	0.4650	0.0059	0.0791 (0.0018)	0.0058 (0.0025)	0.9350 (0.0078)	0.0063 (0.0003)	1000
RP (P)	0.4649	0.0059	0.0791 (0.0018)	0.0057 (0.0025)	0.9360 (0.0077)	0.0063 (0.0003)	1000
FP (W)	0.4672	0.0053	0.0793 (0.0018)	0.0080 (0.0026)	0.9204 (0.0087)	0.0064 (0.0003)	967
FP (k=10)	0.4549	0.0055	0.0785 (0.0018)	-0.0043 (0.0025)	0.9319 (0.0080)	0.0062 (0.0003)	999
FP (k=10000)	0.4601	0.0046	0.0821 (0.0018)	0.0008 (0.0026)	0.8928 (0.0098)	0.0067 (0.0003)	998

Table 175: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5079	0.0078	0.0911 (0.0020)	-0.0004 (0.0029)	0.9447 (0.0072)	0.0083 (0.0004)	995
Exp	0.5173	0.0080	0.0928 (0.0021)	0.0089 (0.0029)	0.9440 (0.0073)	0.0087 (0.0004)	1000
Weibull	0.5093	0.0085	0.0914 (0.0020)	0.0009 (0.0029)	0.9500 (0.0069)	0.0083 (0.0004)	1000
Gompertz	0.5261	0.0081	0.0861 (0.0033)	0.0178 (0.0047)	0.9672 (0.0097)	0.0077 (0.0005)	335
RP (3)	0.5087	0.0085	0.0913 (0.0020)	0.0003 (0.0029)	0.9520 (0.0068)	0.0083 (0.0004)	999
RP (5)	0.5086	0.0085	0.0912 (0.0020)	0.0002 (0.0029)	0.9520 (0.0068)	0.0083 (0.0004)	1000
RP (9)	0.5085	0.0085	0.0912 (0.0020)	0.0002 (0.0029)	0.9519 (0.0068)	0.0083 (0.0004)	998
RP (P)	0.5092	0.0085	0.0914 (0.0021)	0.0008 (0.0029)	0.9503 (0.0069)	0.0084 (0.0004)	986
FP (W)	0.5092	0.0078	0.0914 (0.0020)	0.0008 (0.0029)	0.9449 (0.0072)	0.0083 (0.0004)	999
FP (k=10)	0.5038	0.0079	0.0914 (0.0020)	-0.0046 (0.0029)	0.9410 (0.0075)	0.0084 (0.0004)	1000
FP (k=10000)	0.5057	0.0071	0.0910 (0.0020)	-0.0026 (0.0029)	0.9310 (0.0080)	0.0083 (0.0004)	1000
Model frailty: Normal							
Cox	0.5090	0.0076	0.0917 (0.0021)	0.0006 (0.0029)	0.9400 (0.0075)	0.0084 (0.0004)	1000
Exp	0.5081	0.0078	0.0923 (0.0021)	-0.0003 (0.0029)	0.9395 (0.0076)	0.0085 (0.0004)	992
Weibull	0.5005	0.0082	0.0910 (0.0020)	-0.0079 (0.0029)	0.9437 (0.0073)	0.0083 (0.0004)	994
Gompertz	0.5080	0.0078	0.0903 (0.0034)	-0.0004 (0.0048)	0.9343 (0.0132)	0.0081 (0.0006)	350
RP (3)	0.4994	0.0082	0.0908 (0.0020)	-0.0089 (0.0029)	0.9440 (0.0073)	0.0083 (0.0004)	1000
RP (5)	0.5000	0.0082	0.0908 (0.0020)	-0.0084 (0.0029)	0.9450 (0.0072)	0.0083 (0.0004)	1000
RP (9)	0.5001	0.0082	0.0908 (0.0020)	-0.0083 (0.0029)	0.9450 (0.0072)	0.0083 (0.0004)	1000
RP (P)	0.4992	0.0082	0.0908 (0.0020)	-0.0092 (0.0029)	0.9440 (0.0073)	0.0083 (0.0004)	1000
FP (W)	0.4993	0.0072	0.0909 (0.0021)	-0.0091 (0.0029)	0.9303 (0.0082)	0.0083 (0.0004)	975
FP (k=10)	0.4930	0.0072	0.0908 (0.0020)	-0.0154 (0.0029)	0.9271 (0.0083)	0.0085 (0.0004)	987
FP (k=10000)	0.4990	0.0069	0.0907 (0.0020)	-0.0093 (0.0029)	0.9239 (0.0084)	0.0083 (0.0004)	999

Table 176: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5244	0.0074	0.0864 (0.0019)	-0.0176 (0.0027)	0.9397 (0.0075)	0.0078 (0.0004)	995
Exp	0.5241	0.0070	0.0869 (0.0019)	-0.0180 (0.0027)	0.9320 (0.0080)	0.0079 (0.0004)	1000
Weibull	0.5236	0.0071	0.0868 (0.0019)	-0.0185 (0.0027)	0.9360 (0.0077)	0.0079 (0.0004)	1000
Gompertz	0.5275	0.0071	0.0841 (0.0033)	-0.0145 (0.0047)	0.9536 (0.0117)	0.0073 (0.0005)	323
RP (3)	0.5246	0.0071	0.0870 (0.0020)	-0.0175 (0.0028)	0.9355 (0.0078)	0.0079 (0.0004)	993
RP (5)	0.5243	0.0071	0.0868 (0.0019)	-0.0178 (0.0027)	0.9359 (0.0077)	0.0079 (0.0004)	999
RP (9)	0.5243	0.0071	0.0868 (0.0019)	-0.0178 (0.0027)	0.9359 (0.0077)	0.0078 (0.0004)	999
RP (P)	0.5235	0.0071	0.0867 (0.0019)	-0.0186 (0.0027)	0.9356 (0.0078)	0.0078 (0.0004)	994
FP (W)	0.5236	0.0074	0.0868 (0.0019)	-0.0185 (0.0027)	0.9390 (0.0076)	0.0079 (0.0004)	1000
FP (k=10)	0.5224	0.0074	0.0869 (0.0019)	-0.0197 (0.0027)	0.9400 (0.0075)	0.0079 (0.0004)	1000
FP (k=10000)	0.5219	0.0065	0.0869 (0.0019)	-0.0202 (0.0027)	0.9220 (0.0085)	0.0080 (0.0004)	1000
Model frailty: Normal							
Cox	0.5440	0.0076	0.0877 (0.0020)	0.0019 (0.0028)	0.9499 (0.0069)	0.0077 (0.0003)	999
Exp	0.5455	0.0075	0.0882 (0.0020)	0.0034 (0.0028)	0.9484 (0.0070)	0.0078 (0.0004)	989
Weibull	0.5454	0.0075	0.0882 (0.0020)	0.0033 (0.0028)	0.9495 (0.0070)	0.0078 (0.0004)	990
Gompertz	0.5423	0.0075	0.0843 (0.0032)	0.0003 (0.0046)	0.9589 (0.0107)	0.0071 (0.0006)	341
RP (3)	0.5450	0.0075	0.0881 (0.0020)	0.0029 (0.0028)	0.9470 (0.0071)	0.0078 (0.0004)	1000
RP (5)	0.5449	0.0075	0.0881 (0.0020)	0.0028 (0.0028)	0.9480 (0.0070)	0.0078 (0.0004)	1000
RP (9)	0.5448	0.0075	0.0881 (0.0020)	0.0028 (0.0028)	0.9490 (0.0070)	0.0078 (0.0004)	1000
RP (P)	0.5451	0.0075	0.0881 (0.0020)	0.0030 (0.0028)	0.9460 (0.0071)	0.0078 (0.0004)	1000
FP (W)	0.5441	0.0075	0.0876 (0.0020)	0.0021 (0.0028)	0.9503 (0.0070)	0.0077 (0.0004)	966
FP (k=10)	0.5419	0.0076	0.0884 (0.0020)	-0.0002 (0.0028)	0.9455 (0.0072)	0.0078 (0.0004)	991
FP (k=10000)	0.5435	0.0069	0.0881 (0.0020)	0.0014 (0.0028)	0.9378 (0.0076)	0.0078 (0.0004)	997

Table 177: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5554	0.0087	0.0944 (0.0021)	-0.0094 (0.0030)	0.9487 (0.0070)	0.0090 (0.0004)	995
Exp	0.5634	0.0070	0.0979 (0.0022)	-0.0014 (0.0031)	0.9070 (0.0092)	0.0096 (0.0004)	1000
Weibull	0.5553	0.0086	0.0947 (0.0021)	-0.0095 (0.0030)	0.9420 (0.0074)	0.0091 (0.0004)	1000
Gompertz	0.5672	0.0071	0.0899 (0.0049)	0.0024 (0.0069)	0.9298 (0.0195)	0.0080 (0.0008)	171
RP (3)	0.5554	0.0087	0.0947 (0.0021)	-0.0095 (0.0030)	0.9449 (0.0072)	0.0091 (0.0004)	999
RP (5)	0.5553	0.0087	0.0948 (0.0021)	-0.0095 (0.0030)	0.9458 (0.0072)	0.0091 (0.0004)	997
RP (9)	0.5552	0.0087	0.0947 (0.0021)	-0.0096 (0.0030)	0.9470 (0.0071)	0.0091 (0.0004)	1000
RP (P)	0.5556	0.0087	0.0947 (0.0021)	-0.0093 (0.0030)	0.9448 (0.0072)	0.0090 (0.0004)	997
FP (W)	0.5553	0.0087	0.0947 (0.0021)	-0.0095 (0.0030)	0.9430 (0.0073)	0.0091 (0.0004)	1000
FP (k=10)	0.5463	0.0086	0.0954 (0.0021)	-0.0185 (0.0030)	0.9410 (0.0075)	0.0094 (0.0004)	1000
FP (k=10000)	0.5525	0.0071	0.0955 (0.0021)	-0.0124 (0.0030)	0.9140 (0.0089)	0.0093 (0.0004)	1000
Model frailty: Normal							
Cox	0.5701	0.0088	0.0954 (0.0021)	0.0053 (0.0030)	0.9480 (0.0070)	0.0091 (0.0004)	1000
Exp	0.5937	0.0076	0.0998 (0.0022)	0.0289 (0.0032)	0.9036 (0.0094)	0.0108 (0.0005)	985
Weibull	0.5706	0.0089	0.0954 (0.0022)	0.0058 (0.0030)	0.9461 (0.0072)	0.0091 (0.0004)	983
Gompertz	0.5945	0.0077	0.0918 (0.0041)	0.0297 (0.0058)	0.9160 (0.0175)	0.0093 (0.0008)	250
RP (3)	0.5683	0.0089	0.0953 (0.0021)	0.0035 (0.0030)	0.9490 (0.0070)	0.0091 (0.0004)	1000
RP (5)	0.5682	0.0089	0.0953 (0.0021)	0.0033 (0.0030)	0.9480 (0.0070)	0.0091 (0.0004)	1000
RP (9)	0.5681	0.0089	0.0953 (0.0021)	0.0032 (0.0030)	0.9480 (0.0070)	0.0091 (0.0004)	1000
RP (P)	0.5685	0.0089	0.0953 (0.0021)	0.0037 (0.0030)	0.9470 (0.0071)	0.0091 (0.0004)	1000
FP (W)	0.5680	0.0086	0.0952 (0.0022)	0.0032 (0.0030)	0.9395 (0.0076)	0.0091 (0.0004)	976
FP (k=10)	0.5608	0.0085	0.0952 (0.0022)	-0.0040 (0.0030)	0.9427 (0.0074)	0.0091 (0.0004)	977
FP (k=10000)	0.5775	0.0075	0.0969 (0.0022)	0.0126 (0.0031)	0.9190 (0.0086)	0.0095 (0.0004)	1000

Table 178: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4774	0.0058	0.0761 (0.0017)	-0.0264 (0.0024)	0.9366 (0.0077)	0.0065 (0.0003)	993
Exp	0.4624	0.0063	0.0733 (0.0016)	-0.0415 (0.0023)	0.9310 (0.0080)	0.0071 (0.0003)	1000
Weibull	0.4659	0.0054	0.0743 (0.0017)	-0.0380 (0.0024)	0.9070 (0.0092)	0.0070 (0.0003)	1000
Gompertz	0.4655	0.0063	0.0731 (0.0026)	-0.0383 (0.0037)	0.9373 (0.0124)	0.0068 (0.0004)	383
RP (3)	0.4754	0.0053	0.0757 (0.0017)	-0.0284 (0.0024)	0.9168 (0.0087)	0.0065 (0.0003)	998
RP (5)	0.4767	0.0053	0.0759 (0.0017)	-0.0272 (0.0024)	0.9179 (0.0087)	0.0065 (0.0003)	999
RP (9)	0.4771	0.0053	0.0759 (0.0017)	-0.0268 (0.0024)	0.9190 (0.0086)	0.0065 (0.0003)	1000
RP (P)	0.4737	0.0053	0.0754 (0.0017)	-0.0301 (0.0024)	0.9159 (0.0088)	0.0066 (0.0003)	999
FP (W)	0.4657	0.0059	0.0743 (0.0017)	-0.0381 (0.0024)	0.9208 (0.0085)	0.0070 (0.0003)	998
FP (k=10)	0.4751	0.0058	0.0760 (0.0017)	-0.0287 (0.0024)	0.9280 (0.0082)	0.0066 (0.0003)	1000
FP (k=10000)	0.4717	0.0050	0.0755 (0.0017)	-0.0321 (0.0024)	0.9010 (0.0094)	0.0067 (0.0003)	1000
Model frailty: Normal							
Cox	0.5003	0.0061	0.0773 (0.0017)	-0.0036 (0.0024)	0.9560 (0.0065)	0.0060 (0.0002)	999
Exp	0.4813	0.0068	0.0744 (0.0017)	-0.0225 (0.0024)	0.9646 (0.0059)	0.0060 (0.0002)	990
Weibull	0.4963	0.0060	0.0765 (0.0017)	-0.0076 (0.0024)	0.9503 (0.0069)	0.0059 (0.0002)	986
Gompertz	0.4830	0.0069	0.0732 (0.0028)	-0.0209 (0.0039)	0.9712 (0.0090)	0.0058 (0.0004)	347
RP (3)	0.5021	0.0058	0.0777 (0.0017)	-0.0018 (0.0025)	0.9490 (0.0070)	0.0060 (0.0002)	1000
RP (5)	0.5031	0.0058	0.0778 (0.0017)	-0.0008 (0.0025)	0.9460 (0.0071)	0.0060 (0.0002)	1000
RP (9)	0.5035	0.0058	0.0778 (0.0017)	-0.0004 (0.0025)	0.9470 (0.0071)	0.0061 (0.0002)	1000
RP (P)	0.5010	0.0058	0.0775 (0.0017)	-0.0029 (0.0024)	0.9500 (0.0069)	0.0060 (0.0002)	1000
FP (W)	0.4948	0.0064	0.0765 (0.0017)	-0.0090 (0.0024)	0.9622 (0.0061)	0.0059 (0.0002)	978
FP (k=10)	0.5017	0.0062	0.0778 (0.0017)	-0.0021 (0.0025)	0.9590 (0.0063)	0.0060 (0.0002)	999
FP (k=10000)	0.5003	0.0055	0.0775 (0.0017)	-0.0035 (0.0025)	0.9389 (0.0076)	0.0060 (0.0002)	999

Table 179: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4565	0.0054	0.0719 (0.0016)	-0.0254 (0.0023)	0.9357 (0.0078)	0.0058 (0.0003)	996
Exp	0.4426	0.0078	0.0697 (0.0016)	-0.0392 (0.0022)	0.9700 (0.0054)	0.0064 (0.0003)	1000
Weibull	0.4661	0.0049	0.0733 (0.0016)	-0.0158 (0.0023)	0.9290 (0.0081)	0.0056 (0.0003)	1000
Gompertz	0.4536	0.0074	0.0764 (0.0021)	-0.0283 (0.0029)	0.9649 (0.0070)	0.0066 (0.0004)	683
RP (3)	0.4547	0.0049	0.0715 (0.0016)	-0.0272 (0.0023)	0.9267 (0.0083)	0.0058 (0.0003)	996
RP (5)	0.4559	0.0050	0.0718 (0.0016)	-0.0260 (0.0023)	0.9269 (0.0082)	0.0058 (0.0003)	999
RP (9)	0.4561	0.0050	0.0717 (0.0016)	-0.0257 (0.0023)	0.9289 (0.0081)	0.0058 (0.0003)	999
RP (P)	0.4565	0.0050	0.0719 (0.0016)	-0.0254 (0.0023)	0.9281 (0.0082)	0.0058 (0.0003)	988
FP (W)	0.4660	0.0052	0.0733 (0.0016)	-0.0159 (0.0023)	0.9409 (0.0075)	0.0056 (0.0003)	999
FP (k=10)	0.4443	0.0055	0.0730 (0.0016)	-0.0376 (0.0023)	0.9110 (0.0090)	0.0067 (0.0003)	1000
FP (k=10000)	0.4721	0.0043	0.0754 (0.0017)	-0.0097 (0.0024)	0.9090 (0.0091)	0.0058 (0.0003)	1000
Model frailty: Normal							
Cox	0.4789	0.0057	0.0731 (0.0016)	-0.0030 (0.0023)	0.9560 (0.0065)	0.0053 (0.0002)	999
Exp	0.4464	0.0080	0.0698 (0.0016)	-0.0355 (0.0022)	0.9728 (0.0052)	0.0061 (0.0003)	994
Weibull	0.4893	0.0053	0.0752 (0.0017)	0.0075 (0.0024)	0.9393 (0.0076)	0.0057 (0.0003)	988
Gompertz	0.4568	0.0076	0.0779 (0.0022)	-0.0250 (0.0031)	0.9683 (0.0070)	0.0067 (0.0004)	630
RP (3)	0.4809	0.0054	0.0733 (0.0016)	-0.0010 (0.0023)	0.9500 (0.0069)	0.0054 (0.0003)	1000
RP (5)	0.4820	0.0054	0.0735 (0.0016)	0.0001 (0.0023)	0.9520 (0.0068)	0.0054 (0.0003)	1000
RP (9)	0.4823	0.0054	0.0736 (0.0016)	0.0005 (0.0023)	0.9520 (0.0068)	0.0054 (0.0003)	1000
RP (P)	0.4824	0.0054	0.0736 (0.0016)	0.0005 (0.0023)	0.9510 (0.0068)	0.0054 (0.0003)	1000
FP (W)	0.4889	0.0055	0.0752 (0.0017)	0.0070 (0.0024)	0.9444 (0.0073)	0.0057 (0.0003)	972
FP (k=10)	0.4723	0.0057	0.0738 (0.0017)	-0.0095 (0.0023)	0.9520 (0.0068)	0.0055 (0.0003)	999
FP (k=10000)	0.4948	0.0046	0.0769 (0.0017)	0.0129 (0.0024)	0.9154 (0.0088)	0.0061 (0.0003)	993

Table 180: Simulation results for LLE, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5340	0.0079	0.0905 (0.0020)	-0.0156 (0.0029)	0.9417 (0.0074)	0.0084 (0.0004)	995
Exp	0.5418	0.0070	0.0925 (0.0021)	-0.0078 (0.0029)	0.9230 (0.0084)	0.0086 (0.0004)	1000
Weibull	0.5378	0.0078	0.0913 (0.0020)	-0.0118 (0.0029)	0.9410 (0.0075)	0.0085 (0.0004)	1000
Gompertz	0.5372	0.0070	0.0925 (0.0038)	-0.0124 (0.0054)	0.9252 (0.0153)	0.0087 (0.0007)	294
RP (3)	0.5360	0.0077	0.0910 (0.0020)	-0.0137 (0.0029)	0.9407 (0.0075)	0.0085 (0.0004)	995
RP (5)	0.5345	0.0076	0.0910 (0.0020)	-0.0152 (0.0029)	0.9380 (0.0076)	0.0085 (0.0004)	1000
RP (9)	0.5340	0.0076	0.0910 (0.0020)	-0.0156 (0.0029)	0.9390 (0.0076)	0.0085 (0.0004)	1000
RP (P)	0.5357	0.0077	0.0912 (0.0020)	-0.0139 (0.0029)	0.9389 (0.0076)	0.0085 (0.0004)	999
FP (W)	0.5378	0.0080	0.0913 (0.0020)	-0.0118 (0.0029)	0.9430 (0.0073)	0.0085 (0.0004)	1000
FP (k=10)	0.5312	0.0079	0.0911 (0.0020)	-0.0184 (0.0029)	0.9390 (0.0076)	0.0086 (0.0004)	1000
FP (k=10000)	0.5327	0.0070	0.0911 (0.0020)	-0.0169 (0.0029)	0.9290 (0.0081)	0.0086 (0.0004)	1000
Model frailty: Normal							
Cox	0.5527	0.0081	0.0918 (0.0021)	0.0031 (0.0029)	0.9469 (0.0071)	0.0084 (0.0004)	999
Exp	0.5664	0.0076	0.0939 (0.0021)	0.0168 (0.0030)	0.9283 (0.0082)	0.0091 (0.0004)	990
Weibull	0.5563	0.0081	0.0923 (0.0021)	0.0067 (0.0029)	0.9406 (0.0075)	0.0086 (0.0004)	994
Gompertz	0.5602	0.0076	0.0932 (0.0039)	0.0106 (0.0055)	0.9315 (0.0148)	0.0088 (0.0007)	292
RP (3)	0.5551	0.0081	0.0923 (0.0021)	0.0054 (0.0029)	0.9410 (0.0075)	0.0085 (0.0004)	1000
RP (5)	0.5540	0.0080	0.0922 (0.0021)	0.0044 (0.0029)	0.9430 (0.0073)	0.0085 (0.0004)	1000
RP (9)	0.5537	0.0080	0.0921 (0.0021)	0.0041 (0.0029)	0.9420 (0.0074)	0.0085 (0.0004)	1000
RP (P)	0.5544	0.0080	0.0922 (0.0021)	0.0048 (0.0029)	0.9430 (0.0073)	0.0085 (0.0004)	1000
FP (W)	0.5558	0.0080	0.0924 (0.0021)	0.0061 (0.0030)	0.9407 (0.0076)	0.0086 (0.0004)	978
FP (k=10)	0.5499	0.0080	0.0919 (0.0021)	0.0002 (0.0029)	0.9483 (0.0070)	0.0084 (0.0004)	987
FP (k=10000)	0.5540	0.0074	0.0920 (0.0021)	0.0044 (0.0029)	0.9329 (0.0079)	0.0085 (0.0004)	998

Table 181: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6748	0.0038	0.0621 (0.0014)	-0.0003 (0.0020)	0.9331 (0.0080)	0.0038 (0.0002)	986
Exp	0.6750	0.0039	0.0619 (0.0014)	-0.0001 (0.0020)	0.9370 (0.0077)	0.0038 (0.0002)	1000
Weibull	0.6750	0.0039	0.0620 (0.0014)	-0.0001 (0.0020)	0.9370 (0.0077)	0.0038 (0.0002)	1000
Gompertz	0.6732	0.0039	0.0624 (0.0020)	-0.0019 (0.0028)	0.9335 (0.0110)	0.0039 (0.0002)	511
RP (3)	0.6750	0.0039	0.0620 (0.0014)	-0.0001 (0.0020)	0.9360 (0.0077)	0.0038 (0.0002)	1000
RP (5)	0.6749	0.0039	0.0620 (0.0014)	-0.0002 (0.0020)	0.9350 (0.0078)	0.0038 (0.0002)	1000
RP (9)	0.6749	0.0039	0.0621 (0.0014)	-0.0002 (0.0020)	0.9360 (0.0077)	0.0038 (0.0002)	1000
RP (P)	0.6751	0.0039	0.0618 (0.0014)	-0.0000 (0.0020)	0.9359 (0.0078)	0.0038 (0.0002)	998
FP (W)	0.6751	0.0038	0.0620 (0.0014)	-0.0000 (0.0020)	0.9349 (0.0078)	0.0038 (0.0002)	999
FP (k=10)	0.6733	0.0038	0.0620 (0.0014)	-0.0018 (0.0020)	0.9360 (0.0077)	0.0038 (0.0002)	1000
FP (k=10000)	0.6742	0.0036	0.0620 (0.0014)	-0.0009 (0.0020)	0.9320 (0.0080)	0.0038 (0.0002)	1000
Model frailty: Normal							
Cox	0.6738	0.0038	0.0621 (0.0014)	-0.0013 (0.0020)	0.9360 (0.0077)	0.0039 (0.0002)	1000
Exp	0.6742	0.0039	0.0620 (0.0014)	-0.0009 (0.0020)	0.9380 (0.0076)	0.0038 (0.0002)	1000
Weibull	0.6743	0.0039	0.0621 (0.0014)	-0.0008 (0.0020)	0.9349 (0.0078)	0.0039 (0.0002)	999
Gompertz	0.6734	0.0039	0.0637 (0.0019)	-0.0017 (0.0027)	0.9303 (0.0109)	0.0040 (0.0002)	545
RP (3)	0.6742	0.0039	0.0621 (0.0014)	-0.0009 (0.0020)	0.9360 (0.0077)	0.0039 (0.0002)	1000
RP (5)	0.6741	0.0039	0.0621 (0.0014)	-0.0010 (0.0020)	0.9370 (0.0077)	0.0039 (0.0002)	1000
RP (9)	0.6741	0.0039	0.0622 (0.0014)	-0.0010 (0.0020)	0.9370 (0.0077)	0.0039 (0.0002)	1000
RP (P)	0.6742	0.0039	0.0621 (0.0014)	-0.0009 (0.0020)	0.9360 (0.0077)	0.0039 (0.0002)	1000
FP (W)	0.6723	0.0038	0.0623 (0.0015)	-0.0028 (0.0021)	0.9336 (0.0082)	0.0039 (0.0002)	918
FP (k=10)	0.6691	0.0038	0.0624 (0.0014)	-0.0060 (0.0020)	0.9345 (0.0078)	0.0039 (0.0002)	993
FP (k=10000)	0.6694	0.0034	0.0621 (0.0014)	-0.0057 (0.0020)	0.9308 (0.0080)	0.0039 (0.0002)	997

Table 182: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7001	0.0043	0.0692 (0.0015)	0.0012 (0.0022)	0.9438 (0.0073)	0.0048 (0.0002)	997
Exp	0.7221	0.0042	0.0717 (0.0016)	0.0232 (0.0023)	0.9130 (0.0089)	0.0057 (0.0003)	1000
Weibull	0.7011	0.0047	0.0693 (0.0016)	0.0022 (0.0022)	0.9500 (0.0069)	0.0048 (0.0002)	1000
Gompertz	0.7250	0.0042	0.0703 (0.0025)	0.0261 (0.0036)	0.9149 (0.0142)	0.0056 (0.0004)	388
RP (3)	0.7007	0.0047	0.0692 (0.0015)	0.0018 (0.0022)	0.9490 (0.0070)	0.0048 (0.0002)	1000
RP (5)	0.7007	0.0047	0.0691 (0.0015)	0.0017 (0.0022)	0.9510 (0.0068)	0.0048 (0.0002)	1000
RP (9)	0.7006	0.0047	0.0691 (0.0015)	0.0017 (0.0022)	0.9510 (0.0068)	0.0048 (0.0002)	1000
RP (P)	0.7009	0.0047	0.0692 (0.0015)	0.0020 (0.0022)	0.9500 (0.0069)	0.0048 (0.0002)	1000
FP (W)	0.7008	0.0043	0.0695 (0.0016)	0.0019 (0.0022)	0.9424 (0.0074)	0.0048 (0.0002)	990
FP (k=10)	0.6927	0.0043	0.0693 (0.0016)	-0.0062 (0.0022)	0.9380 (0.0076)	0.0048 (0.0002)	1000
FP (k=10000)	0.6966	0.0040	0.0696 (0.0016)	-0.0024 (0.0022)	0.9310 (0.0080)	0.0048 (0.0002)	1000
Model frailty: Normal							
Cox	0.6989	0.0043	0.0691 (0.0015)	-0.0000 (0.0022)	0.9420 (0.0074)	0.0048 (0.0002)	1000
Exp	0.7198	0.0042	0.0716 (0.0016)	0.0209 (0.0023)	0.9180 (0.0087)	0.0056 (0.0003)	1000
Weibull	0.6986	0.0047	0.0692 (0.0015)	-0.0004 (0.0022)	0.9509 (0.0068)	0.0048 (0.0002)	998
Gompertz	0.7244	0.0042	0.0712 (0.0025)	0.0255 (0.0035)	0.9169 (0.0137)	0.0057 (0.0004)	409
RP (3)	0.6979	0.0047	0.0691 (0.0015)	-0.0010 (0.0022)	0.9510 (0.0068)	0.0048 (0.0002)	1000
RP (5)	0.6979	0.0047	0.0691 (0.0015)	-0.0010 (0.0022)	0.9520 (0.0068)	0.0048 (0.0002)	1000
RP (9)	0.6979	0.0047	0.0691 (0.0015)	-0.0010 (0.0022)	0.9500 (0.0069)	0.0048 (0.0002)	1000
RP (P)	0.6981	0.0047	0.0691 (0.0015)	-0.0008 (0.0022)	0.9490 (0.0070)	0.0048 (0.0002)	1000
FP (W)	0.6976	0.0042	0.0692 (0.0016)	-0.0014 (0.0022)	0.9399 (0.0076)	0.0048 (0.0002)	982
FP (k=10)	0.6871	0.0042	0.0703 (0.0016)	-0.0118 (0.0022)	0.9245 (0.0084)	0.0051 (0.0002)	994
FP (k=10000)	0.6878	0.0039	0.0701 (0.0016)	-0.0112 (0.0022)	0.9198 (0.0086)	0.0050 (0.0002)	997

Table 183: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6094	0.0031	0.0543 (0.0012)	-0.0030 (0.0017)	0.9545 (0.0066)	0.0030 (0.0001)	988
Exp	0.5654	0.0033	0.0505 (0.0011)	-0.0471 (0.0016)	0.9030 (0.0094)	0.0048 (0.0002)	1000
Weibull	0.5899	0.0029	0.0527 (0.0012)	-0.0226 (0.0017)	0.9380 (0.0076)	0.0033 (0.0001)	1000
Gompertz	0.6094	0.0028	0.0546 (0.0012)	-0.0031 (0.0017)	0.9430 (0.0073)	0.0030 (0.0001)	1000
RP (3)	0.6074	0.0028	0.0544 (0.0012)	-0.0051 (0.0017)	0.9450 (0.0072)	0.0030 (0.0001)	1000
RP (5)	0.6088	0.0028	0.0545 (0.0012)	-0.0036 (0.0017)	0.9420 (0.0074)	0.0030 (0.0001)	1000
RP (9)	0.6093	0.0028	0.0545 (0.0012)	-0.0031 (0.0017)	0.9430 (0.0073)	0.0030 (0.0001)	1000
RP (P)	0.6056	0.0028	0.0542 (0.0012)	-0.0069 (0.0017)	0.9450 (0.0072)	0.0030 (0.0001)	1000
FP (W)	0.5898	0.0031	0.0528 (0.0012)	-0.0227 (0.0017)	0.9437 (0.0073)	0.0033 (0.0001)	995
FP (k=10)	0.6088	0.0031	0.0545 (0.0012)	-0.0037 (0.0017)	0.9520 (0.0068)	0.0030 (0.0001)	1000
FP (k=10000)	0.6048	0.0028	0.0541 (0.0012)	-0.0077 (0.0017)	0.9400 (0.0075)	0.0030 (0.0001)	1000
Model frailty: Normal							
Cox	0.6102	0.0031	0.0545 (0.0012)	-0.0023 (0.0017)	0.9540 (0.0066)	0.0030 (0.0001)	1000
Exp	0.5659	0.0033	0.0506 (0.0011)	-0.0465 (0.0016)	0.9070 (0.0092)	0.0047 (0.0002)	1000
Weibull	0.5921	0.0030	0.0528 (0.0012)	-0.0204 (0.0017)	0.9379 (0.0076)	0.0032 (0.0001)	999
Gompertz	0.6117	0.0029	0.0547 (0.0012)	-0.0008 (0.0017)	0.9460 (0.0071)	0.0030 (0.0001)	1000
RP (3)	0.6096	0.0029	0.0545 (0.0012)	-0.0028 (0.0017)	0.9480 (0.0070)	0.0030 (0.0001)	1000
RP (5)	0.6110	0.0029	0.0546 (0.0012)	-0.0015 (0.0017)	0.9450 (0.0072)	0.0030 (0.0001)	1000
RP (9)	0.6115	0.0029	0.0546 (0.0012)	-0.0010 (0.0017)	0.9440 (0.0073)	0.0030 (0.0001)	1000
RP (P)	0.6078	0.0029	0.0543 (0.0012)	-0.0047 (0.0017)	0.9480 (0.0070)	0.0030 (0.0001)	1000
FP (W)	0.5908	0.0031	0.0534 (0.0012)	-0.0217 (0.0017)	0.9410 (0.0077)	0.0033 (0.0002)	932
FP (k=10)	0.6058	0.0030	0.0567 (0.0013)	-0.0066 (0.0018)	0.9312 (0.0081)	0.0033 (0.0001)	988
FP (k=10000)	0.6095	0.0027	0.0551 (0.0012)	-0.0030 (0.0017)	0.9327 (0.0079)	0.0030 (0.0001)	995

Table 184: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5877	0.0029	0.0533 (0.0012)	-0.0010 (0.0017)	0.9503 (0.0069)	0.0028 (0.0001)	986
Exp	0.5434	0.0036	0.0495 (0.0011)	-0.0453 (0.0016)	0.9300 (0.0081)	0.0045 (0.0002)	1000
Weibull	0.6060	0.0026	0.0548 (0.0012)	0.0173 (0.0017)	0.9150 (0.0088)	0.0033 (0.0002)	1000
Gompertz	0.6125	0.0029	0.0557 (0.0012)	0.0238 (0.0018)	0.9150 (0.0088)	0.0037 (0.0002)	1000
RP (3)	0.5847	0.0027	0.0528 (0.0012)	-0.0040 (0.0017)	0.9390 (0.0076)	0.0028 (0.0001)	1000
RP (5)	0.5874	0.0027	0.0531 (0.0012)	-0.0013 (0.0017)	0.9400 (0.0075)	0.0028 (0.0001)	1000
RP (9)	0.5876	0.0027	0.0531 (0.0012)	-0.0011 (0.0017)	0.9400 (0.0075)	0.0028 (0.0001)	1000
RP (P)	0.5879	0.0027	0.0532 (0.0012)	-0.0008 (0.0017)	0.9388 (0.0076)	0.0028 (0.0001)	996
FP (W)	0.6059	0.0028	0.0548 (0.0012)	0.0172 (0.0017)	0.9228 (0.0084)	0.0033 (0.0002)	998
FP (k=10)	0.5845	0.0029	0.0533 (0.0012)	-0.0042 (0.0017)	0.9450 (0.0072)	0.0029 (0.0001)	1000
FP (k=10000)	0.6162	0.0025	0.0567 (0.0013)	0.0275 (0.0018)	0.8810 (0.0102)	0.0040 (0.0002)	1000
Model frailty: Normal							
Cox	0.5883	0.0029	0.0531 (0.0012)	-0.0004 (0.0017)	0.9510 (0.0068)	0.0028 (0.0001)	1000
Exp	0.5425	0.0036	0.0495 (0.0011)	-0.0462 (0.0016)	0.9299 (0.0081)	0.0046 (0.0002)	999
Weibull	0.6082	0.0026	0.0549 (0.0012)	0.0195 (0.0017)	0.9129 (0.0089)	0.0034 (0.0002)	999
Gompertz	0.6129	0.0029	0.0557 (0.0012)	0.0242 (0.0018)	0.9170 (0.0087)	0.0037 (0.0002)	1000
RP (3)	0.5870	0.0027	0.0529 (0.0012)	-0.0018 (0.0017)	0.9410 (0.0075)	0.0028 (0.0001)	1000
RP (5)	0.5894	0.0027	0.0532 (0.0012)	0.0007 (0.0017)	0.9410 (0.0075)	0.0028 (0.0001)	1000
RP (9)	0.5896	0.0027	0.0532 (0.0012)	0.0009 (0.0017)	0.9430 (0.0073)	0.0028 (0.0001)	1000
RP (P)	0.5899	0.0027	0.0532 (0.0012)	0.0012 (0.0017)	0.9400 (0.0075)	0.0028 (0.0001)	1000
FP (W)	0.6063	0.0027	0.0554 (0.0013)	0.0176 (0.0018)	0.9245 (0.0087)	0.0034 (0.0002)	927
FP (k=10)	0.5821	0.0028	0.0543 (0.0012)	-0.0066 (0.0017)	0.9397 (0.0075)	0.0030 (0.0001)	995
FP (k=10000)	0.6039	0.0022	0.0612 (0.0014)	0.0151 (0.0019)	0.8584 (0.0110)	0.0040 (0.0002)	996

Table 185: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6850	0.0041	0.0650 (0.0015)	-0.0014 (0.0021)	0.9370 (0.0077)	0.0042 (0.0002)	1000
Exp	0.7048	0.0040	0.0671 (0.0015)	0.0184 (0.0021)	0.9240 (0.0084)	0.0048 (0.0002)	1000
Weibull	0.6933	0.0042	0.0660 (0.0015)	0.0069 (0.0021)	0.9430 (0.0073)	0.0044 (0.0002)	1000
Gompertz	0.7071	0.0040	0.0667 (0.0023)	0.0207 (0.0033)	0.9244 (0.0131)	0.0049 (0.0003)	410
RP (3)	0.6873	0.0043	0.0653 (0.0015)	0.0009 (0.0021)	0.9510 (0.0068)	0.0043 (0.0002)	1000
RP (5)	0.6858	0.0042	0.0651 (0.0015)	-0.0006 (0.0021)	0.9470 (0.0071)	0.0042 (0.0002)	1000
RP (9)	0.6854	0.0042	0.0651 (0.0015)	-0.0010 (0.0021)	0.9460 (0.0071)	0.0042 (0.0002)	1000
RP (P)	0.6869	0.0042	0.0652 (0.0015)	0.0005 (0.0021)	0.9479 (0.0070)	0.0043 (0.0002)	998
FP (W)	0.6933	0.0041	0.0660 (0.0015)	0.0069 (0.0021)	0.9350 (0.0078)	0.0044 (0.0002)	1000
FP (k=10)	0.6824	0.0041	0.0651 (0.0015)	-0.0040 (0.0021)	0.9389 (0.0076)	0.0043 (0.0002)	999
FP (k=10000)	0.6846	0.0039	0.0651 (0.0015)	-0.0018 (0.0021)	0.9350 (0.0078)	0.0042 (0.0002)	1000
Model frailty: Normal							
Cox	0.6839	0.0041	0.0651 (0.0015)	-0.0025 (0.0021)	0.9420 (0.0074)	0.0042 (0.0002)	1000
Exp	0.7034	0.0040	0.0672 (0.0015)	0.0171 (0.0021)	0.9238 (0.0084)	0.0048 (0.0002)	998
Weibull	0.6915	0.0042	0.0661 (0.0015)	0.0051 (0.0021)	0.9420 (0.0074)	0.0044 (0.0002)	1000
Gompertz	0.7035	0.0040	0.0657 (0.0022)	0.0171 (0.0031)	0.9247 (0.0126)	0.0046 (0.0003)	438
RP (3)	0.6858	0.0042	0.0654 (0.0015)	-0.0006 (0.0021)	0.9500 (0.0069)	0.0043 (0.0002)	1000
RP (5)	0.6844	0.0042	0.0652 (0.0015)	-0.0020 (0.0021)	0.9500 (0.0069)	0.0043 (0.0002)	1000
RP (9)	0.6841	0.0042	0.0652 (0.0015)	-0.0023 (0.0021)	0.9480 (0.0070)	0.0042 (0.0002)	1000
RP (P)	0.6854	0.0042	0.0654 (0.0015)	-0.0010 (0.0021)	0.9480 (0.0070)	0.0043 (0.0002)	1000
FP (W)	0.6905	0.0040	0.0661 (0.0015)	0.0041 (0.0021)	0.9300 (0.0082)	0.0044 (0.0002)	972
FP (k=10)	0.6775	0.0040	0.0653 (0.0015)	-0.0089 (0.0021)	0.9410 (0.0075)	0.0043 (0.0002)	1000
FP (k=10000)	0.6786	0.0037	0.0657 (0.0015)	-0.0078 (0.0021)	0.9269 (0.0082)	0.0044 (0.0002)	998

Table 186: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6754	0.0038	0.0610 (0.0014)	-0.0010 (0.0019)	0.9521 (0.0068)	0.0037 (0.0002)	982
Exp	0.6754	0.0037	0.0608 (0.0014)	-0.0010 (0.0019)	0.9490 (0.0070)	0.0037 (0.0002)	1000
Weibull	0.6755	0.0037	0.0610 (0.0014)	-0.0009 (0.0019)	0.9490 (0.0070)	0.0037 (0.0002)	1000
Gompertz	0.6770	0.0037	0.0623 (0.0025)	0.0006 (0.0035)	0.9502 (0.0121)	0.0039 (0.0003)	321
RP (3)	0.6753	0.0037	0.0609 (0.0014)	-0.0011 (0.0019)	0.9480 (0.0070)	0.0037 (0.0002)	1000
RP (5)	0.6753	0.0037	0.0610 (0.0014)	-0.0011 (0.0019)	0.9480 (0.0070)	0.0037 (0.0002)	1000
RP (9)	0.6754	0.0037	0.0610 (0.0014)	-0.0011 (0.0019)	0.9490 (0.0070)	0.0037 (0.0002)	1000
RP (P)	0.6755	0.0037	0.0610 (0.0014)	-0.0010 (0.0019)	0.9479 (0.0070)	0.0037 (0.0002)	999
FP (W)	0.6753	0.0038	0.0608 (0.0014)	-0.0011 (0.0019)	0.9520 (0.0068)	0.0037 (0.0002)	999
FP (k=10)	0.6743	0.0038	0.0610 (0.0014)	-0.0022 (0.0019)	0.9490 (0.0070)	0.0037 (0.0002)	1000
FP (k=10000)	0.6747	0.0036	0.0610 (0.0014)	-0.0017 (0.0019)	0.9460 (0.0071)	0.0037 (0.0002)	1000
Model frailty: Normal							
Cox	0.6771	0.0038	0.0609 (0.0014)	0.0007 (0.0019)	0.9530 (0.0067)	0.0037 (0.0002)	1000
Exp	0.6780	0.0037	0.0607 (0.0014)	0.0015 (0.0019)	0.9540 (0.0066)	0.0037 (0.0002)	1000
Weibull	0.6782	0.0037	0.0609 (0.0014)	0.0018 (0.0019)	0.9530 (0.0067)	0.0037 (0.0002)	999
Gompertz	0.6781	0.0038	0.0609 (0.0019)	0.0017 (0.0027)	0.9612 (0.0085)	0.0037 (0.0002)	516
RP (3)	0.6780	0.0037	0.0609 (0.0014)	0.0015 (0.0019)	0.9520 (0.0068)	0.0037 (0.0002)	1000
RP (5)	0.6779	0.0037	0.0609 (0.0014)	0.0015 (0.0019)	0.9530 (0.0067)	0.0037 (0.0002)	1000
RP (9)	0.6780	0.0037	0.0609 (0.0014)	0.0015 (0.0019)	0.9530 (0.0067)	0.0037 (0.0002)	1000
RP (P)	0.6781	0.0037	0.0609 (0.0014)	0.0016 (0.0019)	0.9540 (0.0066)	0.0037 (0.0002)	1000
FP (W)	0.6777	0.0038	0.0612 (0.0014)	0.0012 (0.0020)	0.9496 (0.0071)	0.0037 (0.0002)	953
FP (k=10)	0.6732	0.0038	0.0616 (0.0014)	-0.0032 (0.0020)	0.9498 (0.0069)	0.0038 (0.0002)	997
FP (k=10000)	0.6746	0.0034	0.0612 (0.0014)	-0.0018 (0.0019)	0.9427 (0.0074)	0.0037 (0.0002)	995

Table 187: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7092	0.0044	0.0692 (0.0016)	-0.0012 (0.0022)	0.9307 (0.0081)	0.0048 (0.0002)	995
Exp	0.7340	0.0041	0.0720 (0.0016)	0.0236 (0.0023)	0.9060 (0.0092)	0.0057 (0.0003)	1000
Weibull	0.7103	0.0046	0.0694 (0.0016)	-0.0001 (0.0022)	0.9350 (0.0078)	0.0048 (0.0002)	1000
Gompertz	0.7354	0.0041	0.0719 (0.0026)	0.0249 (0.0036)	0.9063 (0.0147)	0.0058 (0.0005)	395
RP (3)	0.7099	0.0046	0.0694 (0.0016)	-0.0005 (0.0022)	0.9370 (0.0077)	0.0048 (0.0002)	1000
RP (5)	0.7098	0.0046	0.0694 (0.0016)	-0.0006 (0.0022)	0.9360 (0.0077)	0.0048 (0.0002)	1000
RP (9)	0.7098	0.0046	0.0694 (0.0016)	-0.0007 (0.0022)	0.9350 (0.0078)	0.0048 (0.0002)	1000
RP (P)	0.7100	0.0046	0.0694 (0.0016)	-0.0004 (0.0022)	0.9350 (0.0078)	0.0048 (0.0002)	1000
FP (W)	0.7103	0.0044	0.0694 (0.0016)	-0.0002 (0.0022)	0.9309 (0.0080)	0.0048 (0.0002)	999
FP (k=10)	0.7030	0.0043	0.0695 (0.0016)	-0.0075 (0.0022)	0.9250 (0.0083)	0.0049 (0.0002)	1000
FP (k=10000)	0.7070	0.0040	0.0696 (0.0016)	-0.0035 (0.0022)	0.9170 (0.0087)	0.0048 (0.0002)	1000
Model frailty: Normal							
Cox	0.7106	0.0044	0.0695 (0.0016)	0.0002 (0.0022)	0.9290 (0.0081)	0.0048 (0.0002)	1000
Exp	0.7366	0.0041	0.0721 (0.0016)	0.0262 (0.0023)	0.9029 (0.0094)	0.0059 (0.0003)	999
Weibull	0.7109	0.0046	0.0694 (0.0016)	0.0005 (0.0022)	0.9369 (0.0077)	0.0048 (0.0002)	999
Gompertz	0.7380	0.0041	0.0696 (0.0024)	0.0276 (0.0034)	0.9038 (0.0145)	0.0056 (0.0004)	416
RP (3)	0.7105	0.0046	0.0694 (0.0016)	0.0001 (0.0022)	0.9380 (0.0076)	0.0048 (0.0002)	1000
RP (5)	0.7104	0.0046	0.0694 (0.0016)	-0.0000 (0.0022)	0.9370 (0.0077)	0.0048 (0.0002)	1000
RP (9)	0.7104	0.0046	0.0694 (0.0016)	-0.0001 (0.0022)	0.9360 (0.0077)	0.0048 (0.0002)	1000
RP (P)	0.7106	0.0046	0.0694 (0.0016)	0.0002 (0.0022)	0.9370 (0.0077)	0.0048 (0.0002)	1000
FP (W)	0.7095	0.0043	0.0690 (0.0016)	-0.0010 (0.0022)	0.9273 (0.0083)	0.0048 (0.0002)	976
FP (k=10)	0.7003	0.0043	0.0701 (0.0016)	-0.0101 (0.0022)	0.9197 (0.0086)	0.0050 (0.0002)	996
FP (k=10000)	0.7024	0.0039	0.0704 (0.0016)	-0.0081 (0.0022)	0.9056 (0.0093)	0.0050 (0.0002)	996

Table 188: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5978	0.0029	0.0536 (0.0012)	-0.0037 (0.0017)	0.9458 (0.0072)	0.0029 (0.0001)	997
Exp	0.5544	0.0031	0.0495 (0.0011)	-0.0471 (0.0016)	0.8840 (0.0101)	0.0047 (0.0002)	1000
Weibull	0.5772	0.0028	0.0517 (0.0012)	-0.0243 (0.0016)	0.9200 (0.0086)	0.0033 (0.0001)	1000
Gompertz	0.5972	0.0027	0.0535 (0.0012)	-0.0042 (0.0017)	0.9370 (0.0077)	0.0029 (0.0001)	1000
RP (3)	0.5948	0.0027	0.0533 (0.0012)	-0.0067 (0.0017)	0.9370 (0.0077)	0.0029 (0.0001)	1000
RP (5)	0.5966	0.0027	0.0535 (0.0012)	-0.0049 (0.0017)	0.9400 (0.0075)	0.0029 (0.0001)	1000
RP (9)	0.5971	0.0027	0.0536 (0.0012)	-0.0043 (0.0017)	0.9430 (0.0073)	0.0029 (0.0001)	1000
RP (P)	0.5932	0.0027	0.0532 (0.0012)	-0.0083 (0.0017)	0.9379 (0.0076)	0.0029 (0.0001)	999
FP (W)	0.5772	0.0030	0.0517 (0.0012)	-0.0243 (0.0016)	0.9379 (0.0076)	0.0033 (0.0001)	999
FP (k=10)	0.5968	0.0030	0.0536 (0.0012)	-0.0047 (0.0017)	0.9470 (0.0071)	0.0029 (0.0001)	1000
FP (k=10000)	0.5926	0.0027	0.0530 (0.0012)	-0.0089 (0.0017)	0.9360 (0.0077)	0.0029 (0.0001)	1000
Model frailty: Normal							
Cox	0.6002	0.0030	0.0535 (0.0012)	-0.0013 (0.0017)	0.9460 (0.0071)	0.0029 (0.0001)	1000
Exp	0.5567	0.0032	0.0495 (0.0011)	-0.0447 (0.0016)	0.8929 (0.0098)	0.0045 (0.0002)	999
Weibull	0.5817	0.0028	0.0517 (0.0012)	-0.0198 (0.0016)	0.9340 (0.0079)	0.0031 (0.0001)	1000
Gompertz	0.6018	0.0027	0.0536 (0.0012)	0.0004 (0.0017)	0.9408 (0.0075)	0.0029 (0.0001)	997
RP (3)	0.5994	0.0027	0.0534 (0.0012)	-0.0021 (0.0017)	0.9410 (0.0075)	0.0028 (0.0001)	1000
RP (5)	0.6011	0.0027	0.0536 (0.0012)	-0.0003 (0.0017)	0.9410 (0.0075)	0.0029 (0.0001)	1000
RP (9)	0.6017	0.0027	0.0536 (0.0012)	0.0002 (0.0017)	0.9400 (0.0075)	0.0029 (0.0001)	1000
RP (P)	0.5977	0.0027	0.0532 (0.0012)	-0.0037 (0.0017)	0.9430 (0.0073)	0.0028 (0.0001)	1000
FP (W)	0.5802	0.0030	0.0523 (0.0012)	-0.0212 (0.0017)	0.9384 (0.0079)	0.0032 (0.0001)	926
FP (k=10)	0.5981	0.0029	0.0568 (0.0013)	-0.0033 (0.0018)	0.9320 (0.0080)	0.0032 (0.0001)	986
FP (k=10000)	0.6030	0.0026	0.0546 (0.0012)	0.0016 (0.0017)	0.9284 (0.0082)	0.0030 (0.0001)	992

Table 189: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5780	0.0028	0.0524 (0.0012)	-0.0010 (0.0017)	0.9553 (0.0066)	0.0027 (0.0001)	985
Exp	0.5348	0.0035	0.0491 (0.0011)	-0.0442 (0.0016)	0.9260 (0.0083)	0.0044 (0.0002)	1000
Weibull	0.5972	0.0025	0.0542 (0.0012)	0.0182 (0.0017)	0.9230 (0.0084)	0.0033 (0.0001)	1000
Gompertz	0.6057	0.0027	0.0552 (0.0012)	0.0267 (0.0017)	0.9060 (0.0092)	0.0038 (0.0002)	1000
RP (3)	0.5745	0.0025	0.0522 (0.0012)	-0.0045 (0.0017)	0.9470 (0.0071)	0.0027 (0.0001)	1000
RP (5)	0.5776	0.0026	0.0525 (0.0012)	-0.0014 (0.0017)	0.9480 (0.0070)	0.0028 (0.0001)	1000
RP (9)	0.5781	0.0026	0.0524 (0.0012)	-0.0009 (0.0017)	0.9470 (0.0071)	0.0027 (0.0001)	1000
RP (P)	0.5782	0.0025	0.0524 (0.0012)	-0.0008 (0.0017)	0.9478 (0.0070)	0.0027 (0.0001)	997
FP (W)	0.5972	0.0027	0.0543 (0.0012)	0.0182 (0.0017)	0.9329 (0.0079)	0.0033 (0.0001)	998
FP (k=10)	0.5762	0.0028	0.0526 (0.0012)	-0.0028 (0.0017)	0.9570 (0.0064)	0.0028 (0.0001)	1000
FP (k=10000)	0.6111	0.0024	0.0558 (0.0012)	0.0321 (0.0018)	0.8560 (0.0111)	0.0041 (0.0002)	1000
Model frailty: Normal							
Cox	0.5811	0.0028	0.0523 (0.0012)	0.0022 (0.0017)	0.9540 (0.0066)	0.0027 (0.0001)	1000
Exp	0.5352	0.0035	0.0491 (0.0011)	-0.0438 (0.0016)	0.9279 (0.0082)	0.0043 (0.0002)	998
Weibull	0.6021	0.0025	0.0542 (0.0012)	0.0231 (0.0017)	0.9139 (0.0089)	0.0035 (0.0002)	999
Gompertz	0.6082	0.0028	0.0552 (0.0012)	0.0293 (0.0017)	0.9028 (0.0094)	0.0039 (0.0002)	998
RP (3)	0.5794	0.0026	0.0521 (0.0012)	0.0004 (0.0016)	0.9540 (0.0066)	0.0027 (0.0001)	1000
RP (5)	0.5823	0.0026	0.0524 (0.0012)	0.0033 (0.0017)	0.9480 (0.0070)	0.0028 (0.0001)	1000
RP (9)	0.5828	0.0026	0.0523 (0.0012)	0.0038 (0.0017)	0.9480 (0.0070)	0.0028 (0.0001)	1000
RP (P)	0.5829	0.0026	0.0524 (0.0012)	0.0040 (0.0017)	0.9470 (0.0071)	0.0028 (0.0001)	1000
FP (W)	0.6020	0.0027	0.0552 (0.0013)	0.0230 (0.0018)	0.9222 (0.0089)	0.0036 (0.0002)	913
FP (k=10)	0.5774	0.0028	0.0543 (0.0012)	-0.0016 (0.0017)	0.9477 (0.0071)	0.0029 (0.0001)	994
FP (k=10000)	0.6106	0.0022	0.0576 (0.0013)	0.0316 (0.0018)	0.8325 (0.0118)	0.0043 (0.0002)	997

Table 190: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6903	0.0041	0.0628 (0.0014)	0.0003 (0.0020)	0.9486 (0.0070)	0.0039 (0.0002)	992
Exp	0.7106	0.0039	0.0649 (0.0015)	0.0207 (0.0021)	0.9290 (0.0081)	0.0046 (0.0002)	1000
Weibull	0.6989	0.0041	0.0638 (0.0014)	0.0090 (0.0020)	0.9430 (0.0073)	0.0041 (0.0002)	1000
Gompertz	0.7056	0.0039	0.0640 (0.0022)	0.0156 (0.0032)	0.9340 (0.0123)	0.0043 (0.0003)	409
RP (3)	0.6927	0.0041	0.0632 (0.0014)	0.0028 (0.0020)	0.9490 (0.0070)	0.0040 (0.0002)	1000
RP (5)	0.6907	0.0041	0.0630 (0.0014)	0.0008 (0.0020)	0.9490 (0.0070)	0.0040 (0.0002)	1000
RP (9)	0.6902	0.0041	0.0630 (0.0014)	0.0003 (0.0020)	0.9490 (0.0070)	0.0040 (0.0002)	1000
RP (P)	0.6918	0.0041	0.0632 (0.0014)	0.0019 (0.0020)	0.9490 (0.0070)	0.0040 (0.0002)	1000
FP (W)	0.6989	0.0041	0.0638 (0.0014)	0.0090 (0.0020)	0.9420 (0.0074)	0.0041 (0.0002)	1000
FP (k=10)	0.6877	0.0041	0.0630 (0.0014)	-0.0022 (0.0020)	0.9540 (0.0066)	0.0040 (0.0002)	1000
FP (k=10000)	0.6900	0.0039	0.0630 (0.0014)	0.0001 (0.0020)	0.9420 (0.0074)	0.0040 (0.0002)	1000
Model frailty: Normal							
Cox	0.6919	0.0041	0.0628 (0.0014)	0.0019 (0.0020)	0.9530 (0.0067)	0.0039 (0.0002)	1000
Exp	0.7137	0.0039	0.0647 (0.0014)	0.0238 (0.0020)	0.9249 (0.0083)	0.0047 (0.0002)	999
Weibull	0.7009	0.0041	0.0637 (0.0014)	0.0110 (0.0020)	0.9399 (0.0075)	0.0042 (0.0002)	998
Gompertz	0.7095	0.0039	0.0640 (0.0022)	0.0196 (0.0031)	0.9311 (0.0123)	0.0045 (0.0003)	421
RP (3)	0.6950	0.0041	0.0631 (0.0014)	0.0050 (0.0020)	0.9470 (0.0071)	0.0040 (0.0002)	1000
RP (5)	0.6931	0.0041	0.0629 (0.0014)	0.0032 (0.0020)	0.9520 (0.0068)	0.0040 (0.0002)	1000
RP (9)	0.6926	0.0041	0.0628 (0.0014)	0.0027 (0.0020)	0.9530 (0.0067)	0.0039 (0.0002)	1000
RP (P)	0.6941	0.0041	0.0630 (0.0014)	0.0042 (0.0020)	0.9510 (0.0068)	0.0040 (0.0002)	1000
FP (W)	0.7003	0.0040	0.0639 (0.0015)	0.0103 (0.0021)	0.9414 (0.0077)	0.0042 (0.0002)	939
FP (k=10)	0.6862	0.0040	0.0633 (0.0014)	-0.0037 (0.0020)	0.9489 (0.0070)	0.0040 (0.0002)	998
FP (k=10000)	0.6887	0.0037	0.0631 (0.0014)	-0.0012 (0.0020)	0.9378 (0.0076)	0.0040 (0.0002)	997

Table 191: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5754	0.0031	0.0598 (0.0014)	-0.0009 (0.0019)	0.9276 (0.0083)	0.0036 (0.0002)	981
Exp	0.5760	0.0037	0.0599 (0.0013)	-0.0002 (0.0019)	0.9500 (0.0069)	0.0036 (0.0002)	1000
Weibull	0.5762	0.0037	0.0599 (0.0013)	-0.0001 (0.0019)	0.9500 (0.0069)	0.0036 (0.0002)	1000
Gompertz	0.5782	0.0037	0.0590 (0.0019)	0.0019 (0.0027)	0.9587 (0.0093)	0.0035 (0.0002)	460
RP (3)	0.5761	0.0037	0.0600 (0.0013)	-0.0002 (0.0019)	0.9480 (0.0070)	0.0036 (0.0002)	1000
RP (5)	0.5761	0.0037	0.0599 (0.0013)	-0.0002 (0.0019)	0.9480 (0.0070)	0.0036 (0.0002)	1000
RP (9)	0.5761	0.0037	0.0599 (0.0013)	-0.0002 (0.0019)	0.9490 (0.0070)	0.0036 (0.0002)	1000
RP (P)	0.5760	0.0037	0.0601 (0.0014)	-0.0002 (0.0019)	0.9490 (0.0071)	0.0036 (0.0002)	960
FP (W)	0.5759	0.0031	0.0599 (0.0013)	-0.0003 (0.0019)	0.9291 (0.0082)	0.0036 (0.0002)	987
FP (k=10)	0.5740	0.0031	0.0600 (0.0013)	-0.0022 (0.0019)	0.9269 (0.0082)	0.0036 (0.0002)	998
FP (k=10000)	0.5752	0.0030	0.0600 (0.0013)	-0.0011 (0.0019)	0.9209 (0.0085)	0.0036 (0.0002)	999
Model frailty: Normal							
Cox	0.5650	0.0029	0.0606 (0.0014)	-0.0113 (0.0019)	0.9150 (0.0088)	0.0038 (0.0002)	1000
Exp	0.5639	0.0035	0.0606 (0.0014)	-0.0123 (0.0019)	0.9359 (0.0078)	0.0038 (0.0002)	998
Weibull	0.5644	0.0035	0.0607 (0.0014)	-0.0118 (0.0019)	0.9349 (0.0078)	0.0038 (0.0002)	998
Gompertz	0.5645	0.0035	0.0589 (0.0020)	-0.0117 (0.0028)	0.9490 (0.0106)	0.0036 (0.0002)	431
RP (3)	0.5638	0.0035	0.0608 (0.0014)	-0.0124 (0.0019)	0.9330 (0.0079)	0.0038 (0.0002)	1000
RP (5)	0.5638	0.0035	0.0607 (0.0014)	-0.0124 (0.0019)	0.9330 (0.0079)	0.0038 (0.0002)	1000
RP (9)	0.5638	0.0035	0.0607 (0.0014)	-0.0124 (0.0019)	0.9330 (0.0079)	0.0038 (0.0002)	1000
RP (P)	0.5644	0.0035	0.0618 (0.0014)	-0.0119 (0.0020)	0.9330 (0.0079)	0.0040 (0.0002)	1000
FP (W)	0.5633	0.0029	0.0614 (0.0014)	-0.0129 (0.0020)	0.9038 (0.0096)	0.0039 (0.0002)	946
FP (k=10)	0.5573	0.0029	0.0625 (0.0014)	-0.0190 (0.0020)	0.8972 (0.0096)	0.0043 (0.0002)	992
FP (k=10000)	0.5545	0.0026	0.0602 (0.0013)	-0.0217 (0.0019)	0.8776 (0.0104)	0.0041 (0.0002)	997

Table 192: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5912	0.0035	0.0661 (0.0015)	0.0004 (0.0021)	0.9196 (0.0087)	0.0044 (0.0002)	982
Exp	0.6111	0.0040	0.0681 (0.0015)	0.0203 (0.0022)	0.9260 (0.0083)	0.0050 (0.0002)	1000
Weibull	0.5923	0.0044	0.0662 (0.0015)	0.0015 (0.0021)	0.9450 (0.0072)	0.0044 (0.0002)	1000
Gompertz	0.6102	0.0040	0.0708 (0.0026)	0.0194 (0.0037)	0.9118 (0.0147)	0.0054 (0.0004)	374
RP (3)	0.5918	0.0044	0.0662 (0.0015)	0.0010 (0.0021)	0.9470 (0.0071)	0.0044 (0.0002)	1000
RP (5)	0.5918	0.0044	0.0662 (0.0015)	0.0009 (0.0021)	0.9460 (0.0071)	0.0044 (0.0002)	1000
RP (9)	0.5917	0.0044	0.0662 (0.0015)	0.0009 (0.0021)	0.9460 (0.0071)	0.0044 (0.0002)	1000
RP (P)	0.5922	0.0044	0.0659 (0.0015)	0.0014 (0.0021)	0.9455 (0.0073)	0.0043 (0.0002)	973
FP (W)	0.5919	0.0035	0.0659 (0.0015)	0.0011 (0.0021)	0.9208 (0.0086)	0.0043 (0.0002)	997
FP (k=10)	0.5811	0.0034	0.0661 (0.0015)	-0.0097 (0.0021)	0.9064 (0.0092)	0.0045 (0.0002)	994
FP (k=10000)	0.5897	0.0033	0.0665 (0.0015)	-0.0011 (0.0021)	0.9048 (0.0093)	0.0044 (0.0002)	998
Model frailty: Normal							
Cox	0.5753	0.0033	0.0670 (0.0015)	-0.0155 (0.0021)	0.8860 (0.0101)	0.0047 (0.0002)	1000
Exp	0.5942	0.0038	0.0693 (0.0016)	0.0033 (0.0022)	0.9147 (0.0089)	0.0048 (0.0002)	996
Weibull	0.5739	0.0041	0.0671 (0.0015)	-0.0170 (0.0021)	0.9189 (0.0086)	0.0048 (0.0002)	999
Gompertz	0.5912	0.0038	0.0721 (0.0026)	0.0003 (0.0037)	0.8987 (0.0156)	0.0052 (0.0004)	375
RP (3)	0.5732	0.0041	0.0671 (0.0015)	-0.0177 (0.0021)	0.9160 (0.0088)	0.0048 (0.0002)	1000
RP (5)	0.5732	0.0041	0.0671 (0.0015)	-0.0177 (0.0021)	0.9180 (0.0087)	0.0048 (0.0002)	1000
RP (9)	0.5732	0.0041	0.0671 (0.0015)	-0.0177 (0.0021)	0.9180 (0.0087)	0.0048 (0.0002)	1000
RP (P)	0.5733	0.0041	0.0671 (0.0015)	-0.0175 (0.0021)	0.9170 (0.0087)	0.0048 (0.0002)	1000
FP (W)	0.5735	0.0032	0.0674 (0.0015)	-0.0173 (0.0022)	0.8776 (0.0106)	0.0048 (0.0002)	964
FP (k=10)	0.5633	0.0032	0.0708 (0.0016)	-0.0275 (0.0022)	0.8416 (0.0116)	0.0058 (0.0003)	991
FP (k=10000)	0.5619	0.0029	0.0672 (0.0015)	-0.0289 (0.0021)	0.8417 (0.0116)	0.0053 (0.0002)	998

Table 193: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5453	0.0026	0.0525 (0.0012)	0.0016 (0.0017)	0.9470 (0.0072)	0.0028 (0.0001)	981
Exp	0.5176	0.0032	0.0494 (0.0011)	-0.0261 (0.0016)	0.9500 (0.0069)	0.0031 (0.0001)	1000
Weibull	0.5347	0.0028	0.0510 (0.0011)	-0.0090 (0.0016)	0.9540 (0.0066)	0.0027 (0.0001)	1000
Gompertz	0.5235	0.0032	0.0552 (0.0016)	-0.0202 (0.0023)	0.9352 (0.0102)	0.0035 (0.0002)	586
RP (3)	0.5447	0.0028	0.0524 (0.0012)	0.0010 (0.0017)	0.9530 (0.0067)	0.0027 (0.0001)	1000
RP (5)	0.5456	0.0028	0.0526 (0.0012)	0.0019 (0.0017)	0.9530 (0.0067)	0.0028 (0.0001)	1000
RP (9)	0.5458	0.0028	0.0526 (0.0012)	0.0021 (0.0017)	0.9520 (0.0068)	0.0028 (0.0001)	1000
RP (P)	0.5432	0.0028	0.0523 (0.0012)	-0.0005 (0.0017)	0.9537 (0.0067)	0.0027 (0.0001)	972
FP (W)	0.5347	0.0027	0.0511 (0.0011)	-0.0090 (0.0016)	0.9459 (0.0072)	0.0027 (0.0001)	998
FP (k=10)	0.5454	0.0026	0.0527 (0.0012)	0.0017 (0.0017)	0.9459 (0.0072)	0.0028 (0.0001)	999
FP (k=10000)	0.5435	0.0025	0.0522 (0.0012)	-0.0002 (0.0017)	0.9380 (0.0076)	0.0027 (0.0001)	1000
Model frailty: Normal							
Cox	0.5445	0.0025	0.0534 (0.0012)	0.0008 (0.0017)	0.9360 (0.0077)	0.0029 (0.0001)	1000
Exp	0.5134	0.0032	0.0504 (0.0011)	-0.0303 (0.0016)	0.9329 (0.0079)	0.0035 (0.0001)	998
Weibull	0.5350	0.0029	0.0521 (0.0012)	-0.0087 (0.0016)	0.9520 (0.0068)	0.0028 (0.0001)	1000
Gompertz	0.5214	0.0031	0.0550 (0.0015)	-0.0223 (0.0021)	0.9346 (0.0095)	0.0035 (0.0002)	673
RP (3)	0.5442	0.0028	0.0534 (0.0012)	0.0005 (0.0017)	0.9540 (0.0066)	0.0028 (0.0001)	1000
RP (5)	0.5447	0.0028	0.0535 (0.0012)	0.0010 (0.0017)	0.9530 (0.0067)	0.0029 (0.0001)	1000
RP (9)	0.5449	0.0028	0.0535 (0.0012)	0.0012 (0.0017)	0.9530 (0.0067)	0.0029 (0.0001)	1000
RP (P)	0.5432	0.0028	0.0532 (0.0012)	-0.0005 (0.0017)	0.9540 (0.0066)	0.0028 (0.0001)	1000
FP (W)	0.5316	0.0026	0.0526 (0.0012)	-0.0121 (0.0017)	0.9286 (0.0083)	0.0029 (0.0001)	952
FP (k=10)	0.5319	0.0024	0.0586 (0.0013)	-0.0118 (0.0019)	0.8885 (0.0101)	0.0036 (0.0002)	978
FP (k=10000)	0.5300	0.0021	0.0566 (0.0013)	-0.0137 (0.0018)	0.8718 (0.0106)	0.0034 (0.0002)	991

Table 194: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5165	0.0024	0.0509 (0.0011)	-0.0016 (0.0016)	0.9462 (0.0072)	0.0026 (0.0001)	985
Exp	0.4819	0.0034	0.0487 (0.0011)	-0.0361 (0.0015)	0.9540 (0.0066)	0.0037 (0.0002)	1000
Weibull	0.5268	0.0025	0.0524 (0.0012)	0.0088 (0.0017)	0.9410 (0.0075)	0.0028 (0.0001)	1000
Gompertz	0.5207	0.0029	0.0589 (0.0013)	0.0027 (0.0019)	0.9456 (0.0073)	0.0035 (0.0002)	956
RP (3)	0.5151	0.0026	0.0506 (0.0011)	-0.0029 (0.0016)	0.9560 (0.0065)	0.0026 (0.0001)	1000
RP (5)	0.5163	0.0026	0.0508 (0.0011)	-0.0018 (0.0016)	0.9550 (0.0066)	0.0026 (0.0001)	1000
RP (9)	0.5163	0.0026	0.0510 (0.0011)	-0.0017 (0.0016)	0.9547 (0.0066)	0.0026 (0.0001)	993
RP (P)	0.5176	0.0026	0.0522 (0.0012)	-0.0004 (0.0017)	0.9554 (0.0067)	0.0027 (0.0002)	941
FP (W)	0.5268	0.0023	0.0525 (0.0012)	0.0088 (0.0017)	0.9279 (0.0082)	0.0028 (0.0001)	998
FP (k=10)	0.5123	0.0024	0.0510 (0.0011)	-0.0057 (0.0016)	0.9449 (0.0072)	0.0026 (0.0001)	998
FP (k=10000)	0.5285	0.0021	0.0547 (0.0012)	0.0105 (0.0017)	0.8980 (0.0096)	0.0031 (0.0001)	1000
Model frailty: Normal							
Cox	0.5148	0.0023	0.0516 (0.0012)	-0.0032 (0.0016)	0.9370 (0.0077)	0.0027 (0.0001)	1000
Exp	0.4719	0.0033	0.0496 (0.0011)	-0.0461 (0.0016)	0.9087 (0.0091)	0.0046 (0.0002)	997
Weibull	0.5246	0.0025	0.0535 (0.0012)	0.0066 (0.0017)	0.9398 (0.0075)	0.0029 (0.0001)	996
Gompertz	0.5135	0.0029	0.0614 (0.0015)	-0.0045 (0.0021)	0.9252 (0.0089)	0.0038 (0.0002)	869
RP (3)	0.5145	0.0026	0.0516 (0.0012)	-0.0035 (0.0016)	0.9520 (0.0068)	0.0027 (0.0001)	1000
RP (5)	0.5148	0.0026	0.0518 (0.0012)	-0.0032 (0.0016)	0.9540 (0.0066)	0.0027 (0.0001)	1000
RP (9)	0.5149	0.0026	0.0518 (0.0012)	-0.0031 (0.0016)	0.9540 (0.0066)	0.0027 (0.0001)	1000
RP (P)	0.5151	0.0026	0.0519 (0.0012)	-0.0029 (0.0016)	0.9520 (0.0068)	0.0027 (0.0001)	1000
FP (W)	0.5210	0.0022	0.0541 (0.0013)	0.0029 (0.0018)	0.9163 (0.0091)	0.0029 (0.0002)	920
FP (k=10)	0.5043	0.0023	0.0530 (0.0012)	-0.0137 (0.0017)	0.9125 (0.0090)	0.0030 (0.0001)	983
FP (k=10000)	0.4271	0.0014	0.0814 (0.0018)	-0.0909 (0.0026)	0.4291 (0.0157)	0.0149 (0.0006)	988

Table 195: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5865	0.0033	0.0646 (0.0015)	0.0036 (0.0021)	0.9136 (0.0090)	0.0042 (0.0002)	984
Exp	0.5996	0.0038	0.0660 (0.0015)	0.0166 (0.0021)	0.9210 (0.0085)	0.0046 (0.0002)	1000
Weibull	0.5904	0.0040	0.0651 (0.0015)	0.0075 (0.0021)	0.9330 (0.0079)	0.0043 (0.0002)	1000
Gompertz	0.6054	0.0039	0.0645 (0.0028)	0.0225 (0.0040)	0.9248 (0.0162)	0.0047 (0.0004)	266
RP (3)	0.5880	0.0040	0.0647 (0.0014)	0.0051 (0.0020)	0.9358 (0.0078)	0.0042 (0.0002)	997
RP (5)	0.5874	0.0040	0.0644 (0.0014)	0.0044 (0.0020)	0.9380 (0.0076)	0.0042 (0.0002)	1000
RP (9)	0.5872	0.0040	0.0644 (0.0014)	0.0043 (0.0020)	0.9380 (0.0076)	0.0042 (0.0002)	1000
RP (P)	0.5877	0.0040	0.0644 (0.0015)	0.0048 (0.0021)	0.9385 (0.0078)	0.0042 (0.0002)	960
FP (W)	0.5902	0.0033	0.0651 (0.0015)	0.0073 (0.0021)	0.9085 (0.0091)	0.0043 (0.0002)	994
FP (k=10)	0.5834	0.0033	0.0643 (0.0014)	0.0005 (0.0020)	0.9134 (0.0089)	0.0041 (0.0002)	993
FP (k=10000)	0.5852	0.0032	0.0644 (0.0014)	0.0023 (0.0020)	0.9108 (0.0090)	0.0042 (0.0002)	998
Model frailty: Normal							
Cox	0.5749	0.0031	0.0653 (0.0015)	-0.0080 (0.0021)	0.9010 (0.0094)	0.0043 (0.0002)	1000
Exp	0.5853	0.0036	0.0670 (0.0015)	0.0023 (0.0021)	0.9160 (0.0088)	0.0045 (0.0002)	1000
Weibull	0.5752	0.0038	0.0661 (0.0015)	-0.0077 (0.0021)	0.9219 (0.0085)	0.0044 (0.0002)	999
Gompertz	0.5869	0.0037	0.0648 (0.0024)	0.0039 (0.0033)	0.9342 (0.0127)	0.0042 (0.0003)	380
RP (3)	0.5736	0.0038	0.0656 (0.0015)	-0.0093 (0.0021)	0.9240 (0.0084)	0.0044 (0.0002)	1000
RP (5)	0.5736	0.0038	0.0655 (0.0015)	-0.0093 (0.0021)	0.9230 (0.0084)	0.0044 (0.0002)	1000
RP (9)	0.5735	0.0038	0.0655 (0.0015)	-0.0094 (0.0021)	0.9220 (0.0085)	0.0044 (0.0002)	1000
RP (P)	0.5737	0.0038	0.0656 (0.0015)	-0.0092 (0.0021)	0.9230 (0.0084)	0.0044 (0.0002)	1000
FP (W)	0.5743	0.0031	0.0667 (0.0015)	-0.0086 (0.0022)	0.8964 (0.0099)	0.0045 (0.0002)	956
FP (k=10)	0.5658	0.0031	0.0673 (0.0015)	-0.0172 (0.0021)	0.8780 (0.0104)	0.0048 (0.0002)	992
FP (k=10000)	0.5655	0.0029	0.0646 (0.0014)	-0.0175 (0.0020)	0.8786 (0.0103)	0.0045 (0.0002)	997

Table 196: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5785	0.0031	0.0636 (0.0014)	-0.0174 (0.0020)	0.8979 (0.0097)	0.0043 (0.0002)	970
Exp	0.5787	0.0032	0.0633 (0.0014)	-0.0172 (0.0020)	0.9100 (0.0090)	0.0043 (0.0002)	1000
Weibull	0.5786	0.0032	0.0632 (0.0014)	-0.0173 (0.0020)	0.9080 (0.0091)	0.0043 (0.0002)	1000
Gompertz	0.5755	0.0032	0.0687 (0.0036)	-0.0204 (0.0050)	0.8710 (0.0246)	0.0051 (0.0005)	186
RP (3)	0.5787	0.0033	0.0632 (0.0014)	-0.0172 (0.0020)	0.9080 (0.0091)	0.0043 (0.0002)	1000
RP (5)	0.5786	0.0033	0.0631 (0.0014)	-0.0174 (0.0020)	0.9070 (0.0092)	0.0043 (0.0002)	1000
RP (9)	0.5785	0.0033	0.0632 (0.0014)	-0.0174 (0.0020)	0.9080 (0.0091)	0.0043 (0.0002)	1000
RP (P)	0.5789	0.0032	0.0631 (0.0014)	-0.0170 (0.0020)	0.9093 (0.0092)	0.0043 (0.0002)	981
FP (W)	0.5787	0.0031	0.0632 (0.0014)	-0.0172 (0.0020)	0.8956 (0.0097)	0.0043 (0.0002)	996
FP (k=10)	0.5784	0.0031	0.0631 (0.0014)	-0.0176 (0.0020)	0.9019 (0.0094)	0.0043 (0.0002)	999
FP (k=10000)	0.5784	0.0029	0.0632 (0.0014)	-0.0175 (0.0020)	0.8890 (0.0099)	0.0043 (0.0002)	1000
Model frailty: Normal							
Cox	0.5934	0.0031	0.0614 (0.0014)	-0.0026 (0.0019)	0.9260 (0.0083)	0.0038 (0.0002)	1000
Exp	0.5939	0.0034	0.0614 (0.0014)	-0.0020 (0.0019)	0.9309 (0.0080)	0.0038 (0.0002)	999
Weibull	0.5941	0.0034	0.0614 (0.0014)	-0.0018 (0.0019)	0.9350 (0.0078)	0.0038 (0.0002)	1000
Gompertz	0.5942	0.0034	0.0631 (0.0021)	-0.0017 (0.0030)	0.9330 (0.0120)	0.0040 (0.0003)	433
RP (3)	0.5939	0.0034	0.0614 (0.0014)	-0.0020 (0.0019)	0.9360 (0.0077)	0.0038 (0.0002)	1000
RP (5)	0.5938	0.0034	0.0613 (0.0014)	-0.0021 (0.0019)	0.9350 (0.0078)	0.0038 (0.0002)	1000
RP (9)	0.5938	0.0034	0.0614 (0.0014)	-0.0021 (0.0019)	0.9350 (0.0078)	0.0038 (0.0002)	1000
RP (P)	0.5939	0.0034	0.0614 (0.0014)	-0.0020 (0.0019)	0.9340 (0.0079)	0.0038 (0.0002)	1000
FP (W)	0.5905	0.0031	0.0625 (0.0014)	-0.0054 (0.0020)	0.9185 (0.0087)	0.0039 (0.0002)	982
FP (k=10)	0.5854	0.0030	0.0636 (0.0014)	-0.0105 (0.0020)	0.9075 (0.0092)	0.0042 (0.0002)	984
FP (k=10000)	0.5897	0.0028	0.0613 (0.0014)	-0.0062 (0.0019)	0.9067 (0.0092)	0.0038 (0.0002)	997

Table 197: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6206	0.0036	0.0641 (0.0015)	-0.0032 (0.0021)	0.9415 (0.0075)	0.0041 (0.0002)	975
Exp	0.6345	0.0036	0.0686 (0.0015)	0.0107 (0.0022)	0.9050 (0.0093)	0.0048 (0.0002)	1000
Weibull	0.6206	0.0040	0.0640 (0.0014)	-0.0032 (0.0020)	0.9530 (0.0067)	0.0041 (0.0002)	1000
Gompertz	0.6326	0.0036	0.0683 (0.0024)	0.0088 (0.0035)	0.9051 (0.0148)	0.0047 (0.0003)	390
RP (3)	0.6204	0.0040	0.0640 (0.0014)	-0.0034 (0.0020)	0.9530 (0.0067)	0.0041 (0.0002)	1000
RP (5)	0.6203	0.0040	0.0640 (0.0014)	-0.0035 (0.0020)	0.9540 (0.0066)	0.0041 (0.0002)	1000
RP (9)	0.6203	0.0040	0.0640 (0.0014)	-0.0035 (0.0020)	0.9520 (0.0068)	0.0041 (0.0002)	1000
RP (P)	0.6204	0.0040	0.0639 (0.0014)	-0.0034 (0.0020)	0.9553 (0.0066)	0.0041 (0.0002)	984
FP (W)	0.6210	0.0036	0.0640 (0.0014)	-0.0028 (0.0020)	0.9376 (0.0077)	0.0041 (0.0002)	993
FP (k=10)	0.6151	0.0036	0.0640 (0.0014)	-0.0087 (0.0020)	0.9338 (0.0079)	0.0042 (0.0002)	997
FP (k=10000)	0.6190	0.0033	0.0652 (0.0015)	-0.0048 (0.0021)	0.9198 (0.0086)	0.0043 (0.0002)	997
Model frailty: Normal							
Cox	0.6277	0.0036	0.0626 (0.0014)	0.0039 (0.0020)	0.9480 (0.0070)	0.0039 (0.0002)	1000
Exp	0.6537	0.0036	0.0657 (0.0015)	0.0299 (0.0021)	0.8970 (0.0096)	0.0052 (0.0002)	1000
Weibull	0.6282	0.0040	0.0628 (0.0014)	0.0044 (0.0020)	0.9618 (0.0061)	0.0040 (0.0002)	996
Gompertz	0.6579	0.0037	0.0689 (0.0026)	0.0341 (0.0036)	0.8819 (0.0169)	0.0059 (0.0004)	364
RP (3)	0.6276	0.0041	0.0628 (0.0014)	0.0038 (0.0020)	0.9630 (0.0060)	0.0039 (0.0002)	1000
RP (5)	0.6275	0.0041	0.0627 (0.0014)	0.0037 (0.0020)	0.9630 (0.0060)	0.0039 (0.0002)	1000
RP (9)	0.6275	0.0041	0.0627 (0.0014)	0.0037 (0.0020)	0.9630 (0.0060)	0.0039 (0.0002)	1000
RP (P)	0.6277	0.0041	0.0628 (0.0014)	0.0039 (0.0020)	0.9620 (0.0060)	0.0039 (0.0002)	1000
FP (W)	0.6261	0.0036	0.0628 (0.0014)	0.0023 (0.0020)	0.9467 (0.0072)	0.0039 (0.0002)	975
FP (k=10)	0.6156	0.0035	0.0639 (0.0014)	-0.0083 (0.0020)	0.9326 (0.0080)	0.0041 (0.0002)	994
FP (k=10000)	0.6212	0.0031	0.0640 (0.0014)	-0.0026 (0.0020)	0.9259 (0.0083)	0.0041 (0.0002)	999

Table 198: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5269	0.0024	0.0507 (0.0012)	-0.0181 (0.0016)	0.9148 (0.0090)	0.0029 (0.0001)	962
Exp	0.5022	0.0028	0.0474 (0.0011)	-0.0428 (0.0015)	0.8860 (0.0101)	0.0041 (0.0002)	1000
Weibull	0.5123	0.0025	0.0498 (0.0011)	-0.0327 (0.0016)	0.8870 (0.0100)	0.0035 (0.0001)	1000
Gompertz	0.5091	0.0027	0.0506 (0.0014)	-0.0358 (0.0020)	0.8942 (0.0119)	0.0038 (0.0002)	671
RP (3)	0.5241	0.0024	0.0507 (0.0011)	-0.0208 (0.0016)	0.9120 (0.0090)	0.0030 (0.0001)	1000
RP (5)	0.5255	0.0024	0.0508 (0.0011)	-0.0195 (0.0016)	0.9140 (0.0089)	0.0030 (0.0001)	1000
RP (9)	0.5259	0.0024	0.0508 (0.0011)	-0.0190 (0.0016)	0.9160 (0.0088)	0.0029 (0.0001)	1000
RP (P)	0.5233	0.0024	0.0506 (0.0011)	-0.0216 (0.0016)	0.9083 (0.0092)	0.0030 (0.0001)	992
FP (W)	0.5124	0.0024	0.0497 (0.0011)	-0.0325 (0.0016)	0.8814 (0.0102)	0.0035 (0.0001)	995
FP (k=10)	0.5264	0.0024	0.0507 (0.0011)	-0.0186 (0.0016)	0.9140 (0.0089)	0.0029 (0.0001)	1000
FP (k=10000)	0.5235	0.0022	0.0506 (0.0011)	-0.0215 (0.0016)	0.8980 (0.0096)	0.0030 (0.0001)	1000
Model frailty: Normal							
Cox	0.5463	0.0025	0.0497 (0.0011)	0.0013 (0.0016)	0.9420 (0.0074)	0.0025 (0.0001)	1000
Exp	0.5166	0.0029	0.0466 (0.0010)	-0.0283 (0.0015)	0.9339 (0.0079)	0.0030 (0.0001)	999
Weibull	0.5353	0.0027	0.0485 (0.0011)	-0.0096 (0.0015)	0.9469 (0.0071)	0.0024 (0.0001)	998
Gompertz	0.5243	0.0029	0.0493 (0.0013)	-0.0207 (0.0018)	0.9438 (0.0086)	0.0029 (0.0001)	712
RP (3)	0.5457	0.0026	0.0497 (0.0011)	0.0008 (0.0016)	0.9480 (0.0070)	0.0025 (0.0001)	1000
RP (5)	0.5470	0.0026	0.0498 (0.0011)	0.0020 (0.0016)	0.9510 (0.0068)	0.0025 (0.0001)	1000
RP (9)	0.5474	0.0026	0.0498 (0.0011)	0.0024 (0.0016)	0.9510 (0.0068)	0.0025 (0.0001)	1000
RP (P)	0.5450	0.0026	0.0495 (0.0011)	0.0000 (0.0016)	0.9480 (0.0070)	0.0025 (0.0001)	1000
FP (W)	0.5313	0.0025	0.0500 (0.0011)	-0.0136 (0.0016)	0.9317 (0.0082)	0.0027 (0.0001)	952
FP (k=10)	0.5402	0.0024	0.0552 (0.0012)	-0.0048 (0.0018)	0.9101 (0.0091)	0.0031 (0.0002)	979
FP (k=10000)	0.5507	0.0022	0.0505 (0.0011)	0.0058 (0.0016)	0.9243 (0.0084)	0.0026 (0.0001)	991

Table 199: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5060	0.0022	0.0516 (0.0012)	-0.0156 (0.0017)	0.9070 (0.0093)	0.0029 (0.0001)	968
Exp	0.4817	0.0032	0.0470 (0.0011)	-0.0399 (0.0015)	0.9250 (0.0083)	0.0038 (0.0002)	1000
Weibull	0.5187	0.0022	0.0521 (0.0012)	-0.0029 (0.0016)	0.9230 (0.0084)	0.0027 (0.0001)	1000
Gompertz	0.5254	0.0025	0.0539 (0.0012)	0.0037 (0.0017)	0.9389 (0.0076)	0.0029 (0.0001)	982
RP (3)	0.5028	0.0022	0.0510 (0.0011)	-0.0189 (0.0016)	0.9019 (0.0094)	0.0030 (0.0001)	999
RP (5)	0.5047	0.0023	0.0512 (0.0011)	-0.0169 (0.0016)	0.9070 (0.0092)	0.0029 (0.0001)	1000
RP (9)	0.5053	0.0023	0.0512 (0.0011)	-0.0164 (0.0016)	0.9078 (0.0092)	0.0029 (0.0001)	998
RP (P)	0.5054	0.0023	0.0509 (0.0012)	-0.0163 (0.0016)	0.9110 (0.0091)	0.0029 (0.0001)	977
FP (W)	0.5187	0.0021	0.0522 (0.0012)	-0.0029 (0.0017)	0.9225 (0.0085)	0.0027 (0.0001)	993
FP (k=10)	0.5086	0.0023	0.0507 (0.0011)	-0.0130 (0.0016)	0.9230 (0.0084)	0.0027 (0.0001)	1000
FP (k=10000)	0.5313	0.0020	0.0531 (0.0012)	0.0096 (0.0017)	0.9050 (0.0093)	0.0029 (0.0001)	1000
Model frailty: Normal							
Cox	0.5248	0.0023	0.0496 (0.0011)	0.0031 (0.0016)	0.9420 (0.0074)	0.0025 (0.0001)	1000
Exp	0.4841	0.0032	0.0470 (0.0011)	-0.0375 (0.0015)	0.9369 (0.0077)	0.0036 (0.0002)	998
Weibull	0.5375	0.0023	0.0511 (0.0011)	0.0158 (0.0016)	0.9339 (0.0079)	0.0029 (0.0001)	998
Gompertz	0.5340	0.0026	0.0543 (0.0012)	0.0123 (0.0017)	0.9334 (0.0080)	0.0031 (0.0001)	976
RP (3)	0.5237	0.0024	0.0495 (0.0011)	0.0020 (0.0016)	0.9490 (0.0070)	0.0025 (0.0001)	1000
RP (5)	0.5255	0.0024	0.0498 (0.0011)	0.0038 (0.0016)	0.9510 (0.0068)	0.0025 (0.0001)	1000
RP (9)	0.5259	0.0024	0.0497 (0.0011)	0.0042 (0.0016)	0.9500 (0.0069)	0.0025 (0.0001)	1000
RP (P)	0.5259	0.0024	0.0498 (0.0011)	0.0042 (0.0016)	0.9470 (0.0071)	0.0025 (0.0001)	1000
FP (W)	0.5335	0.0022	0.0528 (0.0012)	0.0119 (0.0017)	0.9203 (0.0089)	0.0029 (0.0001)	929
FP (k=10)	0.5203	0.0023	0.0519 (0.0012)	-0.0013 (0.0017)	0.9249 (0.0084)	0.0027 (0.0001)	986
FP (k=10000)	0.4872	0.0015	0.0752 (0.0017)	-0.0344 (0.0024)	0.6876 (0.0148)	0.0068 (0.0004)	986

Table 200: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5908	0.0033	0.0625 (0.0014)	-0.0148 (0.0020)	0.9225 (0.0086)	0.0041 (0.0002)	968
Exp	0.6026	0.0034	0.0644 (0.0014)	-0.0030 (0.0020)	0.9250 (0.0083)	0.0042 (0.0002)	1000
Weibull	0.5965	0.0036	0.0630 (0.0014)	-0.0091 (0.0020)	0.9350 (0.0078)	0.0040 (0.0002)	1000
Gompertz	0.5994	0.0034	0.0653 (0.0023)	-0.0062 (0.0033)	0.9196 (0.0136)	0.0043 (0.0003)	398
RP (3)	0.5932	0.0036	0.0627 (0.0014)	-0.0124 (0.0020)	0.9329 (0.0079)	0.0041 (0.0002)	998
RP (5)	0.5911	0.0035	0.0625 (0.0014)	-0.0145 (0.0020)	0.9310 (0.0080)	0.0041 (0.0002)	1000
RP (9)	0.5906	0.0035	0.0625 (0.0014)	-0.0150 (0.0020)	0.9300 (0.0081)	0.0041 (0.0002)	1000
RP (P)	0.5918	0.0035	0.0626 (0.0014)	-0.0138 (0.0020)	0.9336 (0.0079)	0.0041 (0.0002)	994
FP (W)	0.5966	0.0033	0.0630 (0.0014)	-0.0090 (0.0020)	0.9249 (0.0083)	0.0040 (0.0002)	999
FP (k=10)	0.5898	0.0033	0.0625 (0.0014)	-0.0158 (0.0020)	0.9198 (0.0086)	0.0042 (0.0002)	997
FP (k=10000)	0.5912	0.0032	0.0625 (0.0014)	-0.0144 (0.0020)	0.9150 (0.0088)	0.0041 (0.0002)	1000
Model frailty: Normal							
Cox	0.6043	0.0033	0.0615 (0.0014)	-0.0013 (0.0019)	0.9370 (0.0077)	0.0038 (0.0002)	1000
Exp	0.6194	0.0035	0.0633 (0.0014)	0.0138 (0.0020)	0.9309 (0.0080)	0.0042 (0.0002)	998
Weibull	0.6086	0.0037	0.0623 (0.0014)	0.0030 (0.0020)	0.9430 (0.0073)	0.0039 (0.0002)	1000
Gompertz	0.6222	0.0035	0.0664 (0.0024)	0.0166 (0.0033)	0.9171 (0.0138)	0.0047 (0.0003)	398
RP (3)	0.6066	0.0037	0.0619 (0.0014)	0.0010 (0.0020)	0.9440 (0.0073)	0.0038 (0.0002)	1000
RP (5)	0.6052	0.0036	0.0617 (0.0014)	-0.0004 (0.0020)	0.9420 (0.0074)	0.0038 (0.0002)	1000
RP (9)	0.6048	0.0036	0.0617 (0.0014)	-0.0008 (0.0019)	0.9430 (0.0073)	0.0038 (0.0002)	1000
RP (P)	0.6056	0.0036	0.0618 (0.0014)	-0.0000 (0.0020)	0.9420 (0.0074)	0.0038 (0.0002)	1000
FP (W)	0.6058	0.0033	0.0631 (0.0014)	0.0002 (0.0020)	0.9289 (0.0083)	0.0040 (0.0002)	970
FP (k=10)	0.5960	0.0033	0.0633 (0.0014)	-0.0096 (0.0020)	0.9251 (0.0084)	0.0041 (0.0002)	988
FP (k=10000)	0.6005	0.0030	0.0621 (0.0014)	-0.0050 (0.0020)	0.9179 (0.0087)	0.0039 (0.0002)	999

Table 201: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5020	0.0027	0.0593 (0.0013)	-0.0018 (0.0019)	0.9057 (0.0093)	0.0035 (0.0002)	997
Exp	0.5022	0.0035	0.0593 (0.0013)	-0.0015 (0.0019)	0.9440 (0.0073)	0.0035 (0.0002)	1000
Weibull	0.5025	0.0035	0.0593 (0.0013)	-0.0013 (0.0019)	0.9440 (0.0073)	0.0035 (0.0002)	1000
Gompertz	0.5004	0.0035	0.0574 (0.0019)	-0.0033 (0.0026)	0.9473 (0.0103)	0.0033 (0.0002)	474
RP (3)	0.5023	0.0035	0.0593 (0.0013)	-0.0014 (0.0019)	0.9440 (0.0073)	0.0035 (0.0002)	1000
RP (5)	0.5024	0.0035	0.0593 (0.0013)	-0.0013 (0.0019)	0.9430 (0.0073)	0.0035 (0.0002)	1000
RP (9)	0.5024	0.0035	0.0593 (0.0013)	-0.0013 (0.0019)	0.9428 (0.0074)	0.0035 (0.0002)	996
RP (P)	0.5033	0.0035	0.0603 (0.0014)	-0.0004 (0.0020)	0.9414 (0.0079)	0.0036 (0.0002)	887
FP (W)	0.5025	0.0027	0.0593 (0.0013)	-0.0013 (0.0019)	0.9060 (0.0092)	0.0035 (0.0002)	1000
FP (k=10)	0.5003	0.0026	0.0594 (0.0013)	-0.0034 (0.0019)	0.9044 (0.0093)	0.0035 (0.0002)	994
FP (k=10000)	0.5013	0.0026	0.0594 (0.0013)	-0.0024 (0.0019)	0.8996 (0.0095)	0.0035 (0.0002)	996
Model frailty: Normal							
Cox	0.4802	0.0023	0.0597 (0.0013)	-0.0235 (0.0019)	0.8430 (0.0115)	0.0041 (0.0002)	1000
Exp	0.4767	0.0032	0.0603 (0.0013)	-0.0270 (0.0019)	0.8868 (0.0100)	0.0044 (0.0002)	998
Weibull	0.4771	0.0032	0.0604 (0.0014)	-0.0266 (0.0019)	0.8877 (0.0100)	0.0044 (0.0002)	997
Gompertz	0.4749	0.0032	0.0579 (0.0018)	-0.0288 (0.0026)	0.8917 (0.0138)	0.0042 (0.0003)	508
RP (3)	0.4750	0.0032	0.0608 (0.0014)	-0.0287 (0.0019)	0.8840 (0.0101)	0.0045 (0.0002)	1000
RP (5)	0.4750	0.0032	0.0608 (0.0014)	-0.0287 (0.0019)	0.8840 (0.0101)	0.0045 (0.0002)	1000
RP (9)	0.4755	0.0032	0.0622 (0.0014)	-0.0282 (0.0020)	0.8830 (0.0102)	0.0047 (0.0002)	1000
RP (P)	0.4751	0.0032	0.0608 (0.0014)	-0.0286 (0.0019)	0.8849 (0.0101)	0.0045 (0.0002)	999
FP (W)	0.4723	0.0023	0.0637 (0.0014)	-0.0314 (0.0020)	0.7942 (0.0130)	0.0050 (0.0003)	967
FP (k=10)	0.4729	0.0023	0.0616 (0.0014)	-0.0308 (0.0020)	0.8191 (0.0122)	0.0047 (0.0002)	995
FP (k=10000)	0.4725	0.0021	0.0597 (0.0013)	-0.0312 (0.0019)	0.8036 (0.0126)	0.0045 (0.0002)	998

Table 202: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5110	0.0030	0.0651 (0.0015)	-0.0032 (0.0021)	0.9085 (0.0091)	0.0042 (0.0002)	994
Exp	0.5310	0.0038	0.0677 (0.0015)	-0.0168 (0.0021)	0.9230 (0.0084)	0.0049 (0.0002)	1000
Weibull	0.5120	0.0041	0.0650 (0.0015)	-0.0022 (0.0021)	0.9440 (0.0073)	0.0042 (0.0002)	1000
Gompertz	0.5341	0.0038	0.0664 (0.0023)	-0.0199 (0.0033)	0.9293 (0.0127)	0.0048 (0.0004)	410
RP (3)	0.5115	0.0041	0.0650 (0.0015)	-0.0027 (0.0021)	0.9440 (0.0073)	0.0042 (0.0002)	1000
RP (5)	0.5115	0.0041	0.0650 (0.0015)	-0.0027 (0.0021)	0.9440 (0.0073)	0.0042 (0.0002)	1000
RP (9)	0.5115	0.0041	0.0651 (0.0015)	-0.0027 (0.0021)	0.9439 (0.0073)	0.0042 (0.0002)	998
RP (P)	0.5127	0.0041	0.0657 (0.0015)	-0.0015 (0.0022)	0.9449 (0.0075)	0.0043 (0.0002)	925
FP (W)	0.5122	0.0030	0.0648 (0.0015)	-0.0020 (0.0021)	0.9099 (0.0091)	0.0042 (0.0002)	999
FP (k=10)	0.4994	0.0028	0.0652 (0.0015)	-0.0148 (0.0021)	0.8835 (0.0102)	0.0045 (0.0002)	987
FP (k=10000)	0.5106	0.0028	0.0657 (0.0015)	-0.0036 (0.0021)	0.8877 (0.0100)	0.0043 (0.0002)	997
Model frailty: Normal							
Cox	0.4832	0.0026	0.0646 (0.0014)	-0.0310 (0.0020)	0.8350 (0.0117)	0.0051 (0.0002)	1000
Exp	0.4997	0.0034	0.0678 (0.0015)	-0.0146 (0.0021)	0.8969 (0.0096)	0.0048 (0.0002)	999
Weibull	0.4791	0.0036	0.0649 (0.0015)	-0.0351 (0.0021)	0.8843 (0.0101)	0.0054 (0.0002)	994
Gompertz	0.5018	0.0034	0.0663 (0.0022)	-0.0124 (0.0032)	0.8966 (0.0146)	0.0045 (0.0004)	435
RP (3)	0.4774	0.0036	0.0650 (0.0015)	-0.0368 (0.0021)	0.8790 (0.0103)	0.0056 (0.0002)	1000
RP (5)	0.4774	0.0036	0.0651 (0.0015)	-0.0368 (0.0021)	0.8790 (0.0103)	0.0056 (0.0002)	1000
RP (9)	0.4775	0.0036	0.0651 (0.0015)	-0.0367 (0.0021)	0.8800 (0.0103)	0.0056 (0.0002)	1000
RP (P)	0.4775	0.0036	0.0653 (0.0015)	-0.0368 (0.0021)	0.8800 (0.0103)	0.0056 (0.0002)	1000
FP (W)	0.4779	0.0025	0.0671 (0.0015)	-0.0363 (0.0021)	0.8018 (0.0127)	0.0058 (0.0003)	984
FP (k=10)	0.4680	0.0025	0.0697 (0.0016)	-0.0462 (0.0022)	0.7375 (0.0139)	0.0070 (0.0003)	998
FP (k=10000)	0.4726	0.0023	0.0686 (0.0015)	-0.0416 (0.0022)	0.7420 (0.0138)	0.0064 (0.0003)	1000

Table 203: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4873	0.0022	0.0546 (0.0012)	0.0036 (0.0017)	0.9138 (0.0089)	0.0030 (0.0001)	998
Exp	0.4662	0.0031	0.0520 (0.0012)	-0.0176 (0.0016)	0.9500 (0.0069)	0.0030 (0.0001)	1000
Weibull	0.4800	0.0028	0.0535 (0.0012)	-0.0037 (0.0017)	0.9490 (0.0070)	0.0029 (0.0001)	1000
Gompertz	0.4658	0.0031	0.0552 (0.0020)	-0.0180 (0.0028)	0.9406 (0.0120)	0.0034 (0.0002)	387
RP (3)	0.4867	0.0027	0.0545 (0.0012)	0.0030 (0.0017)	0.9469 (0.0071)	0.0030 (0.0001)	998
RP (5)	0.4871	0.0027	0.0546 (0.0012)	0.0034 (0.0017)	0.9470 (0.0071)	0.0030 (0.0001)	1000
RP (9)	0.4872	0.0027	0.0546 (0.0012)	0.0035 (0.0017)	0.9460 (0.0071)	0.0030 (0.0001)	1000
RP (P)	0.4861	0.0027	0.0543 (0.0013)	0.0024 (0.0018)	0.9484 (0.0073)	0.0030 (0.0001)	930
FP (W)	0.4797	0.0023	0.0536 (0.0012)	-0.0040 (0.0017)	0.9273 (0.0082)	0.0029 (0.0001)	991
FP (k=10)	0.4866	0.0022	0.0546 (0.0012)	0.0029 (0.0017)	0.9157 (0.0088)	0.0030 (0.0001)	996
FP (k=10000)	0.4856	0.0022	0.0544 (0.0012)	0.0019 (0.0017)	0.9130 (0.0089)	0.0030 (0.0001)	1000
Model frailty: Normal							
Cox	0.4772	0.0021	0.0556 (0.0012)	-0.0065 (0.0018)	0.8870 (0.0100)	0.0031 (0.0001)	1000
Exp	0.4515	0.0029	0.0536 (0.0012)	-0.0322 (0.0017)	0.8990 (0.0095)	0.0039 (0.0002)	1000
Weibull	0.4708	0.0027	0.0551 (0.0012)	-0.0130 (0.0017)	0.9228 (0.0085)	0.0032 (0.0001)	997
Gompertz	0.4499	0.0029	0.0545 (0.0016)	-0.0339 (0.0022)	0.8853 (0.0131)	0.0041 (0.0002)	593
RP (3)	0.4753	0.0026	0.0561 (0.0013)	-0.0084 (0.0018)	0.9250 (0.0083)	0.0032 (0.0001)	1000
RP (5)	0.4754	0.0026	0.0562 (0.0013)	-0.0083 (0.0018)	0.9239 (0.0084)	0.0032 (0.0001)	999
RP (9)	0.4754	0.0026	0.0562 (0.0013)	-0.0083 (0.0018)	0.9230 (0.0084)	0.0032 (0.0001)	1000
RP (P)	0.4747	0.0026	0.0561 (0.0013)	-0.0091 (0.0018)	0.9240 (0.0084)	0.0032 (0.0001)	1000
FP (W)	0.4601	0.0021	0.0625 (0.0015)	-0.0237 (0.0021)	0.8360 (0.0122)	0.0045 (0.0003)	927
FP (k=10)	0.4649	0.0020	0.0594 (0.0013)	-0.0188 (0.0019)	0.8350 (0.0118)	0.0039 (0.0002)	988
FP (k=10000)	0.4549	0.0017	0.0578 (0.0013)	-0.0288 (0.0018)	0.7629 (0.0135)	0.0042 (0.0002)	991

Table 204: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4596	0.0021	0.0516 (0.0012)	0.0004 (0.0016)	0.9148 (0.0088)	0.0027 (0.0001)	998
Exp	0.4270	0.0032	0.0499 (0.0011)	-0.0322 (0.0016)	0.9400 (0.0075)	0.0035 (0.0001)	1000
Weibull	0.4663	0.0025	0.0527 (0.0012)	0.0071 (0.0017)	0.9260 (0.0083)	0.0028 (0.0001)	1000
Gompertz	0.4347	0.0032	0.0553 (0.0015)	-0.0245 (0.0021)	0.9354 (0.0094)	0.0037 (0.0002)	681
RP (3)	0.4588	0.0025	0.0514 (0.0011)	-0.0004 (0.0016)	0.9380 (0.0076)	0.0026 (0.0001)	1000
RP (5)	0.4594	0.0025	0.0515 (0.0012)	0.0002 (0.0016)	0.9369 (0.0077)	0.0027 (0.0001)	999
RP (9)	0.4596	0.0025	0.0514 (0.0012)	0.0004 (0.0016)	0.9371 (0.0077)	0.0026 (0.0001)	985
RP (P)	0.4607	0.0025	0.0517 (0.0012)	0.0014 (0.0017)	0.9341 (0.0084)	0.0027 (0.0001)	880
FP (W)	0.4663	0.0020	0.0527 (0.0012)	0.0071 (0.0017)	0.9011 (0.0095)	0.0028 (0.0001)	991
FP (k=10)	0.4530	0.0020	0.0519 (0.0012)	-0.0062 (0.0016)	0.9056 (0.0093)	0.0027 (0.0001)	996
FP (k=10000)	0.4614	0.0018	0.0576 (0.0013)	0.0022 (0.0018)	0.8629 (0.0110)	0.0033 (0.0002)	985
Model frailty: Normal							
Cox	0.4505	0.0019	0.0533 (0.0012)	-0.0087 (0.0017)	0.8850 (0.0101)	0.0029 (0.0001)	1000
Exp	0.4059	0.0030	0.0515 (0.0012)	-0.0533 (0.0016)	0.8355 (0.0117)	0.0055 (0.0002)	997
Weibull	0.4535	0.0024	0.0549 (0.0012)	-0.0057 (0.0017)	0.9119 (0.0090)	0.0030 (0.0001)	999
Gompertz	0.4107	0.0029	0.0546 (0.0015)	-0.0485 (0.0021)	0.8390 (0.0145)	0.0053 (0.0002)	646
RP (3)	0.4483	0.0024	0.0540 (0.0012)	-0.0109 (0.0017)	0.9139 (0.0089)	0.0030 (0.0001)	999
RP (5)	0.4478	0.0025	0.0543 (0.0012)	-0.0114 (0.0017)	0.9100 (0.0090)	0.0031 (0.0001)	1000
RP (9)	0.4479	0.0025	0.0543 (0.0012)	-0.0113 (0.0017)	0.9110 (0.0090)	0.0031 (0.0001)	1000
RP (P)	0.4475	0.0024	0.0563 (0.0013)	-0.0117 (0.0018)	0.9089 (0.0091)	0.0033 (0.0003)	999
FP (W)	0.4431	0.0018	0.0637 (0.0015)	-0.0161 (0.0021)	0.8197 (0.0129)	0.0043 (0.0003)	893
FP (k=10)	0.4378	0.0018	0.0542 (0.0012)	-0.0214 (0.0017)	0.8396 (0.0117)	0.0034 (0.0001)	985
FP (k=10000)	0.3364	0.0010	0.0702 (0.0016)	-0.1228 (0.0022)	0.2194 (0.0132)	0.0200 (0.0006)	989

Table 205: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5102	0.0028	0.0621 (0.0014)	0.0018 (0.0020)	0.9087 (0.0091)	0.0039 (0.0002)	997
Exp	0.5204	0.0036	0.0635 (0.0014)	0.0121 (0.0020)	0.9340 (0.0079)	0.0042 (0.0002)	1000
Weibull	0.5120	0.0038	0.0627 (0.0014)	0.0036 (0.0020)	0.9420 (0.0074)	0.0039 (0.0002)	1000
Gompertz	0.5183	0.0036	0.0670 (0.0030)	0.0099 (0.0042)	0.9094 (0.0180)	0.0046 (0.0004)	254
RP (3)	0.5107	0.0038	0.0621 (0.0014)	0.0024 (0.0020)	0.9449 (0.0072)	0.0039 (0.0002)	998
RP (5)	0.5107	0.0037	0.0622 (0.0014)	0.0023 (0.0020)	0.9430 (0.0073)	0.0039 (0.0002)	1000
RP (9)	0.5106	0.0037	0.0622 (0.0014)	0.0022 (0.0020)	0.9430 (0.0073)	0.0039 (0.0002)	1000
RP (P)	0.5130	0.0037	0.0623 (0.0015)	0.0046 (0.0021)	0.9412 (0.0078)	0.0039 (0.0002)	918
FP (W)	0.5120	0.0028	0.0627 (0.0014)	0.0036 (0.0020)	0.9040 (0.0093)	0.0039 (0.0002)	1000
FP (k=10)	0.5064	0.0028	0.0622 (0.0014)	-0.0020 (0.0020)	0.9016 (0.0094)	0.0039 (0.0002)	996
FP (k=10000)	0.5085	0.0028	0.0622 (0.0014)	0.0001 (0.0020)	0.9027 (0.0094)	0.0039 (0.0002)	997
Model frailty: Normal							
Cox	0.4874	0.0025	0.0627 (0.0014)	-0.0210 (0.0020)	0.8450 (0.0114)	0.0044 (0.0002)	1000
Exp	0.4920	0.0033	0.0647 (0.0014)	-0.0164 (0.0020)	0.8918 (0.0098)	0.0044 (0.0002)	998
Weibull	0.4823	0.0034	0.0638 (0.0014)	-0.0260 (0.0020)	0.8874 (0.0100)	0.0047 (0.0002)	995
Gompertz	0.4862	0.0033	0.0669 (0.0023)	-0.0222 (0.0032)	0.8825 (0.0155)	0.0050 (0.0003)	434
RP (3)	0.4812	0.0034	0.0640 (0.0014)	-0.0272 (0.0020)	0.8840 (0.0101)	0.0048 (0.0002)	1000
RP (5)	0.4817	0.0034	0.0640 (0.0014)	-0.0267 (0.0020)	0.8870 (0.0100)	0.0048 (0.0002)	1000
RP (9)	0.4817	0.0034	0.0640 (0.0014)	-0.0266 (0.0020)	0.8870 (0.0100)	0.0048 (0.0002)	1000
RP (P)	0.4813	0.0034	0.0641 (0.0014)	-0.0271 (0.0020)	0.8849 (0.0101)	0.0048 (0.0002)	999
FP (W)	0.4806	0.0024	0.0668 (0.0015)	-0.0278 (0.0021)	0.7969 (0.0129)	0.0052 (0.0003)	975
FP (k=10)	0.4782	0.0024	0.0660 (0.0015)	-0.0301 (0.0021)	0.7990 (0.0127)	0.0053 (0.0002)	995
FP (k=10000)	0.4806	0.0023	0.0628 (0.0014)	-0.0277 (0.0020)	0.8200 (0.0121)	0.0047 (0.0002)	1000

Table 206: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5157	0.0026	0.0596 (0.0013)	-0.0264 (0.0019)	0.8656 (0.0108)	0.0042 (0.0002)	997
Exp	0.5149	0.0029	0.0600 (0.0013)	-0.0272 (0.0019)	0.8810 (0.0102)	0.0043 (0.0002)	1000
Weibull	0.5149	0.0029	0.0599 (0.0013)	-0.0272 (0.0019)	0.8830 (0.0102)	0.0043 (0.0002)	1000
Gompertz	0.5195	0.0029	0.0588 (0.0020)	-0.0225 (0.0029)	0.9009 (0.0145)	0.0040 (0.0003)	424
RP (3)	0.5151	0.0029	0.0599 (0.0013)	-0.0270 (0.0019)	0.8809 (0.0102)	0.0043 (0.0002)	999
RP (5)	0.5150	0.0029	0.0599 (0.0013)	-0.0271 (0.0019)	0.8820 (0.0102)	0.0043 (0.0002)	1000
RP (9)	0.5150	0.0029	0.0599 (0.0013)	-0.0270 (0.0019)	0.8810 (0.0102)	0.0043 (0.0002)	1000
RP (P)	0.5150	0.0029	0.0600 (0.0014)	-0.0271 (0.0019)	0.8839 (0.0103)	0.0043 (0.0002)	973
FP (W)	0.5152	0.0025	0.0599 (0.0013)	-0.0269 (0.0019)	0.8635 (0.0109)	0.0043 (0.0002)	996
FP (k=10)	0.5154	0.0026	0.0597 (0.0013)	-0.0266 (0.0019)	0.8636 (0.0109)	0.0043 (0.0002)	997
FP (k=10000)	0.5153	0.0025	0.0598 (0.0013)	-0.0267 (0.0019)	0.8567 (0.0111)	0.0043 (0.0002)	998
Model frailty: Normal							
Cox	0.5440	0.0027	0.0561 (0.0013)	0.0019 (0.0018)	0.9350 (0.0078)	0.0031 (0.0001)	1000
Exp	0.5428	0.0031	0.0565 (0.0013)	0.0008 (0.0018)	0.9499 (0.0069)	0.0032 (0.0001)	999
Weibull	0.5429	0.0031	0.0565 (0.0013)	0.0008 (0.0018)	0.9499 (0.0069)	0.0032 (0.0001)	999
Gompertz	0.5440	0.0031	0.0574 (0.0020)	0.0020 (0.0028)	0.9476 (0.0109)	0.0033 (0.0002)	420
RP (3)	0.5429	0.0031	0.0564 (0.0013)	0.0009 (0.0018)	0.9480 (0.0070)	0.0032 (0.0001)	1000
RP (5)	0.5428	0.0031	0.0565 (0.0013)	0.0008 (0.0018)	0.9480 (0.0070)	0.0032 (0.0001)	1000
RP (9)	0.5429	0.0031	0.0565 (0.0013)	0.0008 (0.0018)	0.9480 (0.0070)	0.0032 (0.0001)	1000
RP (P)	0.5430	0.0031	0.0565 (0.0013)	0.0010 (0.0018)	0.9489 (0.0070)	0.0032 (0.0001)	999
FP (W)	0.5371	0.0026	0.0581 (0.0013)	-0.0050 (0.0019)	0.9189 (0.0089)	0.0034 (0.0002)	950
FP (k=10)	0.5318	0.0026	0.0605 (0.0014)	-0.0103 (0.0019)	0.9043 (0.0094)	0.0038 (0.0002)	982
FP (k=10000)	0.5385	0.0024	0.0568 (0.0013)	-0.0036 (0.0018)	0.9073 (0.0092)	0.0032 (0.0001)	992

Table 207: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5478	0.0030	0.0635 (0.0014)	-0.0170 (0.0020)	0.8871 (0.0100)	0.0043 (0.0002)	992
Exp	0.5497	0.0031	0.0713 (0.0016)	-0.0151 (0.0023)	0.8440 (0.0115)	0.0053 (0.0002)	1000
Weibull	0.5480	0.0036	0.0640 (0.0014)	-0.0169 (0.0020)	0.9200 (0.0086)	0.0044 (0.0002)	1000
Gompertz	0.5486	0.0031	0.0701 (0.0032)	-0.0162 (0.0045)	0.8625 (0.0222)	0.0052 (0.0004)	240
RP (3)	0.5480	0.0036	0.0639 (0.0014)	-0.0168 (0.0020)	0.9220 (0.0085)	0.0044 (0.0002)	1000
RP (5)	0.5479	0.0036	0.0638 (0.0014)	-0.0170 (0.0020)	0.9220 (0.0085)	0.0044 (0.0002)	1000
RP (9)	0.5478	0.0036	0.0638 (0.0014)	-0.0170 (0.0020)	0.9210 (0.0085)	0.0044 (0.0002)	1000
RP (P)	0.5486	0.0036	0.0639 (0.0015)	-0.0162 (0.0020)	0.9197 (0.0087)	0.0043 (0.0002)	971
FP (W)	0.5480	0.0030	0.0640 (0.0014)	-0.0168 (0.0020)	0.8809 (0.0103)	0.0044 (0.0002)	982
FP (k=10)	0.5448	0.0030	0.0640 (0.0014)	-0.0200 (0.0020)	0.8756 (0.0105)	0.0045 (0.0002)	997
FP (k=10000)	0.5429	0.0027	0.0669 (0.0015)	-0.0220 (0.0021)	0.8355 (0.0118)	0.0050 (0.0002)	991
Model frailty: Normal							
Cox	0.5704	0.0031	0.0603 (0.0013)	0.0056 (0.0019)	0.9350 (0.0078)	0.0037 (0.0002)	1000
Exp	0.5929	0.0033	0.0630 (0.0014)	0.0281 (0.0020)	0.9049 (0.0093)	0.0048 (0.0002)	999
Weibull	0.5688	0.0037	0.0604 (0.0014)	0.0040 (0.0019)	0.9547 (0.0066)	0.0037 (0.0002)	994
Gompertz	0.5945	0.0034	0.0641 (0.0023)	0.0296 (0.0033)	0.8974 (0.0156)	0.0050 (0.0004)	380
RP (3)	0.5680	0.0037	0.0602 (0.0013)	0.0032 (0.0019)	0.9540 (0.0066)	0.0036 (0.0002)	1000
RP (5)	0.5678	0.0037	0.0602 (0.0013)	0.0030 (0.0019)	0.9550 (0.0066)	0.0036 (0.0002)	1000
RP (9)	0.5678	0.0037	0.0602 (0.0013)	0.0029 (0.0019)	0.9550 (0.0066)	0.0036 (0.0002)	1000
RP (P)	0.5678	0.0037	0.0602 (0.0013)	0.0030 (0.0019)	0.9560 (0.0065)	0.0036 (0.0002)	1000
FP (W)	0.5634	0.0030	0.0630 (0.0014)	-0.0014 (0.0020)	0.9253 (0.0085)	0.0040 (0.0002)	950
FP (k=10)	0.5547	0.0030	0.0632 (0.0014)	-0.0101 (0.0020)	0.8949 (0.0097)	0.0041 (0.0002)	990
FP (k=10000)	0.5660	0.0026	0.0607 (0.0014)	0.0012 (0.0019)	0.9047 (0.0093)	0.0037 (0.0002)	997

Table 208: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4691	0.0020	0.0513 (0.0011)	-0.0348 (0.0016)	0.8136 (0.0123)	0.0038 (0.0002)	998
Exp	0.4536	0.0025	0.0487 (0.0011)	-0.0503 (0.0015)	0.8140 (0.0123)	0.0049 (0.0002)	1000
Weibull	0.4557	0.0022	0.0518 (0.0012)	-0.0482 (0.0016)	0.7660 (0.0134)	0.0050 (0.0002)	1000
Gompertz	0.4560	0.0025	0.0499 (0.0016)	-0.0479 (0.0023)	0.8262 (0.0176)	0.0048 (0.0002)	466
RP (3)	0.4665	0.0021	0.0514 (0.0012)	-0.0373 (0.0016)	0.8240 (0.0120)	0.0040 (0.0002)	1000
RP (5)	0.4677	0.0021	0.0514 (0.0012)	-0.0361 (0.0016)	0.8340 (0.0118)	0.0039 (0.0002)	1000
RP (9)	0.4681	0.0021	0.0514 (0.0012)	-0.0358 (0.0016)	0.8360 (0.0117)	0.0039 (0.0002)	1000
RP (P)	0.4659	0.0021	0.0514 (0.0012)	-0.0379 (0.0016)	0.8231 (0.0121)	0.0041 (0.0002)	989
FP (W)	0.4553	0.0020	0.0519 (0.0012)	-0.0485 (0.0017)	0.7404 (0.0139)	0.0050 (0.0002)	990
FP (k=10)	0.4691	0.0020	0.0514 (0.0012)	-0.0348 (0.0016)	0.8148 (0.0123)	0.0038 (0.0002)	999
FP (k=10000)	0.4668	0.0019	0.0513 (0.0011)	-0.0370 (0.0016)	0.7950 (0.0128)	0.0040 (0.0002)	1000
Model frailty: Normal							
Cox	0.5056	0.0022	0.0488 (0.0011)	0.0018 (0.0015)	0.9350 (0.0078)	0.0024 (0.0001)	1000
Exp	0.4815	0.0028	0.0457 (0.0010)	-0.0223 (0.0014)	0.9518 (0.0068)	0.0026 (0.0001)	996
Weibull	0.4963	0.0025	0.0475 (0.0011)	-0.0076 (0.0015)	0.9559 (0.0065)	0.0023 (0.0001)	997
Gompertz	0.4846	0.0028	0.0469 (0.0015)	-0.0193 (0.0022)	0.9499 (0.0102)	0.0026 (0.0002)	459
RP (3)	0.5034	0.0024	0.0484 (0.0011)	-0.0004 (0.0015)	0.9520 (0.0068)	0.0023 (0.0001)	1000
RP (5)	0.5044	0.0024	0.0485 (0.0011)	0.0005 (0.0015)	0.9520 (0.0068)	0.0023 (0.0001)	1000
RP (9)	0.5047	0.0024	0.0485 (0.0011)	0.0009 (0.0015)	0.9540 (0.0066)	0.0023 (0.0001)	1000
RP (P)	0.5032	0.0024	0.0483 (0.0011)	-0.0007 (0.0015)	0.9540 (0.0066)	0.0023 (0.0001)	1000
FP (W)	0.4891	0.0022	0.0503 (0.0011)	-0.0148 (0.0016)	0.9177 (0.0089)	0.0027 (0.0001)	960
FP (k=10)	0.4935	0.0021	0.0575 (0.0013)	-0.0104 (0.0018)	0.8838 (0.0102)	0.0034 (0.0002)	981
FP (k=10000)	0.5043	0.0018	0.0498 (0.0011)	0.0004 (0.0016)	0.8949 (0.0097)	0.0025 (0.0001)	990

Table 209: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4484	0.0018	0.0517 (0.0012)	-0.0335 (0.0016)	0.7887 (0.0129)	0.0038 (0.0001)	994
Exp	0.4393	0.0029	0.0477 (0.0011)	-0.0426 (0.0015)	0.9030 (0.0094)	0.0041 (0.0002)	1000
Weibull	0.4599	0.0019	0.0525 (0.0012)	-0.0220 (0.0017)	0.8530 (0.0112)	0.0032 (0.0001)	1000
Gompertz	0.4535	0.0028	0.0552 (0.0014)	-0.0283 (0.0020)	0.8967 (0.0112)	0.0039 (0.0002)	736
RP (3)	0.4459	0.0019	0.0517 (0.0012)	-0.0360 (0.0016)	0.7940 (0.0128)	0.0040 (0.0002)	1000
RP (5)	0.4471	0.0020	0.0520 (0.0012)	-0.0347 (0.0016)	0.8010 (0.0126)	0.0039 (0.0002)	1000
RP (9)	0.4475	0.0020	0.0520 (0.0012)	-0.0344 (0.0016)	0.8008 (0.0126)	0.0039 (0.0002)	999
RP (P)	0.4482	0.0020	0.0520 (0.0012)	-0.0337 (0.0017)	0.8116 (0.0127)	0.0038 (0.0002)	945
FP (W)	0.4599	0.0018	0.0526 (0.0012)	-0.0219 (0.0017)	0.8362 (0.0118)	0.0033 (0.0001)	989
FP (k=10)	0.4547	0.0019	0.0515 (0.0012)	-0.0272 (0.0016)	0.8308 (0.0119)	0.0034 (0.0001)	999
FP (k=10000)	0.4719	0.0016	0.0537 (0.0012)	-0.0099 (0.0017)	0.8437 (0.0115)	0.0030 (0.0001)	998
Model frailty: Normal							
Cox	0.4834	0.0020	0.0501 (0.0011)	0.0016 (0.0016)	0.9260 (0.0083)	0.0025 (0.0001)	1000
Exp	0.4438	0.0030	0.0475 (0.0011)	-0.0381 (0.0015)	0.9200 (0.0086)	0.0037 (0.0001)	1000
Weibull	0.4896	0.0022	0.0512 (0.0011)	0.0077 (0.0016)	0.9235 (0.0084)	0.0027 (0.0001)	994
Gompertz	0.4592	0.0029	0.0562 (0.0015)	-0.0227 (0.0021)	0.9127 (0.0104)	0.0037 (0.0002)	733
RP (3)	0.4815	0.0022	0.0496 (0.0011)	-0.0004 (0.0016)	0.9350 (0.0078)	0.0025 (0.0001)	1000
RP (5)	0.4827	0.0022	0.0498 (0.0011)	0.0009 (0.0016)	0.9410 (0.0075)	0.0025 (0.0001)	1000
RP (9)	0.4831	0.0023	0.0498 (0.0011)	0.0013 (0.0016)	0.9410 (0.0075)	0.0025 (0.0001)	1000
RP (P)	0.4830	0.0022	0.0498 (0.0011)	0.0012 (0.0016)	0.9390 (0.0076)	0.0025 (0.0001)	1000
FP (W)	0.4849	0.0019	0.0541 (0.0012)	0.0030 (0.0018)	0.8982 (0.0098)	0.0029 (0.0002)	943
FP (k=10)	0.4735	0.0020	0.0528 (0.0012)	-0.0083 (0.0017)	0.8900 (0.0100)	0.0029 (0.0001)	973
FP (k=10000)	0.4113	0.0012	0.0736 (0.0017)	-0.0706 (0.0023)	0.5066 (0.0159)	0.0104 (0.0005)	985

Table 210: Simulation results for LLE, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5255	0.0027	0.0603 (0.0014)	-0.0241 (0.0019)	0.8775 (0.0104)	0.0042 (0.0002)	996
Exp	0.5313	0.0030	0.0637 (0.0014)	-0.0183 (0.0020)	0.8910 (0.0099)	0.0044 (0.0002)	1000
Weibull	0.5297	0.0032	0.0613 (0.0014)	-0.0200 (0.0019)	0.9110 (0.0090)	0.0041 (0.0002)	1000
Gompertz	0.5351	0.0030	0.0622 (0.0022)	-0.0145 (0.0031)	0.9087 (0.0141)	0.0041 (0.0003)	416
RP (3)	0.5270	0.0032	0.0608 (0.0014)	-0.0227 (0.0019)	0.9069 (0.0092)	0.0042 (0.0002)	999
RP (5)	0.5253	0.0031	0.0608 (0.0014)	-0.0243 (0.0019)	0.9010 (0.0094)	0.0043 (0.0002)	1000
RP (9)	0.5248	0.0031	0.0607 (0.0014)	-0.0248 (0.0019)	0.8990 (0.0095)	0.0043 (0.0002)	1000
RP (P)	0.5256	0.0031	0.0608 (0.0014)	-0.0240 (0.0019)	0.9035 (0.0094)	0.0043 (0.0002)	984
FP (W)	0.5297	0.0028	0.0613 (0.0014)	-0.0199 (0.0019)	0.8833 (0.0102)	0.0042 (0.0002)	994
FP (k=10)	0.5247	0.0027	0.0614 (0.0014)	-0.0250 (0.0019)	0.8742 (0.0105)	0.0044 (0.0002)	994
FP (k=10000)	0.5255	0.0026	0.0613 (0.0014)	-0.0241 (0.0019)	0.8696 (0.0107)	0.0043 (0.0002)	997
Model frailty: Normal							
Cox	0.5545	0.0029	0.0578 (0.0013)	0.0049 (0.0018)	0.9359 (0.0077)	0.0034 (0.0001)	999
Exp	0.5645	0.0032	0.0586 (0.0013)	0.0148 (0.0019)	0.9349 (0.0078)	0.0036 (0.0002)	999
Weibull	0.5545	0.0034	0.0577 (0.0013)	0.0048 (0.0018)	0.9488 (0.0070)	0.0033 (0.0001)	997
Gompertz	0.5647	0.0032	0.0566 (0.0020)	0.0151 (0.0028)	0.9330 (0.0125)	0.0034 (0.0002)	403
RP (3)	0.5539	0.0034	0.0574 (0.0013)	0.0043 (0.0018)	0.9500 (0.0069)	0.0033 (0.0001)	1000
RP (5)	0.5529	0.0033	0.0573 (0.0013)	0.0032 (0.0018)	0.9480 (0.0070)	0.0033 (0.0001)	1000
RP (9)	0.5525	0.0033	0.0573 (0.0013)	0.0029 (0.0018)	0.9480 (0.0070)	0.0033 (0.0001)	1000
RP (P)	0.5530	0.0033	0.0574 (0.0013)	0.0034 (0.0018)	0.9480 (0.0070)	0.0033 (0.0001)	1000
FP (W)	0.5488	0.0028	0.0598 (0.0014)	-0.0008 (0.0019)	0.9233 (0.0086)	0.0036 (0.0002)	952
FP (k=10)	0.5420	0.0028	0.0606 (0.0014)	-0.0076 (0.0019)	0.9081 (0.0092)	0.0037 (0.0002)	990
FP (k=10000)	0.5501	0.0026	0.0569 (0.0013)	0.0005 (0.0018)	0.9148 (0.0088)	0.0032 (0.0001)	998

Table 211: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6774	0.0025	0.0535 (0.0012)	0.0023 (0.0017)	0.9294 (0.0082)	0.0029 (0.0001)	977
Exp	0.6776	0.0029	0.0533 (0.0012)	0.0025 (0.0017)	0.9500 (0.0069)	0.0028 (0.0001)	1000
Weibull	0.6777	0.0029	0.0534 (0.0012)	0.0026 (0.0017)	0.9500 (0.0069)	0.0029 (0.0001)	1000
Gompertz	0.6771	0.0029	0.0522 (0.0019)	0.0020 (0.0027)	0.9529 (0.0111)	0.0027 (0.0002)	361
RP (3)	0.6777	0.0029	0.0534 (0.0012)	0.0026 (0.0017)	0.9499 (0.0069)	0.0029 (0.0001)	998
RP (5)	0.6775	0.0029	0.0534 (0.0012)	0.0024 (0.0017)	0.9490 (0.0070)	0.0029 (0.0001)	1000
RP (9)	0.6775	0.0029	0.0534 (0.0012)	0.0024 (0.0017)	0.9490 (0.0070)	0.0029 (0.0001)	1000
RP (P)	0.6776	0.0029	0.0534 (0.0012)	0.0025 (0.0017)	0.9500 (0.0069)	0.0029 (0.0001)	1000
FP (W)	0.6777	0.0025	0.0534 (0.0012)	0.0026 (0.0017)	0.9309 (0.0080)	0.0029 (0.0001)	998
FP (k=10)	0.6764	0.0025	0.0534 (0.0012)	0.0013 (0.0017)	0.9270 (0.0082)	0.0029 (0.0001)	1000
FP (k=10000)	0.6771	0.0024	0.0534 (0.0012)	0.0020 (0.0017)	0.9240 (0.0084)	0.0029 (0.0001)	1000
Model frailty: Normal							
Cox	0.6724	0.0025	0.0540 (0.0012)	-0.0027 (0.0017)	0.9190 (0.0086)	0.0029 (0.0001)	1000
Exp	0.6761	0.0028	0.0539 (0.0012)	0.0010 (0.0017)	0.9440 (0.0073)	0.0029 (0.0001)	1000
Weibull	0.6762	0.0029	0.0540 (0.0012)	0.0011 (0.0017)	0.9450 (0.0072)	0.0029 (0.0001)	1000
Gompertz	0.6742	0.0029	0.0527 (0.0019)	-0.0009 (0.0027)	0.9447 (0.0117)	0.0028 (0.0002)	380
RP (3)	0.6762	0.0029	0.0540 (0.0012)	0.0011 (0.0017)	0.9450 (0.0072)	0.0029 (0.0001)	1000
RP (5)	0.6760	0.0029	0.0539 (0.0012)	0.0009 (0.0017)	0.9420 (0.0074)	0.0029 (0.0001)	1000
RP (9)	0.6761	0.0029	0.0539 (0.0012)	0.0010 (0.0017)	0.9420 (0.0074)	0.0029 (0.0001)	1000
RP (P)	0.6762	0.0029	0.0539 (0.0012)	0.0011 (0.0017)	0.9450 (0.0072)	0.0029 (0.0001)	1000
FP (W)	0.5367	0.0017	0.1407 (0.0040)	-0.1384 (0.0057)	0.4608 (0.0201)	0.0389 (0.0021)	612
FP (k=10)	0.6561	0.0023	0.0604 (0.0014)	-0.0190 (0.0020)	0.8693 (0.0110)	0.0040 (0.0002)	941
FP (k=10000)	0.6544	0.0021	0.0572 (0.0013)	-0.0207 (0.0018)	0.8530 (0.0114)	0.0037 (0.0002)	973

Table 212: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7011	0.0028	0.0599 (0.0014)	0.0022 (0.0019)	0.9134 (0.0090)	0.0036 (0.0002)	981
Exp	0.7227	0.0034	0.0624 (0.0014)	0.0238 (0.0020)	0.9090 (0.0091)	0.0045 (0.0002)	1000
Weibull	0.7023	0.0036	0.0596 (0.0013)	0.0034 (0.0019)	0.9500 (0.0069)	0.0036 (0.0002)	1000
Gompertz	0.7253	0.0034	0.0603 (0.0020)	0.0263 (0.0028)	0.9101 (0.0132)	0.0043 (0.0003)	467
RP (3)	0.7020	0.0036	0.0596 (0.0013)	0.0031 (0.0019)	0.9510 (0.0068)	0.0036 (0.0002)	1000
RP (5)	0.7019	0.0036	0.0596 (0.0013)	0.0030 (0.0019)	0.9499 (0.0069)	0.0036 (0.0002)	998
RP (9)	0.7018	0.0036	0.0601 (0.0014)	0.0029 (0.0019)	0.9481 (0.0071)	0.0036 (0.0002)	964
RP (P)	0.7021	0.0036	0.0596 (0.0013)	0.0031 (0.0019)	0.9500 (0.0069)	0.0036 (0.0002)	1000
FP (W)	0.7023	0.0028	0.0596 (0.0013)	0.0034 (0.0019)	0.9170 (0.0087)	0.0036 (0.0002)	1000
FP (k=10)	0.6865	0.0027	0.0609 (0.0014)	-0.0124 (0.0019)	0.8950 (0.0097)	0.0039 (0.0002)	1000
FP (k=10000)	0.6833	0.0025	0.0644 (0.0014)	-0.0156 (0.0020)	0.8720 (0.0106)	0.0044 (0.0002)	1000
Model frailty: Normal							
Cox	0.6948	0.0028	0.0607 (0.0014)	-0.0041 (0.0019)	0.9080 (0.0091)	0.0037 (0.0002)	1000
Exp	0.7195	0.0033	0.0634 (0.0014)	0.0206 (0.0020)	0.9080 (0.0091)	0.0044 (0.0002)	1000
Weibull	0.6986	0.0035	0.0606 (0.0014)	-0.0003 (0.0019)	0.9390 (0.0076)	0.0037 (0.0002)	1000
Gompertz	0.7202	0.0033	0.0601 (0.0020)	0.0213 (0.0028)	0.9200 (0.0128)	0.0041 (0.0003)	450
RP (3)	0.6983	0.0035	0.0606 (0.0014)	-0.0006 (0.0019)	0.9420 (0.0074)	0.0037 (0.0002)	1000
RP (5)	0.6981	0.0035	0.0606 (0.0014)	-0.0008 (0.0019)	0.9420 (0.0074)	0.0037 (0.0002)	1000
RP (9)	0.6982	0.0035	0.0606 (0.0014)	-0.0007 (0.0019)	0.9390 (0.0076)	0.0037 (0.0002)	1000
RP (P)	0.6984	0.0035	0.0606 (0.0014)	-0.0006 (0.0019)	0.9390 (0.0076)	0.0037 (0.0002)	1000
FP (W)	0.5670	0.0021	0.1551 (0.0041)	-0.1319 (0.0058)	0.4830 (0.0188)	0.0414 (0.0023)	706
FP (k=10)	0.6759	0.0027	0.0665 (0.0015)	-0.0231 (0.0022)	0.8498 (0.0116)	0.0050 (0.0003)	952
FP (k=10000)	0.6624	0.0023	0.0655 (0.0015)	-0.0365 (0.0021)	0.7875 (0.0131)	0.0056 (0.0003)	979

Table 213: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6135	0.0020	0.0473 (0.0011)	0.0010 (0.0015)	0.9376 (0.0077)	0.0022 (0.0001)	978
Exp	0.5677	0.0024	0.0441 (0.0010)	-0.0448 (0.0014)	0.8680 (0.0107)	0.0039 (0.0001)	1000
Weibull	0.5926	0.0022	0.0460 (0.0010)	-0.0198 (0.0015)	0.9320 (0.0080)	0.0025 (0.0001)	1000
Gompertz	0.6123	0.0022	0.0479 (0.0011)	-0.0002 (0.0015)	0.9478 (0.0070)	0.0023 (0.0001)	996
RP (3)	0.6105	0.0022	0.0475 (0.0011)	-0.0020 (0.0015)	0.9460 (0.0071)	0.0023 (0.0001)	1000
RP (5)	0.6120	0.0022	0.0476 (0.0011)	-0.0005 (0.0015)	0.9490 (0.0070)	0.0023 (0.0001)	1000
RP (9)	0.6125	0.0022	0.0476 (0.0011)	0.0000 (0.0015)	0.9490 (0.0070)	0.0023 (0.0001)	1000
RP (P)	0.6094	0.0022	0.0473 (0.0011)	-0.0031 (0.0015)	0.9479 (0.0070)	0.0022 (0.0001)	999
FP (W)	0.5926	0.0020	0.0460 (0.0010)	-0.0198 (0.0015)	0.9210 (0.0085)	0.0025 (0.0001)	1000
FP (k=10)	0.6137	0.0020	0.0474 (0.0011)	0.0012 (0.0015)	0.9390 (0.0076)	0.0022 (0.0001)	1000
FP (k=10000)	0.6096	0.0019	0.0470 (0.0011)	-0.0029 (0.0015)	0.9330 (0.0079)	0.0022 (0.0001)	1000
Model frailty: Normal							
Cox	0.6115	0.0020	0.0475 (0.0011)	-0.0010 (0.0015)	0.9330 (0.0079)	0.0023 (0.0001)	1000
Exp	0.5681	0.0024	0.0442 (0.0010)	-0.0444 (0.0014)	0.8810 (0.0102)	0.0039 (0.0001)	1000
Weibull	0.5945	0.0023	0.0460 (0.0010)	-0.0179 (0.0015)	0.9390 (0.0076)	0.0024 (0.0001)	1000
Gompertz	0.6147	0.0023	0.0479 (0.0011)	0.0023 (0.0015)	0.9472 (0.0071)	0.0023 (0.0001)	985
RP (3)	0.6125	0.0022	0.0474 (0.0011)	0.0000 (0.0015)	0.9500 (0.0069)	0.0022 (0.0001)	1000
RP (5)	0.6139	0.0023	0.0475 (0.0011)	0.0015 (0.0015)	0.9490 (0.0070)	0.0023 (0.0001)	1000
RP (9)	0.6145	0.0023	0.0476 (0.0011)	0.0020 (0.0015)	0.9500 (0.0069)	0.0023 (0.0001)	1000
RP (P)	0.6114	0.0023	0.0472 (0.0011)	-0.0011 (0.0015)	0.9520 (0.0068)	0.0022 (0.0001)	1000
FP (W)	0.4774	0.0014	0.1255 (0.0042)	-0.1351 (0.0059)	0.4489 (0.0234)	0.0340 (0.0020)	450
FP (k=10)	0.6041	0.0019	0.0545 (0.0013)	-0.0083 (0.0018)	0.8773 (0.0109)	0.0030 (0.0002)	905
FP (k=10000)	0.6112	0.0017	0.0490 (0.0011)	-0.0012 (0.0016)	0.9034 (0.0096)	0.0024 (0.0001)	942

Table 214: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5924	0.0019	0.0461 (0.0010)	0.0037 (0.0015)	0.9347 (0.0079)	0.0021 (0.0001)	980
Exp	0.5473	0.0025	0.0442 (0.0010)	-0.0414 (0.0014)	0.8960 (0.0097)	0.0037 (0.0001)	1000
Weibull	0.6101	0.0020	0.0476 (0.0011)	0.0214 (0.0015)	0.9100 (0.0090)	0.0027 (0.0001)	1000
Gompertz	0.6173	0.0021	0.0487 (0.0011)	0.0286 (0.0015)	0.8950 (0.0097)	0.0032 (0.0001)	1000
RP (3)	0.5889	0.0020	0.0461 (0.0010)	0.0001 (0.0015)	0.9469 (0.0072)	0.0021 (0.0001)	979
RP (5)	0.5913	0.0021	0.0462 (0.0010)	0.0025 (0.0015)	0.9479 (0.0070)	0.0021 (0.0001)	999
RP (9)	0.5916	0.0021	0.0462 (0.0010)	0.0029 (0.0015)	0.9480 (0.0070)	0.0021 (0.0001)	1000
RP (P)	0.5916	0.0021	0.0462 (0.0010)	0.0029 (0.0015)	0.9469 (0.0071)	0.0021 (0.0001)	999
FP (W)	0.6101	0.0018	0.0476 (0.0011)	0.0214 (0.0015)	0.8990 (0.0095)	0.0027 (0.0001)	1000
FP (k=10)	0.5955	0.0019	0.0453 (0.0010)	0.0067 (0.0014)	0.9380 (0.0076)	0.0021 (0.0001)	1000
FP (k=10000)	0.0574	0.0000	0.0094 (0.0002)	-0.5313 (0.0003)	0.0000 (0.0000)	0.2824 (0.0003)	981
Model frailty: Normal							
Cox	0.5899	0.0019	0.0459 (0.0010)	0.0011 (0.0015)	0.9380 (0.0076)	0.0021 (0.0001)	1000
Exp	0.5460	0.0025	0.0445 (0.0010)	-0.0427 (0.0014)	0.8940 (0.0097)	0.0038 (0.0001)	1000
Weibull	0.6118	0.0021	0.0472 (0.0011)	0.0230 (0.0015)	0.9090 (0.0091)	0.0028 (0.0001)	1000
Gompertz	0.6174	0.0021	0.0487 (0.0011)	0.0286 (0.0015)	0.8950 (0.0097)	0.0032 (0.0001)	1000
RP (3)	0.5902	0.0021	0.0456 (0.0010)	0.0015 (0.0014)	0.9480 (0.0070)	0.0021 (0.0001)	1000
RP (5)	0.5927	0.0021	0.0459 (0.0010)	0.0040 (0.0015)	0.9530 (0.0067)	0.0021 (0.0001)	1000
RP (9)	0.5931	0.0021	0.0459 (0.0010)	0.0043 (0.0015)	0.9520 (0.0068)	0.0021 (0.0001)	1000
RP (P)	0.5931	0.0021	0.0459 (0.0010)	0.0044 (0.0015)	0.9510 (0.0068)	0.0021 (0.0001)	1000
FP (W)	0.4966	0.0013	0.1208 (0.0039)	-0.0921 (0.0055)	0.4929 (0.0226)	0.0231 (0.0014)	491
FP (k=10)	0.5789	0.0018	0.0510 (0.0012)	-0.0098 (0.0017)	0.8905 (0.0103)	0.0027 (0.0002)	922
FP (k=10000)	0.5818	0.0014	0.0606 (0.0014)	-0.0070 (0.0020)	0.7903 (0.0133)	0.0037 (0.0002)	944

Table 215: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6884	0.0027	0.0582 (0.0013)	0.0020 (0.0019)	0.9127 (0.0090)	0.0034 (0.0001)	985
Exp	0.7083	0.0031	0.0603 (0.0014)	0.0219 (0.0019)	0.9020 (0.0094)	0.0041 (0.0002)	1000
Weibull	0.6969	0.0032	0.0592 (0.0013)	0.0106 (0.0019)	0.9340 (0.0079)	0.0036 (0.0002)	1000
Gompertz	0.7167	0.0031	0.0656 (0.0039)	0.0303 (0.0055)	0.8511 (0.0300)	0.0052 (0.0006)	141
RP (3)	0.6907	0.0032	0.0583 (0.0013)	0.0043 (0.0018)	0.9389 (0.0076)	0.0034 (0.0001)	999
RP (5)	0.6891	0.0031	0.0580 (0.0013)	0.0027 (0.0018)	0.9350 (0.0078)	0.0034 (0.0001)	1000
RP (9)	0.6886	0.0031	0.0581 (0.0013)	0.0022 (0.0018)	0.9366 (0.0077)	0.0034 (0.0001)	994
RP (P)	0.6898	0.0031	0.0581 (0.0013)	0.0034 (0.0018)	0.9370 (0.0077)	0.0034 (0.0001)	1000
FP (W)	0.6969	0.0027	0.0592 (0.0013)	0.0105 (0.0019)	0.8989 (0.0095)	0.0036 (0.0002)	999
FP (k=10)	0.6849	0.0026	0.0584 (0.0013)	-0.0015 (0.0018)	0.9110 (0.0090)	0.0034 (0.0001)	1000
FP (k=10000)	0.6873	0.0026	0.0583 (0.0013)	0.0009 (0.0018)	0.9080 (0.0091)	0.0034 (0.0001)	1000
Model frailty: Normal							
Cox	0.6824	0.0026	0.0589 (0.0013)	-0.0040 (0.0019)	0.9090 (0.0091)	0.0035 (0.0001)	1000
Exp	0.7059	0.0030	0.0612 (0.0014)	0.0196 (0.0019)	0.8990 (0.0095)	0.0041 (0.0002)	1000
Weibull	0.6942	0.0031	0.0600 (0.0013)	0.0078 (0.0019)	0.9290 (0.0081)	0.0037 (0.0002)	1000
Gompertz	0.7061	0.0030	0.0608 (0.0020)	0.0197 (0.0029)	0.8966 (0.0144)	0.0041 (0.0003)	445
RP (3)	0.6881	0.0031	0.0591 (0.0013)	0.0017 (0.0019)	0.9350 (0.0078)	0.0035 (0.0002)	1000
RP (5)	0.6867	0.0031	0.0588 (0.0013)	0.0003 (0.0019)	0.9330 (0.0079)	0.0035 (0.0001)	1000
RP (9)	0.6863	0.0031	0.0587 (0.0013)	-0.0001 (0.0019)	0.9360 (0.0077)	0.0034 (0.0001)	1000
RP (P)	0.6874	0.0031	0.0589 (0.0013)	0.0010 (0.0019)	0.9330 (0.0079)	0.0035 (0.0001)	1000
FP (W)	0.5675	0.0019	0.1477 (0.0040)	-0.1189 (0.0056)	0.5137 (0.0190)	0.0359 (0.0020)	691
FP (k=10)	0.6613	0.0025	0.0656 (0.0015)	-0.0251 (0.0021)	0.8358 (0.0121)	0.0049 (0.0003)	938
FP (k=10000)	0.6645	0.0023	0.0608 (0.0014)	-0.0219 (0.0020)	0.8488 (0.0116)	0.0042 (0.0002)	959

Table 216: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6745	0.0025	0.0523 (0.0012)	-0.0019 (0.0017)	0.9326 (0.0080)	0.0027 (0.0001)	979
Exp	0.6740	0.0027	0.0522 (0.0012)	-0.0024 (0.0017)	0.9450 (0.0072)	0.0027 (0.0001)	1000
Weibull	0.6741	0.0027	0.0523 (0.0012)	-0.0023 (0.0017)	0.9430 (0.0073)	0.0027 (0.0001)	1000
Gompertz	0.6775	0.0027	0.0504 (0.0023)	0.0011 (0.0032)	0.9562 (0.0129)	0.0025 (0.0002)	251
RP (3)	0.6739	0.0027	0.0522 (0.0012)	-0.0025 (0.0017)	0.9449 (0.0072)	0.0027 (0.0001)	999
RP (5)	0.6738	0.0027	0.0523 (0.0012)	-0.0026 (0.0017)	0.9450 (0.0072)	0.0027 (0.0001)	1000
RP (9)	0.6739	0.0027	0.0523 (0.0012)	-0.0025 (0.0017)	0.9450 (0.0072)	0.0027 (0.0001)	1000
RP (P)	0.6740	0.0027	0.0522 (0.0012)	-0.0024 (0.0017)	0.9450 (0.0072)	0.0027 (0.0001)	1000
FP (W)	0.6741	0.0025	0.0523 (0.0012)	-0.0023 (0.0017)	0.9310 (0.0080)	0.0027 (0.0001)	1000
FP (k=10)	0.6738	0.0025	0.0520 (0.0012)	-0.0027 (0.0016)	0.9340 (0.0079)	0.0027 (0.0001)	1000
FP (k=10000)	0.6739	0.0024	0.0521 (0.0012)	-0.0025 (0.0016)	0.9320 (0.0080)	0.0027 (0.0001)	1000
Model frailty: Normal							
Cox	0.6732	0.0025	0.0516 (0.0012)	-0.0033 (0.0016)	0.9360 (0.0077)	0.0027 (0.0001)	1000
Exp	0.6768	0.0028	0.0514 (0.0012)	0.0004 (0.0016)	0.9510 (0.0068)	0.0026 (0.0001)	1000
Weibull	0.6769	0.0028	0.0515 (0.0012)	0.0005 (0.0016)	0.9480 (0.0070)	0.0026 (0.0001)	1000
Gompertz	0.6789	0.0028	0.0502 (0.0015)	0.0024 (0.0021)	0.9567 (0.0085)	0.0025 (0.0001)	577
RP (3)	0.6768	0.0028	0.0514 (0.0012)	0.0003 (0.0016)	0.9490 (0.0070)	0.0026 (0.0001)	1000
RP (5)	0.6766	0.0028	0.0514 (0.0012)	0.0002 (0.0016)	0.9510 (0.0068)	0.0026 (0.0001)	1000
RP (9)	0.6767	0.0028	0.0514 (0.0012)	0.0003 (0.0016)	0.9520 (0.0068)	0.0026 (0.0001)	1000
RP (P)	0.6768	0.0028	0.0514 (0.0012)	0.0004 (0.0016)	0.9480 (0.0070)	0.0026 (0.0001)	1000
FP (W)	0.5420	0.0017	0.1389 (0.0039)	-0.1345 (0.0056)	0.4670 (0.0200)	0.0373 (0.0021)	621
FP (k=10)	0.6575	0.0024	0.0585 (0.0014)	-0.0189 (0.0019)	0.8719 (0.0110)	0.0038 (0.0002)	929
FP (k=10000)	0.6637	0.0021	0.0531 (0.0012)	-0.0127 (0.0017)	0.8892 (0.0101)	0.0030 (0.0001)	957

Table 217: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7077	0.0028	0.0567 (0.0013)	-0.0027 (0.0018)	0.9376 (0.0077)	0.0032 (0.0001)	977
Exp	0.7318	0.0032	0.0593 (0.0013)	0.0214 (0.0019)	0.9160 (0.0088)	0.0040 (0.0002)	1000
Weibull	0.7089	0.0034	0.0566 (0.0013)	-0.0015 (0.0018)	0.9600 (0.0062)	0.0032 (0.0001)	1000
Gompertz	0.7319	0.0032	0.0605 (0.0021)	0.0215 (0.0030)	0.9143 (0.0137)	0.0041 (0.0003)	420
RP (3)	0.7085	0.0034	0.0566 (0.0013)	-0.0019 (0.0018)	0.9590 (0.0063)	0.0032 (0.0001)	1000
RP (5)	0.7083	0.0034	0.0567 (0.0013)	-0.0022 (0.0018)	0.9590 (0.0063)	0.0032 (0.0001)	1000
RP (9)	0.7086	0.0034	0.0569 (0.0013)	-0.0018 (0.0018)	0.9582 (0.0064)	0.0032 (0.0001)	980
RP (P)	0.7085	0.0034	0.0566 (0.0013)	-0.0019 (0.0018)	0.9600 (0.0062)	0.0032 (0.0001)	1000
FP (W)	0.7089	0.0028	0.0566 (0.0013)	-0.0015 (0.0018)	0.9400 (0.0075)	0.0032 (0.0001)	1000
FP (k=10)	0.6966	0.0027	0.0573 (0.0013)	-0.0139 (0.0018)	0.9200 (0.0086)	0.0035 (0.0002)	1000
FP (k=10000)	0.6972	0.0026	0.0585 (0.0013)	-0.0132 (0.0019)	0.8987 (0.0096)	0.0036 (0.0002)	997
Model frailty: Normal							
Cox	0.7055	0.0028	0.0567 (0.0013)	-0.0050 (0.0018)	0.9350 (0.0078)	0.0032 (0.0001)	1000
Exp	0.7345	0.0031	0.0589 (0.0013)	0.0241 (0.0019)	0.9120 (0.0090)	0.0040 (0.0002)	1000
Weibull	0.7096	0.0033	0.0566 (0.0013)	-0.0008 (0.0018)	0.9580 (0.0063)	0.0032 (0.0001)	1000
Gompertz	0.7362	0.0031	0.0610 (0.0021)	0.0258 (0.0030)	0.8918 (0.0152)	0.0044 (0.0003)	416
RP (3)	0.7092	0.0033	0.0566 (0.0013)	-0.0013 (0.0018)	0.9550 (0.0066)	0.0032 (0.0001)	1000
RP (5)	0.7089	0.0033	0.0566 (0.0013)	-0.0015 (0.0018)	0.9540 (0.0066)	0.0032 (0.0001)	1000
RP (9)	0.7090	0.0033	0.0566 (0.0013)	-0.0014 (0.0018)	0.9540 (0.0066)	0.0032 (0.0001)	1000
RP (P)	0.7092	0.0033	0.0566 (0.0013)	-0.0012 (0.0018)	0.9560 (0.0065)	0.0032 (0.0001)	1000
FP (W)	0.5767	0.0021	0.1563 (0.0042)	-0.1338 (0.0059)	0.4936 (0.0189)	0.0423 (0.0024)	703
FP (k=10)	0.6823	0.0027	0.0635 (0.0015)	-0.0281 (0.0021)	0.8627 (0.0112)	0.0048 (0.0003)	947
FP (k=10000)	0.6784	0.0024	0.0591 (0.0013)	-0.0320 (0.0019)	0.8410 (0.0117)	0.0045 (0.0002)	975

Table 218: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5984	0.0019	0.0469 (0.0011)	-0.0030 (0.0015)	0.9205 (0.0086)	0.0022 (0.0001)	981
Exp	0.5534	0.0023	0.0430 (0.0010)	-0.0480 (0.0014)	0.8520 (0.0112)	0.0041 (0.0001)	1000
Weibull	0.5764	0.0022	0.0456 (0.0010)	-0.0250 (0.0014)	0.9130 (0.0089)	0.0027 (0.0001)	1000
Gompertz	0.5965	0.0021	0.0476 (0.0011)	-0.0050 (0.0015)	0.9319 (0.0080)	0.0023 (0.0001)	998
RP (3)	0.5941	0.0021	0.0472 (0.0011)	-0.0074 (0.0015)	0.9300 (0.0081)	0.0023 (0.0001)	1000
RP (5)	0.5958	0.0021	0.0473 (0.0011)	-0.0057 (0.0015)	0.9330 (0.0079)	0.0023 (0.0001)	1000
RP (9)	0.5964	0.0021	0.0473 (0.0011)	-0.0050 (0.0015)	0.9360 (0.0077)	0.0023 (0.0001)	1000
RP (P)	0.5931	0.0021	0.0470 (0.0011)	-0.0083 (0.0015)	0.9280 (0.0082)	0.0023 (0.0001)	1000
FP (W)	0.5764	0.0020	0.0456 (0.0010)	-0.0250 (0.0014)	0.8910 (0.0099)	0.0027 (0.0001)	1000
FP (k=10)	0.5982	0.0019	0.0470 (0.0011)	-0.0033 (0.0015)	0.9210 (0.0085)	0.0022 (0.0001)	1000
FP (k=10000)	0.5940	0.0018	0.0465 (0.0010)	-0.0074 (0.0015)	0.9170 (0.0087)	0.0022 (0.0001)	1000
Model frailty: Normal							
Cox	0.5988	0.0019	0.0464 (0.0010)	-0.0026 (0.0015)	0.9260 (0.0083)	0.0022 (0.0001)	1000
Exp	0.5561	0.0024	0.0426 (0.0010)	-0.0453 (0.0013)	0.8760 (0.0104)	0.0039 (0.0001)	1000
Weibull	0.5811	0.0023	0.0449 (0.0010)	-0.0204 (0.0014)	0.9380 (0.0076)	0.0024 (0.0001)	1000
Gompertz	0.6014	0.0022	0.0469 (0.0011)	-0.0000 (0.0015)	0.9485 (0.0070)	0.0022 (0.0001)	991
RP (3)	0.5989	0.0022	0.0464 (0.0010)	-0.0025 (0.0015)	0.9490 (0.0070)	0.0022 (0.0001)	1000
RP (5)	0.6006	0.0022	0.0465 (0.0010)	-0.0009 (0.0015)	0.9520 (0.0068)	0.0022 (0.0001)	1000
RP (9)	0.6012	0.0022	0.0465 (0.0010)	-0.0002 (0.0015)	0.9510 (0.0068)	0.0022 (0.0001)	1000
RP (P)	0.5980	0.0022	0.0462 (0.0010)	-0.0035 (0.0015)	0.9500 (0.0069)	0.0021 (0.0001)	1000
FP (W)	0.4624	0.0013	0.1210 (0.0043)	-0.1390 (0.0061)	0.3801 (0.0245)	0.0339 (0.0020)	392
FP (k=10)	0.5985	0.0019	0.0532 (0.0012)	-0.0029 (0.0018)	0.8836 (0.0106)	0.0028 (0.0001)	919
FP (k=10000)	0.6084	0.0016	0.0472 (0.0011)	0.0069 (0.0015)	0.9066 (0.0095)	0.0023 (0.0001)	942

Table 219: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5773	0.0018	0.0457 (0.0010)	-0.0017 (0.0015)	0.9344 (0.0079)	0.0021 (0.0001)	975
Exp	0.5329	0.0024	0.0433 (0.0010)	-0.0461 (0.0014)	0.8730 (0.0105)	0.0040 (0.0001)	1000
Weibull	0.5956	0.0019	0.0473 (0.0011)	0.0166 (0.0015)	0.9140 (0.0089)	0.0025 (0.0001)	1000
Gompertz	0.6046	0.0020	0.0480 (0.0011)	0.0256 (0.0015)	0.9040 (0.0093)	0.0030 (0.0001)	1000
RP (3)	0.5726	0.0020	0.0458 (0.0010)	-0.0064 (0.0015)	0.9377 (0.0077)	0.0021 (0.0001)	995
RP (5)	0.5758	0.0020	0.0460 (0.0010)	-0.0032 (0.0015)	0.9380 (0.0076)	0.0021 (0.0001)	1000
RP (9)	0.5764	0.0020	0.0459 (0.0010)	-0.0026 (0.0015)	0.9410 (0.0075)	0.0021 (0.0001)	1000
RP (P)	0.5763	0.0020	0.0459 (0.0010)	-0.0027 (0.0015)	0.9400 (0.0075)	0.0021 (0.0001)	1000
FP (W)	0.5957	0.0017	0.0473 (0.0011)	0.0167 (0.0015)	0.9038 (0.0093)	0.0025 (0.0001)	998
FP (k=10)	0.5859	0.0018	0.0438 (0.0010)	0.0069 (0.0014)	0.9440 (0.0073)	0.0020 (0.0001)	1000
FP (k=10000)	0.0522	0.0000	0.0082 (0.0002)	-0.5268 (0.0003)	0.0000 (0.0000)	0.2776 (0.0003)	974
Model frailty: Normal							
Cox	0.5784	0.0018	0.0449 (0.0010)	-0.0006 (0.0014)	0.9370 (0.0077)	0.0020 (0.0001)	1000
Exp	0.5335	0.0024	0.0432 (0.0010)	-0.0455 (0.0014)	0.8770 (0.0104)	0.0039 (0.0001)	1000
Weibull	0.6005	0.0020	0.0463 (0.0010)	0.0216 (0.0015)	0.9180 (0.0087)	0.0026 (0.0001)	1000
Gompertz	0.6075	0.0021	0.0474 (0.0011)	0.0285 (0.0015)	0.9050 (0.0093)	0.0031 (0.0001)	1000
RP (3)	0.5776	0.0021	0.0448 (0.0010)	-0.0014 (0.0014)	0.9490 (0.0070)	0.0020 (0.0001)	1000
RP (5)	0.5806	0.0021	0.0451 (0.0010)	0.0016 (0.0014)	0.9520 (0.0068)	0.0020 (0.0001)	1000
RP (9)	0.5811	0.0021	0.0451 (0.0010)	0.0021 (0.0014)	0.9520 (0.0068)	0.0020 (0.0001)	1000
RP (P)	0.5811	0.0021	0.0450 (0.0010)	0.0021 (0.0014)	0.9520 (0.0068)	0.0020 (0.0001)	1000
FP (W)	0.4977	0.0013	0.1131 (0.0038)	-0.0813 (0.0053)	0.5089 (0.0236)	0.0194 (0.0013)	450
FP (k=10)	0.5713	0.0017	0.0504 (0.0012)	-0.0077 (0.0017)	0.8966 (0.0101)	0.0026 (0.0002)	909
FP (k=10000)	0.5896	0.0013	0.0517 (0.0012)	0.0106 (0.0017)	0.8316 (0.0121)	0.0028 (0.0001)	950

Table 220: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6895	0.0027	0.0552 (0.0013)	-0.0004 (0.0018)	0.9383 (0.0077)	0.0030 (0.0001)	973
Exp	0.7108	0.0029	0.0573 (0.0013)	0.0209 (0.0018)	0.9220 (0.0085)	0.0037 (0.0002)	1000
Weibull	0.6993	0.0030	0.0562 (0.0013)	0.0093 (0.0018)	0.9470 (0.0071)	0.0032 (0.0001)	1000
Gompertz	0.7127	0.0029	0.0572 (0.0018)	0.0228 (0.0026)	0.9243 (0.0118)	0.0038 (0.0002)	502
RP (3)	0.6926	0.0030	0.0553 (0.0012)	0.0027 (0.0018)	0.9499 (0.0069)	0.0031 (0.0001)	999
RP (5)	0.6903	0.0030	0.0552 (0.0012)	0.0004 (0.0017)	0.9500 (0.0069)	0.0030 (0.0001)	1000
RP (9)	0.6897	0.0030	0.0552 (0.0012)	-0.0002 (0.0017)	0.9488 (0.0070)	0.0030 (0.0001)	996
RP (P)	0.6911	0.0030	0.0552 (0.0012)	0.0012 (0.0017)	0.9500 (0.0069)	0.0031 (0.0001)	1000
FP (W)	0.6993	0.0027	0.0562 (0.0013)	0.0093 (0.0018)	0.9280 (0.0082)	0.0032 (0.0001)	1000
FP (k=10)	0.6883	0.0026	0.0549 (0.0012)	-0.0016 (0.0017)	0.9380 (0.0076)	0.0030 (0.0001)	1000
FP (k=10000)	0.6901	0.0026	0.0551 (0.0012)	0.0001 (0.0017)	0.9360 (0.0077)	0.0030 (0.0001)	1000
Model frailty: Normal							
Cox	0.6884	0.0026	0.0547 (0.0012)	-0.0015 (0.0017)	0.9400 (0.0075)	0.0030 (0.0001)	1000
Exp	0.7139	0.0029	0.0565 (0.0013)	0.0239 (0.0018)	0.9260 (0.0083)	0.0038 (0.0002)	1000
Weibull	0.7012	0.0030	0.0557 (0.0012)	0.0113 (0.0018)	0.9450 (0.0072)	0.0032 (0.0001)	1000
Gompertz	0.7153	0.0029	0.0559 (0.0018)	0.0254 (0.0025)	0.9254 (0.0118)	0.0038 (0.0002)	496
RP (3)	0.6949	0.0030	0.0548 (0.0012)	0.0049 (0.0017)	0.9490 (0.0070)	0.0030 (0.0001)	1000
RP (5)	0.6927	0.0030	0.0546 (0.0012)	0.0028 (0.0017)	0.9490 (0.0070)	0.0030 (0.0001)	1000
RP (9)	0.6923	0.0030	0.0545 (0.0012)	0.0024 (0.0017)	0.9490 (0.0070)	0.0030 (0.0001)	1000
RP (P)	0.6935	0.0030	0.0547 (0.0012)	0.0036 (0.0017)	0.9490 (0.0070)	0.0030 (0.0001)	1000
FP (W)	0.5670	0.0019	0.1494 (0.0042)	-0.1229 (0.0060)	0.5088 (0.0200)	0.0374 (0.0022)	623
FP (k=10)	0.6706	0.0025	0.0652 (0.0015)	-0.0193 (0.0021)	0.8651 (0.0112)	0.0046 (0.0003)	934
FP (k=10000)	0.6756	0.0023	0.0553 (0.0013)	-0.0143 (0.0018)	0.8965 (0.0098)	0.0033 (0.0001)	966

Table 221: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5792	0.0020	0.0633 (0.0014)	0.0029 (0.0020)	0.8380 (0.0119)	0.0040 (0.0002)	963
Exp	0.5798	0.0037	0.0628 (0.0014)	0.0036 (0.0020)	0.9380 (0.0076)	0.0040 (0.0002)	1000
Weibull	0.5800	0.0037	0.0628 (0.0014)	0.0037 (0.0020)	0.9390 (0.0076)	0.0040 (0.0002)	1000
Gompertz	0.5818	0.0037	0.0621 (0.0020)	0.0037 (0.0020)	0.9440 (0.0103)	0.0039 (0.0003)	500
RP (3)	0.5802	0.0037	0.0629 (0.0014)	0.0039 (0.0020)	0.9390 (0.0076)	0.0040 (0.0002)	984
RP (5)	0.5814	0.0037	0.0623 (0.0014)	0.0052 (0.0020)	0.9404 (0.0076)	0.0039 (0.0002)	973
RP (9)	0.5819	0.0037	0.0623 (0.0014)	0.0056 (0.0020)	0.9387 (0.0077)	0.0039 (0.0002)	963
RP (P)	0.5802	0.0037	0.0627 (0.0014)	0.0039 (0.0020)	0.9387 (0.0076)	0.0039 (0.0002)	995
FP (W)	0.5800	0.0020	0.0628 (0.0014)	0.0037 (0.0020)	0.8380 (0.0117)	0.0040 (0.0002)	1000
FP (k=10)	0.5762	0.0020	0.0639 (0.0014)	-0.0000 (0.0020)	0.8320 (0.0118)	0.0041 (0.0002)	1000
FP (k=10000)	0.5785	0.0020	0.0631 (0.0014)	0.0023 (0.0020)	0.8340 (0.0118)	0.0040 (0.0002)	1000
Model frailty: Normal							
Cox	0.5585	0.0019	0.0690 (0.0015)	-0.0177 (0.0022)	0.7520 (0.0137)	0.0051 (0.0002)	1000
Exp	0.5646	0.0035	0.0696 (0.0016)	-0.0117 (0.0022)	0.9000 (0.0095)	0.0050 (0.0002)	1000
Weibull	0.5646	0.0035	0.0694 (0.0016)	-0.0116 (0.0022)	0.8989 (0.0095)	0.0049 (0.0002)	999
Gompertz	0.5679	0.0035	0.0703 (0.0023)	-0.0083 (0.0032)	0.8971 (0.0139)	0.0050 (0.0003)	476
RP (3)	0.5643	0.0036	0.0699 (0.0016)	-0.0120 (0.0022)	0.8990 (0.0095)	0.0050 (0.0002)	1000
RP (5)	0.5643	0.0036	0.0699 (0.0016)	-0.0120 (0.0022)	0.8980 (0.0096)	0.0050 (0.0002)	1000
RP (9)	0.5641	0.0036	0.0699 (0.0016)	-0.0121 (0.0022)	0.8980 (0.0096)	0.0050 (0.0002)	1000
RP (P)	0.5644	0.0036	0.0699 (0.0016)	-0.0119 (0.0022)	0.8980 (0.0096)	0.0050 (0.0002)	1000
FP (W)	0.4502	0.0014	0.1149 (0.0035)	-0.1261 (0.0049)	0.3554 (0.0205)	0.0291 (0.0014)	543
FP (k=10)	0.5431	0.0018	0.0760 (0.0018)	-0.0332 (0.0026)	0.7122 (0.0152)	0.0069 (0.0004)	886
FP (k=10000)	0.5516	0.0017	0.0673 (0.0016)	-0.0246 (0.0022)	0.7303 (0.0146)	0.0051 (0.0002)	927

Table 222: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5858	0.0023	0.0694 (0.0016)	-0.0050 (0.0022)	0.8135 (0.0126)	0.0048 (0.0002)	960
Exp	0.6062	0.0046	0.0712 (0.0016)	0.0153 (0.0023)	0.9130 (0.0089)	0.0053 (0.0002)	1000
Weibull	0.5880	0.0046	0.0685 (0.0015)	-0.0028 (0.0022)	0.9340 (0.0079)	0.0047 (0.0002)	1000
Gompertz	0.6050	0.0046	0.0713 (0.0024)	0.0142 (0.0034)	0.9147 (0.0134)	0.0053 (0.0004)	434
RP (3)	0.5881	0.0046	0.0683 (0.0015)	-0.0027 (0.0022)	0.9345 (0.0079)	0.0047 (0.0002)	992
RP (5)	0.5900	0.0045	0.0684 (0.0016)	-0.0008 (0.0022)	0.9349 (0.0080)	0.0047 (0.0002)	952
RP (9)	0.5887	0.0045	0.0682 (0.0015)	-0.0021 (0.0022)	0.9365 (0.0078)	0.0047 (0.0002)	977
RP (P)	0.5879	0.0046	0.0685 (0.0015)	-0.0029 (0.0022)	0.9327 (0.0079)	0.0047 (0.0002)	996
FP (W)	0.5880	0.0023	0.0685 (0.0015)	-0.0028 (0.0022)	0.8270 (0.0120)	0.0047 (0.0002)	1000
FP (k=10)	0.5514	0.0020	0.0751 (0.0017)	-0.0394 (0.0024)	0.6900 (0.0146)	0.0072 (0.0003)	1000
FP (k=10000)	0.5257	0.0017	0.1076 (0.0024)	-0.0651 (0.0034)	0.5724 (0.0157)	0.0158 (0.0009)	994
Model frailty: Normal							
Cox	0.5587	0.0021	0.0765 (0.0017)	-0.0321 (0.0024)	0.6930 (0.0146)	0.0069 (0.0003)	1000
Exp	0.5845	0.0041	0.0799 (0.0018)	-0.0063 (0.0025)	0.8770 (0.0104)	0.0064 (0.0003)	1000
Weibull	0.5646	0.0042	0.0771 (0.0017)	-0.0262 (0.0024)	0.8737 (0.0105)	0.0066 (0.0003)	998
Gompertz	0.5863	0.0041	0.0796 (0.0028)	-0.0045 (0.0039)	0.8662 (0.0168)	0.0063 (0.0005)	411
RP (3)	0.5640	0.0042	0.0772 (0.0017)	-0.0268 (0.0024)	0.8730 (0.0105)	0.0067 (0.0003)	1000
RP (5)	0.5640	0.0042	0.0772 (0.0017)	-0.0268 (0.0024)	0.8740 (0.0105)	0.0067 (0.0003)	1000
RP (9)	0.5640	0.0042	0.0772 (0.0017)	-0.0268 (0.0024)	0.8740 (0.0105)	0.0067 (0.0003)	1000
RP (P)	0.5642	0.0042	0.0772 (0.0017)	-0.0266 (0.0024)	0.8740 (0.0105)	0.0067 (0.0003)	1000
FP (W)	0.4568	0.0016	0.1251 (0.0035)	-0.1340 (0.0050)	0.3501 (0.0189)	0.0336 (0.0016)	637
FP (k=10)	0.5456	0.0020	0.0836 (0.0020)	-0.0452 (0.0028)	0.6539 (0.0157)	0.0090 (0.0004)	913
FP (k=10000)	0.5532	0.0019	0.0739 (0.0017)	-0.0376 (0.0024)	0.6780 (0.0152)	0.0069 (0.0003)	941

Table 223: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5492	0.0017	0.0504 (0.0012)	0.0055 (0.0016)	0.8770 (0.0106)	0.0026 (0.0001)	959
Exp	0.5194	0.0028	0.0461 (0.0010)	-0.0243 (0.0015)	0.9420 (0.0074)	0.0027 (0.0001)	1000
Weibull	0.5371	0.0028	0.0480 (0.0011)	-0.0066 (0.0015)	0.9650 (0.0058)	0.0023 (0.0001)	1000
Gompertz	0.5356	0.0028	0.0550 (0.0016)	-0.0081 (0.0023)	0.9294 (0.0105)	0.0031 (0.0002)	595
RP (3)	0.5477	0.0027	0.0497 (0.0011)	0.0040 (0.0016)	0.9575 (0.0064)	0.0025 (0.0001)	988
RP (5)	0.5485	0.0027	0.0497 (0.0011)	0.0048 (0.0016)	0.9598 (0.0062)	0.0025 (0.0001)	995
RP (9)	0.5511	0.0027	0.0491 (0.0011)	0.0074 (0.0016)	0.9596 (0.0064)	0.0025 (0.0001)	940
RP (P)	0.5468	0.0027	0.0498 (0.0011)	0.0030 (0.0016)	0.9577 (0.0064)	0.0025 (0.0001)	993
FP (W)	0.5371	0.0018	0.0480 (0.0011)	-0.0066 (0.0015)	0.8940 (0.0097)	0.0023 (0.0001)	1000
FP (k=10)	0.5492	0.0017	0.0500 (0.0011)	0.0055 (0.0016)	0.8810 (0.0102)	0.0025 (0.0001)	1000
FP (k=10000)	0.5476	0.0017	0.0495 (0.0011)	0.0039 (0.0016)	0.8810 (0.0102)	0.0025 (0.0001)	1000
Model frailty: Normal							
Cox	0.5384	0.0016	0.0552 (0.0012)	-0.0053 (0.0017)	0.8348 (0.0117)	0.0031 (0.0001)	999
Exp	0.5119	0.0029	0.0524 (0.0012)	-0.0318 (0.0017)	0.9070 (0.0092)	0.0038 (0.0002)	1000
Weibull	0.5338	0.0028	0.0533 (0.0012)	-0.0099 (0.0017)	0.9400 (0.0075)	0.0029 (0.0001)	1000
Gompertz	0.5303	0.0028	0.0613 (0.0016)	-0.0134 (0.0023)	0.9025 (0.0111)	0.0039 (0.0002)	708
RP (3)	0.5435	0.0028	0.0550 (0.0012)	-0.0002 (0.0017)	0.9320 (0.0080)	0.0030 (0.0001)	1000
RP (5)	0.5441	0.0028	0.0553 (0.0012)	0.0003 (0.0017)	0.9310 (0.0080)	0.0031 (0.0001)	1000
RP (9)	0.5442	0.0028	0.0553 (0.0012)	0.0005 (0.0017)	0.9300 (0.0081)	0.0031 (0.0001)	1000
RP (P)	0.5429	0.0028	0.0549 (0.0012)	-0.0008 (0.0017)	0.9330 (0.0079)	0.0030 (0.0001)	1000
FP (W)	0.4191	0.0011	0.0981 (0.0032)	-0.1246 (0.0045)	0.3262 (0.0216)	0.0251 (0.0012)	469
FP (k=10)	0.5241	0.0015	0.0627 (0.0015)	-0.0196 (0.0022)	0.7672 (0.0146)	0.0043 (0.0002)	842
FP (k=10000)	0.5294	0.0014	0.0560 (0.0013)	-0.0143 (0.0019)	0.7870 (0.0136)	0.0033 (0.0002)	906

Table 224: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5234	0.0016	0.0513 (0.0012)	0.0054 (0.0017)	0.8583 (0.0112)	0.0027 (0.0001)	967
Exp	0.4871	0.0028	0.0499 (0.0011)	-0.0309 (0.0016)	0.9210 (0.0085)	0.0034 (0.0001)	1000
Weibull	0.5337	0.0026	0.0533 (0.0012)	0.0156 (0.0017)	0.9180 (0.0087)	0.0031 (0.0001)	1000
Gompertz	0.5278	0.0027	0.0637 (0.0015)	0.0098 (0.0021)	0.8850 (0.0104)	0.0041 (0.0002)	948
RP (3)	0.5224	0.0025	0.0507 (0.0012)	0.0044 (0.0017)	0.9387 (0.0082)	0.0026 (0.0001)	865
RP (5)	0.5230	0.0026	0.0508 (0.0011)	0.0050 (0.0016)	0.9425 (0.0074)	0.0026 (0.0001)	992
RP (9)	0.5250	0.0026	0.0507 (0.0012)	0.0070 (0.0017)	0.9416 (0.0076)	0.0026 (0.0001)	941
RP (P)	0.5229	0.0026	0.0510 (0.0011)	0.0049 (0.0016)	0.9414 (0.0075)	0.0026 (0.0001)	990
FP (W)	0.5337	0.0015	0.0533 (0.0012)	0.0156 (0.0017)	0.8260 (0.0120)	0.0031 (0.0001)	1000
FP (k=10)	0.5150	0.0015	0.0548 (0.0012)	-0.0030 (0.0017)	0.8160 (0.0123)	0.0030 (0.0001)	1000
FP (k=10000)	0.0582	0.0000	0.0119 (0.0003)	-0.4598 (0.0004)	0.0000 (0.0000)	0.2115 (0.0003)	1000
Model frailty: Normal							
Cox	0.5127	0.0015	0.0555 (0.0012)	-0.0053 (0.0018)	0.8168 (0.0122)	0.0031 (0.0001)	999
Exp	0.4745	0.0027	0.0561 (0.0013)	-0.0436 (0.0018)	0.8500 (0.0113)	0.0050 (0.0002)	1000
Weibull	0.5285	0.0025	0.0582 (0.0013)	0.0104 (0.0018)	0.8980 (0.0096)	0.0035 (0.0001)	1000
Gompertz	0.5194	0.0026	0.0710 (0.0017)	0.0014 (0.0024)	0.8318 (0.0127)	0.0050 (0.0002)	874
RP (3)	0.5173	0.0026	0.0556 (0.0012)	-0.0007 (0.0018)	0.9110 (0.0090)	0.0031 (0.0001)	1000
RP (5)	0.5177	0.0026	0.0562 (0.0013)	-0.0003 (0.0018)	0.9090 (0.0091)	0.0032 (0.0001)	1000
RP (9)	0.5179	0.0026	0.0562 (0.0013)	-0.0002 (0.0018)	0.9090 (0.0091)	0.0032 (0.0001)	1000
RP (P)	0.5180	0.0026	0.0562 (0.0013)	-0.0001 (0.0018)	0.9100 (0.0090)	0.0032 (0.0001)	1000
FP (W)	0.4370	0.0011	0.0990 (0.0034)	-0.0811 (0.0047)	0.3991 (0.0235)	0.0164 (0.0009)	436
FP (k=10)	0.4982	0.0014	0.0618 (0.0015)	-0.0198 (0.0021)	0.7665 (0.0144)	0.0042 (0.0002)	865
FP (k=10000)	0.4741	0.0011	0.0700 (0.0017)	-0.0440 (0.0024)	0.5698 (0.0167)	0.0068 (0.0003)	881

Table 225: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5917	0.0022	0.0656 (0.0015)	0.0087 (0.0021)	0.8281 (0.0122)	0.0044 (0.0002)	960
Exp	0.6052	0.0041	0.0674 (0.0015)	0.0223 (0.0021)	0.9060 (0.0092)	0.0050 (0.0002)	1000
Weibull	0.5961	0.0041	0.0662 (0.0015)	0.0132 (0.0021)	0.9270 (0.0082)	0.0045 (0.0002)	1000
Gompertz	0.6083	0.0041	0.0672 (0.0030)	0.0253 (0.0043)	0.8956 (0.0194)	0.0051 (0.0004)	249
RP (3)	0.5943	0.0040	0.0650 (0.0015)	0.0113 (0.0021)	0.9350 (0.0079)	0.0043 (0.0002)	984
RP (5)	0.5937	0.0040	0.0648 (0.0015)	0.0108 (0.0021)	0.9348 (0.0079)	0.0043 (0.0002)	981
RP (9)	0.5944	0.0040	0.0637 (0.0014)	0.0114 (0.0020)	0.9384 (0.0077)	0.0042 (0.0002)	974
RP (P)	0.5933	0.0040	0.0648 (0.0015)	0.0103 (0.0021)	0.9358 (0.0078)	0.0043 (0.0002)	997
FP (W)	0.5961	0.0022	0.0662 (0.0015)	0.0132 (0.0021)	0.8270 (0.0120)	0.0045 (0.0002)	1000
FP (k=10)	0.5828	0.0021	0.0676 (0.0015)	-0.0001 (0.0021)	0.8080 (0.0125)	0.0046 (0.0002)	1000
FP (k=10000)	0.5880	0.0022	0.0661 (0.0015)	0.0050 (0.0021)	0.8200 (0.0121)	0.0044 (0.0002)	1000
Model frailty: Normal							
Cox	0.5686	0.0020	0.0716 (0.0016)	-0.0143 (0.0023)	0.7480 (0.0137)	0.0053 (0.0002)	1000
Exp	0.5872	0.0038	0.0745 (0.0017)	0.0042 (0.0024)	0.8759 (0.0104)	0.0056 (0.0003)	999
Weibull	0.5768	0.0038	0.0736 (0.0016)	-0.0061 (0.0023)	0.8879 (0.0100)	0.0054 (0.0002)	999
Gompertz	0.5891	0.0038	0.0774 (0.0026)	0.0061 (0.0037)	0.8647 (0.0164)	0.0060 (0.0004)	436
RP (3)	0.5748	0.0038	0.0728 (0.0016)	-0.0081 (0.0023)	0.8960 (0.0097)	0.0054 (0.0002)	1000
RP (5)	0.5746	0.0038	0.0724 (0.0016)	-0.0083 (0.0023)	0.8980 (0.0096)	0.0053 (0.0002)	1000
RP (9)	0.5744	0.0038	0.0723 (0.0016)	-0.0086 (0.0023)	0.8980 (0.0096)	0.0053 (0.0002)	1000
RP (P)	0.5748	0.0038	0.0726 (0.0016)	-0.0082 (0.0023)	0.8980 (0.0096)	0.0053 (0.0002)	1000
FP (W)	0.4588	0.0015	0.1297 (0.0037)	-0.1241 (0.0053)	0.3870 (0.0199)	0.0322 (0.0016)	602
FP (k=10)	0.5495	0.0019	0.0811 (0.0019)	-0.0334 (0.0027)	0.6973 (0.0152)	0.0077 (0.0004)	915
FP (k=10000)	0.5613	0.0019	0.0700 (0.0016)	-0.0216 (0.0023)	0.7416 (0.0142)	0.0054 (0.0003)	948

Table 226: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5849	0.0020	0.0609 (0.0014)	-0.0110 (0.0020)	0.8459 (0.0117)	0.0038 (0.0002)	954
Exp	0.5828	0.0032	0.0613 (0.0014)	-0.0131 (0.0019)	0.9140 (0.0089)	0.0039 (0.0002)	1000
Weibull	0.5829	0.0032	0.0614 (0.0014)	-0.0130 (0.0019)	0.9160 (0.0088)	0.0039 (0.0002)	1000
Gompertz	0.5847	0.0032	0.0591 (0.0024)	-0.0112 (0.0034)	0.9283 (0.0147)	0.0036 (0.0003)	307
RP (3)	0.5829	0.0032	0.0614 (0.0014)	-0.0130 (0.0019)	0.9147 (0.0089)	0.0039 (0.0002)	996
RP (5)	0.5828	0.0032	0.0614 (0.0014)	-0.0131 (0.0019)	0.9160 (0.0088)	0.0039 (0.0002)	1000
RP (9)	0.5830	0.0032	0.0614 (0.0014)	-0.0129 (0.0019)	0.9168 (0.0087)	0.0039 (0.0002)	998
RP (P)	0.5830	0.0032	0.0614 (0.0014)	-0.0129 (0.0019)	0.9147 (0.0088)	0.0039 (0.0002)	997
FP (W)	0.5829	0.0020	0.0614 (0.0014)	-0.0130 (0.0019)	0.8390 (0.0116)	0.0039 (0.0002)	1000
FP (k=10)	0.5843	0.0020	0.0604 (0.0014)	-0.0116 (0.0019)	0.8460 (0.0114)	0.0038 (0.0002)	1000
FP (k=10000)	0.5845	0.0020	0.0604 (0.0014)	-0.0114 (0.0019)	0.8460 (0.0114)	0.0038 (0.0002)	1000
Model frailty: Normal							
Cox	0.5898	0.0020	0.0564 (0.0013)	-0.0061 (0.0018)	0.8810 (0.0102)	0.0032 (0.0001)	1000
Exp	0.5961	0.0032	0.0562 (0.0013)	0.0002 (0.0018)	0.9510 (0.0068)	0.0032 (0.0001)	999
Weibull	0.5962	0.0032	0.0562 (0.0013)	0.0003 (0.0018)	0.9489 (0.0070)	0.0032 (0.0001)	999
Gompertz	0.5946	0.0032	0.0558 (0.0023)	-0.0013 (0.0033)	0.9479 (0.0131)	0.0031 (0.0003)	288
RP (3)	0.5961	0.0032	0.0562 (0.0013)	0.0002 (0.0018)	0.9500 (0.0069)	0.0032 (0.0001)	1000
RP (5)	0.5960	0.0032	0.0562 (0.0013)	0.0001 (0.0018)	0.9490 (0.0070)	0.0032 (0.0001)	1000
RP (9)	0.5960	0.0032	0.0562 (0.0013)	0.0001 (0.0018)	0.9490 (0.0070)	0.0032 (0.0001)	1000
RP (P)	0.5962	0.0032	0.0562 (0.0013)	0.0003 (0.0018)	0.9490 (0.0070)	0.0032 (0.0001)	1000
FP (W)	0.4637	0.0013	0.1216 (0.0039)	-0.1322 (0.0055)	0.3483 (0.0215)	0.0322 (0.0017)	491
FP (k=10)	0.5737	0.0019	0.0682 (0.0016)	-0.0222 (0.0023)	0.7862 (0.0138)	0.0051 (0.0003)	884
FP (k=10000)	0.5858	0.0018	0.0571 (0.0013)	-0.0101 (0.0019)	0.8554 (0.0115)	0.0034 (0.0002)	927

Table 227: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6255	0.0024	0.0683 (0.0016)	0.0017 (0.0022)	0.8415 (0.0118)	0.0047 (0.0002)	965
Exp	0.6406	0.0039	0.0753 (0.0017)	0.0168 (0.0024)	0.8870 (0.0100)	0.0059 (0.0003)	1000
Weibull	0.6249	0.0039	0.0685 (0.0015)	0.0011 (0.0022)	0.9300 (0.0081)	0.0047 (0.0002)	1000
Gompertz	0.6439	0.0039	0.0725 (0.0029)	0.0201 (0.0040)	0.8944 (0.0171)	0.0056 (0.0004)	322
RP (3)	0.6248	0.0039	0.0683 (0.0015)	0.0010 (0.0022)	0.9317 (0.0080)	0.0047 (0.0002)	996
RP (5)	0.6248	0.0039	0.0681 (0.0015)	0.0010 (0.0022)	0.9317 (0.0080)	0.0046 (0.0002)	996
RP (9)	0.6247	0.0039	0.0683 (0.0015)	0.0009 (0.0022)	0.9299 (0.0081)	0.0047 (0.0002)	998
RP (P)	0.6245	0.0039	0.0682 (0.0015)	0.0007 (0.0022)	0.9309 (0.0080)	0.0046 (0.0002)	999
FP (W)	0.6249	0.0024	0.0685 (0.0015)	0.0011 (0.0022)	0.8360 (0.0117)	0.0047 (0.0002)	1000
FP (k=10)	0.6017	0.0021	0.0739 (0.0017)	-0.0221 (0.0023)	0.7708 (0.0133)	0.0059 (0.0003)	999
FP (k=10000)	0.6096	0.0021	0.0775 (0.0017)	-0.0142 (0.0025)	0.7875 (0.0130)	0.0062 (0.0005)	993
Model frailty: Normal							
Cox	0.6240	0.0023	0.0648 (0.0014)	0.0002 (0.0020)	0.8630 (0.0109)	0.0042 (0.0002)	1000
Exp	0.6568	0.0038	0.0666 (0.0015)	0.0330 (0.0021)	0.8930 (0.0098)	0.0055 (0.0002)	1000
Weibull	0.6315	0.0038	0.0644 (0.0014)	0.0077 (0.0020)	0.9369 (0.0077)	0.0042 (0.0002)	999
Gompertz	0.6625	0.0038	0.0658 (0.0023)	0.0387 (0.0033)	0.8917 (0.0156)	0.0058 (0.0004)	397
RP (3)	0.6308	0.0038	0.0644 (0.0014)	0.0070 (0.0020)	0.9360 (0.0077)	0.0042 (0.0002)	1000
RP (5)	0.6307	0.0038	0.0644 (0.0014)	0.0069 (0.0020)	0.9380 (0.0076)	0.0042 (0.0002)	1000
RP (9)	0.6307	0.0038	0.0645 (0.0014)	0.0069 (0.0020)	0.9380 (0.0076)	0.0042 (0.0002)	1000
RP (P)	0.6309	0.0038	0.0645 (0.0014)	0.0071 (0.0020)	0.9370 (0.0077)	0.0042 (0.0002)	1000
FP (W)	0.4990	0.0017	0.1395 (0.0041)	-0.1249 (0.0058)	0.4201 (0.0206)	0.0350 (0.0019)	576
FP (k=10)	0.6026	0.0022	0.0788 (0.0019)	-0.0212 (0.0026)	0.7805 (0.0139)	0.0067 (0.0004)	893
FP (k=10000)	0.6160	0.0020	0.0637 (0.0015)	-0.0078 (0.0021)	0.8214 (0.0125)	0.0041 (0.0002)	935

Table 228: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5321	0.0016	0.0568 (0.0013)	-0.0129 (0.0018)	0.8023 (0.0129)	0.0034 (0.0001)	946
Exp	0.5032	0.0025	0.0510 (0.0011)	-0.0418 (0.0016)	0.8570 (0.0111)	0.0043 (0.0002)	1000
Weibull	0.5150	0.0024	0.0560 (0.0013)	-0.0300 (0.0018)	0.8590 (0.0110)	0.0040 (0.0002)	1000
Gompertz	0.5234	0.0024	0.0594 (0.0019)	-0.0216 (0.0027)	0.8703 (0.0154)	0.0040 (0.0002)	478
RP (3)	0.5262	0.0024	0.0574 (0.0013)	-0.0188 (0.0018)	0.8809 (0.0102)	0.0036 (0.0002)	999
RP (5)	0.5275	0.0024	0.0574 (0.0013)	-0.0175 (0.0018)	0.8850 (0.0101)	0.0036 (0.0002)	1000
RP (9)	0.5278	0.0024	0.0574 (0.0013)	-0.0172 (0.0018)	0.8837 (0.0102)	0.0036 (0.0002)	997
RP (P)	0.5259	0.0024	0.0572 (0.0013)	-0.0190 (0.0018)	0.8828 (0.0102)	0.0036 (0.0002)	998
FP (W)	0.5150	0.0016	0.0560 (0.0013)	-0.0300 (0.0018)	0.7580 (0.0135)	0.0040 (0.0002)	1000
FP (k=10)	0.5317	0.0016	0.0565 (0.0013)	-0.0133 (0.0018)	0.8000 (0.0126)	0.0034 (0.0001)	1000
FP (k=10000)	0.5309	0.0015	0.0546 (0.0012)	-0.0141 (0.0017)	0.8082 (0.0125)	0.0032 (0.0001)	996
Model frailty: Normal							
Cox	0.5424	0.0016	0.0511 (0.0011)	-0.0026 (0.0016)	0.8790 (0.0103)	0.0026 (0.0001)	1000
Exp	0.5163	0.0027	0.0463 (0.0010)	-0.0286 (0.0015)	0.9430 (0.0073)	0.0030 (0.0001)	1000
Weibull	0.5350	0.0027	0.0491 (0.0011)	-0.0100 (0.0016)	0.9550 (0.0066)	0.0025 (0.0001)	999
Gompertz	0.5372	0.0026	0.0550 (0.0023)	-0.0078 (0.0032)	0.9192 (0.0158)	0.0031 (0.0002)	297
RP (3)	0.5454	0.0026	0.0511 (0.0011)	0.0005 (0.0016)	0.9420 (0.0074)	0.0026 (0.0001)	1000
RP (5)	0.5466	0.0026	0.0512 (0.0011)	0.0016 (0.0016)	0.9400 (0.0075)	0.0026 (0.0001)	1000
RP (9)	0.5470	0.0026	0.0512 (0.0011)	0.0021 (0.0016)	0.9420 (0.0074)	0.0026 (0.0001)	1000
RP (P)	0.5452	0.0026	0.0509 (0.0011)	0.0002 (0.0016)	0.9440 (0.0073)	0.0026 (0.0001)	1000
FP (W)	0.4284	0.0011	0.1013 (0.0037)	-0.1165 (0.0052)	0.3422 (0.0245)	0.0238 (0.0014)	374
FP (k=10)	0.5397	0.0016	0.0579 (0.0014)	-0.0053 (0.0020)	0.8203 (0.0132)	0.0034 (0.0002)	846
FP (k=10000)	0.5513	0.0014	0.0493 (0.0012)	0.0063 (0.0017)	0.8565 (0.0118)	0.0025 (0.0001)	878

Table 229: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5068	0.0015	0.0568 (0.0013)	-0.0149 (0.0018)	0.7839 (0.0134)	0.0034 (0.0002)	944
Exp	0.4786	0.0024	0.0498 (0.0011)	-0.0430 (0.0016)	0.8360 (0.0117)	0.0043 (0.0002)	1000
Weibull	0.5167	0.0021	0.0578 (0.0013)	-0.0050 (0.0018)	0.8650 (0.0108)	0.0034 (0.0001)	1000
Gompertz	0.5228	0.0022	0.0607 (0.0014)	0.0011 (0.0020)	0.8622 (0.0111)	0.0037 (0.0002)	965
RP (3)	0.5003	0.0022	0.0563 (0.0013)	-0.0213 (0.0018)	0.8632 (0.0111)	0.0036 (0.0002)	965
RP (5)	0.5031	0.0022	0.0568 (0.0013)	-0.0186 (0.0018)	0.8679 (0.0107)	0.0036 (0.0002)	999
RP (9)	0.5038	0.0022	0.0568 (0.0013)	-0.0178 (0.0018)	0.8687 (0.0107)	0.0035 (0.0002)	998
RP (P)	0.5036	0.0022	0.0568 (0.0013)	-0.0180 (0.0018)	0.8677 (0.0107)	0.0035 (0.0002)	998
FP (W)	0.5167	0.0014	0.0578 (0.0013)	-0.0050 (0.0018)	0.7760 (0.0132)	0.0034 (0.0001)	1000
FP (k=10)	0.5136	0.0014	0.0558 (0.0012)	-0.0081 (0.0018)	0.7978 (0.0127)	0.0032 (0.0001)	999
FP (k=10000)	0.0455	0.0000	0.0099 (0.0002)	-0.4762 (0.0003)	0.0000 (0.0000)	0.2268 (0.0003)	999
Model frailty: Normal							
Cox	0.5188	0.0015	0.0505 (0.0011)	-0.0029 (0.0016)	0.8530 (0.0112)	0.0026 (0.0001)	1000
Exp	0.4813	0.0025	0.0491 (0.0011)	-0.0403 (0.0016)	0.8599 (0.0110)	0.0040 (0.0002)	999
Weibull	0.5344	0.0023	0.0528 (0.0012)	0.0128 (0.0017)	0.9049 (0.0093)	0.0029 (0.0001)	999
Gompertz	0.5322	0.0023	0.0610 (0.0014)	0.0105 (0.0020)	0.8662 (0.0113)	0.0038 (0.0002)	912
RP (3)	0.5209	0.0024	0.0504 (0.0011)	-0.0008 (0.0016)	0.9410 (0.0075)	0.0025 (0.0001)	1000
RP (5)	0.5228	0.0024	0.0507 (0.0011)	0.0011 (0.0016)	0.9420 (0.0074)	0.0026 (0.0001)	1000
RP (9)	0.5233	0.0024	0.0506 (0.0011)	0.0016 (0.0016)	0.9410 (0.0075)	0.0026 (0.0001)	1000
RP (P)	0.5231	0.0024	0.0507 (0.0011)	0.0015 (0.0016)	0.9420 (0.0074)	0.0026 (0.0001)	1000
FP (W)	0.4368	0.0010	0.0993 (0.0037)	-0.0848 (0.0052)	0.4218 (0.0261)	0.0170 (0.0011)	358
FP (k=10)	0.5112	0.0014	0.0606 (0.0015)	-0.0105 (0.0021)	0.7930 (0.0141)	0.0038 (0.0002)	826
FP (k=10000)	0.5034	0.0011	0.0633 (0.0015)	-0.0183 (0.0022)	0.6721 (0.0160)	0.0043 (0.0002)	860

Table 230: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5945	0.0022	0.0673 (0.0015)	-0.0111 (0.0022)	0.8148 (0.0126)	0.0046 (0.0002)	945
Exp	0.6053	0.0034	0.0704 (0.0016)	-0.0003 (0.0022)	0.8960 (0.0097)	0.0050 (0.0002)	1000
Weibull	0.5984	0.0035	0.0677 (0.0015)	-0.0072 (0.0021)	0.9110 (0.0090)	0.0046 (0.0002)	1000
Gompertz	0.6041	0.0035	0.0704 (0.0032)	-0.0015 (0.0045)	0.8967 (0.0196)	0.0049 (0.0005)	242
RP (3)	0.5957	0.0035	0.0671 (0.0015)	-0.0099 (0.0021)	0.9103 (0.0091)	0.0046 (0.0002)	992
RP (5)	0.5934	0.0034	0.0671 (0.0015)	-0.0122 (0.0021)	0.9089 (0.0091)	0.0046 (0.0002)	999
RP (9)	0.5928	0.0034	0.0671 (0.0015)	-0.0128 (0.0021)	0.9070 (0.0092)	0.0047 (0.0002)	1000
RP (P)	0.5938	0.0034	0.0673 (0.0015)	-0.0118 (0.0021)	0.9096 (0.0091)	0.0047 (0.0002)	996
FP (W)	0.5984	0.0022	0.0677 (0.0015)	-0.0072 (0.0021)	0.8130 (0.0123)	0.0046 (0.0002)	1000
FP (k=10)	0.5941	0.0021	0.0648 (0.0015)	-0.0115 (0.0020)	0.8310 (0.0119)	0.0043 (0.0002)	1000
FP (k=10000)	0.5951	0.0021	0.0651 (0.0015)	-0.0104 (0.0021)	0.8278 (0.0119)	0.0043 (0.0002)	999
Model frailty: Normal							
Cox	0.5978	0.0021	0.0614 (0.0014)	-0.0077 (0.0019)	0.8520 (0.0112)	0.0038 (0.0002)	1000
Exp	0.6190	0.0035	0.0636 (0.0014)	0.0134 (0.0020)	0.9139 (0.0089)	0.0042 (0.0002)	999
Weibull	0.6080	0.0035	0.0627 (0.0014)	0.0024 (0.0020)	0.9349 (0.0078)	0.0039 (0.0002)	998
Gompertz	0.6201	0.0035	0.0638 (0.0022)	0.0145 (0.0031)	0.9176 (0.0133)	0.0043 (0.0003)	425
RP (3)	0.6064	0.0035	0.0614 (0.0014)	0.0008 (0.0019)	0.9419 (0.0074)	0.0038 (0.0002)	999
RP (5)	0.6050	0.0034	0.0612 (0.0014)	-0.0006 (0.0019)	0.9419 (0.0074)	0.0037 (0.0002)	999
RP (9)	0.6046	0.0034	0.0611 (0.0014)	-0.0010 (0.0019)	0.9419 (0.0074)	0.0037 (0.0002)	999
RP (P)	0.6053	0.0034	0.0613 (0.0014)	-0.0003 (0.0019)	0.9419 (0.0074)	0.0038 (0.0002)	999
FP (W)	0.4680	0.0014	0.1292 (0.0040)	-0.1376 (0.0057)	0.3748 (0.0213)	0.0356 (0.0018)	515
FP (k=10)	0.5748	0.0020	0.0776 (0.0018)	-0.0308 (0.0026)	0.7455 (0.0146)	0.0070 (0.0004)	892
FP (k=10000)	0.5939	0.0019	0.0603 (0.0014)	-0.0117 (0.0020)	0.8308 (0.0123)	0.0038 (0.0002)	928

Table 231: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5074	0.0017	0.0630 (0.0014)	0.0037 (0.0020)	0.8098 (0.0125)	0.0040 (0.0002)	983
Exp	0.5087	0.0042	0.0630 (0.0014)	0.0050 (0.0020)	0.9420 (0.0074)	0.0040 (0.0002)	1000
Weibull	0.5088	0.0042	0.0629 (0.0014)	0.0051 (0.0020)	0.9400 (0.0075)	0.0040 (0.0002)	1000
Gompertz	0.5082	0.0042	0.0636 (0.0020)	0.0045 (0.0028)	0.9353 (0.0109)	0.0041 (0.0003)	510
RP (3)	0.5089	0.0042	0.0628 (0.0014)	0.0052 (0.0020)	0.9409 (0.0076)	0.0040 (0.0002)	964
RP (5)	0.5129	0.0041	0.0638 (0.0015)	0.0092 (0.0022)	0.9350 (0.0084)	0.0042 (0.0002)	862
RP (9)	0.5164	0.0042	0.0622 (0.0015)	0.0127 (0.0022)	0.9356 (0.0086)	0.0040 (0.0002)	807
RP (P)	0.5090	0.0042	0.0630 (0.0014)	0.0053 (0.0020)	0.9400 (0.0076)	0.0040 (0.0002)	984
FP (W)	0.5088	0.0018	0.0629 (0.0014)	0.0051 (0.0020)	0.8140 (0.0123)	0.0040 (0.0002)	1000
FP (k=10)	0.5027	0.0017	0.0647 (0.0014)	-0.0010 (0.0020)	0.7950 (0.0128)	0.0042 (0.0002)	1000
FP (k=10000)	0.5064	0.0017	0.0636 (0.0014)	0.0027 (0.0020)	0.8040 (0.0126)	0.0040 (0.0002)	1000
Model frailty: Normal							
Cox	0.4707	0.0015	0.0716 (0.0016)	-0.0330 (0.0023)	0.6350 (0.0152)	0.0062 (0.0002)	1000
Exp	0.4748	0.0038	0.0743 (0.0017)	-0.0289 (0.0024)	0.8537 (0.0112)	0.0064 (0.0003)	998
Weibull	0.4748	0.0038	0.0742 (0.0017)	-0.0289 (0.0023)	0.8540 (0.0112)	0.0063 (0.0003)	1000
Gompertz	0.4759	0.0038	0.0757 (0.0037)	-0.0278 (0.0053)	0.8551 (0.0245)	0.0065 (0.0006)	207
RP (3)	0.4727	0.0039	0.0760 (0.0017)	-0.0310 (0.0024)	0.8529 (0.0112)	0.0067 (0.0003)	999
RP (5)	0.4727	0.0039	0.0759 (0.0017)	-0.0310 (0.0024)	0.8520 (0.0112)	0.0067 (0.0003)	1000
RP (9)	0.4727	0.0039	0.0759 (0.0017)	-0.0310 (0.0024)	0.8510 (0.0113)	0.0067 (0.0003)	1000
RP (P)	0.4733	0.0039	0.0769 (0.0017)	-0.0304 (0.0024)	0.8520 (0.0112)	0.0068 (0.0003)	1000
FP (W)	0.3766	0.0011	0.0946 (0.0029)	-0.1271 (0.0041)	0.2788 (0.0193)	0.0251 (0.0011)	538
FP (k=10)	0.4622	0.0015	0.0755 (0.0018)	-0.0415 (0.0025)	0.6071 (0.0165)	0.0074 (0.0003)	878
FP (k=10000)	0.4737	0.0014	0.0688 (0.0016)	-0.0300 (0.0023)	0.6595 (0.0156)	0.0056 (0.0003)	928

Table 232: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5148	0.0019	0.0728 (0.0016)	0.0006 (0.0023)	0.7497 (0.0138)	0.0053 (0.0002)	987
Exp	0.5368	0.0051	0.0754 (0.0017)	0.0226 (0.0024)	0.9130 (0.0089)	0.0062 (0.0003)	1000
Weibull	0.5181	0.0050	0.0729 (0.0016)	0.0039 (0.0023)	0.9310 (0.0080)	0.0053 (0.0002)	1000
Gompertz	0.5340	0.0050	0.0769 (0.0026)	0.0197 (0.0036)	0.9187 (0.0128)	0.0063 (0.0004)	455
RP (3)	0.5175	0.0050	0.0732 (0.0017)	0.0033 (0.0023)	0.9297 (0.0082)	0.0054 (0.0002)	981
RP (5)	0.5197	0.0050	0.0728 (0.0017)	0.0055 (0.0024)	0.9316 (0.0083)	0.0053 (0.0002)	921
RP (9)	0.5237	0.0049	0.0730 (0.0017)	0.0095 (0.0025)	0.9305 (0.0086)	0.0054 (0.0002)	878
RP (P)	0.5187	0.0050	0.0726 (0.0016)	0.0044 (0.0023)	0.9310 (0.0081)	0.0053 (0.0002)	986
FP (W)	0.5181	0.0020	0.0729 (0.0016)	0.0039 (0.0023)	0.7510 (0.0137)	0.0053 (0.0002)	1000
FP (k=10)	0.4681	0.0016	0.0809 (0.0018)	-0.0461 (0.0026)	0.5750 (0.0156)	0.0087 (0.0003)	1000
FP (k=10000)	0.4309	0.0013	0.1177 (0.0026)	-0.0834 (0.0037)	0.4567 (0.0158)	0.0208 (0.0009)	994
Model frailty: Normal							
Cox	0.4729	0.0016	0.0812 (0.0018)	-0.0413 (0.0026)	0.5770 (0.0156)	0.0083 (0.0003)	1000
Exp	0.4977	0.0044	0.0869 (0.0019)	-0.0165 (0.0027)	0.8338 (0.0118)	0.0078 (0.0003)	999
Weibull	0.4770	0.0043	0.0839 (0.0019)	-0.0372 (0.0027)	0.8238 (0.0121)	0.0084 (0.0003)	999
Gompertz	0.4904	0.0044	0.0864 (0.0029)	-0.0238 (0.0041)	0.8299 (0.0180)	0.0080 (0.0005)	435
RP (3)	0.4751	0.0044	0.0847 (0.0019)	-0.0392 (0.0027)	0.8220 (0.0121)	0.0087 (0.0003)	1000
RP (5)	0.4751	0.0044	0.0847 (0.0019)	-0.0391 (0.0027)	0.8210 (0.0121)	0.0087 (0.0003)	1000
RP (9)	0.4751	0.0044	0.0847 (0.0019)	-0.0391 (0.0027)	0.8210 (0.0121)	0.0087 (0.0003)	1000
RP (P)	0.4753	0.0044	0.0847 (0.0019)	-0.0390 (0.0027)	0.8220 (0.0121)	0.0087 (0.0003)	1000
FP (W)	0.3977	0.0013	0.1019 (0.0029)	-0.1165 (0.0041)	0.3166 (0.0187)	0.0239 (0.0010)	616
FP (k=10)	0.4666	0.0017	0.0820 (0.0019)	-0.0476 (0.0027)	0.5829 (0.0164)	0.0090 (0.0004)	899
FP (k=10000)	0.4821	0.0016	0.0757 (0.0018)	-0.0321 (0.0025)	0.6377 (0.0158)	0.0067 (0.0003)	922

Table 233: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4903	0.0015	0.0580 (0.0013)	0.0066 (0.0019)	0.8108 (0.0125)	0.0034 (0.0002)	978
Exp	0.4676	0.0032	0.0547 (0.0012)	-0.0161 (0.0017)	0.9480 (0.0070)	0.0033 (0.0001)	1000
Weibull	0.4825	0.0032	0.0562 (0.0013)	-0.0012 (0.0018)	0.9420 (0.0074)	0.0032 (0.0001)	1000
Gompertz	0.4723	0.0032	0.0604 (0.0023)	-0.0115 (0.0033)	0.9091 (0.0156)	0.0038 (0.0003)	341
RP (3)	0.4895	0.0032	0.0580 (0.0013)	0.0058 (0.0019)	0.9321 (0.0081)	0.0034 (0.0002)	972
RP (5)	0.4930	0.0032	0.0577 (0.0013)	0.0093 (0.0019)	0.9312 (0.0083)	0.0034 (0.0002)	930
RP (9)	0.4961	0.0032	0.0588 (0.0015)	0.0124 (0.0021)	0.9231 (0.0096)	0.0036 (0.0002)	767
RP (P)	0.4905	0.0032	0.0581 (0.0013)	0.0068 (0.0019)	0.9318 (0.0082)	0.0034 (0.0002)	938
FP (W)	0.4825	0.0015	0.0562 (0.0013)	-0.0012 (0.0018)	0.8330 (0.0118)	0.0032 (0.0001)	1000
FP (k=10)	0.4888	0.0015	0.0589 (0.0013)	0.0051 (0.0019)	0.8060 (0.0125)	0.0035 (0.0002)	1000
FP (k=10000)	0.4886	0.0014	0.0582 (0.0013)	0.0049 (0.0018)	0.8110 (0.0124)	0.0034 (0.0002)	1000
Model frailty: Normal							
Cox	0.4665	0.0013	0.0675 (0.0015)	-0.0172 (0.0021)	0.6670 (0.0149)	0.0049 (0.0002)	1000
Exp	0.4454	0.0031	0.0672 (0.0015)	-0.0383 (0.0021)	0.8328 (0.0118)	0.0060 (0.0003)	999
Weibull	0.4649	0.0031	0.0681 (0.0015)	-0.0188 (0.0022)	0.8739 (0.0105)	0.0050 (0.0002)	999
Gompertz	0.4546	0.0031	0.0714 (0.0020)	-0.0291 (0.0028)	0.8310 (0.0148)	0.0059 (0.0003)	639
RP (3)	0.4709	0.0031	0.0702 (0.0016)	-0.0128 (0.0022)	0.8785 (0.0104)	0.0051 (0.0002)	988
RP (5)	0.4702	0.0032	0.0706 (0.0016)	-0.0135 (0.0022)	0.8750 (0.0105)	0.0052 (0.0002)	1000
RP (9)	0.4703	0.0032	0.0707 (0.0016)	-0.0135 (0.0022)	0.8750 (0.0105)	0.0052 (0.0002)	1000
RP (P)	0.4706	0.0031	0.0734 (0.0016)	-0.0132 (0.0023)	0.8769 (0.0104)	0.0056 (0.0005)	999
FP (W)	0.3747	0.0010	0.0932 (0.0032)	-0.1090 (0.0045)	0.3009 (0.0221)	0.0205 (0.0010)	432
FP (k=10)	0.4563	0.0013	0.0702 (0.0017)	-0.0275 (0.0024)	0.6379 (0.0164)	0.0057 (0.0003)	856
FP (k=10000)	0.4608	0.0011	0.0655 (0.0016)	-0.0229 (0.0022)	0.6513 (0.0162)	0.0048 (0.0002)	869

Table 234: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4641	0.0014	0.0553 (0.0012)	0.0049 (0.0018)	0.8086 (0.0126)	0.0031 (0.0001)	982
Exp	0.4301	0.0031	0.0553 (0.0012)	-0.0291 (0.0017)	0.9110 (0.0090)	0.0039 (0.0002)	1000
Weibull	0.4706	0.0030	0.0570 (0.0013)	0.0114 (0.0018)	0.9200 (0.0086)	0.0034 (0.0002)	1000
Gompertz	0.4516	0.0031	0.0686 (0.0019)	-0.0076 (0.0027)	0.8726 (0.0133)	0.0048 (0.0002)	628
RP (3)	0.4631	0.0029	0.0564 (0.0014)	0.0039 (0.0020)	0.9214 (0.0095)	0.0032 (0.0002)	802
RP (5)	0.4677	0.0029	0.0542 (0.0013)	0.0085 (0.0018)	0.9320 (0.0083)	0.0030 (0.0001)	912
RP (9)	0.4685	0.0029	0.0553 (0.0014)	0.0093 (0.0020)	0.9233 (0.0095)	0.0031 (0.0002)	782
RP (P)	0.4643	0.0030	0.0548 (0.0013)	0.0051 (0.0018)	0.9302 (0.0082)	0.0030 (0.0001)	960
FP (W)	0.4705	0.0013	0.0569 (0.0013)	0.0113 (0.0018)	0.7908 (0.0129)	0.0034 (0.0002)	999
FP (k=10)	0.4465	0.0012	0.0592 (0.0013)	-0.0127 (0.0019)	0.7310 (0.0140)	0.0037 (0.0002)	1000
FP (k=10000)	0.0591	0.0000	0.0146 (0.0003)	-0.4001 (0.0005)	0.0000 (0.0000)	0.1603 (0.0004)	1000
Model frailty: Normal							
Cox	0.4420	0.0012	0.0637 (0.0014)	-0.0173 (0.0020)	0.6657 (0.0149)	0.0044 (0.0002)	999
Exp	0.4029	0.0028	0.0664 (0.0015)	-0.0563 (0.0021)	0.7350 (0.0140)	0.0076 (0.0003)	1000
Weibull	0.4515	0.0028	0.0678 (0.0015)	-0.0077 (0.0021)	0.8620 (0.0109)	0.0046 (0.0002)	1000
Gompertz	0.4241	0.0028	0.0808 (0.0036)	-0.0351 (0.0050)	0.7558 (0.0267)	0.0077 (0.0006)	258
RP (3)	0.4453	0.0029	0.0666 (0.0015)	-0.0139 (0.0021)	0.8780 (0.0103)	0.0046 (0.0002)	1000
RP (5)	0.4449	0.0029	0.0671 (0.0015)	-0.0143 (0.0021)	0.8770 (0.0104)	0.0047 (0.0002)	1000
RP (9)	0.4450	0.0029	0.0672 (0.0015)	-0.0142 (0.0021)	0.8779 (0.0104)	0.0047 (0.0002)	999
RP (P)	0.4450	0.0029	0.0672 (0.0015)	-0.0142 (0.0021)	0.8780 (0.0103)	0.0047 (0.0002)	1000
FP (W)	0.3678	0.0008	0.0791 (0.0030)	-0.0914 (0.0042)	0.3059 (0.0245)	0.0146 (0.0008)	353
FP (k=10)	0.4296	0.0012	0.0665 (0.0016)	-0.0296 (0.0023)	0.6243 (0.0167)	0.0053 (0.0003)	841
FP (k=10000)	0.4098	0.0010	0.0675 (0.0016)	-0.0495 (0.0023)	0.5006 (0.0172)	0.0070 (0.0003)	847

Table 235: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5128	0.0019	0.0701 (0.0016)	0.0045 (0.0022)	0.7675 (0.0135)	0.0049 (0.0002)	985
Exp	0.5246	0.0046	0.0718 (0.0016)	0.0162 (0.0023)	0.9280 (0.0082)	0.0054 (0.0003)	1000
Weibull	0.5161	0.0045	0.0710 (0.0016)	0.0078 (0.0022)	0.9300 (0.0081)	0.0051 (0.0002)	1000
Gompertz	0.5278	0.0046	0.0720 (0.0033)	0.0194 (0.0047)	0.9319 (0.0164)	0.0055 (0.0005)	235
RP (3)	0.5160	0.0045	0.0707 (0.0016)	0.0077 (0.0023)	0.9303 (0.0082)	0.0051 (0.0002)	961
RP (5)	0.5167	0.0045	0.0701 (0.0016)	0.0083 (0.0023)	0.9336 (0.0081)	0.0050 (0.0002)	934
RP (9)	0.5215	0.0044	0.0697 (0.0017)	0.0132 (0.0024)	0.9319 (0.0086)	0.0050 (0.0002)	866
RP (P)	0.5156	0.0045	0.0703 (0.0016)	0.0072 (0.0022)	0.9330 (0.0080)	0.0050 (0.0002)	985
FP (W)	0.5161	0.0019	0.0710 (0.0016)	0.0078 (0.0022)	0.7620 (0.0135)	0.0051 (0.0002)	1000
FP (k=10)	0.4983	0.0017	0.0754 (0.0017)	-0.0100 (0.0024)	0.7040 (0.0144)	0.0058 (0.0003)	1000
FP (k=10000)	0.5075	0.0018	0.0715 (0.0016)	-0.0008 (0.0023)	0.7620 (0.0135)	0.0051 (0.0002)	1000
Model frailty: Normal							
Cox	0.4757	0.0016	0.0789 (0.0018)	-0.0326 (0.0025)	0.6036 (0.0155)	0.0073 (0.0003)	999
Exp	0.4883	0.0040	0.0837 (0.0019)	-0.0201 (0.0026)	0.8388 (0.0116)	0.0074 (0.0003)	999
Weibull	0.4785	0.0040	0.0827 (0.0019)	-0.0299 (0.0026)	0.8318 (0.0118)	0.0077 (0.0003)	999
Gompertz	0.4869	0.0041	0.0820 (0.0037)	-0.0215 (0.0053)	0.8306 (0.0241)	0.0072 (0.0006)	242
RP (3)	0.4768	0.0041	0.0838 (0.0019)	-0.0315 (0.0026)	0.8348 (0.0117)	0.0080 (0.0003)	999
RP (5)	0.4773	0.0041	0.0835 (0.0019)	-0.0311 (0.0026)	0.8340 (0.0118)	0.0079 (0.0003)	1000
RP (9)	0.4774	0.0041	0.0833 (0.0019)	-0.0309 (0.0026)	0.8370 (0.0117)	0.0079 (0.0003)	1000
RP (P)	0.4772	0.0041	0.0836 (0.0019)	-0.0312 (0.0026)	0.8350 (0.0117)	0.0079 (0.0003)	1000
FP (W)	0.3886	0.0012	0.1035 (0.0031)	-0.1198 (0.0043)	0.3251 (0.0196)	0.0250 (0.0011)	569
FP (k=10)	0.4684	0.0016	0.0814 (0.0019)	-0.0400 (0.0027)	0.5856 (0.0165)	0.0082 (0.0004)	888
FP (k=10000)	0.4796	0.0016	0.0744 (0.0017)	-0.0287 (0.0024)	0.6375 (0.0157)	0.0064 (0.0003)	938

Table 236: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5260	0.0017	0.0739 (0.0017)	-0.0161 (0.0024)	0.7353 (0.0142)	0.0057 (0.0003)	967
Exp	0.5237	0.0033	0.0749 (0.0017)	-0.0184 (0.0024)	0.8580 (0.0110)	0.0059 (0.0003)	1000
Weibull	0.5237	0.0033	0.0750 (0.0017)	-0.0183 (0.0024)	0.8560 (0.0111)	0.0060 (0.0003)	1000
Gompertz	0.5305	0.0033	0.0742 (0.0024)	-0.0116 (0.0034)	0.8721 (0.0154)	0.0056 (0.0004)	469
RP (3)	0.5234	0.0033	0.0748 (0.0017)	-0.0186 (0.0024)	0.8561 (0.0111)	0.0059 (0.0003)	994
RP (5)	0.5242	0.0033	0.0746 (0.0017)	-0.0179 (0.0024)	0.8566 (0.0111)	0.0059 (0.0003)	990
RP (9)	0.5241	0.0033	0.0751 (0.0017)	-0.0180 (0.0024)	0.8544 (0.0113)	0.0060 (0.0003)	982
RP (P)	0.5237	0.0033	0.0748 (0.0017)	-0.0184 (0.0024)	0.8574 (0.0111)	0.0059 (0.0003)	996
FP (W)	0.5237	0.0017	0.0750 (0.0017)	-0.0183 (0.0024)	0.7200 (0.0142)	0.0060 (0.0003)	1000
FP (k=10)	0.5264	0.0017	0.0734 (0.0016)	-0.0157 (0.0023)	0.7330 (0.0140)	0.0056 (0.0003)	1000
FP (k=10000)	0.5304	0.0017	0.0691 (0.0016)	-0.0117 (0.0022)	0.7510 (0.0138)	0.0049 (0.0002)	984
Model frailty: Normal							
Cox	0.5422	0.0017	0.0612 (0.0014)	0.0002 (0.0019)	0.8375 (0.0117)	0.0037 (0.0002)	997
Exp	0.5482	0.0034	0.0618 (0.0014)	0.0061 (0.0020)	0.9369 (0.0077)	0.0039 (0.0002)	998
Weibull	0.5484	0.0034	0.0618 (0.0014)	0.0064 (0.0020)	0.9330 (0.0079)	0.0039 (0.0002)	1000
Gompertz	0.5517	0.0034	0.0636 (0.0021)	0.0097 (0.0030)	0.9289 (0.0121)	0.0041 (0.0003)	450
RP (3)	0.5486	0.0034	0.0614 (0.0014)	0.0065 (0.0019)	0.9370 (0.0077)	0.0038 (0.0002)	1000
RP (5)	0.5485	0.0034	0.0614 (0.0014)	0.0064 (0.0019)	0.9360 (0.0077)	0.0038 (0.0002)	1000
RP (9)	0.5483	0.0034	0.0616 (0.0014)	0.0062 (0.0019)	0.9360 (0.0077)	0.0038 (0.0002)	1000
RP (P)	0.5486	0.0034	0.0615 (0.0014)	0.0065 (0.0019)	0.9340 (0.0079)	0.0038 (0.0002)	1000
FP (W)	0.4306	0.0012	0.1074 (0.0036)	-0.1115 (0.0051)	0.3649 (0.0228)	0.0239 (0.0013)	444
FP (k=10)	0.5271	0.0017	0.0739 (0.0018)	-0.0150 (0.0026)	0.7427 (0.0152)	0.0057 (0.0004)	824
FP (k=10000)	0.5438	0.0016	0.0614 (0.0015)	0.0017 (0.0021)	0.8070 (0.0133)	0.0038 (0.0002)	886

Table 237: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5596	0.0020	0.0749 (0.0017)	-0.0052 (0.0024)	0.7536 (0.0138)	0.0056 (0.0002)	974
Exp	0.5678	0.0040	0.0866 (0.0019)	0.0029 (0.0027)	0.8470 (0.0114)	0.0075 (0.0003)	1000
Weibull	0.5588	0.0041	0.0763 (0.0017)	-0.0060 (0.0024)	0.8870 (0.0100)	0.0058 (0.0003)	1000
Gompertz	0.5722	0.0041	0.0812 (0.0028)	0.0073 (0.0040)	0.8678 (0.0166)	0.0066 (0.0004)	416
RP (3)	0.5587	0.0041	0.0762 (0.0017)	-0.0061 (0.0024)	0.8879 (0.0100)	0.0058 (0.0003)	990
RP (5)	0.5595	0.0041	0.0755 (0.0017)	-0.0053 (0.0024)	0.8898 (0.0100)	0.0057 (0.0002)	989
RP (9)	0.5589	0.0041	0.0760 (0.0017)	-0.0060 (0.0024)	0.8861 (0.0101)	0.0058 (0.0003)	992
RP (P)	0.5586	0.0041	0.0760 (0.0017)	-0.0063 (0.0024)	0.8874 (0.0100)	0.0058 (0.0003)	995
FP (W)	0.5588	0.0020	0.0763 (0.0017)	-0.0060 (0.0024)	0.7490 (0.0137)	0.0058 (0.0003)	1000
FP (k=10)	0.5261	0.0017	0.0871 (0.0019)	-0.0387 (0.0028)	0.6493 (0.0151)	0.0091 (0.0005)	998
FP (k=10000)	0.5463	0.0017	0.0816 (0.0018)	-0.0185 (0.0026)	0.7105 (0.0145)	0.0070 (0.0005)	974
Model frailty: Normal							
Cox	0.5645	0.0020	0.0664 (0.0015)	-0.0003 (0.0021)	0.7908 (0.0129)	0.0044 (0.0002)	999
Exp	0.5971	0.0041	0.0690 (0.0015)	0.0323 (0.0022)	0.8917 (0.0098)	0.0058 (0.0002)	997
Weibull	0.5725	0.0040	0.0665 (0.0015)	0.0076 (0.0021)	0.9360 (0.0077)	0.0045 (0.0002)	1000
Gompertz	0.5954	0.0041	0.0686 (0.0031)	0.0306 (0.0044)	0.8838 (0.0206)	0.0056 (0.0005)	241
RP (3)	0.5720	0.0040	0.0662 (0.0015)	0.0072 (0.0021)	0.9369 (0.0077)	0.0044 (0.0002)	998
RP (5)	0.5718	0.0040	0.0662 (0.0015)	0.0070 (0.0021)	0.9359 (0.0078)	0.0044 (0.0002)	998
RP (9)	0.5718	0.0040	0.0663 (0.0015)	0.0070 (0.0021)	0.9359 (0.0078)	0.0044 (0.0002)	998
RP (P)	0.5721	0.0040	0.0661 (0.0015)	0.0073 (0.0021)	0.9368 (0.0077)	0.0044 (0.0002)	997
FP (W)	0.4377	0.0013	0.1202 (0.0037)	-0.1271 (0.0052)	0.3539 (0.0207)	0.0306 (0.0015)	534
FP (k=10)	0.5455	0.0019	0.0783 (0.0019)	-0.0194 (0.0027)	0.7459 (0.0149)	0.0065 (0.0004)	858
FP (k=10000)	0.5691	0.0018	0.0633 (0.0015)	0.0043 (0.0021)	0.7908 (0.0136)	0.0040 (0.0002)	889

Table 238: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4788	0.0013	0.0635 (0.0015)	-0.0251 (0.0021)	0.6844 (0.0150)	0.0047 (0.0002)	957
Exp	0.4600	0.0026	0.0587 (0.0013)	-0.0438 (0.0019)	0.7990 (0.0127)	0.0054 (0.0002)	1000
Weibull	0.4650	0.0025	0.0645 (0.0014)	-0.0388 (0.0020)	0.7830 (0.0130)	0.0057 (0.0002)	1000
Gompertz	0.4764	0.0026	0.0606 (0.0018)	-0.0274 (0.0025)	0.8417 (0.0151)	0.0044 (0.0002)	581
RP (3)	0.4741	0.0024	0.0643 (0.0014)	-0.0298 (0.0020)	0.8056 (0.0125)	0.0050 (0.0002)	998
RP (5)	0.4754	0.0024	0.0642 (0.0014)	-0.0285 (0.0020)	0.8150 (0.0123)	0.0049 (0.0002)	1000
RP (9)	0.4757	0.0025	0.0646 (0.0015)	-0.0282 (0.0021)	0.8144 (0.0124)	0.0050 (0.0002)	986
RP (P)	0.4741	0.0024	0.0641 (0.0014)	-0.0297 (0.0020)	0.8116 (0.0124)	0.0050 (0.0002)	998
FP (W)	0.4650	0.0013	0.0645 (0.0014)	-0.0388 (0.0020)	0.6450 (0.0151)	0.0057 (0.0002)	1000
FP (k=10)	0.4809	0.0013	0.0629 (0.0014)	-0.0229 (0.0020)	0.6940 (0.0146)	0.0045 (0.0002)	1000
FP (k=10000)	0.4879	0.0013	0.0570 (0.0013)	-0.0159 (0.0019)	0.7468 (0.0142)	0.0035 (0.0001)	932
Model frailty: Normal							
Cox	0.5017	0.0014	0.0536 (0.0012)	-0.0021 (0.0017)	0.8308 (0.0119)	0.0029 (0.0001)	999
Exp	0.4844	0.0029	0.0489 (0.0011)	-0.0195 (0.0015)	0.9510 (0.0068)	0.0028 (0.0001)	1000
Weibull	0.4995	0.0029	0.0515 (0.0012)	-0.0043 (0.0016)	0.9550 (0.0066)	0.0027 (0.0001)	1000
Gompertz	0.4942	0.0029	0.0537 (0.0016)	-0.0096 (0.0023)	0.9385 (0.0101)	0.0030 (0.0002)	569
RP (3)	0.5063	0.0028	0.0534 (0.0012)	0.0024 (0.0017)	0.9460 (0.0071)	0.0029 (0.0001)	1000
RP (5)	0.5073	0.0028	0.0534 (0.0012)	0.0035 (0.0017)	0.9450 (0.0072)	0.0029 (0.0001)	1000
RP (9)	0.5077	0.0028	0.0534 (0.0012)	0.0039 (0.0017)	0.9440 (0.0073)	0.0029 (0.0001)	1000
RP (P)	0.5064	0.0028	0.0532 (0.0012)	0.0026 (0.0017)	0.9480 (0.0070)	0.0028 (0.0001)	1000
FP (W)	0.4098	0.0011	0.0921 (0.0036)	-0.0941 (0.0050)	0.3934 (0.0268)	0.0173 (0.0011)	333
FP (k=10)	0.4993	0.0014	0.0593 (0.0015)	-0.0045 (0.0021)	0.7901 (0.0143)	0.0035 (0.0002)	810
FP (k=10000)	0.5094	0.0012	0.0520 (0.0013)	0.0055 (0.0018)	0.8153 (0.0135)	0.0027 (0.0001)	823

Table 239: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.4574	0.0012	0.0630 (0.0014)	-0.0245 (0.0020)	0.6913 (0.0150)	0.0046 (0.0002)	949
Exp	0.4421	0.0025	0.0522 (0.0012)	-0.0398 (0.0017)	0.8450 (0.0114)	0.0043 (0.0002)	1000
Weibull	0.4658	0.0021	0.0628 (0.0014)	-0.0161 (0.0020)	0.8390 (0.0116)	0.0042 (0.0002)	1000
Gompertz	0.4691	0.0024	0.0654 (0.0016)	-0.0128 (0.0023)	0.8444 (0.0127)	0.0044 (0.0002)	816
RP (3)	0.4508	0.0022	0.0622 (0.0014)	-0.0310 (0.0020)	0.8037 (0.0128)	0.0048 (0.0002)	968
RP (5)	0.4545	0.0022	0.0633 (0.0014)	-0.0274 (0.0020)	0.8104 (0.0124)	0.0048 (0.0002)	997
RP (9)	0.4549	0.0022	0.0637 (0.0014)	-0.0270 (0.0020)	0.8075 (0.0126)	0.0048 (0.0002)	982
RP (P)	0.4551	0.0022	0.0634 (0.0014)	-0.0267 (0.0020)	0.8095 (0.0125)	0.0047 (0.0002)	987
FP (W)	0.4658	0.0012	0.0628 (0.0014)	-0.0161 (0.0020)	0.6990 (0.0145)	0.0042 (0.0002)	1000
FP (k=10)	0.4561	0.0012	0.0674 (0.0015)	-0.0257 (0.0021)	0.6670 (0.0149)	0.0052 (0.0003)	1000
FP (k=10000)	0.0404	0.0000	0.0121 (0.0003)	-0.4414 (0.0004)	0.0000 (0.0000)	0.1950 (0.0003)	996
Model frailty: Normal							
Cox	0.4807	0.0013	0.0519 (0.0012)	-0.0011 (0.0016)	0.8258 (0.0120)	0.0027 (0.0001)	999
Exp	0.4465	0.0026	0.0506 (0.0011)	-0.0354 (0.0016)	0.8868 (0.0100)	0.0038 (0.0002)	998
Weibull	0.4927	0.0024	0.0539 (0.0012)	0.0108 (0.0017)	0.9200 (0.0086)	0.0030 (0.0001)	1000
Gompertz	0.4749	0.0025	0.0673 (0.0017)	-0.0070 (0.0025)	0.8640 (0.0125)	0.0046 (0.0002)	750
RP (3)	0.4841	0.0025	0.0515 (0.0012)	0.0023 (0.0016)	0.9390 (0.0076)	0.0027 (0.0001)	1000
RP (5)	0.4855	0.0025	0.0519 (0.0012)	0.0036 (0.0016)	0.9390 (0.0076)	0.0027 (0.0001)	1000
RP (9)	0.4859	0.0026	0.0518 (0.0012)	0.0041 (0.0016)	0.9390 (0.0076)	0.0027 (0.0001)	1000
RP (P)	0.4857	0.0025	0.0518 (0.0012)	0.0039 (0.0016)	0.9400 (0.0075)	0.0027 (0.0001)	1000
FP (W)	0.4199	0.0010	0.0861 (0.0035)	-0.0620 (0.0050)	0.4404 (0.0286)	0.0112 (0.0008)	302
FP (k=10)	0.4742	0.0013	0.0581 (0.0015)	-0.0076 (0.0021)	0.7910 (0.0144)	0.0034 (0.0002)	799
FP (k=10000)	0.4659	0.0010	0.0573 (0.0014)	-0.0159 (0.0020)	0.6910 (0.0164)	0.0035 (0.0002)	793

Table 240: Simulation results for LLE, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5329	0.0018	0.0727 (0.0017)	-0.0167 (0.0023)	0.7333 (0.0142)	0.0056 (0.0003)	971
Exp	0.5396	0.0036	0.0784 (0.0018)	-0.0101 (0.0025)	0.8670 (0.0107)	0.0062 (0.0003)	1000
Weibull	0.5363	0.0036	0.0741 (0.0017)	-0.0134 (0.0023)	0.8800 (0.0103)	0.0057 (0.0003)	1000
Gompertz	0.5441	0.0036	0.0721 (0.0024)	-0.0056 (0.0034)	0.8923 (0.0145)	0.0052 (0.0003)	455
RP (3)	0.5338	0.0036	0.0747 (0.0017)	-0.0158 (0.0024)	0.8800 (0.0104)	0.0058 (0.0003)	975
RP (5)	0.5322	0.0035	0.0742 (0.0017)	-0.0174 (0.0024)	0.8784 (0.0104)	0.0058 (0.0003)	995
RP (9)	0.5314	0.0035	0.0743 (0.0017)	-0.0182 (0.0024)	0.8799 (0.0103)	0.0058 (0.0003)	991
RP (P)	0.5321	0.0035	0.0744 (0.0017)	-0.0176 (0.0024)	0.8764 (0.0104)	0.0058 (0.0003)	995
FP (W)	0.5363	0.0018	0.0741 (0.0017)	-0.0134 (0.0023)	0.7290 (0.0141)	0.0057 (0.0003)	1000
FP (k=10)	0.5351	0.0018	0.0713 (0.0016)	-0.0145 (0.0023)	0.7590 (0.0135)	0.0053 (0.0003)	1000
FP (k=10000)	0.5379	0.0018	0.0694 (0.0016)	-0.0118 (0.0022)	0.7518 (0.0138)	0.0049 (0.0002)	987
Model frailty: Normal							
Cox	0.5479	0.0018	0.0614 (0.0014)	-0.0017 (0.0019)	0.8258 (0.0120)	0.0038 (0.0002)	999
Exp	0.5666	0.0037	0.0629 (0.0014)	0.0170 (0.0020)	0.9339 (0.0079)	0.0042 (0.0002)	999
Weibull	0.5565	0.0037	0.0622 (0.0014)	0.0068 (0.0020)	0.9389 (0.0076)	0.0039 (0.0002)	999
Gompertz	0.5660	0.0037	0.0590 (0.0020)	0.0164 (0.0028)	0.9336 (0.0119)	0.0037 (0.0003)	437
RP (3)	0.5563	0.0037	0.0611 (0.0014)	0.0066 (0.0019)	0.9440 (0.0073)	0.0038 (0.0002)	1000
RP (5)	0.5552	0.0036	0.0610 (0.0014)	0.0056 (0.0019)	0.9399 (0.0075)	0.0038 (0.0002)	999
RP (9)	0.5548	0.0036	0.0610 (0.0014)	0.0052 (0.0019)	0.9419 (0.0074)	0.0037 (0.0002)	999
RP (P)	0.5553	0.0036	0.0612 (0.0014)	0.0057 (0.0019)	0.9399 (0.0075)	0.0038 (0.0002)	998
FP (W)	0.4305	0.0012	0.1173 (0.0039)	-0.1191 (0.0055)	0.3632 (0.0225)	0.0279 (0.0015)	457
FP (k=10)	0.5280	0.0017	0.0730 (0.0018)	-0.0217 (0.0025)	0.7512 (0.0151)	0.0058 (0.0004)	820
FP (k=10000)	0.5515	0.0017	0.0596 (0.0014)	0.0019 (0.0020)	0.8216 (0.0128)	0.0035 (0.0002)	897

Results: frailty variance

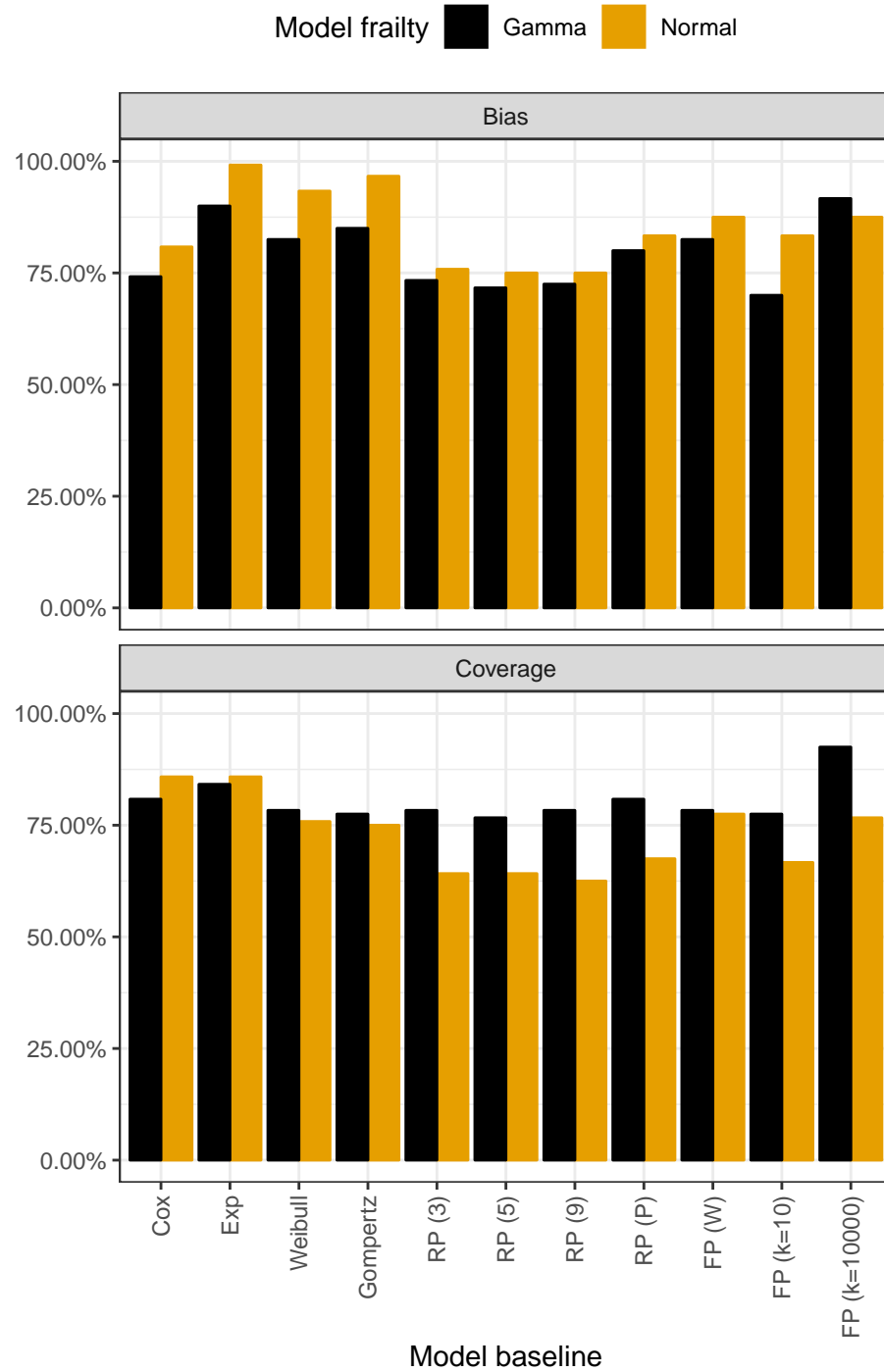


Figure 9: Percentage of simulated scenarios in which bias (top panel) or coverage (lower panel) for the estimated frailty variance effect was statistically different than the target value of 0 (for bias) or 95% (coverage), using Z tests based on Monte Carlo standard errors.

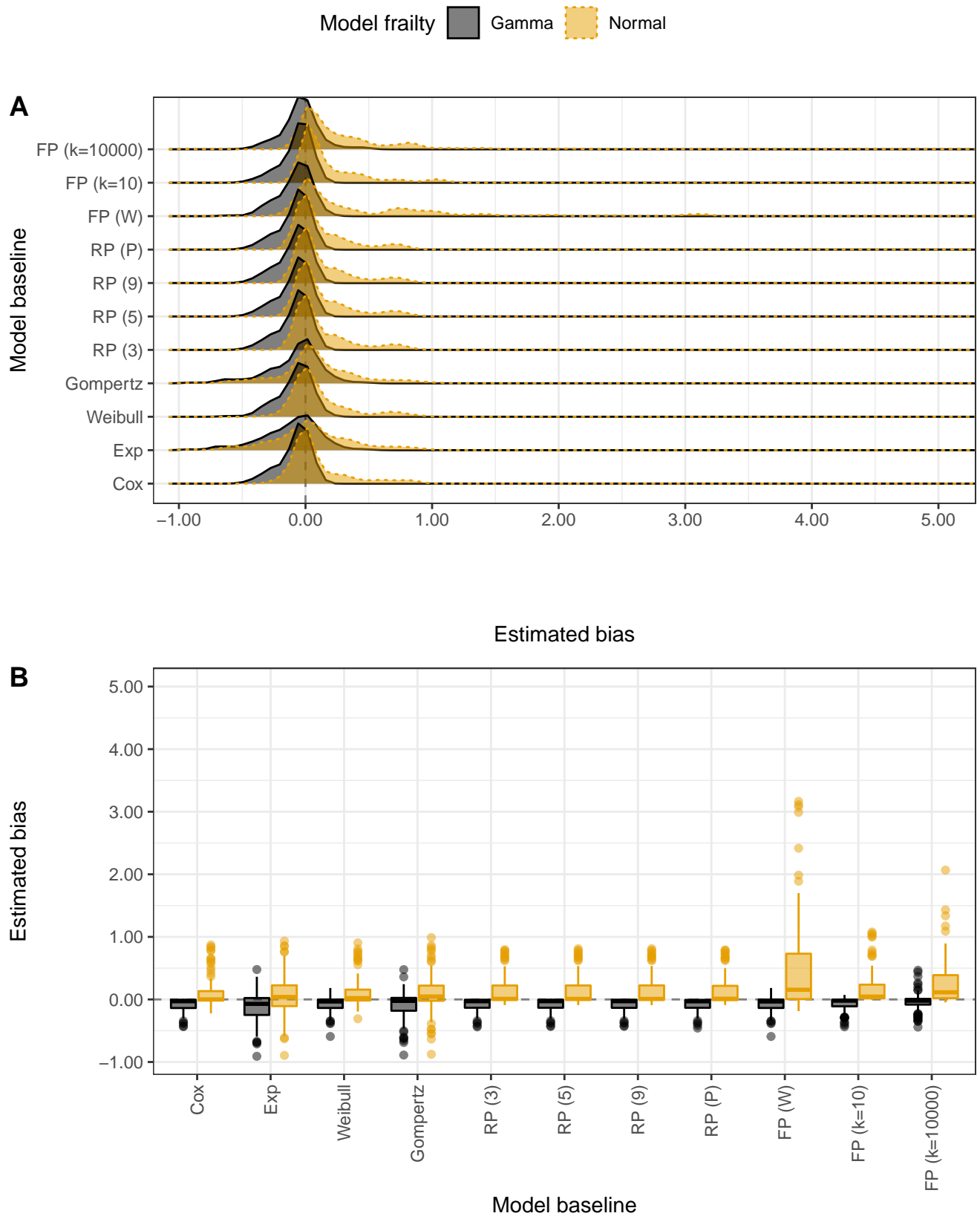


Figure 10: Bias distribution for the estimated frailty variance under each data-generating mechanisms by fitted model using ridgeline plots (panel A) or box plots (panel B). Values of bias above the value of 5 (6 values) were removed for plotting purposes, all from the FP (k=10000), Gamma model.

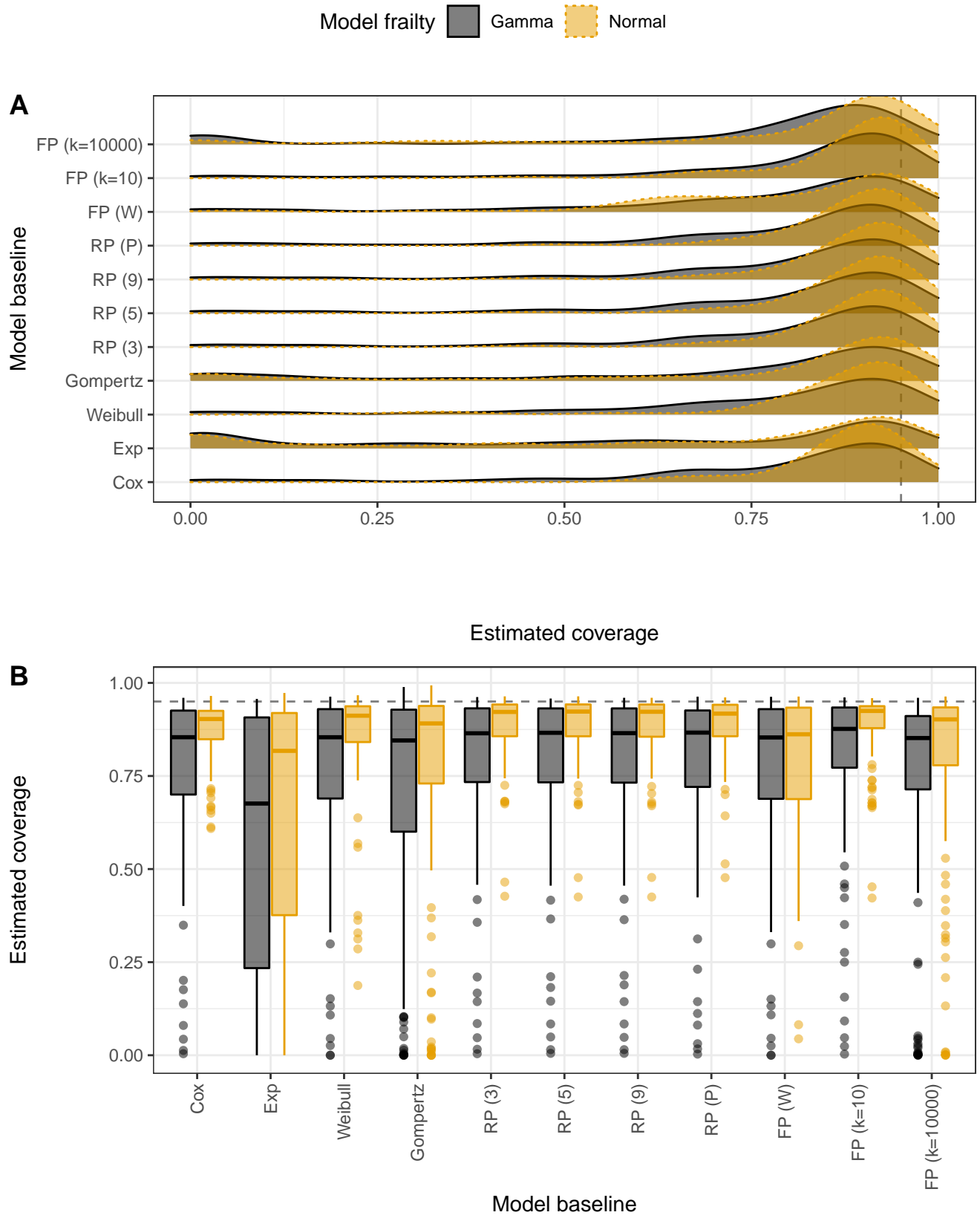


Figure 11: Coverage distribution for the estimated frailty variance under each data-generating mechanisms by fitted model using ridgeline plots (panel A) or box plots (panel B).

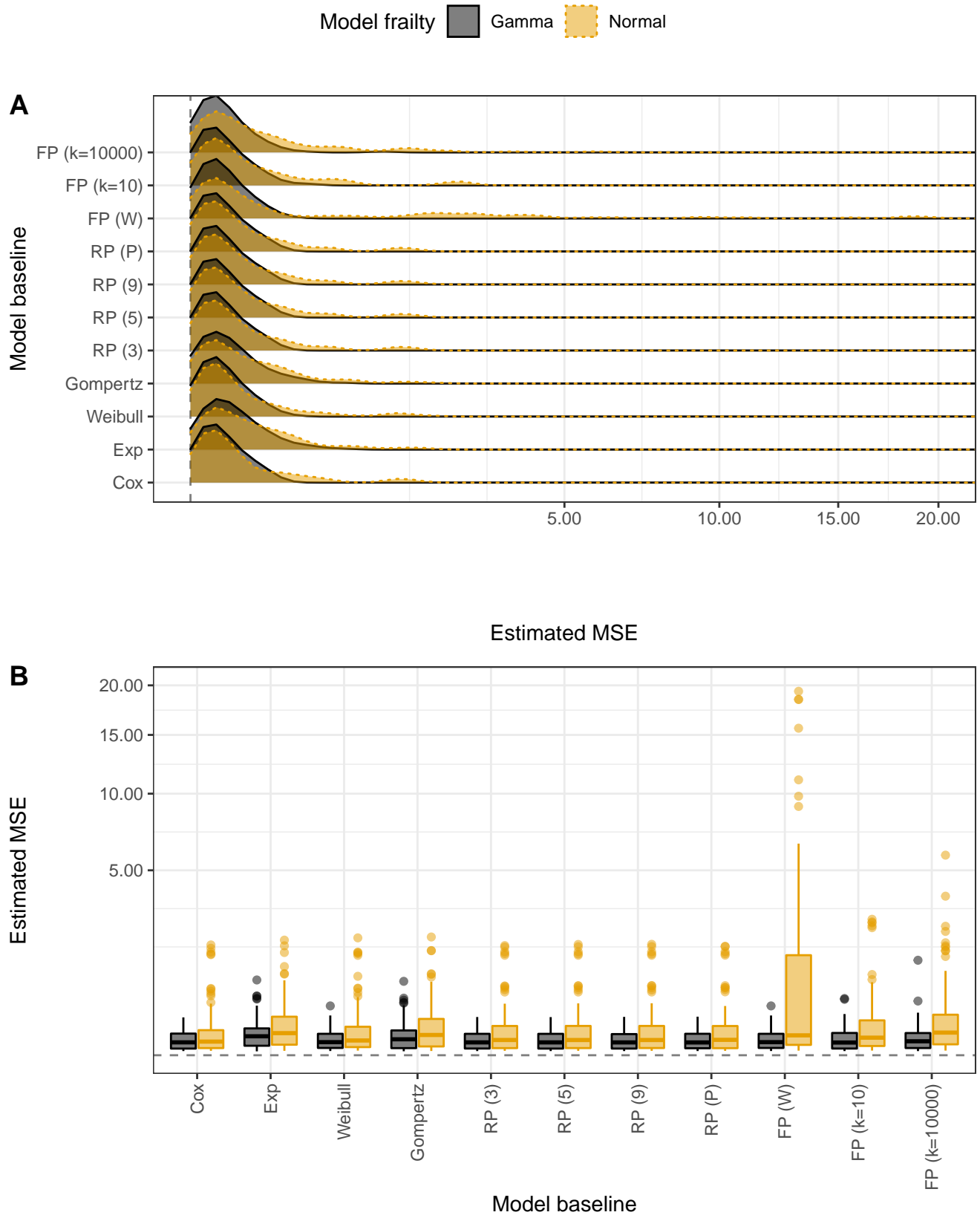


Figure 12: Mean squared error distribution for the estimated frailty variance under each data-generating mechanisms by fitted model using ridgeline plots (panel A) or box plots (panel B). Values of MSE above the value of 20 (6 values) were removed for plotting purposes, all from the FP ($k=10000$), Gamma model.

Table 241: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2479	0.0036	0.0597 (0.0013)	-0.0021 (0.0019)	0.9469 (0.0071)	0.0036 (0.0002)	999
Exp	0.2476	0.0023	0.0471 (0.0011)	-0.0024 (0.0015)	0.9490 (0.0070)	0.0022 (0.0001)	1000
Weibull	0.2507	0.0032	0.0546 (0.0012)	0.0007 (0.0017)	0.9540 (0.0066)	0.0030 (0.0001)	1000
Gompertz	0.2468	0.0036	0.0478 (0.0014)	-0.0032 (0.0019)	0.9821 (0.0053)	0.0023 (0.0001)	615
RP (3)	0.2497	0.0036	0.0596 (0.0013)	-0.0003 (0.0019)	0.9489 (0.0070)	0.0036 (0.0002)	998
RP (5)	0.2500	0.0036	0.0599 (0.0013)	0.0000 (0.0019)	0.9469 (0.0071)	0.0036 (0.0002)	999
RP (9)	0.2501	0.0036	0.0599 (0.0013)	0.0001 (0.0019)	0.9469 (0.0071)	0.0036 (0.0002)	999
RP (P)	0.2499	0.0033	0.0560 (0.0013)	-0.0001 (0.0018)	0.9500 (0.0069)	0.0031 (0.0001)	1000
FP (W)	0.2509	0.0032	0.0547 (0.0012)	0.0009 (0.0017)	0.9545 (0.0066)	0.0030 (0.0001)	990
FP (k=10)	0.2471	0.0036	0.0598 (0.0013)	-0.0029 (0.0019)	0.9470 (0.0071)	0.0036 (0.0002)	1000
FP (k=10000)	0.2483	0.0023	0.0597 (0.0013)	-0.0017 (0.0019)	0.8860 (0.0101)	0.0036 (0.0002)	1000
Model frailty: Normal							
Cox	0.2477	0.0039	0.0610 (0.0014)	-0.0023 (0.0019)	0.9500 (0.0069)	0.0037 (0.0002)	1000
Exp	0.2937	0.0032	0.0521 (0.0012)	0.0437 (0.0016)	0.9199 (0.0086)	0.0046 (0.0002)	999
Weibull	0.3136	0.0047	0.0618 (0.0014)	0.0636 (0.0020)	0.9130 (0.0089)	0.0079 (0.0003)	1000
Gompertz	0.2900	0.0049	0.0509 (0.0016)	0.0400 (0.0023)	0.9881 (0.0048)	0.0042 (0.0003)	504
RP (3)	0.2836	0.0058	0.0742 (0.0017)	0.0336 (0.0023)	0.9520 (0.0068)	0.0066 (0.0003)	1000
RP (5)	0.2840	0.0058	0.0744 (0.0017)	0.0340 (0.0024)	0.9540 (0.0066)	0.0067 (0.0003)	1000
RP (9)	0.2844	0.0058	0.0745 (0.0017)	0.0344 (0.0024)	0.9520 (0.0068)	0.0067 (0.0003)	1000
RP (P)	0.2844	0.0053	0.0701 (0.0016)	0.0344 (0.0022)	0.9610 (0.0061)	0.0061 (0.0003)	1000
FP (W)	0.2861	0.0051	0.0689 (0.0016)	0.0361 (0.0022)	0.9585 (0.0063)	0.0061 (0.0003)	989
FP (k=10)	0.2829	0.0057	0.0739 (0.0017)	0.0329 (0.0023)	0.9470 (0.0071)	0.0065 (0.0003)	1000
FP (k=10000)	0.2816	0.0043	0.0735 (0.0016)	0.0316 (0.0023)	0.9020 (0.0094)	0.0064 (0.0003)	1000

Table 242: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2493	0.0044	0.0645 (0.0014)	-0.0007 (0.0020)	0.9420 (0.0074)	0.0042 (0.0002)	1000
Exp	0.4954	0.0046	0.0699 (0.0016)	0.2454 (0.0022)	0.0310 (0.0055)	0.0651 (0.0011)	1000
Weibull	0.2552	0.0041	0.0617 (0.0014)	0.0052 (0.0020)	0.9630 (0.0060)	0.0038 (0.0002)	1000
Gompertz	0.4939	0.0064	0.0667 (0.0023)	0.2439 (0.0032)	0.0705 (0.0122)	0.0639 (0.0016)	440
RP (3)	0.2516	0.0044	0.0645 (0.0014)	0.0016 (0.0020)	0.9448 (0.0072)	0.0042 (0.0002)	996
RP (5)	0.2519	0.0044	0.0645 (0.0014)	0.0019 (0.0020)	0.9477 (0.0071)	0.0042 (0.0002)	995
RP (9)	0.2517	0.0044	0.0647 (0.0015)	0.0017 (0.0021)	0.9477 (0.0071)	0.0042 (0.0002)	994
RP (P)	0.2536	0.0042	0.0631 (0.0014)	0.0036 (0.0020)	0.9530 (0.0067)	0.0040 (0.0002)	1000
FP (W)	0.2552	0.0041	0.0618 (0.0014)	0.0052 (0.0020)	0.9627 (0.0060)	0.0038 (0.0002)	991
FP (k=10)	0.2534	0.0044	0.0649 (0.0015)	0.0034 (0.0021)	0.9500 (0.0069)	0.0042 (0.0002)	1000
FP (k=10000)	0.3041	0.0036	0.0668 (0.0015)	0.0541 (0.0021)	0.8540 (0.0112)	0.0074 (0.0003)	1000
Model frailty: Normal							
Cox	0.2412	0.0043	0.0630 (0.0014)	-0.0088 (0.0020)	0.9390 (0.0076)	0.0040 (0.0002)	1000
Exp	0.6185	0.0071	0.0828 (0.0019)	0.3685 (0.0026)	0.0030 (0.0017)	0.1426 (0.0020)	1000
Weibull	0.3231	0.0056	0.0675 (0.0015)	0.0731 (0.0021)	0.8969 (0.0096)	0.0099 (0.0004)	999
Gompertz	0.6103	0.0101	0.0799 (0.0028)	0.3603 (0.0039)	0.0098 (0.0049)	0.1362 (0.0029)	410
RP (3)	0.2780	0.0065	0.0775 (0.0017)	0.0280 (0.0025)	0.9639 (0.0059)	0.0068 (0.0003)	996
RP (5)	0.2785	0.0065	0.0773 (0.0017)	0.0285 (0.0024)	0.9639 (0.0059)	0.0068 (0.0003)	997
RP (9)	0.2786	0.0065	0.0778 (0.0017)	0.0286 (0.0025)	0.9599 (0.0062)	0.0069 (0.0003)	997
RP (P)	0.2810	0.0061	0.0760 (0.0017)	0.0310 (0.0024)	0.9600 (0.0062)	0.0067 (0.0003)	1000
FP (W)	0.2830	0.0059	0.0744 (0.0017)	0.0330 (0.0024)	0.9546 (0.0066)	0.0066 (0.0003)	992
FP (k=10)	0.2927	0.0067	0.0803 (0.0018)	0.0427 (0.0025)	0.9460 (0.0071)	0.0083 (0.0004)	1000
FP (k=10000)	0.3730	0.0069	0.0907 (0.0020)	0.1230 (0.0029)	0.7100 (0.0143)	0.0233 (0.0008)	1000

Table 243: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2460	0.0029	0.0556 (0.0012)	-0.0040 (0.0018)	0.9400 (0.0075)	0.0031 (0.0001)	1000
Exp	0.0402	0.0010	0.0296 (0.0007)	-0.2098 (0.0009)	0.0000 (0.0000)	0.0449 (0.0004)	982
Weibull	0.1500	0.0019	0.0459 (0.0010)	-0.1000 (0.0015)	0.3800 (0.0153)	0.0121 (0.0003)	1000
Gompertz	0.2488	0.0030	0.0557 (0.0012)	-0.0012 (0.0018)	0.9420 (0.0074)	0.0031 (0.0001)	1000
RP (3)	0.2434	0.0029	0.0554 (0.0012)	-0.0066 (0.0018)	0.9348 (0.0078)	0.0031 (0.0001)	997
RP (5)	0.2474	0.0029	0.0555 (0.0012)	-0.0026 (0.0018)	0.9410 (0.0075)	0.0031 (0.0001)	1000
RP (9)	0.2485	0.0030	0.0557 (0.0012)	-0.0015 (0.0018)	0.9440 (0.0073)	0.0031 (0.0001)	1000
RP (P)	0.2245	0.0026	0.0549 (0.0012)	-0.0255 (0.0017)	0.8820 (0.0102)	0.0037 (0.0002)	1000
FP (W)	0.1500	0.0019	0.0459 (0.0010)	-0.1000 (0.0015)	0.3800 (0.0153)	0.0121 (0.0003)	1000
FP (k=10)	0.2450	0.0029	0.0551 (0.0012)	-0.0050 (0.0017)	0.9370 (0.0077)	0.0031 (0.0001)	1000
FP (k=10000)	0.2318	0.0014	0.0525 (0.0012)	-0.0182 (0.0017)	0.7890 (0.0129)	0.0031 (0.0001)	1000
Model frailty: Normal							
Cox	0.2580	0.0037	0.0622 (0.0014)	0.0080 (0.0020)	0.9550 (0.0066)	0.0039 (0.0002)	1000
Exp	0.0540	0.0012	0.0313 (0.0008)	-0.1960 (0.0011)	0.0000 (0.0000)	0.0394 (0.0004)	862
Weibull	0.1977	0.0032	0.0576 (0.0013)	-0.0523 (0.0018)	0.7968 (0.0127)	0.0060 (0.0002)	999
Gompertz	0.3123	0.0047	0.0650 (0.0015)	0.0623 (0.0021)	0.8989 (0.0095)	0.0081 (0.0003)	999
RP (3)	0.2908	0.0053	0.0747 (0.0017)	0.0408 (0.0024)	0.9379 (0.0076)	0.0072 (0.0003)	998
RP (5)	0.2937	0.0053	0.0748 (0.0017)	0.0437 (0.0024)	0.9380 (0.0076)	0.0075 (0.0004)	1000
RP (9)	0.2947	0.0053	0.0749 (0.0017)	0.0447 (0.0024)	0.9380 (0.0076)	0.0076 (0.0004)	1000
RP (P)	0.2660	0.0047	0.0734 (0.0016)	0.0160 (0.0023)	0.9380 (0.0076)	0.0056 (0.0003)	1000
FP (W)	0.1732	0.0030	0.0570 (0.0013)	-0.0768 (0.0018)	0.6360 (0.0152)	0.0091 (0.0003)	1000
FP (k=10)	0.2926	0.0052	0.0742 (0.0017)	0.0426 (0.0023)	0.9350 (0.0078)	0.0073 (0.0003)	1000
FP (k=10000)	0.2821	0.0030	0.0721 (0.0016)	0.0321 (0.0023)	0.8470 (0.0114)	0.0062 (0.0003)	1000

Table 244: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2430	0.0030	0.0528 (0.0012)	-0.0070 (0.0017)	0.9600 (0.0062)	0.0028 (0.0001)	999
Exp	0.0000	0.0010	0.0000 (0.0000)	-0.2500 (0.0000)	0.0000 (0.0000)	0.0625 (0.0000)	576
Weibull	0.3644	0.0032	0.0542 (0.0012)	0.1144 (0.0017)	0.4600 (0.0158)	0.0160 (0.0004)	1000
Gompertz	0.2773	0.0032	0.0545 (0.0012)	0.0273 (0.0017)	0.9390 (0.0076)	0.0037 (0.0002)	1000
RP (3)	0.2448	0.0030	0.0531 (0.0012)	-0.0052 (0.0017)	0.9620 (0.0060)	0.0028 (0.0001)	1000
RP (5)	0.2453	0.0030	0.0531 (0.0012)	-0.0047 (0.0017)	0.9580 (0.0063)	0.0028 (0.0001)	999
RP (9)	0.2457	0.0030	0.0530 (0.0012)	-0.0043 (0.0017)	0.9600 (0.0062)	0.0028 (0.0001)	1000
RP (P)	0.2511	0.0030	0.0532 (0.0012)	0.0011 (0.0017)	0.9630 (0.0060)	0.0028 (0.0001)	1000
FP (W)	0.3644	0.0032	0.0542 (0.0012)	0.1144 (0.0017)	0.4600 (0.0158)	0.0160 (0.0004)	1000
FP (k=10)	0.2465	0.0031	0.0535 (0.0012)	-0.0035 (0.0017)	0.9610 (0.0061)	0.0029 (0.0001)	1000
FP (k=10000)	0.5144	0.0023	0.0712 (0.0016)	0.2644 (0.0023)	0.0020 (0.0014)	0.0750 (0.0012)	998
Model frailty: Normal							
Cox	0.2513	0.0037	0.0576 (0.0013)	0.0013 (0.0018)	0.9650 (0.0058)	0.0033 (0.0001)	1000
Exp	0.0162	0.0010	0.0122 (0.0009)	-0.2338 (0.0013)	0.0000 (0.0000)	0.0548 (0.0006)	94
Weibull	0.4406	0.0053	0.0625 (0.0014)	0.1906 (0.0020)	0.1874 (0.0124)	0.0402 (0.0008)	998
Gompertz	0.2876	0.0040	0.0499 (0.0011)	0.0376 (0.0016)	0.9710 (0.0053)	0.0039 (0.0002)	999
RP (3)	0.2903	0.0054	0.0703 (0.0016)	0.0403 (0.0022)	0.9449 (0.0072)	0.0066 (0.0003)	999
RP (5)	0.2869	0.0053	0.0696 (0.0016)	0.0369 (0.0022)	0.9520 (0.0068)	0.0062 (0.0003)	1000
RP (9)	0.2872	0.0053	0.0695 (0.0016)	0.0372 (0.0022)	0.9520 (0.0068)	0.0062 (0.0003)	1000
RP (P)	0.2933	0.0053	0.0694 (0.0016)	0.0433 (0.0022)	0.9420 (0.0074)	0.0067 (0.0003)	1000
FP (W)	0.4408	0.0062	0.0731 (0.0016)	0.1908 (0.0023)	0.2941 (0.0145)	0.0417 (0.0010)	986
FP (k=10)	0.2979	0.0054	0.0695 (0.0016)	0.0479 (0.0022)	0.9370 (0.0077)	0.0071 (0.0003)	1000
FP (k=10000)	0.7018	0.0072	0.1118 (0.0025)	0.4518 (0.0035)	0.0020 (0.0014)	0.2166 (0.0033)	1000

Table 245: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2473	0.0039	0.0631 (0.0014)	-0.0027 (0.0020)	0.9530 (0.0067)	0.0040 (0.0002)	1000
Exp	0.3690	0.0031	0.0562 (0.0013)	0.1190 (0.0018)	0.4200 (0.0156)	0.0173 (0.0004)	1000
Weibull	0.2796	0.0036	0.0616 (0.0014)	0.0296 (0.0019)	0.9360 (0.0077)	0.0047 (0.0002)	1000
Gompertz	0.3657	0.0047	0.0572 (0.0019)	0.1157 (0.0026)	0.6226 (0.0222)	0.0166 (0.0006)	477
RP (3)	0.2509	0.0039	0.0623 (0.0014)	0.0009 (0.0020)	0.9508 (0.0069)	0.0039 (0.0002)	995
RP (5)	0.2498	0.0039	0.0631 (0.0014)	-0.0002 (0.0020)	0.9489 (0.0070)	0.0040 (0.0002)	998
RP (9)	0.2497	0.0039	0.0634 (0.0014)	-0.0003 (0.0020)	0.9518 (0.0068)	0.0040 (0.0002)	996
RP (P)	0.2543	0.0039	0.0635 (0.0014)	0.0043 (0.0020)	0.9470 (0.0071)	0.0041 (0.0002)	1000
FP (W)	0.2795	0.0036	0.0615 (0.0014)	0.0295 (0.0020)	0.9362 (0.0078)	0.0046 (0.0002)	988
FP (k=10)	0.2462	0.0039	0.0628 (0.0014)	-0.0038 (0.0020)	0.9499 (0.0069)	0.0040 (0.0002)	999
FP (k=10000)	0.2329	0.0027	0.0623 (0.0014)	-0.0171 (0.0020)	0.8740 (0.0105)	0.0042 (0.0002)	1000
Model frailty: Normal							
Cox	0.2439	0.0041	0.0630 (0.0014)	-0.0061 (0.0020)	0.9460 (0.0071)	0.0040 (0.0002)	1000
Exp	0.4345	0.0044	0.0624 (0.0014)	0.1845 (0.0020)	0.1743 (0.0120)	0.0379 (0.0007)	998
Weibull	0.3374	0.0051	0.0662 (0.0015)	0.0874 (0.0021)	0.8118 (0.0124)	0.0120 (0.0004)	999
Gompertz	0.4357	0.0068	0.0611 (0.0021)	0.1857 (0.0030)	0.3183 (0.0227)	0.0382 (0.0011)	421
RP (3)	0.2789	0.0060	0.0758 (0.0017)	0.0289 (0.0024)	0.9578 (0.0064)	0.0066 (0.0003)	996
RP (5)	0.2803	0.0060	0.0768 (0.0017)	0.0303 (0.0024)	0.9570 (0.0064)	0.0068 (0.0003)	999
RP (9)	0.2811	0.0061	0.0767 (0.0017)	0.0311 (0.0024)	0.9568 (0.0064)	0.0068 (0.0003)	996
RP (P)	0.2830	0.0060	0.0765 (0.0017)	0.0330 (0.0024)	0.9520 (0.0068)	0.0069 (0.0003)	1000
FP (W)	0.3085	0.0055	0.0737 (0.0017)	0.0585 (0.0023)	0.9175 (0.0087)	0.0089 (0.0004)	994
FP (k=10)	0.2817	0.0060	0.0763 (0.0017)	0.0317 (0.0024)	0.9490 (0.0070)	0.0068 (0.0003)	1000
FP (k=10000)	0.2549	0.0043	0.0712 (0.0016)	0.0049 (0.0023)	0.9230 (0.0084)	0.0051 (0.0002)	1000

Table 246: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2156	0.0032	0.0551 (0.0012)	-0.0344 (0.0017)	0.8878 (0.0100)	0.0042 (0.0002)	998
Exp	0.2224	0.0020	0.0435 (0.0010)	-0.0276 (0.0014)	0.9040 (0.0093)	0.0027 (0.0001)	1000
Weibull	0.2193	0.0028	0.0501 (0.0011)	-0.0307 (0.0016)	0.9130 (0.0089)	0.0035 (0.0001)	1000
Gompertz	0.2214	0.0032	0.0438 (0.0013)	-0.0286 (0.0018)	0.9626 (0.0078)	0.0027 (0.0002)	588
RP (3)	0.2175	0.0032	0.0549 (0.0012)	-0.0325 (0.0017)	0.8998 (0.0095)	0.0041 (0.0002)	998
RP (5)	0.2179	0.0032	0.0550 (0.0012)	-0.0321 (0.0017)	0.8997 (0.0095)	0.0041 (0.0002)	997
RP (9)	0.2179	0.0032	0.0552 (0.0012)	-0.0321 (0.0017)	0.8990 (0.0095)	0.0041 (0.0002)	1000
RP (P)	0.2182	0.0029	0.0518 (0.0012)	-0.0318 (0.0016)	0.9060 (0.0092)	0.0037 (0.0001)	1000
FP (W)	0.2193	0.0028	0.0501 (0.0011)	-0.0307 (0.0016)	0.9130 (0.0089)	0.0035 (0.0001)	1000
FP (k=10)	0.2152	0.0032	0.0551 (0.0012)	-0.0348 (0.0017)	0.8880 (0.0100)	0.0042 (0.0002)	1000
FP (k=10000)	0.2167	0.0019	0.0548 (0.0012)	-0.0333 (0.0017)	0.8070 (0.0125)	0.0041 (0.0002)	1000
Model frailty: Normal							
Cox	0.2221	0.0036	0.0579 (0.0013)	-0.0279 (0.0018)	0.9110 (0.0090)	0.0041 (0.0002)	1000
Exp	0.2695	0.0028	0.0496 (0.0011)	0.0195 (0.0016)	0.9530 (0.0067)	0.0028 (0.0001)	1000
Weibull	0.2832	0.0043	0.0583 (0.0013)	0.0332 (0.0018)	0.9570 (0.0064)	0.0045 (0.0002)	999
Gompertz	0.2666	0.0046	0.0493 (0.0015)	0.0166 (0.0021)	0.9850 (0.0053)	0.0027 (0.0002)	534
RP (3)	0.2535	0.0052	0.0696 (0.0016)	0.0035 (0.0022)	0.9527 (0.0067)	0.0049 (0.0002)	994
RP (5)	0.2539	0.0053	0.0696 (0.0016)	0.0039 (0.0022)	0.9568 (0.0064)	0.0049 (0.0002)	996
RP (9)	0.2537	0.0053	0.0700 (0.0016)	0.0037 (0.0022)	0.9560 (0.0065)	0.0049 (0.0002)	1000
RP (P)	0.2540	0.0047	0.0659 (0.0015)	0.0040 (0.0021)	0.9540 (0.0066)	0.0044 (0.0002)	1000
FP (W)	0.2551	0.0046	0.0637 (0.0014)	0.0051 (0.0020)	0.9539 (0.0066)	0.0041 (0.0002)	997
FP (k=10)	0.2527	0.0052	0.0687 (0.0015)	0.0027 (0.0022)	0.9430 (0.0073)	0.0047 (0.0002)	1000
FP (k=10000)	0.2523	0.0036	0.0679 (0.0015)	0.0023 (0.0021)	0.9040 (0.0093)	0.0046 (0.0002)	1000

Table 247: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2184	0.0039	0.0612 (0.0014)	-0.0316 (0.0019)	0.9010 (0.0094)	0.0047 (0.0002)	1000
Exp	0.4722	0.0040	0.0647 (0.0014)	0.2222 (0.0020)	0.0470 (0.0067)	0.0535 (0.0009)	1000
Weibull	0.2269	0.0035	0.0588 (0.0013)	-0.0231 (0.0019)	0.9220 (0.0085)	0.0040 (0.0002)	1000
Gompertz	0.4718	0.0059	0.0642 (0.0021)	0.2218 (0.0030)	0.1038 (0.0143)	0.0533 (0.0014)	453
RP (3)	0.2207	0.0039	0.0611 (0.0014)	-0.0293 (0.0019)	0.9083 (0.0092)	0.0046 (0.0002)	992
RP (5)	0.2214	0.0039	0.0606 (0.0014)	-0.0286 (0.0019)	0.9121 (0.0090)	0.0045 (0.0002)	990
RP (9)	0.2212	0.0039	0.0611 (0.0014)	-0.0288 (0.0019)	0.9105 (0.0091)	0.0046 (0.0002)	994
RP (P)	0.2236	0.0037	0.0601 (0.0013)	-0.0264 (0.0019)	0.9140 (0.0089)	0.0043 (0.0002)	1000
FP (W)	0.2269	0.0035	0.0589 (0.0013)	-0.0231 (0.0019)	0.9211 (0.0086)	0.0040 (0.0002)	988
FP (k=10)	0.2235	0.0039	0.0617 (0.0014)	-0.0265 (0.0020)	0.9170 (0.0087)	0.0045 (0.0002)	1000
FP (k=10000)	0.2802	0.0031	0.0631 (0.0014)	0.0302 (0.0020)	0.8920 (0.0098)	0.0049 (0.0002)	1000
Model frailty: Normal							
Cox	0.2173	0.0040	0.0611 (0.0014)	-0.0327 (0.0019)	0.8980 (0.0096)	0.0048 (0.0002)	1000
Exp	0.6014	0.0065	0.0783 (0.0018)	0.3514 (0.0025)	0.0000 (0.0000)	0.1296 (0.0018)	998
Weibull	0.2945	0.0051	0.0657 (0.0015)	0.0445 (0.0021)	0.9510 (0.0068)	0.0063 (0.0003)	1000
Gompertz	0.6013	0.0096	0.0747 (0.0027)	0.3513 (0.0037)	0.0000 (0.0000)	0.1290 (0.0027)	397
RP (3)	0.2484	0.0058	0.0743 (0.0017)	-0.0016 (0.0024)	0.9498 (0.0069)	0.0055 (0.0002)	997
RP (5)	0.2494	0.0058	0.0740 (0.0017)	-0.0006 (0.0023)	0.9547 (0.0066)	0.0055 (0.0002)	994
RP (9)	0.2495	0.0058	0.0744 (0.0017)	-0.0005 (0.0024)	0.9548 (0.0066)	0.0055 (0.0002)	995
RP (P)	0.2529	0.0055	0.0732 (0.0016)	0.0029 (0.0023)	0.9500 (0.0069)	0.0054 (0.0002)	1000
FP (W)	0.2568	0.0053	0.0715 (0.0016)	0.0068 (0.0023)	0.9514 (0.0068)	0.0052 (0.0002)	987
FP (k=10)	0.2655	0.0060	0.0763 (0.0017)	0.0155 (0.0024)	0.9430 (0.0073)	0.0061 (0.0003)	1000
FP (k=10000)	0.3553	0.0062	0.0874 (0.0020)	0.1053 (0.0028)	0.7470 (0.0137)	0.0187 (0.0007)	1000

Table 248: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2066	0.0027	0.0519 (0.0012)	-0.0434 (0.0016)	0.8400 (0.0116)	0.0046 (0.0002)	1000
Exp	0.0230	0.0008	0.0221 (0.0005)	-0.2270 (0.0007)	0.0000 (0.0000)	0.0520 (0.0003)	931
Weibull	0.1118	0.0017	0.0418 (0.0009)	-0.1382 (0.0013)	0.1080 (0.0098)	0.0208 (0.0004)	1000
Gompertz	0.2094	0.0027	0.0522 (0.0012)	-0.0406 (0.0016)	0.8540 (0.0112)	0.0044 (0.0002)	1000
RP (3)	0.2030	0.0026	0.0515 (0.0012)	-0.0470 (0.0016)	0.8206 (0.0121)	0.0049 (0.0002)	998
RP (5)	0.2078	0.0027	0.0519 (0.0012)	-0.0422 (0.0016)	0.8428 (0.0115)	0.0045 (0.0002)	999
RP (9)	0.2091	0.0027	0.0521 (0.0012)	-0.0409 (0.0016)	0.8510 (0.0113)	0.0044 (0.0002)	1000
RP (P)	0.1857	0.0024	0.0512 (0.0011)	-0.0643 (0.0016)	0.6820 (0.0147)	0.0068 (0.0002)	1000
FP (W)	0.1122	0.0017	0.0414 (0.0009)	-0.1378 (0.0013)	0.1084 (0.0099)	0.0207 (0.0004)	996
FP (k=10)	0.2054	0.0026	0.0513 (0.0011)	-0.0446 (0.0016)	0.8320 (0.0118)	0.0046 (0.0002)	1000
FP (k=10000)	0.1910	0.0011	0.0486 (0.0011)	-0.0590 (0.0015)	0.5390 (0.0158)	0.0058 (0.0002)	1000
Model frailty: Normal							
Cox	0.2235	0.0034	0.0588 (0.0013)	-0.0265 (0.0019)	0.8900 (0.0099)	0.0042 (0.0002)	1000
Exp	0.0373	0.0011	0.0244 (0.0007)	-0.2127 (0.0009)	0.0000 (0.0000)	0.0458 (0.0004)	697
Weibull	0.1564	0.0028	0.0545 (0.0012)	-0.0936 (0.0017)	0.5587 (0.0157)	0.0117 (0.0003)	997
Gompertz	0.2774	0.0044	0.0624 (0.0014)	0.0274 (0.0020)	0.9659 (0.0057)	0.0046 (0.0002)	998
RP (3)	0.2492	0.0048	0.0701 (0.0016)	-0.0008 (0.0022)	0.9408 (0.0075)	0.0049 (0.0002)	997
RP (5)	0.2529	0.0048	0.0704 (0.0016)	0.0029 (0.0022)	0.9449 (0.0072)	0.0050 (0.0002)	999
RP (9)	0.2540	0.0048	0.0705 (0.0016)	0.0040 (0.0022)	0.9459 (0.0072)	0.0050 (0.0002)	999
RP (P)	0.2260	0.0043	0.0688 (0.0015)	-0.0240 (0.0022)	0.8890 (0.0099)	0.0053 (0.0002)	1000
FP (W)	0.1351	0.0023	0.0476 (0.0011)	-0.1149 (0.0015)	0.3604 (0.0152)	0.0155 (0.0003)	999
FP (k=10)	0.2519	0.0047	0.0688 (0.0015)	0.0019 (0.0022)	0.9370 (0.0077)	0.0047 (0.0002)	1000
FP (k=10000)	0.2399	0.0025	0.0661 (0.0015)	-0.0101 (0.0021)	0.8280 (0.0119)	0.0045 (0.0002)	1000

Table 249: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2084	0.0028	0.0533 (0.0012)	-0.0416 (0.0017)	0.8530 (0.0112)	0.0046 (0.0002)	1000
Exp	0.0000	0.0009	0.0000 (0.0000)	-0.2500 (0.0000)	0.0000 (0.0000)	0.0625 (0.0000)	529
Weibull	0.3312	0.0029	0.0530 (0.0012)	0.0812 (0.0017)	0.7050 (0.0144)	0.0094 (0.0003)	1000
Gompertz	0.2431	0.0029	0.0549 (0.0012)	-0.0069 (0.0017)	0.9350 (0.0078)	0.0031 (0.0001)	1000
RP (3)	0.2098	0.0028	0.0534 (0.0012)	-0.0402 (0.0017)	0.8570 (0.0111)	0.0045 (0.0002)	1000
RP (5)	0.2103	0.0028	0.0534 (0.0012)	-0.0397 (0.0017)	0.8609 (0.0109)	0.0044 (0.0002)	999
RP (9)	0.2111	0.0028	0.0535 (0.0012)	-0.0389 (0.0017)	0.8660 (0.0108)	0.0044 (0.0002)	1000
RP (P)	0.2161	0.0028	0.0534 (0.0012)	-0.0339 (0.0017)	0.8810 (0.0102)	0.0040 (0.0002)	1000
FP (W)	0.3313	0.0029	0.0530 (0.0012)	0.0813 (0.0017)	0.7046 (0.0145)	0.0094 (0.0003)	992
FP (k=10)	0.2134	0.0028	0.0543 (0.0012)	-0.0366 (0.0017)	0.8710 (0.0106)	0.0043 (0.0002)	1000
FP (k=10000)	0.4897	0.0021	0.0672 (0.0015)	0.2397 (0.0021)	0.0080 (0.0028)	0.0620 (0.0011)	999
Model frailty: Normal							
Cox	0.2232	0.0035	0.0597 (0.0013)	-0.0268 (0.0019)	0.9040 (0.0093)	0.0043 (0.0002)	1000
Exp	0.0116	0.0009	0.0097 (0.0024)	-0.2384 (0.0032)	0.0000 (0.0000)	0.0569 (0.0015)	9
Weibull	0.4109	0.0049	0.0630 (0.0014)	0.1609 (0.0020)	0.3287 (0.0149)	0.0298 (0.0007)	998
Gompertz	0.2551	0.0036	0.0512 (0.0011)	0.0051 (0.0016)	0.9810 (0.0043)	0.0026 (0.0001)	1000
RP (3)	0.2573	0.0050	0.0723 (0.0016)	0.0073 (0.0023)	0.9450 (0.0072)	0.0053 (0.0003)	1000
RP (5)	0.2536	0.0049	0.0717 (0.0016)	0.0036 (0.0023)	0.9420 (0.0074)	0.0052 (0.0002)	1000
RP (9)	0.2543	0.0049	0.0717 (0.0016)	0.0043 (0.0023)	0.9440 (0.0073)	0.0052 (0.0002)	1000
RP (P)	0.2598	0.0049	0.0714 (0.0016)	0.0098 (0.0023)	0.9420 (0.0074)	0.0052 (0.0003)	1000
FP (W)	0.4073	0.0057	0.0726 (0.0017)	0.1573 (0.0023)	0.4499 (0.0160)	0.0300 (0.0008)	969
FP (k=10)	0.2682	0.0050	0.0714 (0.0016)	0.0182 (0.0023)	0.9380 (0.0076)	0.0054 (0.0003)	1000
FP (k=10000)	0.6795	0.0064	0.1057 (0.0024)	0.4295 (0.0033)	0.0000 (0.0000)	0.1956 (0.0030)	1000

Table 250: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2151	0.0035	0.0586 (0.0013)	-0.0349 (0.0019)	0.8930 (0.0098)	0.0046 (0.0002)	1000
Exp	0.3391	0.0027	0.0512 (0.0011)	0.0891 (0.0016)	0.6070 (0.0154)	0.0106 (0.0003)	1000
Weibull	0.2452	0.0031	0.0555 (0.0012)	-0.0048 (0.0018)	0.9450 (0.0072)	0.0031 (0.0001)	1000
Gompertz	0.3391	0.0043	0.0496 (0.0015)	0.0891 (0.0022)	0.8046 (0.0174)	0.0104 (0.0004)	522
RP (3)	0.2193	0.0035	0.0580 (0.0013)	-0.0307 (0.0018)	0.9079 (0.0092)	0.0043 (0.0002)	988
RP (5)	0.2183	0.0035	0.0582 (0.0013)	-0.0317 (0.0018)	0.9050 (0.0093)	0.0044 (0.0002)	989
RP (9)	0.2178	0.0035	0.0581 (0.0013)	-0.0322 (0.0018)	0.9015 (0.0094)	0.0044 (0.0002)	995
RP (P)	0.2217	0.0035	0.0588 (0.0013)	-0.0283 (0.0019)	0.9060 (0.0092)	0.0043 (0.0002)	1000
FP (W)	0.2450	0.0031	0.0556 (0.0012)	-0.0050 (0.0018)	0.9446 (0.0073)	0.0031 (0.0001)	993
FP (k=10)	0.2144	0.0034	0.0585 (0.0013)	-0.0356 (0.0019)	0.8909 (0.0099)	0.0047 (0.0002)	999
FP (k=10000)	0.2027	0.0022	0.0571 (0.0013)	-0.0473 (0.0018)	0.7460 (0.0138)	0.0055 (0.0002)	1000
Model frailty: Normal							
Cox	0.2185	0.0038	0.0607 (0.0014)	-0.0315 (0.0019)	0.8970 (0.0096)	0.0047 (0.0002)	1000
Exp	0.4072	0.0040	0.0590 (0.0013)	0.1572 (0.0019)	0.2663 (0.0140)	0.0282 (0.0006)	999
Weibull	0.3038	0.0046	0.0621 (0.0014)	0.0538 (0.0020)	0.9329 (0.0079)	0.0067 (0.0003)	999
Gompertz	0.4069	0.0063	0.0588 (0.0020)	0.1569 (0.0029)	0.4965 (0.0243)	0.0281 (0.0010)	423
RP (3)	0.2489	0.0054	0.0727 (0.0016)	-0.0011 (0.0023)	0.9434 (0.0073)	0.0053 (0.0002)	990
RP (5)	0.2505	0.0055	0.0729 (0.0016)	0.0005 (0.0023)	0.9425 (0.0074)	0.0053 (0.0002)	992
RP (9)	0.2498	0.0055	0.0739 (0.0017)	-0.0002 (0.0023)	0.9370 (0.0077)	0.0055 (0.0002)	1000
RP (P)	0.2521	0.0054	0.0731 (0.0016)	0.0021 (0.0023)	0.9420 (0.0074)	0.0053 (0.0002)	1000
FP (W)	0.2751	0.0049	0.0681 (0.0015)	0.0251 (0.0022)	0.9594 (0.0063)	0.0053 (0.0002)	986
FP (k=10)	0.2518	0.0054	0.0722 (0.0016)	0.0018 (0.0023)	0.9240 (0.0084)	0.0052 (0.0002)	1000
FP (k=10000)	0.2280	0.0036	0.0663 (0.0015)	-0.0220 (0.0021)	0.8690 (0.0107)	0.0049 (0.0002)	1000

Table 251: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7473	0.0091	0.0987 (0.0022)	-0.0027 (0.0031)	0.9430 (0.0073)	0.0097 (0.0004)	1000
Exp	0.7491	0.0062	0.0831 (0.0019)	-0.0009 (0.0026)	0.9330 (0.0079)	0.0069 (0.0003)	1000
Weibull	0.7517	0.0082	0.0939 (0.0021)	0.0017 (0.0030)	0.9450 (0.0072)	0.0088 (0.0004)	1000
Gompertz	0.7511	0.0091	0.0858 (0.0050)	0.0011 (0.0071)	0.9728 (0.0134)	0.0073 (0.0008)	147
RP (3)	0.7506	0.0091	0.0989 (0.0022)	0.0006 (0.0031)	0.9510 (0.0068)	0.0098 (0.0004)	1000
RP (5)	0.7509	0.0092	0.0990 (0.0022)	0.0009 (0.0031)	0.9480 (0.0070)	0.0098 (0.0004)	1000
RP (9)	0.7512	0.0092	0.0990 (0.0022)	0.0012 (0.0031)	0.9500 (0.0069)	0.0098 (0.0004)	1000
RP (P)	0.7508	0.0085	0.0956 (0.0021)	0.0008 (0.0030)	0.9430 (0.0073)	0.0091 (0.0004)	1000
FP (W)	0.7519	0.0082	0.0940 (0.0021)	0.0019 (0.0030)	0.9448 (0.0072)	0.0088 (0.0004)	996
FP (k=10)	0.7463	0.0091	0.0988 (0.0022)	-0.0037 (0.0031)	0.9440 (0.0073)	0.0098 (0.0004)	1000
FP (k=10000)	0.7482	0.0061	0.0984 (0.0022)	-0.0018 (0.0031)	0.8888 (0.0100)	0.0097 (0.0004)	998
Model frailty: Normal							
Cox	0.7567	0.0124	0.1146 (0.0026)	0.0067 (0.0036)	0.9420 (0.0074)	0.0132 (0.0007)	1000
Exp	0.8260	0.0088	0.0916 (0.0020)	0.0760 (0.0029)	0.9050 (0.0093)	0.0142 (0.0006)	1000
Weibull	0.8479	0.0130	0.1066 (0.0024)	0.0979 (0.0034)	0.9269 (0.0082)	0.0209 (0.0010)	998
Gompertz	0.8241	0.0129	0.0922 (0.0059)	0.0741 (0.0084)	0.9339 (0.0226)	0.0139 (0.0019)	121
RP (3)	0.9169	0.0192	0.1407 (0.0031)	0.1669 (0.0044)	0.8320 (0.0118)	0.0476 (0.0019)	1000
RP (5)	0.9169	0.0192	0.1407 (0.0031)	0.1669 (0.0044)	0.8330 (0.0118)	0.0476 (0.0019)	1000
RP (9)	0.9172	0.0192	0.1405 (0.0031)	0.1672 (0.0044)	0.8300 (0.0119)	0.0477 (0.0019)	1000
RP (P)	0.9225	0.0181	0.1377 (0.0031)	0.1725 (0.0044)	0.7920 (0.0128)	0.0487 (0.0019)	1000
FP (W)	0.9250	0.0177	0.1369 (0.0031)	0.1750 (0.0044)	0.7766 (0.0135)	0.0493 (0.0020)	958
FP (k=10)	0.9154	0.0192	0.1413 (0.0032)	0.1654 (0.0045)	0.8254 (0.0121)	0.0473 (0.0020)	991
FP (k=10000)	0.8959	0.0147	0.1356 (0.0030)	0.1459 (0.0043)	0.7830 (0.0130)	0.0397 (0.0017)	1000

Table 252: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7491	0.0108	0.1053 (0.0024)	-0.0009 (0.0033)	0.9510 (0.0068)	0.0111 (0.0005)	1000
Exp	1.1122	0.0112	0.1136 (0.0025)	0.3622 (0.0036)	0.0540 (0.0071)	0.1441 (0.0027)	1000
Weibull	0.7602	0.0100	0.1022 (0.0023)	0.0102 (0.0032)	0.9490 (0.0070)	0.0105 (0.0005)	1000
Gompertz	1.1103	0.0154	0.1113 (0.0038)	0.3603 (0.0054)	0.1012 (0.0146)	0.1421 (0.0041)	425
RP (3)	0.7520	0.0108	0.1055 (0.0024)	0.0020 (0.0033)	0.9520 (0.0068)	0.0111 (0.0005)	1000
RP (5)	0.7524	0.0108	0.1056 (0.0024)	0.0024 (0.0033)	0.9519 (0.0068)	0.0112 (0.0005)	998
RP (9)	0.7529	0.0108	0.1056 (0.0024)	0.0029 (0.0033)	0.9520 (0.0068)	0.0112 (0.0005)	1000
RP (P)	0.7563	0.0103	0.1032 (0.0023)	0.0063 (0.0033)	0.9500 (0.0069)	0.0107 (0.0005)	1000
FP (W)	0.7602	0.0100	0.1022 (0.0023)	0.0102 (0.0032)	0.9490 (0.0070)	0.0105 (0.0005)	1000
FP (k=10)	0.7583	0.0109	0.1066 (0.0024)	0.0083 (0.0034)	0.9470 (0.0071)	0.0114 (0.0005)	1000
FP (k=10000)	0.8483	0.0089	0.1110 (0.0025)	0.0983 (0.0035)	0.8016 (0.0126)	0.0220 (0.0009)	998
Model frailty: Normal							
Cox	0.7164	0.0123	0.1102 (0.0025)	-0.0336 (0.0035)	0.9160 (0.0088)	0.0133 (0.0005)	1000
Exp	1.2879	0.0177	0.1340 (0.0030)	0.5379 (0.0043)	0.0030 (0.0017)	0.3073 (0.0048)	991
Weibull	0.8359	0.0139	0.1063 (0.0024)	0.0859 (0.0034)	0.9470 (0.0071)	0.0187 (0.0008)	1000
Gompertz	1.2915	0.0251	0.1371 (0.0057)	0.5415 (0.0081)	0.0139 (0.0069)	0.3120 (0.0092)	288
RP (3)	0.8800	0.0200	0.1394 (0.0031)	0.1300 (0.0044)	0.8970 (0.0096)	0.0363 (0.0015)	1000
RP (5)	0.8802	0.0200	0.1391 (0.0031)	0.1302 (0.0044)	0.8980 (0.0096)	0.0363 (0.0015)	1000
RP (9)	0.8807	0.0200	0.1390 (0.0031)	0.1307 (0.0044)	0.8950 (0.0097)	0.0364 (0.0015)	1000
RP (P)	0.8883	0.0194	0.1376 (0.0031)	0.1383 (0.0044)	0.8740 (0.0105)	0.0381 (0.0016)	1000
FP (W)	0.9015	0.0191	0.1362 (0.0031)	0.1515 (0.0044)	0.8492 (0.0115)	0.0415 (0.0016)	968
FP (k=10)	0.9182	0.0209	0.1454 (0.0033)	0.1682 (0.0046)	0.8388 (0.0116)	0.0494 (0.0020)	999
FP (k=10000)	1.0630	0.0203	0.1553 (0.0035)	0.3130 (0.0049)	0.4188 (0.0156)	0.1221 (0.0035)	998

Table 253: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7463	0.0076	0.0883 (0.0020)	-0.0037 (0.0028)	0.9499 (0.0069)	0.0078 (0.0003)	999
Exp	0.4333	0.0030	0.0584 (0.0013)	-0.3167 (0.0018)	0.0040 (0.0020)	0.1037 (0.0012)	1000
Weibull	0.6142	0.0056	0.0783 (0.0018)	-0.1358 (0.0025)	0.5510 (0.0157)	0.0246 (0.0007)	1000
Gompertz	0.4367	0.0049	0.0646 (0.0018)	-0.3133 (0.0025)	0.0134 (0.0044)	0.1023 (0.0014)	670
RP (3)	0.7450	0.0075	0.0885 (0.0020)	-0.0050 (0.0028)	0.9449 (0.0072)	0.0078 (0.0003)	999
RP (5)	0.7491	0.0076	0.0887 (0.0020)	-0.0009 (0.0028)	0.9480 (0.0070)	0.0079 (0.0003)	1000
RP (9)	0.7502	0.0076	0.0886 (0.0020)	0.0002 (0.0028)	0.9480 (0.0070)	0.0078 (0.0003)	1000
RP (P)	0.7195	0.0071	0.0881 (0.0020)	-0.0305 (0.0028)	0.9080 (0.0091)	0.0087 (0.0004)	1000
FP (W)	0.6142	0.0056	0.0782 (0.0018)	-0.1358 (0.0025)	0.5499 (0.0158)	0.0246 (0.0007)	991
FP (k=10)	0.7449	0.0075	0.0878 (0.0020)	-0.0051 (0.0028)	0.9480 (0.0070)	0.0077 (0.0003)	1000
FP (k=10000)	0.7308	0.0041	0.0854 (0.0019)	-0.0192 (0.0027)	0.8345 (0.0118)	0.0076 (0.0003)	997
Model frailty: Normal							
Cox	0.8193	0.0130	0.1150 (0.0026)	0.0693 (0.0036)	0.9270 (0.0082)	0.0180 (0.0009)	1000
Exp	0.4781	0.0042	0.0640 (0.0014)	-0.2719 (0.0020)	0.0280 (0.0052)	0.0780 (0.0011)	1000
Weibull	0.7462	0.0105	0.1004 (0.0022)	-0.0038 (0.0032)	0.9589 (0.0063)	0.0101 (0.0005)	998
Gompertz	0.4843	0.0068	0.0774 (0.0027)	-0.2657 (0.0037)	0.1007 (0.0146)	0.0766 (0.0017)	427
RP (3)	0.9727	0.0188	0.1380 (0.0031)	0.2227 (0.0044)	0.6790 (0.0148)	0.0686 (0.0023)	1000
RP (5)	0.9750	0.0188	0.1380 (0.0031)	0.2250 (0.0044)	0.6720 (0.0148)	0.0696 (0.0023)	1000
RP (9)	0.9759	0.0189	0.1379 (0.0031)	0.2259 (0.0044)	0.6700 (0.0149)	0.0700 (0.0023)	1000
RP (P)	0.9361	0.0175	0.1364 (0.0031)	0.1861 (0.0043)	0.7550 (0.0136)	0.0532 (0.0020)	1000
FP (W)	0.8068	0.0139	0.1249 (0.0029)	0.0568 (0.0041)	0.9272 (0.0084)	0.0188 (0.0010)	948
FP (k=10)	0.9750	0.0189	0.1382 (0.0031)	0.2250 (0.0044)	0.6700 (0.0149)	0.0697 (0.0023)	1000
FP (k=10000)	0.9720	0.0130	0.1373 (0.0031)	0.2220 (0.0043)	0.5290 (0.0158)	0.0681 (0.0023)	1000

Table 254: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7455	0.0079	0.0888 (0.0020)	-0.0045 (0.0028)	0.9510 (0.0068)	0.0079 (0.0003)	999
Exp	0.3040	0.0024	0.0474 (0.0011)	-0.4460 (0.0015)	0.0000 (0.0000)	0.2011 (0.0013)	1000
Weibull	0.9010	0.0081	0.0896 (0.0020)	0.1510 (0.0028)	0.6370 (0.0152)	0.0308 (0.0010)	1000
Gompertz	0.6798	0.0071	0.1557 (0.0035)	-0.0702 (0.0050)	0.8000 (0.0128)	0.0291 (0.0017)	980
RP (3)	0.7516	0.0079	0.0893 (0.0020)	0.0016 (0.0028)	0.9570 (0.0064)	0.0080 (0.0003)	1000
RP (5)	0.7491	0.0079	0.0891 (0.0020)	-0.0009 (0.0028)	0.9540 (0.0066)	0.0079 (0.0003)	1000
RP (9)	0.7495	0.0079	0.0892 (0.0020)	-0.0005 (0.0028)	0.9550 (0.0066)	0.0079 (0.0003)	1000
RP (P)	0.7567	0.0079	0.0896 (0.0020)	0.0067 (0.0028)	0.9570 (0.0064)	0.0081 (0.0003)	1000
FP (W)	0.9010	0.0081	0.0894 (0.0020)	0.1510 (0.0028)	0.6379 (0.0152)	0.0308 (0.0010)	997
FP (k=10)	0.7491	0.0079	0.0899 (0.0020)	-0.0009 (0.0028)	0.9510 (0.0068)	0.0081 (0.0003)	1000
FP (k=10000)	1.1175	0.0063	0.1157 (0.0026)	0.3675 (0.0037)	0.0250 (0.0049)	0.1484 (0.0028)	999
Model frailty: Normal							
Cox	0.8044	0.0128	0.1112 (0.0025)	0.0544 (0.0035)	0.9530 (0.0067)	0.0153 (0.0007)	1000
Exp	0.2986	0.0027	0.0440 (0.0010)	-0.4514 (0.0014)	0.0000 (0.0000)	0.2057 (0.0012)	998
Weibull	1.0414	0.0154	0.1106 (0.0025)	0.2914 (0.0035)	0.3122 (0.0147)	0.0972 (0.0022)	996
Gompertz	0.6520	0.0090	0.1440 (0.0033)	-0.0980 (0.0047)	0.8156 (0.0126)	0.0303 (0.0018)	949
RP (3)	0.9683	0.0190	0.1341 (0.0030)	0.2183 (0.0042)	0.6820 (0.0147)	0.0656 (0.0021)	1000
RP (5)	0.9627	0.0189	0.1343 (0.0030)	0.2127 (0.0043)	0.7057 (0.0144)	0.0633 (0.0021)	999
RP (9)	0.9628	0.0189	0.1341 (0.0030)	0.2128 (0.0042)	0.7030 (0.0144)	0.0633 (0.0021)	1000
RP (P)	0.9651	0.0188	0.1333 (0.0030)	0.2151 (0.0042)	0.7000 (0.0145)	0.0641 (0.0021)	1000
FP (W)	1.1829	0.0213	0.1361 (0.0031)	0.4329 (0.0044)	0.0820 (0.0090)	0.2059 (0.0041)	939
FP (k=10)	0.9721	0.0189	0.1333 (0.0030)	0.2221 (0.0042)	0.6774 (0.0148)	0.0671 (0.0021)	998
FP (k=10000)	1.6448	0.0262	0.1969 (0.0044)	0.8948 (0.0062)	0.0010 (0.0010)	0.8394 (0.0112)	999

Table 255: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7485	0.0098	0.0978 (0.0022)	-0.0015 (0.0031)	0.9570 (0.0064)	0.0096 (0.0004)	1000
Exp	0.9132	0.0079	0.0878 (0.0020)	0.1632 (0.0028)	0.5630 (0.0157)	0.0343 (0.0010)	1000
Weibull	0.7822	0.0091	0.0932 (0.0021)	0.0322 (0.0029)	0.9540 (0.0066)	0.0097 (0.0005)	1000
Gompertz	0.9122	0.0115	0.0846 (0.0028)	0.1622 (0.0040)	0.7522 (0.0203)	0.0334 (0.0014)	452
RP (3)	0.7516	0.0098	0.0979 (0.0022)	0.0016 (0.0031)	0.9609 (0.0061)	0.0096 (0.0005)	998
RP (5)	0.7520	0.0098	0.0981 (0.0022)	0.0020 (0.0031)	0.9580 (0.0063)	0.0096 (0.0005)	1000
RP (9)	0.7523	0.0098	0.0982 (0.0022)	0.0023 (0.0031)	0.9580 (0.0063)	0.0096 (0.0005)	1000
RP (P)	0.7566	0.0097	0.0979 (0.0022)	0.0066 (0.0031)	0.9620 (0.0060)	0.0096 (0.0005)	1000
FP (W)	0.7823	0.0091	0.0933 (0.0021)	0.0323 (0.0030)	0.9538 (0.0067)	0.0097 (0.0005)	995
FP (k=10)	0.7475	0.0098	0.0978 (0.0022)	-0.0025 (0.0031)	0.9570 (0.0064)	0.0096 (0.0004)	1000
FP (k=10000)	0.7272	0.0068	0.0961 (0.0022)	-0.0228 (0.0030)	0.8949 (0.0097)	0.0097 (0.0004)	999
Model frailty: Normal							
Cox	0.7387	0.0124	0.1091 (0.0024)	-0.0113 (0.0035)	0.9420 (0.0074)	0.0120 (0.0006)	1000
Exp	1.0137	0.0118	0.1001 (0.0022)	0.2637 (0.0032)	0.2869 (0.0143)	0.0795 (0.0018)	997
Weibull	0.8520	0.0133	0.1004 (0.0023)	0.1020 (0.0032)	0.9268 (0.0083)	0.0205 (0.0009)	997
Gompertz	0.9954	0.0169	0.0996 (0.0039)	0.2454 (0.0055)	0.5676 (0.0271)	0.0701 (0.0030)	333
RP (3)	0.8963	0.0194	0.1354 (0.0030)	0.1463 (0.0043)	0.8760 (0.0104)	0.0397 (0.0017)	1000
RP (5)	0.8999	0.0195	0.1356 (0.0030)	0.1499 (0.0043)	0.8649 (0.0108)	0.0408 (0.0017)	999
RP (9)	0.9011	0.0195	0.1357 (0.0030)	0.1511 (0.0043)	0.8650 (0.0108)	0.0412 (0.0017)	1000
RP (P)	0.8989	0.0193	0.1345 (0.0030)	0.1489 (0.0043)	0.8680 (0.0107)	0.0403 (0.0017)	1000
FP (W)	0.9262	0.0182	0.1298 (0.0030)	0.1762 (0.0042)	0.7992 (0.0129)	0.0479 (0.0018)	961
FP (k=10)	0.9106	0.0199	0.1389 (0.0031)	0.1606 (0.0044)	0.8506 (0.0113)	0.0451 (0.0019)	997
FP (k=10000)	0.8440	0.0146	0.1292 (0.0029)	0.0940 (0.0041)	0.8988 (0.0095)	0.0255 (0.0013)	998

Table 256: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5634	0.0063	0.0802 (0.0018)	-0.1866 (0.0025)	0.3493 (0.0151)	0.0413 (0.0010)	999
Exp	0.5995	0.0041	0.0635 (0.0014)	-0.1505 (0.0020)	0.3470 (0.0151)	0.0267 (0.0006)	1000
Weibull	0.5656	0.0055	0.0740 (0.0017)	-0.1844 (0.0023)	0.2990 (0.0145)	0.0395 (0.0009)	1000
Gompertz	0.5955	0.0064	0.0606 (0.0030)	-0.1545 (0.0042)	0.5095 (0.0345)	0.0275 (0.0013)	210
RP (3)	0.5656	0.0063	0.0804 (0.0018)	-0.1844 (0.0025)	0.3570 (0.0152)	0.0404 (0.0010)	1000
RP (5)	0.5664	0.0063	0.0804 (0.0018)	-0.1836 (0.0025)	0.3660 (0.0152)	0.0402 (0.0010)	1000
RP (9)	0.5669	0.0063	0.0804 (0.0018)	-0.1831 (0.0025)	0.3640 (0.0152)	0.0400 (0.0010)	1000
RP (P)	0.5655	0.0057	0.0762 (0.0017)	-0.1845 (0.0024)	0.3123 (0.0147)	0.0398 (0.0009)	999
FP (W)	0.5657	0.0055	0.0740 (0.0017)	-0.1843 (0.0023)	0.2992 (0.0145)	0.0395 (0.0009)	996
FP (k=10)	0.5636	0.0063	0.0800 (0.0018)	-0.1864 (0.0025)	0.3511 (0.0151)	0.0412 (0.0010)	997
FP (k=10000)	0.5748	0.0037	0.0786 (0.0018)	-0.1752 (0.0025)	0.2500 (0.0137)	0.0369 (0.0009)	1000
Model frailty: Normal							
Cox	0.6282	0.0101	0.0999 (0.0022)	-0.1218 (0.0032)	0.7360 (0.0139)	0.0248 (0.0008)	1000
Exp	0.7170	0.0066	0.0758 (0.0017)	-0.0330 (0.0024)	0.9289 (0.0081)	0.0068 (0.0003)	998
Weibull	0.7064	0.0101	0.0915 (0.0020)	-0.0436 (0.0029)	0.9178 (0.0087)	0.0103 (0.0004)	997
Gompertz	0.7141	0.0104	0.0748 (0.0042)	-0.0359 (0.0059)	0.9753 (0.0122)	0.0069 (0.0007)	162
RP (3)	0.7546	0.0148	0.1223 (0.0027)	0.0046 (0.0039)	0.9480 (0.0070)	0.0150 (0.0007)	1000
RP (5)	0.7548	0.0148	0.1222 (0.0027)	0.0048 (0.0039)	0.9490 (0.0070)	0.0149 (0.0007)	1000
RP (9)	0.7553	0.0148	0.1221 (0.0027)	0.0053 (0.0039)	0.9490 (0.0070)	0.0149 (0.0007)	1000
RP (P)	0.7583	0.0138	0.1178 (0.0026)	0.0083 (0.0037)	0.9480 (0.0070)	0.0139 (0.0007)	1000
FP (W)	0.7599	0.0134	0.1145 (0.0026)	0.0099 (0.0037)	0.9519 (0.0068)	0.0132 (0.0007)	977
FP (k=10)	0.7533	0.0147	0.1214 (0.0027)	0.0033 (0.0038)	0.9480 (0.0070)	0.0147 (0.0007)	1000
FP (k=10000)	0.7531	0.0099	0.1160 (0.0026)	0.0031 (0.0037)	0.8970 (0.0096)	0.0134 (0.0007)	1000

Table 257: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5797	0.0073	0.0876 (0.0020)	-0.1703 (0.0028)	0.4725 (0.0158)	0.0367 (0.0009)	999
Exp	0.9803	0.0078	0.0944 (0.0021)	0.2303 (0.0030)	0.2520 (0.0137)	0.0619 (0.0015)	1000
Weibull	0.5931	0.0067	0.0842 (0.0019)	-0.1569 (0.0027)	0.4880 (0.0158)	0.0317 (0.0008)	1000
Gompertz	0.9854	0.0116	0.0943 (0.0048)	0.2354 (0.0068)	0.3802 (0.0350)	0.0642 (0.0033)	192
RP (3)	0.5818	0.0073	0.0875 (0.0020)	-0.1682 (0.0028)	0.4815 (0.0158)	0.0359 (0.0009)	999
RP (5)	0.5826	0.0074	0.0877 (0.0020)	-0.1674 (0.0028)	0.4810 (0.0158)	0.0357 (0.0009)	1000
RP (9)	0.5831	0.0074	0.0879 (0.0020)	-0.1669 (0.0028)	0.4825 (0.0158)	0.0356 (0.0009)	999
RP (P)	0.5866	0.0071	0.0864 (0.0019)	-0.1634 (0.0027)	0.4790 (0.0158)	0.0342 (0.0009)	1000
FP (W)	0.5929	0.0067	0.0844 (0.0019)	-0.1571 (0.0027)	0.4878 (0.0159)	0.0318 (0.0008)	986
FP (k=10)	0.5994	0.0075	0.0899 (0.0020)	-0.1506 (0.0028)	0.5610 (0.0157)	0.0307 (0.0009)	1000
FP (k=10000)	0.7226	0.0057	0.0948 (0.0021)	-0.0274 (0.0030)	0.8529 (0.0112)	0.0097 (0.0004)	999
Model frailty: Normal							
Cox	0.6140	0.0103	0.1021 (0.0023)	-0.1360 (0.0032)	0.6690 (0.0149)	0.0289 (0.0009)	1000
Exp	1.2427	0.0146	0.1245 (0.0028)	0.4927 (0.0040)	0.0081 (0.0028)	0.2582 (0.0040)	990
Weibull	0.7181	0.0110	0.0975 (0.0022)	-0.0319 (0.0031)	0.9459 (0.0072)	0.0105 (0.0004)	999
Gompertz	1.2385	0.0216	0.1283 (0.0051)	0.4885 (0.0072)	0.0221 (0.0083)	0.2550 (0.0073)	317
RP (3)	0.7459	0.0157	0.1276 (0.0029)	-0.0041 (0.0040)	0.9459 (0.0072)	0.0163 (0.0007)	999
RP (5)	0.7463	0.0157	0.1276 (0.0029)	-0.0037 (0.0040)	0.9500 (0.0069)	0.0163 (0.0007)	1000
RP (9)	0.7469	0.0157	0.1276 (0.0029)	-0.0031 (0.0040)	0.9500 (0.0069)	0.0163 (0.0007)	1000
RP (P)	0.7550	0.0152	0.1268 (0.0028)	0.0050 (0.0040)	0.9490 (0.0070)	0.0161 (0.0007)	1000
FP (W)	0.7687	0.0148	0.1244 (0.0028)	0.0187 (0.0040)	0.9528 (0.0068)	0.0158 (0.0007)	975
FP (k=10)	0.8119	0.0169	0.1366 (0.0031)	0.0619 (0.0043)	0.9278 (0.0082)	0.0225 (0.0011)	997
FP (k=10000)	1.0171	0.0162	0.1475 (0.0033)	0.2671 (0.0047)	0.4594 (0.0158)	0.0931 (0.0028)	997

Table 258: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5317	0.0053	0.0745 (0.0017)	-0.2183 (0.0024)	0.1760 (0.0120)	0.0532 (0.0010)	1000
Exp	0.2993	0.0020	0.0468 (0.0010)	-0.4507 (0.0015)	0.0000 (0.0000)	0.2053 (0.0013)	1000
Weibull	0.4032	0.0036	0.0616 (0.0014)	-0.3468 (0.0019)	0.0000 (0.0000)	0.1241 (0.0013)	1000
Gompertz	0.2997	0.0035	0.0506 (0.0014)	-0.4503 (0.0020)	0.0015 (0.0015)	0.2053 (0.0017)	661
RP (3)	0.5282	0.0052	0.0743 (0.0017)	-0.2218 (0.0023)	0.1670 (0.0118)	0.0547 (0.0010)	1000
RP (5)	0.5338	0.0053	0.0746 (0.0017)	-0.2162 (0.0024)	0.1820 (0.0122)	0.0523 (0.0010)	1000
RP (9)	0.5355	0.0053	0.0748 (0.0017)	-0.2145 (0.0024)	0.1890 (0.0124)	0.0516 (0.0010)	1000
RP (P)	0.5092	0.0049	0.0745 (0.0017)	-0.2408 (0.0024)	0.1121 (0.0100)	0.0635 (0.0011)	999
FP (W)	0.4032	0.0036	0.0616 (0.0014)	-0.3468 (0.0019)	0.0000 (0.0000)	0.1241 (0.0013)	1000
FP (k=10)	0.5294	0.0051	0.0735 (0.0016)	-0.2206 (0.0023)	0.1560 (0.0115)	0.0541 (0.0010)	1000
FP (k=10000)	0.5152	0.0024	0.0701 (0.0016)	-0.2348 (0.0022)	0.0421 (0.0064)	0.0601 (0.0010)	998
Model frailty: Normal							
Cox	0.6344	0.0098	0.1011 (0.0023)	-0.1156 (0.0032)	0.7110 (0.0143)	0.0236 (0.0008)	1000
Exp	0.3643	0.0031	0.0566 (0.0013)	-0.3857 (0.0018)	0.0000 (0.0000)	0.1520 (0.0014)	1000
Weibull	0.5564	0.0077	0.0856 (0.0019)	-0.1936 (0.0027)	0.3755 (0.0153)	0.0448 (0.0010)	996
Gompertz	0.3629	0.0054	0.0668 (0.0026)	-0.3871 (0.0036)	0.0178 (0.0072)	0.1543 (0.0025)	338
RP (3)	0.7484	0.0138	0.1207 (0.0027)	-0.0016 (0.0038)	0.9449 (0.0072)	0.0146 (0.0006)	999
RP (5)	0.7516	0.0139	0.1207 (0.0027)	0.0016 (0.0038)	0.9460 (0.0071)	0.0146 (0.0006)	1000
RP (9)	0.7528	0.0139	0.1209 (0.0027)	0.0028 (0.0038)	0.9470 (0.0071)	0.0146 (0.0006)	1000
RP (P)	0.7200	0.0130	0.1202 (0.0027)	-0.0300 (0.0038)	0.9150 (0.0088)	0.0153 (0.0006)	1000
FP (W)	0.5836	0.0098	0.1056 (0.0024)	-0.1664 (0.0033)	0.5641 (0.0157)	0.0388 (0.0011)	998
FP (k=10)	0.7505	0.0137	0.1206 (0.0027)	0.0005 (0.0038)	0.9450 (0.0072)	0.0145 (0.0006)	1000
FP (k=10000)	0.7489	0.0079	0.1184 (0.0026)	-0.0011 (0.0037)	0.8630 (0.0109)	0.0140 (0.0006)	1000

Table 259: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5373	0.0054	0.0731 (0.0016)	-0.2127 (0.0023)	0.2012 (0.0127)	0.0506 (0.0010)	999
Exp	0.1540	0.0014	0.0351 (0.0008)	-0.5960 (0.0011)	0.0000 (0.0000)	0.3564 (0.0013)	1000
Weibull	0.6795	0.0055	0.0728 (0.0016)	-0.0705 (0.0023)	0.8190 (0.0122)	0.0103 (0.0004)	1000
Gompertz	0.5166	0.0051	0.0758 (0.0017)	-0.2334 (0.0024)	0.1240 (0.0104)	0.0602 (0.0012)	1000
RP (3)	0.5410	0.0055	0.0734 (0.0016)	-0.2090 (0.0023)	0.2100 (0.0129)	0.0491 (0.0010)	1000
RP (5)	0.5397	0.0055	0.0734 (0.0016)	-0.2103 (0.0023)	0.2110 (0.0129)	0.0496 (0.0010)	1000
RP (9)	0.5411	0.0055	0.0734 (0.0016)	-0.2089 (0.0023)	0.2142 (0.0130)	0.0490 (0.0010)	999
RP (P)	0.5465	0.0055	0.0735 (0.0016)	-0.2035 (0.0023)	0.2310 (0.0133)	0.0468 (0.0010)	1000
FP (W)	0.6795	0.0055	0.0728 (0.0016)	-0.0705 (0.0023)	0.8190 (0.0122)	0.0103 (0.0004)	1000
FP (k=10)	0.5475	0.0056	0.0756 (0.0017)	-0.2025 (0.0024)	0.2500 (0.0137)	0.0467 (0.0010)	1000
FP (k=10000)	0.8920	0.0041	0.0951 (0.0021)	0.1420 (0.0030)	0.4101 (0.0156)	0.0292 (0.0010)	995
Model frailty: Normal							
Cox	0.6299	0.0098	0.0987 (0.0022)	-0.1201 (0.0031)	0.7160 (0.0143)	0.0241 (0.0008)	1000
Exp	0.1600	0.0016	0.0351 (0.0008)	-0.5900 (0.0011)	0.0000 (0.0000)	0.3493 (0.0013)	1000
Weibull	0.8452	0.0112	0.0949 (0.0021)	0.0952 (0.0030)	0.9176 (0.0087)	0.0181 (0.0008)	995
Gompertz	0.5148	0.0066	0.0703 (0.0016)	-0.2352 (0.0022)	0.1675 (0.0118)	0.0602 (0.0012)	997
RP (3)	0.7532	0.0140	0.1181 (0.0026)	0.0032 (0.0037)	0.9440 (0.0073)	0.0139 (0.0006)	1000
RP (5)	0.7491	0.0140	0.1186 (0.0027)	-0.0009 (0.0037)	0.9430 (0.0073)	0.0140 (0.0006)	1000
RP (9)	0.7498	0.0140	0.1187 (0.0027)	-0.0002 (0.0038)	0.9450 (0.0072)	0.0141 (0.0006)	1000
RP (P)	0.7506	0.0138	0.1172 (0.0026)	0.0006 (0.0037)	0.9450 (0.0072)	0.0137 (0.0006)	1000
FP (W)	0.9433	0.0152	0.1196 (0.0029)	0.1933 (0.0041)	0.6768 (0.0160)	0.0516 (0.0017)	857
FP (k=10)	0.7700	0.0139	0.1172 (0.0026)	0.0200 (0.0037)	0.9590 (0.0063)	0.0141 (0.0006)	1000
FP (k=10000)	1.4002	0.0175	0.1666 (0.0037)	0.6502 (0.0053)	0.0070 (0.0026)	0.4505 (0.0069)	1000

Table 260: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.5693	0.0067	0.0806 (0.0018)	-0.1807 (0.0025)	0.4010 (0.0155)	0.0391 (0.0009)	1000
Exp	0.7509	0.0053	0.0716 (0.0016)	0.0009 (0.0023)	0.9460 (0.0071)	0.0051 (0.0002)	1000
Weibull	0.5885	0.0060	0.0745 (0.0017)	-0.1615 (0.0024)	0.4260 (0.0156)	0.0316 (0.0008)	1000
Gompertz	0.7493	0.0082	0.0708 (0.0024)	-0.0007 (0.0033)	0.9889 (0.0049)	0.0050 (0.0004)	452
RP (3)	0.5723	0.0067	0.0807 (0.0018)	-0.1777 (0.0026)	0.4180 (0.0156)	0.0381 (0.0009)	1000
RP (5)	0.5724	0.0067	0.0808 (0.0018)	-0.1776 (0.0026)	0.4164 (0.0156)	0.0380 (0.0009)	999
RP (9)	0.5728	0.0067	0.0809 (0.0018)	-0.1772 (0.0026)	0.4190 (0.0156)	0.0379 (0.0009)	1000
RP (P)	0.5757	0.0066	0.0799 (0.0018)	-0.1743 (0.0025)	0.4240 (0.0156)	0.0368 (0.0009)	1000
FP (W)	0.5881	0.0059	0.0747 (0.0017)	-0.1619 (0.0024)	0.4229 (0.0157)	0.0318 (0.0008)	986
FP (k=10)	0.5725	0.0067	0.0811 (0.0018)	-0.1775 (0.0026)	0.4230 (0.0156)	0.0381 (0.0009)	1000
FP (k=10000)	0.5671	0.0041	0.0798 (0.0018)	-0.1829 (0.0025)	0.2442 (0.0136)	0.0398 (0.0009)	999
Model frailty: Normal							
Cox	0.6206	0.0101	0.0974 (0.0022)	-0.1294 (0.0031)	0.7050 (0.0144)	0.0262 (0.0008)	1000
Exp	0.9065	0.0090	0.0908 (0.0020)	0.1565 (0.0029)	0.6774 (0.0148)	0.0327 (0.0011)	992
Weibull	0.7040	0.0101	0.0880 (0.0020)	-0.0460 (0.0028)	0.9309 (0.0080)	0.0099 (0.0004)	999
Gompertz	0.8914	0.0138	0.0873 (0.0032)	0.1414 (0.0045)	0.8838 (0.0167)	0.0276 (0.0016)	370
RP (3)	0.7452	0.0150	0.1202 (0.0027)	-0.0048 (0.0038)	0.9470 (0.0071)	0.0145 (0.0007)	1000
RP (5)	0.7488	0.0151	0.1201 (0.0027)	-0.0012 (0.0038)	0.9500 (0.0069)	0.0144 (0.0007)	1000
RP (9)	0.7499	0.0151	0.1202 (0.0027)	-0.0001 (0.0038)	0.9500 (0.0069)	0.0144 (0.0007)	1000
RP (P)	0.7472	0.0149	0.1186 (0.0027)	-0.0028 (0.0038)	0.9510 (0.0068)	0.0141 (0.0006)	1000
FP (W)	0.7526	0.0134	0.1109 (0.0025)	0.0026 (0.0035)	0.9633 (0.0060)	0.0123 (0.0006)	981
FP (k=10)	0.7687	0.0155	0.1244 (0.0028)	0.0187 (0.0039)	0.9510 (0.0068)	0.0158 (0.0008)	999
FP (k=10000)	0.7260	0.0103	0.1183 (0.0026)	-0.0240 (0.0037)	0.8900 (0.0099)	0.0146 (0.0006)	1000

Table 261: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2510	0.0176	0.1371 (0.0031)	0.0010 (0.0043)	0.9399 (0.0075)	0.0188 (0.0009)	998
Exp	1.2487	0.0121	0.1099 (0.0025)	-0.0013 (0.0035)	0.9480 (0.0070)	0.0121 (0.0006)	1000
Weibull	1.2594	0.0162	0.1295 (0.0029)	0.0094 (0.0041)	0.9430 (0.0073)	0.0168 (0.0008)	1000
Gompertz	1.2439	0.0173	0.1145 (0.0038)	-0.0061 (0.0054)	0.9755 (0.0073)	0.0131 (0.0009)	449
RP (3)	1.2552	0.0177	0.1367 (0.0031)	0.0052 (0.0043)	0.9419 (0.0074)	0.0187 (0.0009)	998
RP (5)	1.2563	0.0178	0.1375 (0.0031)	0.0063 (0.0043)	0.9410 (0.0075)	0.0189 (0.0009)	1000
RP (9)	1.2566	0.0178	0.1375 (0.0031)	0.0066 (0.0043)	0.9400 (0.0075)	0.0189 (0.0009)	1000
RP (P)	1.2573	0.0166	0.1315 (0.0029)	0.0073 (0.0042)	0.9430 (0.0073)	0.0173 (0.0008)	1000
FP (W)	1.2595	0.0162	0.1296 (0.0029)	0.0095 (0.0041)	0.9429 (0.0073)	0.0169 (0.0008)	998
FP (k=10)	1.2497	0.0177	0.1368 (0.0031)	-0.0003 (0.0043)	0.9418 (0.0074)	0.0187 (0.0009)	996
FP (k=10000)	1.2511	0.0119	0.1361 (0.0030)	0.0011 (0.0043)	0.8830 (0.0102)	0.0185 (0.0009)	1000
Model frailty: Normal							
Cox	1.2893	0.0274	0.1672 (0.0037)	0.0393 (0.0053)	0.9440 (0.0073)	0.0295 (0.0014)	1000
Exp	1.3452	0.0183	0.1219 (0.0027)	0.0952 (0.0039)	0.9458 (0.0072)	0.0239 (0.0011)	997
Weibull	1.3846	0.0279	0.1538 (0.0034)	0.1346 (0.0049)	0.9369 (0.0077)	0.0417 (0.0018)	999
Gompertz	1.3430	0.0267	0.1147 (0.0047)	0.0930 (0.0066)	0.9934 (0.0046)	0.0217 (0.0016)	304
RP (3)	1.5742	0.0410	0.2012 (0.0045)	0.3242 (0.0064)	0.6820 (0.0147)	0.1455 (0.0047)	1000
RP (5)	1.5739	0.0410	0.2013 (0.0045)	0.3239 (0.0064)	0.6810 (0.0147)	0.1454 (0.0047)	1000
RP (9)	1.5738	0.0410	0.2011 (0.0045)	0.3238 (0.0064)	0.6800 (0.0148)	0.1453 (0.0047)	1000
RP (P)	1.5884	0.0395	0.1969 (0.0044)	0.3384 (0.0062)	0.6430 (0.0152)	0.1532 (0.0047)	1000
FP (W)	1.6049	0.0396	0.1943 (0.0044)	0.3549 (0.0062)	0.5994 (0.0157)	0.1637 (0.0049)	976
FP (k=10)	1.5756	0.0415	0.2019 (0.0045)	0.3256 (0.0064)	0.6784 (0.0148)	0.1468 (0.0048)	998
FP (k=10000)	1.5202	0.0322	0.1914 (0.0043)	0.2702 (0.0061)	0.7038 (0.0145)	0.1096 (0.0039)	996

Table 262: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2482	0.0206	0.1468 (0.0033)	-0.0018 (0.0046)	0.9419 (0.0074)	0.0215 (0.0010)	999
Exp	1.7278	0.0214	0.1568 (0.0035)	0.4778 (0.0050)	0.0880 (0.0090)	0.2528 (0.0049)	1000
Weibull	1.2633	0.0193	0.1444 (0.0032)	0.0133 (0.0046)	0.9410 (0.0075)	0.0210 (0.0010)	1000
Gompertz	1.7265	0.0292	0.1579 (0.0056)	0.4765 (0.0079)	0.1608 (0.0184)	0.2519 (0.0077)	398
RP (3)	1.2529	0.0206	0.1472 (0.0033)	0.0029 (0.0047)	0.9439 (0.0073)	0.0216 (0.0010)	998
RP (5)	1.2532	0.0206	0.1473 (0.0033)	0.0032 (0.0047)	0.9430 (0.0073)	0.0217 (0.0010)	1000
RP (9)	1.2538	0.0206	0.1473 (0.0033)	0.0038 (0.0047)	0.9420 (0.0074)	0.0217 (0.0010)	1000
RP (P)	1.2585	0.0198	0.1460 (0.0033)	0.0085 (0.0046)	0.9360 (0.0077)	0.0214 (0.0010)	1000
FP (W)	1.2633	0.0193	0.1444 (0.0032)	0.0133 (0.0046)	0.9410 (0.0075)	0.0210 (0.0010)	1000
FP (k=10)	1.2647	0.0208	0.1485 (0.0033)	0.0147 (0.0047)	0.9470 (0.0071)	0.0222 (0.0010)	1000
FP (k=10000)	1.3992	0.0170	0.1536 (0.0034)	0.1492 (0.0049)	0.7780 (0.0131)	0.0458 (0.0019)	1000
Model frailty: Normal							
Cox	1.2000	0.0258	0.1601 (0.0036)	-0.0500 (0.0051)	0.9140 (0.0089)	0.0281 (0.0012)	1000
Exp	1.9494	0.0358	0.1868 (0.0042)	0.6994 (0.0059)	0.0111 (0.0033)	0.5240 (0.0086)	993
Weibull	1.3293	0.0281	0.1545 (0.0035)	0.0793 (0.0049)	0.9629 (0.0060)	0.0301 (0.0015)	997
Gompertz	1.9481	0.0500	0.1796 (0.0075)	0.6981 (0.0107)	0.0176 (0.0078)	0.5194 (0.0155)	284
RP (3)	1.4875	0.0411	0.1981 (0.0044)	0.2375 (0.0063)	0.8360 (0.0117)	0.0956 (0.0038)	1000
RP (5)	1.4872	0.0411	0.1981 (0.0044)	0.2372 (0.0063)	0.8390 (0.0116)	0.0955 (0.0038)	1000
RP (9)	1.4875	0.0411	0.1978 (0.0044)	0.2375 (0.0063)	0.8390 (0.0116)	0.0955 (0.0038)	1000
RP (P)	1.5023	0.0402	0.1990 (0.0045)	0.2523 (0.0063)	0.8140 (0.0123)	0.1032 (0.0040)	1000
FP (W)	1.5221	0.0402	0.1968 (0.0045)	0.2721 (0.0063)	0.7854 (0.0132)	0.1127 (0.0042)	974
FP (k=10)	1.5490	0.0429	0.2030 (0.0045)	0.2990 (0.0064)	0.7380 (0.0139)	0.1306 (0.0045)	1000
FP (k=10000)	1.7346	0.0406	0.2064 (0.0046)	0.4846 (0.0065)	0.3236 (0.0148)	0.2774 (0.0068)	998

Table 263: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2469	0.0147	0.1205 (0.0027)	-0.0031 (0.0038)	0.9559 (0.0065)	0.0145 (0.0007)	998
Exp	0.8549	0.0065	0.0808 (0.0018)	-0.3951 (0.0026)	0.0060 (0.0024)	0.1626 (0.0020)	1000
Weibull	1.0893	0.0115	0.1035 (0.0023)	-0.1607 (0.0033)	0.6560 (0.0150)	0.0365 (0.0011)	1000
Gompertz	0.8565	0.0100	0.0815 (0.0025)	-0.3935 (0.0035)	0.0182 (0.0057)	0.1615 (0.0027)	549
RP (3)	1.2472	0.0147	0.1205 (0.0027)	-0.0028 (0.0038)	0.9520 (0.0068)	0.0145 (0.0007)	1000
RP (5)	1.2514	0.0148	0.1207 (0.0027)	0.0014 (0.0038)	0.9530 (0.0067)	0.0146 (0.0007)	1000
RP (9)	1.2526	0.0148	0.1209 (0.0027)	0.0026 (0.0038)	0.9550 (0.0066)	0.0146 (0.0007)	1000
RP (P)	1.2151	0.0139	0.1187 (0.0027)	-0.0349 (0.0038)	0.9300 (0.0081)	0.0153 (0.0007)	1000
FP (W)	1.0893	0.0115	0.1035 (0.0023)	-0.1607 (0.0033)	0.6560 (0.0150)	0.0365 (0.0011)	1000
FP (k=10)	1.2455	0.0146	0.1200 (0.0027)	-0.0045 (0.0038)	0.9549 (0.0066)	0.0144 (0.0007)	998
FP (k=10000)	1.2324	0.0086	0.1162 (0.0026)	-0.0176 (0.0037)	0.8670 (0.0107)	0.0138 (0.0006)	1000
Model frailty: Normal							
Cox	1.4177	0.0301	0.1711 (0.0038)	0.1677 (0.0054)	0.8860 (0.0101)	0.0574 (0.0026)	1000
Exp	0.9275	0.0096	0.0916 (0.0021)	-0.3225 (0.0029)	0.1124 (0.0100)	0.1124 (0.0018)	996
Weibull	1.3063	0.0241	0.1426 (0.0032)	0.0563 (0.0045)	0.9668 (0.0057)	0.0235 (0.0012)	994
Gompertz	0.9180	0.0146	0.0907 (0.0031)	-0.3320 (0.0043)	0.1693 (0.0178)	0.1184 (0.0028)	443
RP (3)	1.6894	0.0414	0.1985 (0.0044)	0.4394 (0.0063)	0.4270 (0.0156)	0.2324 (0.0062)	1000
RP (5)	1.6908	0.0415	0.1983 (0.0044)	0.4408 (0.0063)	0.4250 (0.0156)	0.2336 (0.0063)	1000
RP (9)	1.6915	0.0415	0.1984 (0.0044)	0.4415 (0.0063)	0.4250 (0.0156)	0.2342 (0.0063)	1000
RP (P)	1.6410	0.0387	0.1947 (0.0044)	0.3910 (0.0062)	0.5140 (0.0158)	0.1908 (0.0055)	1000
FP (W)	1.5180	0.0338	0.1776 (0.0040)	0.2680 (0.0056)	0.7401 (0.0139)	0.1034 (0.0037)	989
FP (k=10)	1.6932	0.0420	0.1974 (0.0044)	0.4432 (0.0063)	0.4223 (0.0156)	0.2354 (0.0062)	997
FP (k=10000)	1.6874	0.0318	0.2001 (0.0045)	0.4374 (0.0063)	0.3043 (0.0146)	0.2314 (0.0063)	999

Table 264: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2452	0.0153	0.1192 (0.0027)	-0.0048 (0.0038)	0.9527 (0.0067)	0.0142 (0.0006)	994
Exp	0.6538	0.0052	0.0657 (0.0015)	-0.5962 (0.0021)	0.0000 (0.0000)	0.3597 (0.0025)	1000
Weibull	1.4324	0.0157	0.1222 (0.0027)	0.1824 (0.0039)	0.7400 (0.0139)	0.0482 (0.0017)	1000
Gompertz	0.6497	0.0082	0.0663 (0.0019)	-0.6003 (0.0027)	0.0000 (0.0000)	0.3647 (0.0032)	603
RP (3)	1.2545	0.0154	0.1194 (0.0027)	0.0045 (0.0038)	0.9600 (0.0062)	0.0143 (0.0007)	1000
RP (5)	1.2503	0.0154	0.1194 (0.0027)	0.0003 (0.0038)	0.9550 (0.0066)	0.0142 (0.0007)	999
RP (9)	1.2510	0.0154	0.1194 (0.0027)	0.0010 (0.0038)	0.9580 (0.0063)	0.0143 (0.0007)	1000
RP (P)	1.2589	0.0154	0.1199 (0.0027)	0.0089 (0.0038)	0.9540 (0.0066)	0.0144 (0.0007)	1000
FP (W)	1.4325	0.0157	0.1223 (0.0027)	0.1825 (0.0039)	0.7395 (0.0139)	0.0483 (0.0017)	998
FP (k=10)	1.2476	0.0154	0.1200 (0.0027)	-0.0024 (0.0038)	0.9530 (0.0067)	0.0144 (0.0007)	999
FP (k=10000)	1.7163	0.0127	0.1571 (0.0035)	0.4663 (0.0050)	0.0460 (0.0066)	0.2421 (0.0048)	1000
Model frailty: Normal							
Cox	1.3805	0.0291	0.1645 (0.0037)	0.1305 (0.0052)	0.9150 (0.0088)	0.0441 (0.0020)	1000
Exp	0.6226	0.0058	0.0605 (0.0014)	-0.6274 (0.0019)	0.0000 (0.0000)	0.3973 (0.0024)	999
Weibull	1.6575	0.0344	0.1656 (0.0037)	0.4075 (0.0053)	0.3625 (0.0153)	0.1934 (0.0047)	993
Gompertz	0.6166	0.0089	0.0591 (0.0018)	-0.6334 (0.0025)	0.0000 (0.0000)	0.4047 (0.0032)	542
RP (3)	1.6624	0.0411	0.1914 (0.0043)	0.4124 (0.0061)	0.4650 (0.0158)	0.2067 (0.0055)	1000
RP (5)	1.6565	0.0410	0.1923 (0.0043)	0.4065 (0.0061)	0.4770 (0.0158)	0.2021 (0.0055)	1000
RP (9)	1.6566	0.0411	0.1924 (0.0043)	0.4066 (0.0061)	0.4775 (0.0158)	0.2023 (0.0055)	999
RP (P)	1.6547	0.0408	0.1909 (0.0043)	0.4047 (0.0060)	0.4770 (0.0158)	0.2002 (0.0054)	1000
FP (W)	1.9411	0.0473	0.2019 (0.0045)	0.6911 (0.0064)	0.0441 (0.0065)	0.5183 (0.0094)	998
FP (k=10)	1.6683	0.0416	0.1917 (0.0043)	0.4183 (0.0061)	0.4523 (0.0159)	0.2117 (0.0056)	986
FP (k=10000)	2.5858	0.0575	0.2545 (0.0057)	1.3358 (0.0081)	0.0000 (0.0000)	1.8492 (0.0214)	999

Table 265: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2528	0.0189	0.1358 (0.0030)	0.0028 (0.0043)	0.9468 (0.0071)	0.0184 (0.0008)	997
Exp	1.4559	0.0154	0.1230 (0.0028)	0.2059 (0.0039)	0.6470 (0.0151)	0.0575 (0.0019)	1000
Weibull	1.2850	0.0175	0.1292 (0.0029)	0.0350 (0.0041)	0.9570 (0.0064)	0.0179 (0.0008)	1000
Gompertz	1.4491	0.0216	0.1270 (0.0046)	0.1991 (0.0064)	0.7974 (0.0204)	0.0557 (0.0031)	390
RP (3)	1.2560	0.0189	0.1359 (0.0030)	0.0060 (0.0043)	0.9500 (0.0069)	0.0185 (0.0008)	1000
RP (5)	1.2581	0.0190	0.1364 (0.0031)	0.0081 (0.0043)	0.9520 (0.0068)	0.0186 (0.0008)	1000
RP (9)	1.2587	0.0190	0.1366 (0.0031)	0.0087 (0.0043)	0.9510 (0.0068)	0.0187 (0.0008)	1000
RP (P)	1.2623	0.0188	0.1350 (0.0030)	0.0123 (0.0043)	0.9580 (0.0063)	0.0184 (0.0008)	1000
FP (W)	1.2850	0.0175	0.1292 (0.0029)	0.0350 (0.0041)	0.9570 (0.0064)	0.0179 (0.0008)	1000
FP (k=10)	1.2538	0.0189	0.1362 (0.0031)	0.0038 (0.0043)	0.9476 (0.0071)	0.0185 (0.0008)	992
FP (k=10000)	1.2256	0.0131	0.1314 (0.0029)	-0.0244 (0.0042)	0.8990 (0.0095)	0.0178 (0.0008)	1000
Model frailty: Normal							
Cox	1.2549	0.0268	0.1578 (0.0035)	0.0049 (0.0050)	0.9470 (0.0071)	0.0249 (0.0011)	1000
Exp	1.5922	0.0245	0.1446 (0.0033)	0.3422 (0.0046)	0.4105 (0.0156)	0.1380 (0.0035)	989
Weibull	1.3653	0.0279	0.1460 (0.0033)	0.1153 (0.0046)	0.9529 (0.0067)	0.0346 (0.0016)	998
Gompertz	1.5940	0.0359	0.1535 (0.0066)	0.3440 (0.0094)	0.6269 (0.0295)	0.1419 (0.0074)	268
RP (3)	1.5368	0.0411	0.1923 (0.0043)	0.2868 (0.0061)	0.7590 (0.0135)	0.1192 (0.0041)	1000
RP (5)	1.5414	0.0412	0.1925 (0.0043)	0.2914 (0.0061)	0.7530 (0.0136)	0.1219 (0.0042)	1000
RP (9)	1.5424	0.0412	0.1926 (0.0043)	0.2924 (0.0061)	0.7530 (0.0136)	0.1226 (0.0042)	1000
RP (P)	1.5387	0.0409	0.1910 (0.0043)	0.2887 (0.0060)	0.7500 (0.0137)	0.1198 (0.0041)	1000
FP (W)	1.5771	0.0399	0.1878 (0.0043)	0.3271 (0.0060)	0.6777 (0.0150)	0.1422 (0.0045)	965
FP (k=10)	1.5682	0.0425	0.1973 (0.0044)	0.3182 (0.0062)	0.7182 (0.0142)	0.1401 (0.0046)	997
FP (k=10000)	1.4554	0.0315	0.1802 (0.0040)	0.2054 (0.0057)	0.8330 (0.0118)	0.0746 (0.0031)	1000

Table 266: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.8663	0.0098	0.0927 (0.0021)	-0.3837 (0.0029)	0.0430 (0.0064)	0.1558 (0.0022)	999
Exp	0.9358	0.0065	0.0799 (0.0018)	-0.3142 (0.0025)	0.0430 (0.0064)	0.1051 (0.0016)	1000
Weibull	0.8635	0.0087	0.0871 (0.0019)	-0.3865 (0.0028)	0.0260 (0.0050)	0.1570 (0.0021)	1000
Gompertz	0.9347	0.0102	0.0801 (0.0027)	-0.3153 (0.0038)	0.1029 (0.0144)	0.1058 (0.0024)	447
RP (3)	0.8694	0.0098	0.0925 (0.0021)	-0.3806 (0.0029)	0.0470 (0.0067)	0.1534 (0.0022)	999
RP (5)	0.8705	0.0098	0.0930 (0.0021)	-0.3795 (0.0029)	0.0490 (0.0068)	0.1526 (0.0022)	1000
RP (9)	0.8710	0.0099	0.0930 (0.0021)	-0.3790 (0.0029)	0.0480 (0.0068)	0.1523 (0.0022)	1000
RP (P)	0.8666	0.0091	0.0894 (0.0020)	-0.3834 (0.0028)	0.0310 (0.0055)	0.1550 (0.0021)	1000
FP (W)	0.8635	0.0087	0.0867 (0.0020)	-0.3865 (0.0028)	0.0253 (0.0050)	0.1569 (0.0021)	988
FP (k=10)	0.8710	0.0098	0.0930 (0.0021)	-0.3790 (0.0029)	0.0470 (0.0067)	0.1522 (0.0022)	1000
FP (k=10000)	0.8989	0.0057	0.0927 (0.0021)	-0.3511 (0.0029)	0.0310 (0.0055)	0.1318 (0.0021)	1000
Model frailty: Normal							
Cox	1.0420	0.0201	0.1314 (0.0029)	-0.2080 (0.0042)	0.6580 (0.0150)	0.0605 (0.0018)	1000
Exp	1.1478	0.0119	0.1032 (0.0023)	-0.1022 (0.0033)	0.8302 (0.0119)	0.0211 (0.0008)	995
Weibull	1.1059	0.0187	0.1189 (0.0027)	-0.1441 (0.0038)	0.8138 (0.0123)	0.0349 (0.0012)	999
Gompertz	1.1472	0.0185	0.0953 (0.0053)	-0.1028 (0.0074)	0.9394 (0.0186)	0.0196 (0.0017)	165
RP (3)	1.2561	0.0278	0.1565 (0.0035)	0.0061 (0.0049)	0.9520 (0.0068)	0.0245 (0.0012)	1000
RP (5)	1.2556	0.0278	0.1565 (0.0035)	0.0056 (0.0049)	0.9530 (0.0067)	0.0245 (0.0012)	1000
RP (9)	1.2556	0.0278	0.1564 (0.0035)	0.0056 (0.0049)	0.9540 (0.0066)	0.0245 (0.0012)	999
RP (P)	1.2628	0.0265	0.1522 (0.0034)	0.0128 (0.0048)	0.9610 (0.0061)	0.0233 (0.0011)	1000
FP (W)	1.2681	0.0262	0.1498 (0.0035)	0.0181 (0.0049)	0.9624 (0.0062)	0.0227 (0.0012)	930
FP (k=10)	1.2532	0.0274	0.1537 (0.0035)	0.0032 (0.0049)	0.9521 (0.0068)	0.0236 (0.0011)	981
FP (k=10000)	1.2495	0.0182	0.1484 (0.0033)	-0.0005 (0.0047)	0.9110 (0.0090)	0.0220 (0.0010)	1000

Table 267: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.9045	0.0114	0.1114 (0.0025)	-0.3455 (0.0035)	0.1381 (0.0109)	0.1318 (0.0024)	999
Exp	1.4474	0.0125	0.1226 (0.0027)	0.1974 (0.0039)	0.5900 (0.0156)	0.0540 (0.0018)	1000
Weibull	0.9170	0.0105	0.1045 (0.0023)	-0.3330 (0.0033)	0.1320 (0.0107)	0.1218 (0.0022)	1000
Gompertz	1.4402	0.0181	0.1304 (0.0049)	0.1902 (0.0069)	0.7348 (0.0232)	0.0531 (0.0032)	362
RP (3)	0.9084	0.0115	0.1122 (0.0025)	-0.3416 (0.0035)	0.1440 (0.0111)	0.1293 (0.0024)	1000
RP (5)	0.9092	0.0115	0.1121 (0.0025)	-0.3408 (0.0035)	0.1451 (0.0111)	0.1287 (0.0024)	999
RP (9)	0.9097	0.0115	0.1122 (0.0025)	-0.3403 (0.0035)	0.1440 (0.0111)	0.1283 (0.0024)	1000
RP (P)	0.9113	0.0112	0.1105 (0.0025)	-0.3387 (0.0035)	0.1440 (0.0111)	0.1269 (0.0024)	1000
FP (W)	0.9169	0.0105	0.1045 (0.0023)	-0.3331 (0.0033)	0.1321 (0.0107)	0.1218 (0.0022)	999
FP (k=10)	0.9560	0.0121	0.1184 (0.0026)	-0.2940 (0.0037)	0.2760 (0.0141)	0.1005 (0.0022)	1000
FP (k=10000)	1.1530	0.0090	0.1263 (0.0028)	-0.0970 (0.0040)	0.7190 (0.0142)	0.0253 (0.0010)	1000
Model frailty: Normal							
Cox	1.0287	0.0206	0.1462 (0.0033)	-0.2213 (0.0046)	0.6090 (0.0154)	0.0703 (0.0021)	1000
Exp	1.8925	0.0271	0.1743 (0.0039)	0.6425 (0.0055)	0.0131 (0.0036)	0.4431 (0.0075)	989
Weibull	1.1246	0.0202	0.1332 (0.0030)	-0.1254 (0.0042)	0.8448 (0.0115)	0.0334 (0.0012)	999
Gompertz	1.8685	0.0389	0.1608 (0.0068)	0.6185 (0.0096)	0.0360 (0.0112)	0.4084 (0.0124)	278
RP (3)	1.2584	0.0295	0.1778 (0.0040)	0.0084 (0.0056)	0.9330 (0.0079)	0.0317 (0.0016)	1000
RP (5)	1.2571	0.0295	0.1773 (0.0040)	0.0071 (0.0056)	0.9330 (0.0079)	0.0315 (0.0016)	1000
RP (9)	1.2566	0.0295	0.1771 (0.0040)	0.0066 (0.0056)	0.9340 (0.0079)	0.0314 (0.0016)	1000
RP (P)	1.2670	0.0290	0.1765 (0.0039)	0.0170 (0.0056)	0.9360 (0.0077)	0.0314 (0.0016)	1000
FP (W)	1.2885	0.0286	0.1716 (0.0039)	0.0385 (0.0055)	0.9417 (0.0076)	0.0309 (0.0017)	961
FP (k=10)	1.4020	0.0321	0.1928 (0.0043)	0.1520 (0.0061)	0.8849 (0.0101)	0.0602 (0.0028)	999
FP (k=10000)	1.6932	0.0296	0.1999 (0.0045)	0.4432 (0.0063)	0.2625 (0.0139)	0.2363 (0.0061)	998

Table 268: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.8146	0.0082	0.0876 (0.0020)	-0.4354 (0.0028)	0.0040 (0.0020)	0.1972 (0.0024)	998
Exp	0.5655	0.0034	0.0585 (0.0013)	-0.6845 (0.0019)	0.0000 (0.0000)	0.4720 (0.0025)	1000
Weibull	0.6582	0.0059	0.0742 (0.0017)	-0.5918 (0.0023)	0.0000 (0.0000)	0.3557 (0.0028)	1000
Gompertz	0.5623	0.0058	0.0595 (0.0018)	-0.6877 (0.0026)	0.0000 (0.0000)	0.4764 (0.0035)	542
RP (3)	0.8110	0.0081	0.0879 (0.0020)	-0.4390 (0.0028)	0.0040 (0.0020)	0.2005 (0.0024)	1000
RP (5)	0.8174	0.0082	0.0879 (0.0020)	-0.4326 (0.0028)	0.0050 (0.0022)	0.1948 (0.0024)	1000
RP (9)	0.8191	0.0082	0.0880 (0.0020)	-0.4309 (0.0028)	0.0050 (0.0022)	0.1934 (0.0024)	1000
RP (P)	0.7920	0.0078	0.0868 (0.0019)	-0.4580 (0.0027)	0.0030 (0.0017)	0.2173 (0.0025)	1000
FP (W)	0.6582	0.0059	0.0742 (0.0017)	-0.5918 (0.0023)	0.0000 (0.0000)	0.3557 (0.0028)	1000
FP (k=10)	0.8123	0.0079	0.0860 (0.0019)	-0.4377 (0.0027)	0.0030 (0.0017)	0.1990 (0.0024)	1000
FP (k=10000)	0.8079	0.0040	0.0829 (0.0019)	-0.4421 (0.0026)	0.0000 (0.0000)	0.2023 (0.0023)	997
Model frailty: Normal							
Cox	1.0517	0.0196	0.1368 (0.0031)	-0.1983 (0.0043)	0.6660 (0.0149)	0.0580 (0.0018)	1000
Exp	0.7068	0.0060	0.0752 (0.0017)	-0.5432 (0.0024)	0.0000 (0.0000)	0.3007 (0.0026)	997
Weibull	0.9410	0.0150	0.1160 (0.0026)	-0.3090 (0.0037)	0.2856 (0.0143)	0.1089 (0.0023)	991
Gompertz	0.7011	0.0100	0.0783 (0.0025)	-0.5489 (0.0036)	0.0000 (0.0000)	0.3074 (0.0039)	486
RP (3)	1.2449	0.0260	0.1595 (0.0036)	-0.0051 (0.0050)	0.9520 (0.0068)	0.0255 (0.0011)	999
RP (5)	1.2479	0.0260	0.1592 (0.0036)	-0.0021 (0.0050)	0.9510 (0.0068)	0.0253 (0.0011)	1000
RP (9)	1.2486	0.0260	0.1591 (0.0036)	-0.0014 (0.0050)	0.9510 (0.0068)	0.0253 (0.0011)	1000
RP (P)	1.2147	0.0248	0.1569 (0.0035)	-0.0353 (0.0050)	0.9270 (0.0082)	0.0258 (0.0011)	1000
FP (W)	1.0628	0.0206	0.1490 (0.0035)	-0.1872 (0.0049)	0.6884 (0.0153)	0.0572 (0.0019)	921
FP (k=10)	1.2467	0.0257	0.1576 (0.0035)	-0.0033 (0.0050)	0.9530 (0.0067)	0.0248 (0.0010)	1000
FP (k=10000)	1.2550	0.0154	0.1533 (0.0034)	0.0050 (0.0048)	0.8840 (0.0101)	0.0235 (0.0010)	1000

Table 269: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.8242	0.0085	0.0935 (0.0021)	-0.4258 (0.0030)	0.0130 (0.0036)	0.1901 (0.0025)	999
Exp	0.3412	0.0022	0.0461 (0.0010)	-0.9088 (0.0015)	0.0000 (0.0000)	0.8280 (0.0026)	1000
Weibull	0.9664	0.0083	0.0915 (0.0020)	-0.2836 (0.0029)	0.1520 (0.0114)	0.0888 (0.0016)	1000
Gompertz	0.3614	0.0043	0.0961 (0.0025)	-0.8886 (0.0036)	0.0000 (0.0000)	0.7988 (0.0054)	727
RP (3)	0.8293	0.0085	0.0944 (0.0021)	-0.4207 (0.0030)	0.0160 (0.0040)	0.1859 (0.0025)	1000
RP (5)	0.8277	0.0085	0.0938 (0.0021)	-0.4223 (0.0030)	0.0150 (0.0038)	0.1871 (0.0025)	1000
RP (9)	0.8292	0.0085	0.0940 (0.0021)	-0.4208 (0.0030)	0.0150 (0.0038)	0.1859 (0.0025)	999
RP (P)	0.8345	0.0085	0.0937 (0.0021)	-0.4155 (0.0030)	0.0170 (0.0041)	0.1814 (0.0024)	999
FP (W)	0.9664	0.0083	0.0913 (0.0021)	-0.2836 (0.0029)	0.1505 (0.0114)	0.0888 (0.0016)	990
FP (k=10)	0.8407	0.0087	0.0977 (0.0022)	-0.4093 (0.0031)	0.0240 (0.0048)	0.1771 (0.0025)	1000
FP (k=10000)	1.2162	0.0061	0.1208 (0.0027)	-0.0338 (0.0038)	0.7758 (0.0132)	0.0157 (0.0007)	999
Model frailty: Normal							
Cox	1.0475	0.0197	0.1413 (0.0032)	-0.2025 (0.0045)	0.6500 (0.0151)	0.0609 (0.0019)	1000
Exp	0.3552	0.0028	0.0468 (0.0010)	-0.8948 (0.0015)	0.0000 (0.0000)	0.8029 (0.0026)	997
Weibull	1.2498	0.0205	0.1336 (0.0030)	-0.0002 (0.0042)	0.9589 (0.0063)	0.0178 (0.0008)	998
Gompertz	0.3736	0.0051	0.0978 (0.0027)	-0.8764 (0.0038)	0.0000 (0.0000)	0.7777 (0.0057)	660
RP (3)	1.2492	0.0263	0.1651 (0.0037)	-0.0008 (0.0052)	0.9430 (0.0073)	0.0272 (0.0012)	1000
RP (5)	1.2469	0.0263	0.1650 (0.0037)	-0.0031 (0.0052)	0.9429 (0.0073)	0.0272 (0.0012)	999
RP (9)	1.2479	0.0263	0.1650 (0.0037)	-0.0021 (0.0052)	0.9420 (0.0074)	0.0272 (0.0012)	1000
RP (P)	1.2416	0.0260	0.1625 (0.0036)	-0.0084 (0.0051)	0.9420 (0.0074)	0.0264 (0.0012)	1000
FP (W)	1.4402	0.0281	0.1739 (0.0045)	0.1902 (0.0063)	0.8309 (0.0136)	0.0664 (0.0030)	757
FP (k=10)	1.2729	0.0262	0.1619 (0.0036)	0.0229 (0.0051)	0.9469 (0.0071)	0.0267 (0.0012)	999
FP (k=10000)	2.0845	0.0328	0.2203 (0.0049)	0.8345 (0.0070)	0.0090 (0.0030)	0.7449 (0.0118)	1000

Table 270: Simulation results for frailty variance, scenario with 750 clusters of 2 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.8762	0.0104	0.1059 (0.0024)	-0.3738 (0.0033)	0.0800 (0.0086)	0.1509 (0.0025)	1000
Exp	1.1205	0.0083	0.0948 (0.0021)	-0.1295 (0.0030)	0.6760 (0.0148)	0.0257 (0.0008)	1000
Weibull	0.8756	0.0091	0.0982 (0.0022)	-0.3744 (0.0031)	0.0450 (0.0066)	0.1498 (0.0023)	1000
Gompertz	1.1178	0.0128	0.1012 (0.0035)	-0.1322 (0.0049)	0.7643 (0.0207)	0.0277 (0.0013)	420
RP (3)	0.8802	0.0104	0.1062 (0.0024)	-0.3698 (0.0034)	0.0851 (0.0088)	0.1480 (0.0024)	999
RP (5)	0.8805	0.0104	0.1063 (0.0024)	-0.3695 (0.0034)	0.0840 (0.0088)	0.1478 (0.0024)	1000
RP (9)	0.8809	0.0104	0.1064 (0.0024)	-0.3691 (0.0034)	0.0840 (0.0088)	0.1475 (0.0024)	1000
RP (P)	0.8811	0.0103	0.1053 (0.0024)	-0.3689 (0.0033)	0.0810 (0.0086)	0.1472 (0.0024)	1000
FP (W)	0.8757	0.0091	0.0984 (0.0022)	-0.3743 (0.0031)	0.0456 (0.0066)	0.1498 (0.0023)	986
FP (k=10)	0.8914	0.0105	0.1068 (0.0024)	-0.3586 (0.0034)	0.0920 (0.0091)	0.1400 (0.0024)	1000
FP (k=10000)	0.9037	0.0064	0.1026 (0.0023)	-0.3463 (0.0032)	0.0520 (0.0070)	0.1304 (0.0022)	1000
Model frailty: Normal							
Cox	1.0277	0.0201	0.1431 (0.0032)	-0.2223 (0.0045)	0.6130 (0.0154)	0.0699 (0.0020)	1000
Exp	1.4095	0.0167	0.1283 (0.0029)	0.1595 (0.0041)	0.8052 (0.0126)	0.0419 (0.0016)	991
Weibull	1.0790	0.0184	0.1272 (0.0029)	-0.1710 (0.0040)	0.7382 (0.0140)	0.0454 (0.0014)	993
Gompertz	1.4107	0.0258	0.1350 (0.0085)	0.1607 (0.0120)	0.8976 (0.0269)	0.0439 (0.0047)	127
RP (3)	1.2439	0.0282	0.1723 (0.0039)	-0.0061 (0.0054)	0.9420 (0.0074)	0.0297 (0.0015)	1000
RP (5)	1.2456	0.0282	0.1718 (0.0038)	-0.0044 (0.0054)	0.9430 (0.0073)	0.0295 (0.0015)	1000
RP (9)	1.2463	0.0282	0.1716 (0.0038)	-0.0037 (0.0054)	0.9420 (0.0074)	0.0294 (0.0015)	1000
RP (P)	1.2408	0.0279	0.1704 (0.0038)	-0.0092 (0.0054)	0.9430 (0.0073)	0.0291 (0.0015)	1000
FP (W)	1.2327	0.0259	0.1656 (0.0039)	-0.0173 (0.0054)	0.9361 (0.0080)	0.0277 (0.0014)	924
FP (k=10)	1.3070	0.0296	0.1785 (0.0040)	0.0570 (0.0057)	0.9395 (0.0076)	0.0351 (0.0019)	992
FP (k=10000)	1.2541	0.0196	0.1612 (0.0036)	0.0041 (0.0051)	0.9140 (0.0089)	0.0260 (0.0013)	1000

Table 271: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2500	0.0029	0.0531 (0.0012)	0.0000 (0.0017)	0.9349 (0.0078)	0.0028 (0.0001)	999
Exp	0.2505	0.0027	0.0506 (0.0011)	0.0005 (0.0016)	0.9450 (0.0072)	0.0026 (0.0001)	1000
Weibull	0.2514	0.0029	0.0524 (0.0012)	0.0014 (0.0017)	0.9360 (0.0077)	0.0027 (0.0001)	1000
Gompertz	0.2474	0.0029	0.0516 (0.0016)	-0.0026 (0.0023)	0.9428 (0.0103)	0.0027 (0.0002)	507
RP (3)	0.2506	0.0029	0.0532 (0.0012)	0.0006 (0.0017)	0.9369 (0.0077)	0.0028 (0.0001)	999
RP (5)	0.2508	0.0029	0.0532 (0.0012)	0.0008 (0.0017)	0.9369 (0.0077)	0.0028 (0.0001)	999
RP (9)	0.2509	0.0029	0.0532 (0.0012)	0.0009 (0.0017)	0.9379 (0.0076)	0.0028 (0.0001)	999
RP (P)	0.2510	0.0029	0.0527 (0.0012)	0.0010 (0.0017)	0.9350 (0.0078)	0.0028 (0.0001)	1000
FP (W)	0.2514	0.0029	0.0524 (0.0012)	0.0014 (0.0017)	0.9360 (0.0077)	0.0027 (0.0001)	1000
FP (k=10)	0.2498	0.0029	0.0531 (0.0012)	-0.0002 (0.0017)	0.9370 (0.0077)	0.0028 (0.0001)	1000
FP (k=10000)	0.2500	0.0027	0.0531 (0.0012)	-0.0000 (0.0017)	0.9310 (0.0080)	0.0028 (0.0001)	1000
Model frailty: Normal							
Cox	0.2697	0.0039	0.0613 (0.0014)	0.0197 (0.0019)	0.9520 (0.0068)	0.0041 (0.0002)	1000
Exp	0.2677	0.0035	0.0575 (0.0013)	0.0177 (0.0018)	0.9590 (0.0063)	0.0036 (0.0002)	1000
Weibull	0.2697	0.0037	0.0599 (0.0013)	0.0197 (0.0019)	0.9579 (0.0064)	0.0040 (0.0002)	997
Gompertz	0.2646	0.0037	0.0568 (0.0018)	0.0146 (0.0026)	0.9628 (0.0086)	0.0034 (0.0002)	484
RP (3)	0.2731	0.0039	0.0621 (0.0014)	0.0231 (0.0020)	0.9570 (0.0064)	0.0044 (0.0002)	1000
RP (5)	0.2731	0.0039	0.0621 (0.0014)	0.0231 (0.0020)	0.9580 (0.0063)	0.0044 (0.0002)	1000
RP (9)	0.2732	0.0039	0.0621 (0.0014)	0.0232 (0.0020)	0.9580 (0.0063)	0.0044 (0.0002)	1000
RP (P)	0.2735	0.0039	0.0615 (0.0014)	0.0235 (0.0019)	0.9610 (0.0061)	0.0043 (0.0002)	1000
FP (W)	0.2740	0.0039	0.0613 (0.0014)	0.0240 (0.0020)	0.9622 (0.0061)	0.0043 (0.0002)	979
FP (k=10)	0.2730	0.0039	0.0621 (0.0014)	0.0230 (0.0020)	0.9580 (0.0063)	0.0044 (0.0002)	1000
FP (k=10000)	0.2726	0.0038	0.0620 (0.0014)	0.0226 (0.0020)	0.9500 (0.0069)	0.0043 (0.0002)	1000

Table 272: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2487	0.0032	0.0566 (0.0013)	-0.0013 (0.0018)	0.9369 (0.0077)	0.0032 (0.0001)	999
Exp	0.3205	0.0041	0.0641 (0.0014)	0.0705 (0.0020)	0.8580 (0.0110)	0.0091 (0.0004)	1000
Weibull	0.2504	0.0032	0.0562 (0.0013)	0.0004 (0.0018)	0.9380 (0.0076)	0.0032 (0.0001)	1000
Gompertz	0.3181	0.0043	0.0682 (0.0024)	0.0681 (0.0034)	0.8750 (0.0164)	0.0093 (0.0006)	408
RP (3)	0.2492	0.0032	0.0567 (0.0013)	-0.0008 (0.0018)	0.9370 (0.0077)	0.0032 (0.0001)	1000
RP (5)	0.2492	0.0032	0.0567 (0.0013)	-0.0008 (0.0018)	0.9379 (0.0076)	0.0032 (0.0001)	999
RP (9)	0.2494	0.0032	0.0568 (0.0013)	-0.0006 (0.0018)	0.9360 (0.0077)	0.0032 (0.0001)	1000
RP (P)	0.2498	0.0032	0.0566 (0.0013)	-0.0002 (0.0018)	0.9390 (0.0076)	0.0032 (0.0001)	1000
FP (W)	0.2504	0.0032	0.0562 (0.0013)	0.0004 (0.0018)	0.9380 (0.0076)	0.0032 (0.0001)	1000
FP (k=10)	0.2497	0.0032	0.0569 (0.0013)	-0.0003 (0.0018)	0.9390 (0.0076)	0.0032 (0.0001)	1000
FP (k=10000)	0.2620	0.0032	0.0584 (0.0013)	0.0120 (0.0018)	0.9439 (0.0073)	0.0036 (0.0002)	998
Model frailty: Normal							
Cox	0.2624	0.0041	0.0633 (0.0014)	0.0124 (0.0020)	0.9480 (0.0070)	0.0042 (0.0002)	1000
Exp	0.3458	0.0055	0.0738 (0.0017)	0.0958 (0.0023)	0.8213 (0.0121)	0.0146 (0.0006)	996
Weibull	0.2628	0.0039	0.0620 (0.0014)	0.0128 (0.0020)	0.9548 (0.0066)	0.0040 (0.0002)	996
Gompertz	0.3459	0.0057	0.0758 (0.0027)	0.0959 (0.0038)	0.8161 (0.0194)	0.0149 (0.0009)	397
RP (3)	0.2662	0.0041	0.0643 (0.0014)	0.0162 (0.0020)	0.9560 (0.0065)	0.0044 (0.0002)	1000
RP (5)	0.2663	0.0041	0.0643 (0.0014)	0.0163 (0.0020)	0.9540 (0.0066)	0.0044 (0.0002)	999
RP (9)	0.2664	0.0041	0.0643 (0.0014)	0.0164 (0.0020)	0.9550 (0.0066)	0.0044 (0.0002)	1000
RP (P)	0.2669	0.0041	0.0641 (0.0014)	0.0169 (0.0020)	0.9570 (0.0064)	0.0044 (0.0002)	1000
FP (W)	0.2673	0.0041	0.0634 (0.0014)	0.0173 (0.0020)	0.9595 (0.0063)	0.0043 (0.0002)	988
FP (k=10)	0.2697	0.0042	0.0651 (0.0015)	0.0197 (0.0021)	0.9520 (0.0068)	0.0046 (0.0002)	1000
FP (k=10000)	0.2827	0.0043	0.0667 (0.0015)	0.0327 (0.0021)	0.9480 (0.0070)	0.0055 (0.0003)	1000

Table 273: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2464	0.0026	0.0502 (0.0011)	-0.0036 (0.0016)	0.9309 (0.0080)	0.0025 (0.0001)	998
Exp	0.1570	0.0014	0.0382 (0.0009)	-0.0930 (0.0012)	0.3190 (0.0147)	0.0101 (0.0002)	1000
Weibull	0.2163	0.0022	0.0462 (0.0010)	-0.0337 (0.0015)	0.8270 (0.0120)	0.0033 (0.0001)	1000
Gompertz	0.2472	0.0026	0.0501 (0.0011)	-0.0028 (0.0016)	0.9350 (0.0078)	0.0025 (0.0001)	1000
RP (3)	0.2461	0.0026	0.0501 (0.0011)	-0.0039 (0.0016)	0.9329 (0.0079)	0.0025 (0.0001)	999
RP (5)	0.2471	0.0026	0.0502 (0.0011)	-0.0029 (0.0016)	0.9350 (0.0078)	0.0025 (0.0001)	1000
RP (9)	0.2474	0.0026	0.0503 (0.0011)	-0.0026 (0.0016)	0.9330 (0.0079)	0.0025 (0.0001)	1000
RP (P)	0.2395	0.0025	0.0497 (0.0011)	-0.0105 (0.0016)	0.9150 (0.0088)	0.0026 (0.0001)	1000
FP (W)	0.2163	0.0022	0.0462 (0.0010)	-0.0337 (0.0015)	0.8270 (0.0120)	0.0033 (0.0001)	1000
FP (k=10)	0.2461	0.0026	0.0500 (0.0011)	-0.0039 (0.0016)	0.9340 (0.0079)	0.0025 (0.0001)	1000
FP (k=10000)	0.2424	0.0023	0.0494 (0.0011)	-0.0076 (0.0016)	0.9110 (0.0090)	0.0025 (0.0001)	1000
Model frailty: Normal							
Cox	0.2732	0.0038	0.0605 (0.0014)	0.0232 (0.0019)	0.9520 (0.0068)	0.0042 (0.0002)	1000
Exp	0.1652	0.0017	0.0422 (0.0009)	-0.0848 (0.0013)	0.4423 (0.0157)	0.0090 (0.0002)	997
Weibull	0.2356	0.0028	0.0539 (0.0012)	-0.0144 (0.0017)	0.9045 (0.0093)	0.0031 (0.0001)	995
Gompertz	0.2719	0.0035	0.0601 (0.0013)	0.0219 (0.0019)	0.9518 (0.0068)	0.0041 (0.0002)	995
RP (3)	0.2748	0.0036	0.0609 (0.0014)	0.0248 (0.0019)	0.9530 (0.0067)	0.0043 (0.0002)	1000
RP (5)	0.2759	0.0037	0.0610 (0.0014)	0.0259 (0.0019)	0.9550 (0.0066)	0.0044 (0.0002)	1000
RP (9)	0.2763	0.0037	0.0611 (0.0014)	0.0263 (0.0019)	0.9550 (0.0066)	0.0044 (0.0002)	1000
RP (P)	0.2667	0.0035	0.0601 (0.0013)	0.0167 (0.0019)	0.9450 (0.0072)	0.0039 (0.0002)	1000
FP (W)	0.2388	0.0029	0.0546 (0.0012)	-0.0112 (0.0017)	0.9104 (0.0091)	0.0031 (0.0001)	993
FP (k=10)	0.2757	0.0037	0.0609 (0.0014)	0.0257 (0.0019)	0.9530 (0.0067)	0.0044 (0.0002)	1000
FP (k=10000)	0.2716	0.0033	0.0600 (0.0013)	0.0216 (0.0019)	0.9420 (0.0074)	0.0041 (0.0002)	1000

Table 274: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2466	0.0026	0.0503 (0.0011)	-0.0034 (0.0016)	0.9318 (0.0080)	0.0025 (0.0001)	997
Exp	0.1247	0.0011	0.0339 (0.0008)	-0.1253 (0.0011)	0.0730 (0.0082)	0.0168 (0.0003)	1000
Weibull	0.2809	0.0031	0.0539 (0.0012)	0.0309 (0.0017)	0.9490 (0.0070)	0.0039 (0.0002)	1000
Gompertz	0.2517	0.0027	0.0502 (0.0011)	0.0017 (0.0016)	0.9470 (0.0071)	0.0025 (0.0001)	1000
RP (3)	0.2474	0.0027	0.0505 (0.0011)	-0.0026 (0.0016)	0.9339 (0.0079)	0.0026 (0.0001)	999
RP (5)	0.2474	0.0027	0.0504 (0.0011)	-0.0026 (0.0016)	0.9340 (0.0079)	0.0025 (0.0001)	1000
RP (9)	0.2475	0.0027	0.0505 (0.0011)	-0.0025 (0.0016)	0.9338 (0.0079)	0.0025 (0.0001)	997
RP (P)	0.2495	0.0027	0.0507 (0.0011)	-0.0005 (0.0016)	0.9389 (0.0076)	0.0026 (0.0001)	998
FP (W)	0.2809	0.0031	0.0539 (0.0012)	0.0309 (0.0017)	0.9489 (0.0070)	0.0039 (0.0002)	999
FP (k=10)	0.2485	0.0027	0.0506 (0.0011)	-0.0015 (0.0016)	0.9360 (0.0077)	0.0026 (0.0001)	1000
FP (k=10000)	0.3103	0.0032	0.0606 (0.0014)	0.0603 (0.0019)	0.8660 (0.0108)	0.0073 (0.0003)	1000
Model frailty: Normal							
Cox	0.2717	0.0038	0.0601 (0.0013)	0.0217 (0.0019)	0.9480 (0.0070)	0.0041 (0.0002)	1000
Exp	0.1261	0.0012	0.0356 (0.0008)	-0.1239 (0.0011)	0.1190 (0.0102)	0.0166 (0.0003)	1000
Weibull	0.3118	0.0043	0.0659 (0.0015)	0.0618 (0.0021)	0.9014 (0.0095)	0.0082 (0.0004)	994
Gompertz	0.2745	0.0037	0.0603 (0.0014)	0.0245 (0.0019)	0.9549 (0.0066)	0.0042 (0.0002)	997
RP (3)	0.2748	0.0037	0.0608 (0.0014)	0.0248 (0.0019)	0.9510 (0.0068)	0.0043 (0.0002)	1000
RP (5)	0.2747	0.0037	0.0608 (0.0014)	0.0247 (0.0019)	0.9510 (0.0068)	0.0043 (0.0002)	1000
RP (9)	0.2749	0.0037	0.0607 (0.0014)	0.0249 (0.0019)	0.9510 (0.0068)	0.0043 (0.0002)	1000
RP (P)	0.2772	0.0037	0.0611 (0.0014)	0.0272 (0.0019)	0.9540 (0.0066)	0.0045 (0.0002)	1000
FP (W)	0.3165	0.0044	0.0669 (0.0015)	0.0665 (0.0021)	0.8950 (0.0098)	0.0089 (0.0004)	971
FP (k=10)	0.2803	0.0038	0.0616 (0.0014)	0.0303 (0.0019)	0.9540 (0.0066)	0.0047 (0.0003)	1000
FP (k=10000)	0.3573	0.0052	0.0777 (0.0017)	0.1073 (0.0025)	0.7460 (0.0138)	0.0175 (0.0007)	1000

Table 275: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2447	0.0029	0.0541 (0.0012)	-0.0053 (0.0017)	0.9349 (0.0078)	0.0030 (0.0001)	999
Exp	0.2854	0.0033	0.0576 (0.0013)	0.0354 (0.0018)	0.9360 (0.0077)	0.0046 (0.0002)	1000
Weibull	0.2534	0.0030	0.0545 (0.0012)	0.0034 (0.0017)	0.9460 (0.0071)	0.0030 (0.0001)	1000
Gompertz	0.2894	0.0036	0.0603 (0.0035)	0.0394 (0.0049)	0.9338 (0.0202)	0.0052 (0.0005)	151
RP (3)	0.2454	0.0029	0.0542 (0.0012)	-0.0046 (0.0017)	0.9350 (0.0078)	0.0030 (0.0001)	1000
RP (5)	0.2454	0.0029	0.0542 (0.0012)	-0.0046 (0.0017)	0.9349 (0.0078)	0.0030 (0.0001)	999
RP (9)	0.2455	0.0029	0.0542 (0.0012)	-0.0045 (0.0017)	0.9340 (0.0079)	0.0030 (0.0001)	1000
RP (P)	0.2470	0.0029	0.0543 (0.0012)	-0.0030 (0.0017)	0.9360 (0.0077)	0.0030 (0.0001)	1000
FP (W)	0.2534	0.0030	0.0545 (0.0012)	0.0034 (0.0017)	0.9460 (0.0071)	0.0030 (0.0001)	1000
FP (k=10)	0.2444	0.0029	0.0541 (0.0012)	-0.0056 (0.0017)	0.9340 (0.0079)	0.0030 (0.0001)	1000
FP (k=10000)	0.2411	0.0027	0.0536 (0.0012)	-0.0089 (0.0017)	0.9230 (0.0084)	0.0029 (0.0001)	1000
Model frailty: Normal							
Cox	0.2613	0.0038	0.0617 (0.0014)	0.0113 (0.0020)	0.9500 (0.0069)	0.0039 (0.0002)	1000
Exp	0.3072	0.0044	0.0665 (0.0015)	0.0572 (0.0021)	0.9167 (0.0088)	0.0077 (0.0004)	996
Weibull	0.2693	0.0038	0.0618 (0.0014)	0.0193 (0.0020)	0.9618 (0.0061)	0.0042 (0.0002)	995
Gompertz	0.3092	0.0047	0.0672 (0.0025)	0.0592 (0.0035)	0.9373 (0.0127)	0.0080 (0.0006)	367
RP (3)	0.2648	0.0039	0.0626 (0.0014)	0.0148 (0.0020)	0.9560 (0.0065)	0.0041 (0.0002)	1000
RP (5)	0.2648	0.0039	0.0626 (0.0014)	0.0148 (0.0020)	0.9570 (0.0064)	0.0041 (0.0002)	1000
RP (9)	0.2649	0.0039	0.0626 (0.0014)	0.0149 (0.0020)	0.9580 (0.0063)	0.0041 (0.0002)	1000
RP (P)	0.2666	0.0039	0.0628 (0.0014)	0.0166 (0.0020)	0.9580 (0.0063)	0.0042 (0.0002)	1000
FP (W)	0.2740	0.0040	0.0631 (0.0014)	0.0240 (0.0020)	0.9600 (0.0063)	0.0046 (0.0002)	975
FP (k=10)	0.2652	0.0039	0.0627 (0.0014)	0.0152 (0.0020)	0.9590 (0.0063)	0.0042 (0.0002)	1000
FP (k=10000)	0.2598	0.0037	0.0618 (0.0014)	0.0098 (0.0020)	0.9470 (0.0071)	0.0039 (0.0002)	1000

Table 276: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2244	0.0025	0.0504 (0.0011)	-0.0256 (0.0016)	0.8745 (0.0105)	0.0032 (0.0001)	996
Exp	0.2257	0.0024	0.0490 (0.0011)	-0.0243 (0.0015)	0.8720 (0.0106)	0.0030 (0.0001)	1000
Weibull	0.2254	0.0025	0.0502 (0.0011)	-0.0246 (0.0016)	0.8720 (0.0106)	0.0031 (0.0001)	1000
Gompertz	0.2205	0.0025	0.0471 (0.0015)	-0.0295 (0.0021)	0.8755 (0.0147)	0.0031 (0.0002)	506
RP (3)	0.2249	0.0025	0.0506 (0.0011)	-0.0251 (0.0016)	0.8749 (0.0105)	0.0032 (0.0001)	999
RP (5)	0.2250	0.0025	0.0506 (0.0011)	-0.0250 (0.0016)	0.8770 (0.0104)	0.0032 (0.0001)	1000
RP (9)	0.2251	0.0025	0.0506 (0.0011)	-0.0249 (0.0016)	0.8769 (0.0104)	0.0032 (0.0001)	999
RP (P)	0.2251	0.0025	0.0503 (0.0011)	-0.0249 (0.0016)	0.8750 (0.0105)	0.0032 (0.0001)	1000
FP (W)	0.2254	0.0025	0.0502 (0.0011)	-0.0246 (0.0016)	0.8720 (0.0106)	0.0031 (0.0001)	1000
FP (k=10)	0.2242	0.0025	0.0505 (0.0011)	-0.0258 (0.0016)	0.8710 (0.0106)	0.0032 (0.0001)	1000
FP (k=10000)	0.2246	0.0023	0.0504 (0.0011)	-0.0254 (0.0016)	0.8630 (0.0109)	0.0032 (0.0001)	1000
Model frailty: Normal							
Cox	0.2454	0.0032	0.0583 (0.0013)	-0.0046 (0.0018)	0.9100 (0.0090)	0.0034 (0.0002)	1000
Exp	0.2439	0.0030	0.0555 (0.0012)	-0.0061 (0.0018)	0.9189 (0.0086)	0.0031 (0.0001)	999
Weibull	0.2450	0.0032	0.0575 (0.0013)	-0.0050 (0.0018)	0.9228 (0.0084)	0.0033 (0.0001)	998
Gompertz	0.2378	0.0031	0.0548 (0.0017)	-0.0122 (0.0025)	0.9217 (0.0120)	0.0031 (0.0002)	498
RP (3)	0.2483	0.0034	0.0591 (0.0013)	-0.0017 (0.0019)	0.9250 (0.0083)	0.0035 (0.0002)	1000
RP (5)	0.2484	0.0034	0.0591 (0.0013)	-0.0016 (0.0019)	0.9250 (0.0083)	0.0035 (0.0002)	1000
RP (9)	0.2484	0.0034	0.0591 (0.0013)	-0.0016 (0.0019)	0.9230 (0.0084)	0.0035 (0.0002)	1000
RP (P)	0.2484	0.0033	0.0588 (0.0013)	-0.0016 (0.0019)	0.9320 (0.0080)	0.0035 (0.0002)	1000
FP (W)	0.2486	0.0033	0.0584 (0.0013)	-0.0014 (0.0019)	0.9322 (0.0080)	0.0034 (0.0002)	988
FP (k=10)	0.2482	0.0034	0.0591 (0.0013)	-0.0018 (0.0019)	0.9250 (0.0083)	0.0035 (0.0002)	1000
FP (k=10000)	0.2481	0.0032	0.0588 (0.0013)	-0.0019 (0.0019)	0.9160 (0.0088)	0.0035 (0.0002)	1000

Table 277: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2227	0.0027	0.0517 (0.0012)	-0.0273 (0.0016)	0.8806 (0.0103)	0.0034 (0.0001)	997
Exp	0.3033	0.0038	0.0634 (0.0014)	0.0533 (0.0020)	0.9160 (0.0088)	0.0069 (0.0004)	1000
Weibull	0.2251	0.0027	0.0518 (0.0012)	-0.0249 (0.0016)	0.8830 (0.0102)	0.0033 (0.0001)	1000
Gompertz	0.3059	0.0040	0.0588 (0.0022)	0.0559 (0.0030)	0.9412 (0.0122)	0.0066 (0.0005)	374
RP (3)	0.2234	0.0027	0.0519 (0.0012)	-0.0266 (0.0016)	0.8810 (0.0102)	0.0034 (0.0001)	1000
RP (5)	0.2235	0.0027	0.0520 (0.0012)	-0.0265 (0.0016)	0.8819 (0.0102)	0.0034 (0.0001)	999
RP (9)	0.2235	0.0027	0.0519 (0.0012)	-0.0265 (0.0016)	0.8830 (0.0102)	0.0034 (0.0001)	1000
RP (P)	0.2243	0.0027	0.0519 (0.0012)	-0.0257 (0.0016)	0.8790 (0.0103)	0.0034 (0.0001)	1000
FP (W)	0.2251	0.0027	0.0518 (0.0012)	-0.0249 (0.0016)	0.8830 (0.0102)	0.0033 (0.0001)	1000
FP (k=10)	0.2245	0.0027	0.0523 (0.0012)	-0.0255 (0.0017)	0.8830 (0.0102)	0.0034 (0.0001)	1000
FP (k=10000)	0.2399	0.0028	0.0552 (0.0012)	-0.0101 (0.0017)	0.9180 (0.0087)	0.0031 (0.0002)	1000
Model frailty: Normal							
Cox	0.2394	0.0034	0.0589 (0.0013)	-0.0106 (0.0019)	0.9120 (0.0090)	0.0036 (0.0002)	1000
Exp	0.3314	0.0049	0.0733 (0.0016)	0.0814 (0.0023)	0.8495 (0.0113)	0.0120 (0.0006)	997
Weibull	0.2406	0.0033	0.0583 (0.0013)	-0.0094 (0.0018)	0.9248 (0.0084)	0.0035 (0.0002)	997
Gompertz	0.3279	0.0051	0.0695 (0.0025)	0.0779 (0.0035)	0.8727 (0.0170)	0.0109 (0.0008)	385
RP (3)	0.2425	0.0035	0.0598 (0.0013)	-0.0075 (0.0019)	0.9270 (0.0082)	0.0036 (0.0002)	1000
RP (5)	0.2427	0.0035	0.0598 (0.0013)	-0.0073 (0.0019)	0.9260 (0.0083)	0.0036 (0.0002)	1000
RP (9)	0.2427	0.0035	0.0598 (0.0013)	-0.0073 (0.0019)	0.9280 (0.0082)	0.0036 (0.0002)	1000
RP (P)	0.2436	0.0035	0.0597 (0.0013)	-0.0064 (0.0019)	0.9300 (0.0081)	0.0036 (0.0002)	1000
FP (W)	0.2449	0.0035	0.0595 (0.0013)	-0.0051 (0.0019)	0.9339 (0.0079)	0.0036 (0.0002)	983
FP (k=10)	0.2469	0.0036	0.0608 (0.0014)	-0.0031 (0.0019)	0.9330 (0.0079)	0.0037 (0.0002)	1000
FP (k=10000)	0.2634	0.0038	0.0641 (0.0014)	0.0134 (0.0020)	0.9430 (0.0073)	0.0043 (0.0003)	1000

Table 278: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2215	0.0023	0.0475 (0.0011)	-0.0285 (0.0015)	0.8626 (0.0109)	0.0031 (0.0001)	997
Exp	0.1349	0.0012	0.0349 (0.0008)	-0.1151 (0.0011)	0.1400 (0.0110)	0.0145 (0.0002)	1000
Weibull	0.1922	0.0019	0.0440 (0.0010)	-0.0578 (0.0014)	0.6740 (0.0148)	0.0053 (0.0002)	1000
Gompertz	0.2222	0.0023	0.0474 (0.0011)	-0.0278 (0.0015)	0.8710 (0.0106)	0.0030 (0.0001)	1000
RP (3)	0.2212	0.0023	0.0476 (0.0011)	-0.0288 (0.0015)	0.8636 (0.0109)	0.0031 (0.0001)	997
RP (5)	0.2222	0.0023	0.0475 (0.0011)	-0.0278 (0.0015)	0.8709 (0.0106)	0.0030 (0.0001)	999
RP (9)	0.2225	0.0023	0.0476 (0.0011)	-0.0275 (0.0015)	0.8680 (0.0107)	0.0030 (0.0001)	1000
RP (P)	0.2150	0.0022	0.0470 (0.0011)	-0.0350 (0.0015)	0.8228 (0.0121)	0.0034 (0.0001)	999
FP (W)	0.1921	0.0019	0.0440 (0.0010)	-0.0579 (0.0014)	0.6737 (0.0148)	0.0053 (0.0002)	999
FP (k=10)	0.2212	0.0023	0.0473 (0.0011)	-0.0288 (0.0015)	0.8610 (0.0109)	0.0031 (0.0001)	1000
FP (k=10000)	0.2177	0.0020	0.0469 (0.0010)	-0.0323 (0.0015)	0.8150 (0.0123)	0.0032 (0.0001)	1000
Model frailty: Normal							
Cox	0.2469	0.0030	0.0560 (0.0013)	-0.0031 (0.0018)	0.9220 (0.0085)	0.0031 (0.0001)	1000
Exp	0.1444	0.0014	0.0385 (0.0009)	-0.1056 (0.0012)	0.2350 (0.0134)	0.0126 (0.0002)	1000
Weibull	0.2119	0.0024	0.0508 (0.0011)	-0.0381 (0.0016)	0.8058 (0.0125)	0.0040 (0.0001)	999
Gompertz	0.2455	0.0031	0.0552 (0.0012)	-0.0045 (0.0017)	0.9299 (0.0081)	0.0031 (0.0001)	998
RP (3)	0.2483	0.0031	0.0564 (0.0013)	-0.0017 (0.0018)	0.9390 (0.0076)	0.0032 (0.0001)	1000
RP (5)	0.2494	0.0032	0.0565 (0.0013)	-0.0006 (0.0018)	0.9380 (0.0076)	0.0032 (0.0001)	1000
RP (9)	0.2497	0.0032	0.0565 (0.0013)	-0.0003 (0.0018)	0.9390 (0.0076)	0.0032 (0.0001)	1000
RP (P)	0.2410	0.0030	0.0556 (0.0012)	-0.0090 (0.0018)	0.9180 (0.0087)	0.0032 (0.0001)	1000
FP (W)	0.2151	0.0025	0.0523 (0.0012)	-0.0349 (0.0017)	0.8238 (0.0124)	0.0039 (0.0002)	948
FP (k=10)	0.2490	0.0032	0.0564 (0.0013)	-0.0010 (0.0018)	0.9360 (0.0077)	0.0032 (0.0001)	1000
FP (k=10000)	0.2453	0.0029	0.0559 (0.0012)	-0.0047 (0.0018)	0.9260 (0.0083)	0.0031 (0.0001)	1000

Table 279: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2235	0.0024	0.0472 (0.0011)	-0.0265 (0.0015)	0.8626 (0.0109)	0.0029 (0.0001)	997
Exp	0.0967	0.0008	0.0285 (0.0006)	-0.1533 (0.0009)	0.0070 (0.0026)	0.0243 (0.0003)	1000
Weibull	0.2579	0.0028	0.0502 (0.0011)	0.0079 (0.0016)	0.9570 (0.0064)	0.0026 (0.0001)	1000
Gompertz	0.2239	0.0023	0.0453 (0.0010)	-0.0261 (0.0014)	0.8800 (0.0103)	0.0027 (0.0001)	1000
RP (3)	0.2245	0.0024	0.0475 (0.0011)	-0.0255 (0.0015)	0.8720 (0.0106)	0.0029 (0.0001)	1000
RP (5)	0.2243	0.0024	0.0473 (0.0011)	-0.0257 (0.0015)	0.8700 (0.0106)	0.0029 (0.0001)	1000
RP (9)	0.2245	0.0024	0.0473 (0.0011)	-0.0255 (0.0015)	0.8710 (0.0106)	0.0029 (0.0001)	1000
RP (P)	0.2264	0.0024	0.0477 (0.0011)	-0.0236 (0.0015)	0.8790 (0.0103)	0.0028 (0.0001)	1000
FP (W)	0.2579	0.0028	0.0502 (0.0011)	0.0079 (0.0016)	0.9570 (0.0064)	0.0026 (0.0001)	1000
FP (k=10)	0.2259	0.0024	0.0477 (0.0011)	-0.0241 (0.0015)	0.8760 (0.0104)	0.0029 (0.0001)	1000
FP (k=10000)	0.2909	0.0030	0.0576 (0.0013)	0.0409 (0.0018)	0.9180 (0.0087)	0.0050 (0.0002)	1000
Model frailty: Normal							
Cox	0.2484	0.0032	0.0557 (0.0012)	-0.0016 (0.0018)	0.9240 (0.0084)	0.0031 (0.0001)	1000
Exp	0.0989	0.0009	0.0297 (0.0007)	-0.1511 (0.0009)	0.0090 (0.0030)	0.0237 (0.0003)	999
Weibull	0.2870	0.0037	0.0598 (0.0013)	0.0370 (0.0019)	0.9540 (0.0066)	0.0049 (0.0002)	999
Gompertz	0.2439	0.0031	0.0529 (0.0012)	-0.0061 (0.0017)	0.9298 (0.0081)	0.0028 (0.0001)	997
RP (3)	0.2514	0.0032	0.0565 (0.0013)	0.0014 (0.0018)	0.9360 (0.0077)	0.0032 (0.0001)	1000
RP (5)	0.2511	0.0032	0.0563 (0.0013)	0.0011 (0.0018)	0.9360 (0.0077)	0.0032 (0.0001)	1000
RP (9)	0.2513	0.0032	0.0562 (0.0013)	0.0013 (0.0018)	0.9380 (0.0076)	0.0032 (0.0001)	1000
RP (P)	0.2535	0.0033	0.0567 (0.0013)	0.0035 (0.0018)	0.9380 (0.0076)	0.0032 (0.0002)	1000
FP (W)	0.2903	0.0038	0.0599 (0.0014)	0.0403 (0.0019)	0.9603 (0.0063)	0.0052 (0.0003)	958
FP (k=10)	0.2576	0.0034	0.0573 (0.0013)	0.0076 (0.0018)	0.9450 (0.0072)	0.0033 (0.0002)	1000
FP (k=10000)	0.3355	0.0046	0.0720 (0.0016)	0.0855 (0.0023)	0.8200 (0.0121)	0.0125 (0.0005)	1000

Table 280: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2263	0.0026	0.0502 (0.0011)	-0.0237 (0.0016)	0.8838 (0.0101)	0.0031 (0.0001)	998
Exp	0.2686	0.0030	0.0540 (0.0012)	0.0186 (0.0017)	0.9540 (0.0066)	0.0033 (0.0002)	1000
Weibull	0.2337	0.0027	0.0503 (0.0011)	-0.0163 (0.0016)	0.9060 (0.0092)	0.0028 (0.0001)	1000
Gompertz	0.2686	0.0032	0.0539 (0.0019)	0.0186 (0.0026)	0.9528 (0.0103)	0.0032 (0.0003)	424
RP (3)	0.2270	0.0026	0.0502 (0.0011)	-0.0230 (0.0016)	0.8870 (0.0100)	0.0030 (0.0001)	1000
RP (5)	0.2270	0.0026	0.0503 (0.0011)	-0.0230 (0.0016)	0.8850 (0.0101)	0.0031 (0.0001)	1000
RP (9)	0.2271	0.0026	0.0503 (0.0011)	-0.0229 (0.0016)	0.8839 (0.0101)	0.0031 (0.0001)	999
RP (P)	0.2283	0.0026	0.0503 (0.0011)	-0.0217 (0.0016)	0.8900 (0.0099)	0.0030 (0.0001)	1000
FP (W)	0.2337	0.0027	0.0503 (0.0011)	-0.0163 (0.0016)	0.9060 (0.0092)	0.0028 (0.0001)	1000
FP (k=10)	0.2261	0.0026	0.0502 (0.0011)	-0.0239 (0.0016)	0.8830 (0.0102)	0.0031 (0.0001)	1000
FP (k=10000)	0.2227	0.0024	0.0498 (0.0011)	-0.0273 (0.0016)	0.8550 (0.0111)	0.0032 (0.0001)	1000
Model frailty: Normal							
Cox	0.2456	0.0033	0.0575 (0.0013)	-0.0044 (0.0018)	0.9190 (0.0086)	0.0033 (0.0002)	1000
Exp	0.2916	0.0039	0.0622 (0.0014)	0.0416 (0.0020)	0.9468 (0.0071)	0.0056 (0.0003)	996
Weibull	0.2519	0.0034	0.0572 (0.0013)	0.0019 (0.0018)	0.9449 (0.0072)	0.0033 (0.0002)	998
Gompertz	0.2911	0.0042	0.0627 (0.0022)	0.0411 (0.0031)	0.9454 (0.0113)	0.0056 (0.0005)	403
RP (3)	0.2485	0.0034	0.0583 (0.0013)	-0.0015 (0.0018)	0.9390 (0.0076)	0.0034 (0.0002)	1000
RP (5)	0.2487	0.0035	0.0583 (0.0013)	-0.0013 (0.0018)	0.9390 (0.0076)	0.0034 (0.0002)	1000
RP (9)	0.2488	0.0035	0.0583 (0.0013)	-0.0012 (0.0018)	0.9390 (0.0076)	0.0034 (0.0002)	1000
RP (P)	0.2500	0.0035	0.0583 (0.0013)	0.0000 (0.0018)	0.9440 (0.0073)	0.0034 (0.0002)	1000
FP (W)	0.2558	0.0035	0.0581 (0.0013)	0.0058 (0.0019)	0.9530 (0.0068)	0.0034 (0.0002)	979
FP (k=10)	0.2491	0.0035	0.0584 (0.0013)	-0.0009 (0.0018)	0.9410 (0.0075)	0.0034 (0.0002)	1000
FP (k=10000)	0.2436	0.0032	0.0576 (0.0013)	-0.0064 (0.0018)	0.9170 (0.0087)	0.0034 (0.0001)	1000

Table 281: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7446	0.0147	0.1222 (0.0027)	-0.0054 (0.0039)	0.9326 (0.0080)	0.0149 (0.0006)	994
Exp	0.7438	0.0140	0.1185 (0.0027)	-0.0062 (0.0037)	0.9350 (0.0078)	0.0141 (0.0006)	1000
Weibull	0.7465	0.0146	0.1217 (0.0027)	-0.0035 (0.0038)	0.9400 (0.0075)	0.0148 (0.0006)	1000
Gompertz	0.7391	0.0145	0.1159 (0.0048)	-0.0109 (0.0068)	0.9281 (0.0151)	0.0135 (0.0011)	292
RP (3)	0.7458	0.0148	0.1224 (0.0027)	-0.0042 (0.0039)	0.9376 (0.0077)	0.0150 (0.0006)	994
RP (5)	0.7463	0.0148	0.1225 (0.0027)	-0.0037 (0.0039)	0.9389 (0.0076)	0.0150 (0.0006)	998
RP (9)	0.7462	0.0148	0.1225 (0.0027)	-0.0038 (0.0039)	0.9380 (0.0076)	0.0150 (0.0006)	1000
RP (P)	0.7458	0.0147	0.1220 (0.0027)	-0.0042 (0.0039)	0.9389 (0.0076)	0.0149 (0.0006)	998
FP (W)	0.7465	0.0146	0.1218 (0.0027)	-0.0035 (0.0039)	0.9399 (0.0075)	0.0148 (0.0006)	999
FP (k=10)	0.7440	0.0147	0.1222 (0.0027)	-0.0060 (0.0039)	0.9350 (0.0078)	0.0150 (0.0006)	1000
FP (k=10000)	0.7446	0.0141	0.1221 (0.0027)	-0.0054 (0.0039)	0.9330 (0.0079)	0.0149 (0.0006)	1000
Model frailty: Normal							
Cox	0.9060	0.0308	0.1739 (0.0039)	0.1560 (0.0055)	0.9170 (0.0087)	0.0546 (0.0024)	1000
Exp	0.8936	0.0273	0.1653 (0.0037)	0.1436 (0.0052)	0.9284 (0.0082)	0.0479 (0.0021)	992
Weibull	0.9039	0.0290	0.1727 (0.0039)	0.1539 (0.0055)	0.9205 (0.0086)	0.0535 (0.0024)	994
Gompertz	0.8932	0.0287	0.1684 (0.0059)	0.1432 (0.0083)	0.9293 (0.0127)	0.0488 (0.0033)	410
RP (3)	0.9163	0.0303	0.1759 (0.0039)	0.1663 (0.0056)	0.9060 (0.0092)	0.0586 (0.0025)	1000
RP (5)	0.9165	0.0303	0.1759 (0.0039)	0.1665 (0.0056)	0.9050 (0.0093)	0.0586 (0.0025)	1000
RP (9)	0.9167	0.0303	0.1759 (0.0039)	0.1667 (0.0056)	0.9070 (0.0092)	0.0587 (0.0025)	1000
RP (P)	0.9167	0.0300	0.1754 (0.0039)	0.1667 (0.0055)	0.9030 (0.0094)	0.0585 (0.0025)	1000
FP (W)	0.9164	0.0299	0.1755 (0.0040)	0.1664 (0.0056)	0.9032 (0.0094)	0.0585 (0.0026)	981
FP (k=10)	0.9191	0.0306	0.1760 (0.0040)	0.1691 (0.0056)	0.9081 (0.0092)	0.0596 (0.0026)	979
FP (k=10000)	0.9156	0.0295	0.1759 (0.0039)	0.1656 (0.0056)	0.9028 (0.0094)	0.0583 (0.0025)	998

Table 282: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7442	0.0157	0.1287 (0.0029)	-0.0058 (0.0041)	0.9236 (0.0084)	0.0166 (0.0007)	995
Exp	0.8927	0.0198	0.1457 (0.0033)	0.1427 (0.0046)	0.8800 (0.0103)	0.0416 (0.0019)	1000
Weibull	0.7496	0.0157	0.1300 (0.0029)	-0.0004 (0.0041)	0.9290 (0.0081)	0.0169 (0.0008)	1000
Gompertz	0.8854	0.0201	0.1447 (0.0055)	0.1354 (0.0077)	0.8895 (0.0167)	0.0392 (0.0029)	353
RP (3)	0.7465	0.0158	0.1300 (0.0029)	-0.0035 (0.0041)	0.9248 (0.0083)	0.0169 (0.0008)	998
RP (5)	0.7468	0.0158	0.1300 (0.0029)	-0.0032 (0.0041)	0.9240 (0.0084)	0.0169 (0.0008)	1000
RP (9)	0.7467	0.0158	0.1296 (0.0029)	-0.0033 (0.0041)	0.9249 (0.0083)	0.0168 (0.0008)	999
RP (P)	0.7483	0.0157	0.1301 (0.0029)	-0.0017 (0.0041)	0.9268 (0.0083)	0.0169 (0.0008)	997
FP (W)	0.7496	0.0157	0.1300 (0.0029)	-0.0004 (0.0041)	0.9290 (0.0081)	0.0169 (0.0008)	1000
FP (k=10)	0.7491	0.0159	0.1306 (0.0029)	-0.0009 (0.0041)	0.9260 (0.0083)	0.0171 (0.0008)	1000
FP (k=10000)	0.7796	0.0163	0.1347 (0.0030)	0.0296 (0.0043)	0.9290 (0.0081)	0.0190 (0.0010)	1000
Model frailty: Normal							
Cox	0.8753	0.0296	0.1763 (0.0039)	0.1253 (0.0056)	0.9340 (0.0079)	0.0467 (0.0024)	1000
Exp	1.0679	0.0391	0.2012 (0.0045)	0.3179 (0.0064)	0.7150 (0.0143)	0.1415 (0.0051)	993
Weibull	0.8751	0.0292	0.1756 (0.0039)	0.1251 (0.0056)	0.9445 (0.0073)	0.0465 (0.0024)	991
Gompertz	1.0740	0.0409	0.2018 (0.0081)	0.3240 (0.0114)	0.7115 (0.0256)	0.1456 (0.0087)	312
RP (3)	0.8874	0.0305	0.1786 (0.0040)	0.1374 (0.0056)	0.9420 (0.0074)	0.0507 (0.0025)	1000
RP (5)	0.8875	0.0305	0.1786 (0.0040)	0.1375 (0.0056)	0.9420 (0.0074)	0.0508 (0.0025)	1000
RP (9)	0.8878	0.0306	0.1786 (0.0040)	0.1378 (0.0056)	0.9420 (0.0074)	0.0509 (0.0025)	1000
RP (P)	0.8897	0.0304	0.1785 (0.0040)	0.1397 (0.0056)	0.9410 (0.0075)	0.0513 (0.0026)	1000
FP (W)	0.8910	0.0304	0.1760 (0.0040)	0.1410 (0.0056)	0.9406 (0.0076)	0.0508 (0.0025)	977
FP (k=10)	0.9000	0.0314	0.1819 (0.0041)	0.1500 (0.0058)	0.9357 (0.0078)	0.0556 (0.0027)	996
FP (k=10000)	0.9299	0.0319	0.1845 (0.0041)	0.1799 (0.0058)	0.9020 (0.0094)	0.0664 (0.0031)	1000

Table 283: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7436	0.0137	0.1181 (0.0026)	-0.0064 (0.0037)	0.9318 (0.0080)	0.0140 (0.0006)	997
Exp	0.5722	0.0087	0.0984 (0.0022)	-0.1778 (0.0031)	0.4860 (0.0158)	0.0413 (0.0011)	1000
Weibull	0.6913	0.0122	0.1131 (0.0025)	-0.0587 (0.0036)	0.8710 (0.0106)	0.0162 (0.0006)	1000
Gompertz	0.5768	0.0094	0.0916 (0.0035)	-0.1732 (0.0050)	0.4927 (0.0271)	0.0384 (0.0016)	341
RP (3)	0.7448	0.0138	0.1188 (0.0027)	-0.0052 (0.0038)	0.9347 (0.0078)	0.0141 (0.0006)	996
RP (5)	0.7461	0.0138	0.1186 (0.0027)	-0.0039 (0.0038)	0.9369 (0.0077)	0.0141 (0.0006)	999
RP (9)	0.7463	0.0138	0.1189 (0.0027)	-0.0037 (0.0038)	0.9349 (0.0078)	0.0141 (0.0006)	999
RP (P)	0.7322	0.0134	0.1181 (0.0027)	-0.0178 (0.0037)	0.9225 (0.0085)	0.0142 (0.0006)	993
FP (W)	0.6913	0.0122	0.1131 (0.0025)	-0.0587 (0.0036)	0.8710 (0.0106)	0.0162 (0.0006)	1000
FP (k=10)	0.7438	0.0137	0.1185 (0.0027)	-0.0062 (0.0037)	0.9370 (0.0077)	0.0141 (0.0006)	1000
FP (k=10000)	0.7386	0.0127	0.1177 (0.0026)	-0.0114 (0.0037)	0.9240 (0.0084)	0.0140 (0.0006)	1000
Model frailty: Normal							
Cox	0.9541	0.0338	0.1831 (0.0041)	0.2041 (0.0058)	0.8690 (0.0107)	0.0751 (0.0030)	1000
Exp	0.6833	0.0161	0.1374 (0.0031)	-0.0667 (0.0044)	0.8362 (0.0117)	0.0233 (0.0009)	995
Weibull	0.8629	0.0250	0.1678 (0.0038)	0.1129 (0.0053)	0.9202 (0.0086)	0.0409 (0.0019)	990
Gompertz	0.6829	0.0172	0.1304 (0.0038)	-0.0671 (0.0053)	0.8825 (0.0131)	0.0215 (0.0010)	604
RP (3)	0.9598	0.0308	0.1840 (0.0041)	0.2098 (0.0058)	0.8400 (0.0116)	0.0779 (0.0031)	1000
RP (5)	0.9622	0.0309	0.1846 (0.0041)	0.2122 (0.0058)	0.8350 (0.0117)	0.0791 (0.0032)	1000
RP (9)	0.9629	0.0310	0.1847 (0.0041)	0.2129 (0.0058)	0.8340 (0.0118)	0.0794 (0.0032)	1000
RP (P)	0.9387	0.0294	0.1808 (0.0040)	0.1887 (0.0057)	0.8590 (0.0110)	0.0682 (0.0028)	1000
FP (W)	0.8724	0.0255	0.1688 (0.0038)	0.1224 (0.0054)	0.9200 (0.0087)	0.0435 (0.0020)	975
FP (k=10)	0.9632	0.0310	0.1855 (0.0042)	0.2132 (0.0059)	0.8348 (0.0118)	0.0798 (0.0032)	993
FP (k=10000)	0.9545	0.0292	0.1829 (0.0041)	0.2045 (0.0058)	0.8297 (0.0119)	0.0753 (0.0030)	998

Table 284: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7435	0.0139	0.1205 (0.0027)	-0.0065 (0.0038)	0.9419 (0.0074)	0.0145 (0.0007)	999
Exp	0.4940	0.0071	0.0904 (0.0020)	-0.2560 (0.0029)	0.1890 (0.0124)	0.0737 (0.0014)	1000
Weibull	0.8022	0.0154	0.1240 (0.0028)	0.0522 (0.0039)	0.9530 (0.0067)	0.0181 (0.0009)	1000
Gompertz	0.6779	0.0120	0.1089 (0.0025)	-0.0721 (0.0035)	0.8469 (0.0117)	0.0170 (0.0007)	947
RP (3)	0.7452	0.0140	0.1206 (0.0027)	-0.0048 (0.0038)	0.9427 (0.0074)	0.0145 (0.0007)	994
RP (5)	0.7454	0.0140	0.1207 (0.0027)	-0.0046 (0.0038)	0.9429 (0.0073)	0.0146 (0.0007)	999
RP (9)	0.7456	0.0140	0.1209 (0.0027)	-0.0044 (0.0038)	0.9428 (0.0074)	0.0146 (0.0007)	996
RP (P)	0.7482	0.0141	0.1210 (0.0027)	-0.0018 (0.0038)	0.9446 (0.0073)	0.0146 (0.0007)	992
FP (W)	0.8022	0.0154	0.1240 (0.0028)	0.0522 (0.0039)	0.9529 (0.0067)	0.0181 (0.0009)	998
FP (k=10)	0.7472	0.0141	0.1209 (0.0027)	-0.0028 (0.0038)	0.9440 (0.0073)	0.0146 (0.0007)	1000
FP (k=10000)	0.8597	0.0163	0.1368 (0.0031)	0.1097 (0.0043)	0.8790 (0.0103)	0.0307 (0.0014)	1000
Model frailty: Normal							
Cox	0.9407	0.0323	0.1827 (0.0041)	0.1907 (0.0058)	0.8790 (0.0103)	0.0697 (0.0032)	1000
Exp	0.5712	0.0124	0.1219 (0.0027)	-0.1788 (0.0039)	0.5452 (0.0158)	0.0468 (0.0013)	996
Weibull	1.0357	0.0348	0.1966 (0.0044)	0.2857 (0.0063)	0.7399 (0.0140)	0.1202 (0.0046)	988
Gompertz	0.8370	0.0249	0.1643 (0.0039)	0.0870 (0.0055)	0.9456 (0.0076)	0.0345 (0.0019)	882
RP (3)	0.9492	0.0305	0.1837 (0.0041)	0.1992 (0.0058)	0.8670 (0.0107)	0.0734 (0.0033)	1000
RP (5)	0.9495	0.0306	0.1843 (0.0041)	0.1995 (0.0058)	0.8640 (0.0108)	0.0737 (0.0033)	1000
RP (9)	0.9500	0.0306	0.1843 (0.0041)	0.2000 (0.0058)	0.8670 (0.0107)	0.0739 (0.0033)	1000
RP (P)	0.9557	0.0309	0.1854 (0.0041)	0.2057 (0.0059)	0.8610 (0.0109)	0.0766 (0.0034)	1000
FP (W)	1.0487	0.0358	0.1994 (0.0046)	0.2987 (0.0065)	0.7194 (0.0146)	0.1289 (0.0049)	948
FP (k=10)	0.9640	0.0315	0.1866 (0.0042)	0.2140 (0.0059)	0.8527 (0.0113)	0.0806 (0.0035)	991
FP (k=10000)	1.1639	0.0425	0.2296 (0.0052)	0.4139 (0.0073)	0.4834 (0.0159)	0.2240 (0.0073)	991

Table 285: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7450	0.0152	0.1235 (0.0028)	-0.0050 (0.0039)	0.9346 (0.0078)	0.0153 (0.0007)	994
Exp	0.8211	0.0167	0.1284 (0.0029)	0.0711 (0.0041)	0.9510 (0.0068)	0.0215 (0.0010)	1000
Weibull	0.7576	0.0154	0.1234 (0.0028)	0.0076 (0.0039)	0.9500 (0.0069)	0.0153 (0.0007)	1000
Gompertz	0.8047	0.0168	0.1194 (0.0044)	0.0547 (0.0063)	0.9505 (0.0114)	0.0172 (0.0015)	364
RP (3)	0.7462	0.0152	0.1235 (0.0028)	-0.0038 (0.0039)	0.9369 (0.0077)	0.0153 (0.0007)	999
RP (5)	0.7465	0.0152	0.1236 (0.0028)	-0.0035 (0.0039)	0.9370 (0.0077)	0.0153 (0.0007)	1000
RP (9)	0.7467	0.0152	0.1237 (0.0028)	-0.0033 (0.0039)	0.9390 (0.0076)	0.0153 (0.0007)	1000
RP (P)	0.7487	0.0153	0.1235 (0.0028)	-0.0013 (0.0039)	0.9390 (0.0076)	0.0153 (0.0007)	1000
FP (W)	0.7576	0.0154	0.1234 (0.0028)	0.0076 (0.0039)	0.9500 (0.0069)	0.0153 (0.0007)	1000
FP (k=10)	0.7445	0.0152	0.1233 (0.0028)	-0.0055 (0.0039)	0.9370 (0.0077)	0.0152 (0.0007)	1000
FP (k=10000)	0.7374	0.0144	0.1224 (0.0027)	-0.0126 (0.0039)	0.9220 (0.0085)	0.0151 (0.0007)	1000
Model frailty: Normal							
Cox	0.8904	0.0301	0.1716 (0.0038)	0.1404 (0.0054)	0.9340 (0.0079)	0.0492 (0.0024)	1000
Exp	0.9904	0.0334	0.1807 (0.0041)	0.2404 (0.0057)	0.8206 (0.0122)	0.0904 (0.0035)	992
Weibull	0.9056	0.0299	0.1729 (0.0039)	0.1556 (0.0055)	0.9285 (0.0082)	0.0541 (0.0025)	993
Gompertz	0.9757	0.0340	0.1818 (0.0071)	0.2257 (0.0100)	0.8640 (0.0188)	0.0839 (0.0060)	331
RP (3)	0.9018	0.0303	0.1738 (0.0039)	0.1518 (0.0055)	0.9290 (0.0081)	0.0532 (0.0025)	1000
RP (5)	0.9018	0.0303	0.1737 (0.0039)	0.1518 (0.0055)	0.9290 (0.0081)	0.0532 (0.0025)	1000
RP (9)	0.9020	0.0303	0.1737 (0.0039)	0.1520 (0.0055)	0.9290 (0.0081)	0.0532 (0.0025)	1000
RP (P)	0.9058	0.0305	0.1744 (0.0039)	0.1558 (0.0055)	0.9280 (0.0082)	0.0546 (0.0026)	1000
FP (W)	0.9215	0.0311	0.1765 (0.0040)	0.1715 (0.0057)	0.9151 (0.0090)	0.0605 (0.0028)	966
FP (k=10)	0.9059	0.0306	0.1750 (0.0039)	0.1559 (0.0056)	0.9273 (0.0082)	0.0549 (0.0026)	991
FP (k=10000)	0.8896	0.0289	0.1719 (0.0038)	0.1396 (0.0054)	0.9350 (0.0078)	0.0490 (0.0024)	1000

Table 286: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6166	0.0106	0.1025 (0.0023)	-0.1334 (0.0033)	0.6764 (0.0149)	0.0283 (0.0009)	992
Exp	0.6269	0.0101	0.1010 (0.0023)	-0.1231 (0.0032)	0.7030 (0.0144)	0.0253 (0.0008)	1000
Weibull	0.6196	0.0106	0.1014 (0.0023)	-0.1304 (0.0032)	0.6960 (0.0145)	0.0273 (0.0009)	1000
Gompertz	0.6302	0.0109	0.1027 (0.0037)	-0.1198 (0.0052)	0.7335 (0.0223)	0.0249 (0.0013)	394
RP (3)	0.6183	0.0107	0.1024 (0.0023)	-0.1317 (0.0032)	0.6844 (0.0147)	0.0278 (0.0009)	995
RP (5)	0.6186	0.0107	0.1025 (0.0023)	-0.1314 (0.0032)	0.6844 (0.0147)	0.0278 (0.0009)	998
RP (9)	0.6188	0.0107	0.1025 (0.0023)	-0.1312 (0.0032)	0.6860 (0.0147)	0.0277 (0.0009)	1000
RP (P)	0.6190	0.0106	0.1019 (0.0023)	-0.1310 (0.0032)	0.6910 (0.0146)	0.0275 (0.0009)	1000
FP (W)	0.6196	0.0106	0.1014 (0.0023)	-0.1304 (0.0032)	0.6957 (0.0146)	0.0273 (0.0009)	999
FP (k=10)	0.6170	0.0107	0.1024 (0.0023)	-0.1330 (0.0032)	0.6800 (0.0148)	0.0282 (0.0009)	1000
FP (k=10000)	0.6196	0.0099	0.1028 (0.0023)	-0.1304 (0.0032)	0.6680 (0.0149)	0.0276 (0.0009)	1000
Model frailty: Normal							
Cox	0.7374	0.0179	0.1369 (0.0031)	-0.0126 (0.0043)	0.9180 (0.0087)	0.0189 (0.0009)	1000
Exp	0.7349	0.0169	0.1315 (0.0030)	-0.0151 (0.0042)	0.9314 (0.0080)	0.0175 (0.0008)	991
Weibull	0.7376	0.0182	0.1365 (0.0031)	-0.0124 (0.0043)	0.9256 (0.0083)	0.0188 (0.0009)	994
Gompertz	0.7318	0.0181	0.1356 (0.0050)	-0.0182 (0.0070)	0.9299 (0.0133)	0.0187 (0.0014)	371
RP (3)	0.7446	0.0189	0.1385 (0.0031)	-0.0054 (0.0044)	0.9310 (0.0080)	0.0192 (0.0009)	1000
RP (5)	0.7448	0.0189	0.1385 (0.0031)	-0.0052 (0.0044)	0.9300 (0.0081)	0.0192 (0.0009)	1000
RP (9)	0.7451	0.0189	0.1386 (0.0031)	-0.0049 (0.0044)	0.9300 (0.0081)	0.0192 (0.0009)	1000
RP (P)	0.7456	0.0187	0.1379 (0.0031)	-0.0044 (0.0044)	0.9350 (0.0078)	0.0190 (0.0009)	1000
FP (W)	0.7485	0.0187	0.1379 (0.0031)	-0.0015 (0.0044)	0.9346 (0.0080)	0.0190 (0.0009)	964
FP (k=10)	0.7450	0.0189	0.1392 (0.0031)	-0.0050 (0.0045)	0.9294 (0.0082)	0.0194 (0.0009)	978
FP (k=10000)	0.7447	0.0179	0.1380 (0.0031)	-0.0053 (0.0044)	0.9269 (0.0082)	0.0191 (0.0009)	998

Table 287: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6276	0.0114	0.1088 (0.0024)	-0.1224 (0.0034)	0.7048 (0.0145)	0.0268 (0.0009)	996
Exp	0.8217	0.0163	0.1412 (0.0032)	0.0717 (0.0045)	0.9240 (0.0084)	0.0251 (0.0012)	1000
Weibull	0.6331	0.0114	0.1091 (0.0024)	-0.1169 (0.0035)	0.7380 (0.0139)	0.0256 (0.0009)	1000
Gompertz	0.8162	0.0170	0.1262 (0.0060)	0.0662 (0.0085)	0.9682 (0.0118)	0.0202 (0.0021)	220
RP (3)	0.6286	0.0114	0.1086 (0.0024)	-0.1214 (0.0034)	0.7124 (0.0143)	0.0265 (0.0009)	998
RP (5)	0.6291	0.0114	0.1089 (0.0024)	-0.1209 (0.0034)	0.7090 (0.0144)	0.0265 (0.0009)	1000
RP (9)	0.6294	0.0114	0.1089 (0.0024)	-0.1206 (0.0034)	0.7110 (0.0143)	0.0264 (0.0009)	1000
RP (P)	0.6313	0.0114	0.1092 (0.0024)	-0.1187 (0.0035)	0.7250 (0.0141)	0.0260 (0.0009)	1000
FP (W)	0.6331	0.0114	0.1091 (0.0024)	-0.1169 (0.0035)	0.7380 (0.0139)	0.0256 (0.0009)	1000
FP (k=10)	0.6399	0.0118	0.1134 (0.0025)	-0.1101 (0.0036)	0.7480 (0.0137)	0.0250 (0.0009)	1000
FP (k=10000)	0.6907	0.0125	0.1252 (0.0028)	-0.0593 (0.0040)	0.8400 (0.0116)	0.0192 (0.0008)	1000
Model frailty: Normal							
Cox	0.7375	0.0190	0.1421 (0.0032)	-0.0125 (0.0045)	0.9170 (0.0087)	0.0203 (0.0009)	1000
Exp	0.9706	0.0285	0.1806 (0.0041)	0.2206 (0.0057)	0.7976 (0.0128)	0.0812 (0.0032)	993
Weibull	0.7394	0.0191	0.1421 (0.0032)	-0.0106 (0.0045)	0.9254 (0.0083)	0.0203 (0.0009)	992
Gompertz	0.9694	0.0300	0.1687 (0.0065)	0.2194 (0.0091)	0.8567 (0.0189)	0.0765 (0.0055)	342
RP (3)	0.7457	0.0198	0.1438 (0.0032)	-0.0043 (0.0045)	0.9270 (0.0082)	0.0207 (0.0010)	1000
RP (5)	0.7459	0.0198	0.1438 (0.0032)	-0.0041 (0.0045)	0.9270 (0.0082)	0.0207 (0.0010)	1000
RP (9)	0.7462	0.0198	0.1438 (0.0032)	-0.0038 (0.0045)	0.9280 (0.0082)	0.0207 (0.0010)	1000
RP (P)	0.7488	0.0198	0.1441 (0.0032)	-0.0012 (0.0046)	0.9280 (0.0082)	0.0208 (0.0010)	1000
FP (W)	0.7537	0.0199	0.1430 (0.0033)	0.0037 (0.0047)	0.9334 (0.0081)	0.0205 (0.0010)	946
FP (k=10)	0.7652	0.0206	0.1498 (0.0034)	0.0152 (0.0048)	0.9322 (0.0080)	0.0226 (0.0011)	988
FP (k=10000)	0.8186	0.0220	0.1605 (0.0036)	0.0686 (0.0051)	0.9328 (0.0079)	0.0305 (0.0016)	997

Table 288: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6050	0.0100	0.0952 (0.0021)	-0.1450 (0.0030)	0.6357 (0.0153)	0.0301 (0.0009)	991
Exp	0.4493	0.0059	0.0783 (0.0018)	-0.3007 (0.0025)	0.0720 (0.0082)	0.0965 (0.0015)	1000
Weibull	0.5601	0.0089	0.0930 (0.0021)	-0.1899 (0.0029)	0.4530 (0.0157)	0.0447 (0.0011)	1000
Gompertz	0.4599	0.0067	0.0800 (0.0028)	-0.2901 (0.0040)	0.0891 (0.0142)	0.0905 (0.0022)	404
RP (3)	0.6061	0.0101	0.0955 (0.0021)	-0.1439 (0.0030)	0.6470 (0.0151)	0.0298 (0.0009)	1000
RP (5)	0.6070	0.0101	0.0953 (0.0021)	-0.1430 (0.0030)	0.6527 (0.0151)	0.0295 (0.0009)	999
RP (9)	0.6074	0.0101	0.0953 (0.0021)	-0.1426 (0.0030)	0.6560 (0.0150)	0.0294 (0.0009)	1000
RP (P)	0.5973	0.0098	0.0952 (0.0021)	-0.1527 (0.0030)	0.6050 (0.0155)	0.0324 (0.0009)	1000
FP (W)	0.5601	0.0089	0.0930 (0.0021)	-0.1899 (0.0029)	0.4530 (0.0157)	0.0447 (0.0011)	1000
FP (k=10)	0.6049	0.0100	0.0952 (0.0021)	-0.1451 (0.0030)	0.6420 (0.0152)	0.0301 (0.0009)	1000
FP (k=10000)	0.6033	0.0089	0.0958 (0.0021)	-0.1467 (0.0030)	0.6060 (0.0155)	0.0307 (0.0009)	1000
Model frailty: Normal							
Cox	0.7380	0.0168	0.1284 (0.0029)	-0.0120 (0.0041)	0.9290 (0.0081)	0.0166 (0.0007)	1000
Exp	0.5179	0.0089	0.0974 (0.0022)	-0.2321 (0.0031)	0.3236 (0.0148)	0.0633 (0.0014)	995
Weibull	0.6704	0.0147	0.1221 (0.0027)	-0.0796 (0.0039)	0.8296 (0.0119)	0.0212 (0.0008)	992
Gompertz	0.5292	0.0101	0.0998 (0.0029)	-0.2208 (0.0040)	0.3964 (0.0198)	0.0587 (0.0017)	608
RP (3)	0.7422	0.0179	0.1297 (0.0029)	-0.0078 (0.0041)	0.9460 (0.0071)	0.0169 (0.0007)	1000
RP (5)	0.7439	0.0179	0.1296 (0.0029)	-0.0061 (0.0041)	0.9470 (0.0071)	0.0168 (0.0007)	1000
RP (9)	0.7446	0.0180	0.1298 (0.0029)	-0.0054 (0.0041)	0.9470 (0.0071)	0.0169 (0.0007)	1000
RP (P)	0.7287	0.0172	0.1282 (0.0029)	-0.0213 (0.0041)	0.9280 (0.0082)	0.0169 (0.0007)	1000
FP (W)	0.6767	0.0150	0.1229 (0.0028)	-0.0733 (0.0040)	0.8423 (0.0117)	0.0204 (0.0008)	964
FP (k=10)	0.7439	0.0179	0.1303 (0.0029)	-0.0061 (0.0041)	0.9463 (0.0072)	0.0170 (0.0008)	987
FP (k=10000)	0.7402	0.0166	0.1300 (0.0029)	-0.0098 (0.0041)	0.9304 (0.0081)	0.0170 (0.0007)	992

Table 289: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6102	0.0102	0.0988 (0.0022)	-0.1398 (0.0031)	0.6697 (0.0149)	0.0293 (0.0009)	993
Exp	0.3330	0.0037	0.0583 (0.0013)	-0.4170 (0.0018)	0.0000 (0.0000)	0.1773 (0.0015)	1000
Weibull	0.6580	0.0111	0.0988 (0.0022)	-0.0920 (0.0031)	0.8270 (0.0120)	0.0182 (0.0007)	1000
Gompertz	0.5462	0.0083	0.0853 (0.0019)	-0.2038 (0.0027)	0.3899 (0.0155)	0.0488 (0.0011)	990
RP (3)	0.6134	0.0103	0.0993 (0.0022)	-0.1366 (0.0031)	0.6807 (0.0148)	0.0285 (0.0009)	999
RP (5)	0.6124	0.0103	0.0990 (0.0022)	-0.1376 (0.0031)	0.6810 (0.0147)	0.0287 (0.0009)	1000
RP (9)	0.6128	0.0103	0.0991 (0.0022)	-0.1372 (0.0031)	0.6810 (0.0147)	0.0286 (0.0009)	1000
RP (P)	0.6138	0.0103	0.0985 (0.0022)	-0.1362 (0.0031)	0.6888 (0.0147)	0.0282 (0.0009)	996
FP (W)	0.6580	0.0111	0.0988 (0.0022)	-0.0920 (0.0031)	0.8268 (0.0120)	0.0182 (0.0007)	999
FP (k=10)	0.6150	0.0104	0.0991 (0.0022)	-0.1350 (0.0031)	0.6910 (0.0146)	0.0280 (0.0009)	1000
FP (k=10000)	0.7223	0.0118	0.1131 (0.0025)	-0.0277 (0.0036)	0.9090 (0.0091)	0.0136 (0.0006)	1000
Model frailty: Normal							
Cox	0.7415	0.0174	0.1321 (0.0030)	-0.0085 (0.0042)	0.9190 (0.0086)	0.0175 (0.0008)	1000
Exp	0.3707	0.0053	0.0716 (0.0016)	-0.3793 (0.0023)	0.0110 (0.0033)	0.1490 (0.0017)	999
Weibull	0.8102	0.0206	0.1386 (0.0031)	0.0602 (0.0044)	0.9515 (0.0068)	0.0228 (0.0011)	989
Gompertz	0.6553	0.0149	0.1176 (0.0027)	-0.0947 (0.0038)	0.8092 (0.0127)	0.0228 (0.0009)	959
RP (3)	0.7484	0.0183	0.1335 (0.0030)	-0.0016 (0.0042)	0.9400 (0.0075)	0.0178 (0.0008)	1000
RP (5)	0.7479	0.0183	0.1335 (0.0030)	-0.0021 (0.0042)	0.9390 (0.0076)	0.0178 (0.0008)	1000
RP (9)	0.7484	0.0183	0.1336 (0.0030)	-0.0016 (0.0042)	0.9390 (0.0076)	0.0178 (0.0008)	1000
RP (P)	0.7504	0.0184	0.1334 (0.0030)	0.0004 (0.0042)	0.9390 (0.0076)	0.0178 (0.0008)	1000
FP (W)	0.8196	0.0211	0.1408 (0.0032)	0.0696 (0.0046)	0.9502 (0.0071)	0.0246 (0.0012)	943
FP (k=10)	0.7633	0.0190	0.1353 (0.0030)	0.0133 (0.0043)	0.9478 (0.0070)	0.0185 (0.0009)	997
FP (k=10000)	0.9367	0.0259	0.1714 (0.0038)	0.1867 (0.0054)	0.8479 (0.0114)	0.0642 (0.0026)	993

Table 290: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6160	0.0108	0.1077 (0.0024)	-0.1340 (0.0034)	0.6707 (0.0149)	0.0295 (0.0010)	996
Exp	0.7005	0.0122	0.1156 (0.0026)	-0.0495 (0.0037)	0.8790 (0.0103)	0.0158 (0.0007)	1000
Weibull	0.6204	0.0108	0.1051 (0.0024)	-0.1296 (0.0033)	0.6880 (0.0147)	0.0278 (0.0009)	1000
Gompertz	0.6946	0.0128	0.1094 (0.0062)	-0.0554 (0.0087)	0.8917 (0.0248)	0.0150 (0.0016)	157
RP (3)	0.6172	0.0109	0.1079 (0.0024)	-0.1328 (0.0034)	0.6747 (0.0148)	0.0293 (0.0009)	999
RP (5)	0.6180	0.0109	0.1080 (0.0024)	-0.1320 (0.0034)	0.6790 (0.0148)	0.0291 (0.0009)	1000
RP (9)	0.6183	0.0109	0.1081 (0.0024)	-0.1317 (0.0034)	0.6800 (0.0148)	0.0290 (0.0009)	1000
RP (P)	0.6181	0.0108	0.1074 (0.0024)	-0.1319 (0.0034)	0.6794 (0.0148)	0.0289 (0.0009)	998
FP (W)	0.6204	0.0108	0.1051 (0.0024)	-0.1296 (0.0033)	0.6880 (0.0147)	0.0278 (0.0009)	1000
FP (k=10)	0.6189	0.0109	0.1093 (0.0024)	-0.1311 (0.0035)	0.6770 (0.0148)	0.0291 (0.0009)	1000
FP (k=10000)	0.6129	0.0100	0.1090 (0.0024)	-0.1371 (0.0034)	0.6230 (0.0153)	0.0307 (0.0010)	1000
Model frailty: Normal							
Cox	0.7310	0.0182	0.1430 (0.0032)	-0.0190 (0.0045)	0.9070 (0.0092)	0.0208 (0.0010)	1000
Exp	0.8276	0.0212	0.1521 (0.0034)	0.0776 (0.0048)	0.9427 (0.0074)	0.0291 (0.0016)	994
Weibull	0.7343	0.0185	0.1410 (0.0032)	-0.0157 (0.0045)	0.9175 (0.0087)	0.0201 (0.0010)	994
Gompertz	0.8243	0.0225	0.1574 (0.0059)	0.0743 (0.0084)	0.9377 (0.0129)	0.0302 (0.0028)	353
RP (3)	0.7381	0.0190	0.1447 (0.0032)	-0.0119 (0.0046)	0.9160 (0.0088)	0.0211 (0.0010)	1000
RP (5)	0.7388	0.0190	0.1446 (0.0032)	-0.0112 (0.0046)	0.9160 (0.0088)	0.0210 (0.0010)	1000
RP (9)	0.7391	0.0190	0.1447 (0.0032)	-0.0109 (0.0046)	0.9150 (0.0088)	0.0210 (0.0010)	1000
RP (P)	0.7396	0.0190	0.1441 (0.0032)	-0.0104 (0.0046)	0.9160 (0.0088)	0.0209 (0.0010)	1000
FP (W)	0.7467	0.0191	0.1414 (0.0033)	-0.0033 (0.0046)	0.9265 (0.0085)	0.0200 (0.0010)	939
FP (k=10)	0.7433	0.0192	0.1475 (0.0033)	-0.0067 (0.0047)	0.9170 (0.0088)	0.0218 (0.0011)	976
FP (k=10000)	0.7293	0.0178	0.1443 (0.0032)	-0.0207 (0.0046)	0.8995 (0.0095)	0.0212 (0.0010)	995

Table 291: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2585	0.0369	0.1961 (0.0044)	0.0085 (0.0062)	0.9305 (0.0081)	0.0385 (0.0018)	993
Exp	1.2580	0.0354	0.1910 (0.0043)	0.0080 (0.0060)	0.9370 (0.0077)	0.0365 (0.0018)	1000
Weibull	1.2617	0.0368	0.1953 (0.0044)	0.0117 (0.0062)	0.9360 (0.0077)	0.0382 (0.0018)	1000
Gompertz	1.2422	0.0360	0.1858 (0.0066)	-0.0078 (0.0093)	0.9343 (0.0124)	0.0345 (0.0027)	396
RP (3)	1.2599	0.0370	0.1965 (0.0044)	0.0099 (0.0062)	0.9315 (0.0080)	0.0387 (0.0018)	993
RP (5)	1.2603	0.0371	0.1967 (0.0044)	0.0103 (0.0062)	0.9329 (0.0079)	0.0388 (0.0018)	998
RP (9)	1.2602	0.0371	0.1967 (0.0044)	0.0102 (0.0062)	0.9328 (0.0079)	0.0388 (0.0018)	997
RP (P)	1.2596	0.0368	0.1962 (0.0044)	0.0096 (0.0063)	0.9355 (0.0079)	0.0386 (0.0018)	977
FP (W)	1.2617	0.0368	0.1953 (0.0044)	0.0117 (0.0062)	0.9360 (0.0077)	0.0382 (0.0018)	1000
FP (k=10)	1.2570	0.0369	0.1960 (0.0044)	0.0070 (0.0062)	0.9320 (0.0080)	0.0384 (0.0018)	1000
FP (k=10000)	1.2578	0.0355	0.1954 (0.0044)	0.0078 (0.0062)	0.9280 (0.0082)	0.0382 (0.0018)	1000
Model frailty: Normal							
Cox	1.6641	0.0951	0.3091 (0.0069)	0.4141 (0.0098)	0.8050 (0.0125)	0.2670 (0.0101)	1000
Exp	1.6439	0.0913	0.2976 (0.0067)	0.3939 (0.0094)	0.8410 (0.0116)	0.2436 (0.0095)	994
Weibull	1.6644	0.0966	0.3099 (0.0070)	0.4144 (0.0098)	0.8216 (0.0122)	0.2677 (0.0102)	992
Gompertz	1.6453	0.0957	0.2916 (0.0102)	0.3953 (0.0144)	0.8592 (0.0171)	0.2411 (0.0143)	412
RP (3)	1.6889	0.1015	0.3180 (0.0071)	0.4389 (0.0101)	0.8100 (0.0124)	0.2937 (0.0111)	1000
RP (5)	1.6893	0.1016	0.3182 (0.0071)	0.4393 (0.0101)	0.8090 (0.0124)	0.2942 (0.0111)	1000
RP (9)	1.6898	0.1016	0.3184 (0.0071)	0.4398 (0.0101)	0.8110 (0.0124)	0.2947 (0.0111)	1000
RP (P)	1.6899	0.1007	0.3160 (0.0071)	0.4399 (0.0100)	0.8060 (0.0125)	0.2933 (0.0109)	1000
FP (W)	1.6951	0.1011	0.3162 (0.0071)	0.4451 (0.0101)	0.8022 (0.0127)	0.2980 (0.0111)	986
FP (k=10)	1.6953	0.1026	0.3226 (0.0073)	0.4453 (0.0103)	0.8025 (0.0128)	0.3022 (0.0115)	972
FP (k=10000)	1.6862	0.0982	0.3161 (0.0071)	0.4362 (0.0100)	0.8018 (0.0126)	0.2901 (0.0109)	999

Table 292: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2395	0.0380	0.1909 (0.0043)	-0.0105 (0.0060)	0.9388 (0.0076)	0.0365 (0.0018)	996
Exp	1.4526	0.0471	0.2136 (0.0048)	0.2026 (0.0068)	0.9070 (0.0092)	0.0866 (0.0038)	1000
Weibull	1.2460	0.0382	0.1913 (0.0043)	-0.0040 (0.0061)	0.9420 (0.0074)	0.0366 (0.0019)	1000
Gompertz	1.4433	0.0481	0.2246 (0.0090)	0.1933 (0.0128)	0.8997 (0.0171)	0.0877 (0.0082)	309
RP (3)	1.2418	0.0383	0.1914 (0.0043)	-0.0082 (0.0061)	0.9399 (0.0075)	0.0366 (0.0019)	999
RP (5)	1.2418	0.0383	0.1915 (0.0043)	-0.0082 (0.0061)	0.9409 (0.0075)	0.0367 (0.0019)	999
RP (9)	1.2422	0.0383	0.1916 (0.0043)	-0.0078 (0.0061)	0.9409 (0.0075)	0.0367 (0.0019)	999
RP (P)	1.2431	0.0382	0.1889 (0.0042)	-0.0069 (0.0060)	0.9417 (0.0074)	0.0357 (0.0016)	995
FP (W)	1.2460	0.0382	0.1913 (0.0043)	-0.0040 (0.0061)	0.9420 (0.0074)	0.0366 (0.0019)	1000
FP (k=10)	1.2473	0.0386	0.1927 (0.0043)	-0.0027 (0.0061)	0.9440 (0.0073)	0.0371 (0.0019)	1000
FP (k=10000)	1.2959	0.0397	0.1989 (0.0045)	0.0459 (0.0063)	0.9530 (0.0067)	0.0416 (0.0022)	1000
Model frailty: Normal							
Cox	1.5629	0.0861	0.2853 (0.0064)	0.3129 (0.0090)	0.8970 (0.0096)	0.1792 (0.0082)	1000
Exp	1.8570	0.1177	0.3230 (0.0073)	0.6070 (0.0103)	0.6141 (0.0155)	0.4727 (0.0149)	990
Weibull	1.5635	0.0906	0.2859 (0.0064)	0.3135 (0.0091)	0.9255 (0.0083)	0.1799 (0.0083)	993
Gompertz	1.8524	0.1212	0.3312 (0.0127)	0.6024 (0.0179)	0.6385 (0.0259)	0.4723 (0.0274)	343
RP (3)	1.5874	0.0952	0.2917 (0.0065)	0.3374 (0.0092)	0.9180 (0.0087)	0.1989 (0.0089)	1000
RP (5)	1.5878	0.0953	0.2920 (0.0065)	0.3378 (0.0092)	0.9190 (0.0086)	0.1993 (0.0089)	1000
RP (9)	1.5880	0.0953	0.2920 (0.0065)	0.3380 (0.0092)	0.9170 (0.0087)	0.1994 (0.0089)	1000
RP (P)	1.5911	0.0950	0.2919 (0.0065)	0.3411 (0.0092)	0.9160 (0.0088)	0.2014 (0.0090)	1000
FP (W)	1.5974	0.0955	0.2931 (0.0067)	0.3474 (0.0094)	0.9053 (0.0094)	0.2065 (0.0093)	971
FP (k=10)	1.6140	0.0987	0.2960 (0.0066)	0.3640 (0.0094)	0.8963 (0.0097)	0.2200 (0.0093)	993
FP (k=10000)	1.6579	0.0986	0.3012 (0.0067)	0.4079 (0.0095)	0.8480 (0.0114)	0.2570 (0.0103)	1000

Table 293: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2496	0.0337	0.1851 (0.0041)	-0.0004 (0.0059)	0.9419 (0.0074)	0.0342 (0.0016)	999
Exp	1.0142	0.0232	0.1559 (0.0035)	-0.2358 (0.0049)	0.5890 (0.0156)	0.0799 (0.0023)	1000
Weibull	1.1820	0.0308	0.1783 (0.0040)	-0.0680 (0.0056)	0.8960 (0.0097)	0.0364 (0.0015)	1000
Gompertz	1.0060	0.0242	0.1601 (0.0052)	-0.2440 (0.0073)	0.5904 (0.0224)	0.0851 (0.0035)	481
RP (3)	1.2509	0.0339	0.1852 (0.0041)	0.0009 (0.0059)	0.9450 (0.0072)	0.0343 (0.0016)	1000
RP (5)	1.2524	0.0340	0.1855 (0.0042)	0.0024 (0.0059)	0.9449 (0.0072)	0.0344 (0.0017)	998
RP (9)	1.2525	0.0340	0.1867 (0.0042)	0.0025 (0.0059)	0.9428 (0.0074)	0.0348 (0.0017)	997
RP (P)	1.2337	0.0331	0.1833 (0.0041)	-0.0163 (0.0059)	0.9356 (0.0079)	0.0338 (0.0016)	978
FP (W)	1.1820	0.0308	0.1783 (0.0040)	-0.0680 (0.0056)	0.8960 (0.0097)	0.0364 (0.0015)	1000
FP (k=10)	1.2492	0.0338	0.1849 (0.0041)	-0.0008 (0.0058)	0.9450 (0.0072)	0.0342 (0.0016)	1000
FP (k=10000)	1.2442	0.0318	0.1839 (0.0041)	-0.0058 (0.0058)	0.9360 (0.0077)	0.0338 (0.0016)	1000
Model frailty: Normal							
Cox	1.7584	0.1018	0.3175 (0.0071)	0.5084 (0.0100)	0.6910 (0.0146)	0.3592 (0.0128)	1000
Exp	1.3322	0.0583	0.2491 (0.0056)	0.0822 (0.0079)	0.9537 (0.0067)	0.0688 (0.0039)	994
Weibull	1.6219	0.0855	0.2993 (0.0067)	0.3719 (0.0095)	0.8310 (0.0119)	0.2278 (0.0095)	988
Gompertz	1.3383	0.0627	0.2534 (0.0083)	0.0883 (0.0117)	0.9596 (0.0091)	0.0719 (0.0064)	470
RP (3)	1.7800	0.1035	0.3279 (0.0073)	0.5300 (0.0104)	0.6750 (0.0148)	0.3884 (0.0137)	1000
RP (5)	1.7838	0.1040	0.3290 (0.0074)	0.5338 (0.0104)	0.6740 (0.0148)	0.3931 (0.0139)	1000
RP (9)	1.7853	0.1042	0.3294 (0.0074)	0.5353 (0.0104)	0.6750 (0.0148)	0.3949 (0.0139)	1000
RP (P)	1.7457	0.0994	0.3221 (0.0072)	0.4957 (0.0102)	0.7140 (0.0143)	0.3493 (0.0127)	1000
FP (W)	1.6420	0.0881	0.3031 (0.0068)	0.3920 (0.0096)	0.8196 (0.0122)	0.2454 (0.0100)	992
FP (k=10)	1.7883	0.1044	0.3296 (0.0074)	0.5383 (0.0104)	0.6700 (0.0149)	0.3983 (0.0139)	1000
FP (k=10000)	1.7746	0.0992	0.3254 (0.0073)	0.5246 (0.0103)	0.6690 (0.0149)	0.3810 (0.0133)	1000

Table 294: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2391	0.0338	0.1826 (0.0041)	-0.0109 (0.0058)	0.9355 (0.0078)	0.0334 (0.0015)	992
Exp	0.8848	0.0190	0.1407 (0.0031)	-0.3652 (0.0044)	0.2780 (0.0142)	0.1532 (0.0032)	1000
Weibull	1.3152	0.0366	0.1876 (0.0042)	0.0652 (0.0059)	0.9610 (0.0061)	0.0394 (0.0018)	1000
Gompertz	0.8882	0.0202	0.1450 (0.0052)	-0.3618 (0.0074)	0.3039 (0.0234)	0.1518 (0.0052)	385
RP (3)	1.2419	0.0340	0.1822 (0.0041)	-0.0081 (0.0058)	0.9384 (0.0076)	0.0332 (0.0015)	991
RP (5)	1.2423	0.0340	0.1827 (0.0041)	-0.0077 (0.0058)	0.9367 (0.0077)	0.0334 (0.0015)	996
RP (9)	1.2421	0.0340	0.1828 (0.0041)	-0.0079 (0.0058)	0.9355 (0.0078)	0.0334 (0.0015)	993
RP (P)	1.2454	0.0341	0.1832 (0.0042)	-0.0046 (0.0059)	0.9365 (0.0079)	0.0335 (0.0015)	961
FP (W)	1.3148	0.0366	0.1877 (0.0042)	0.0648 (0.0059)	0.9609 (0.0061)	0.0394 (0.0018)	997
FP (k=10)	1.2448	0.0342	0.1832 (0.0041)	-0.0052 (0.0058)	0.9360 (0.0077)	0.0336 (0.0015)	1000
FP (k=10000)	1.3978	0.0388	0.2064 (0.0046)	0.1478 (0.0065)	0.9000 (0.0095)	0.0644 (0.0029)	1000
Model frailty: Normal							
Cox	1.7157	0.0971	0.3021 (0.0068)	0.4657 (0.0096)	0.7500 (0.0137)	0.3080 (0.0105)	1000
Exp	1.1295	0.0451	0.2149 (0.0048)	-0.1205 (0.0068)	0.8380 (0.0117)	0.0607 (0.0023)	994
Weibull	1.8709	0.1119	0.3310 (0.0075)	0.6209 (0.0106)	0.5687 (0.0158)	0.4950 (0.0149)	983
Gompertz	1.1436	0.0493	0.2205 (0.0066)	-0.1064 (0.0093)	0.8619 (0.0145)	0.0598 (0.0030)	565
RP (3)	1.7373	0.1001	0.3112 (0.0070)	0.4873 (0.0098)	0.7480 (0.0137)	0.3342 (0.0114)	1000
RP (5)	1.7382	0.1003	0.3116 (0.0070)	0.4882 (0.0099)	0.7490 (0.0137)	0.3354 (0.0115)	1000
RP (9)	1.7389	0.1004	0.3120 (0.0070)	0.4889 (0.0099)	0.7470 (0.0137)	0.3362 (0.0115)	1000
RP (P)	1.7488	0.1014	0.3143 (0.0070)	0.4988 (0.0099)	0.7340 (0.0140)	0.3475 (0.0118)	1000
FP (W)	1.8997	0.1162	0.3389 (0.0077)	0.6497 (0.0109)	0.5398 (0.0160)	0.5369 (0.0160)	967
FP (k=10)	1.7628	0.1032	0.3158 (0.0071)	0.5128 (0.0100)	0.7207 (0.0142)	0.3626 (0.0121)	999
FP (k=10000)	2.1061	0.1379	0.3920 (0.0088)	0.8561 (0.0124)	0.3146 (0.0147)	0.8864 (0.0237)	998

Table 295: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2478	0.0371	0.1924 (0.0043)	-0.0022 (0.0061)	0.9337 (0.0079)	0.0370 (0.0017)	995
Exp	1.3487	0.0402	0.1957 (0.0044)	0.0987 (0.0062)	0.9530 (0.0067)	0.0480 (0.0023)	1000
Weibull	1.2616	0.0375	0.1915 (0.0043)	0.0116 (0.0061)	0.9390 (0.0076)	0.0368 (0.0017)	1000
Gompertz	1.3213	0.0402	0.1734 (0.0067)	0.0713 (0.0095)	0.9731 (0.0088)	0.0351 (0.0027)	335
RP (3)	1.2502	0.0374	0.1924 (0.0043)	0.0002 (0.0061)	0.9409 (0.0075)	0.0370 (0.0017)	999
RP (5)	1.2507	0.0375	0.1926 (0.0043)	0.0007 (0.0061)	0.9410 (0.0075)	0.0371 (0.0017)	1000
RP (9)	1.2513	0.0375	0.1928 (0.0043)	0.0013 (0.0061)	0.9399 (0.0075)	0.0371 (0.0017)	998
RP (P)	1.2511	0.0373	0.1915 (0.0043)	0.0011 (0.0061)	0.9402 (0.0076)	0.0367 (0.0017)	986
FP (W)	1.2618	0.0375	0.1916 (0.0043)	0.0118 (0.0061)	0.9389 (0.0076)	0.0368 (0.0017)	999
FP (k=10)	1.2482	0.0374	0.1923 (0.0043)	-0.0018 (0.0061)	0.9390 (0.0076)	0.0369 (0.0017)	1000
FP (k=10000)	1.2381	0.0356	0.1901 (0.0043)	-0.0119 (0.0060)	0.9340 (0.0079)	0.0362 (0.0017)	1000
Model frailty: Normal							
Cox	1.6158	0.0897	0.2948 (0.0066)	0.3658 (0.0093)	0.8480 (0.0114)	0.2206 (0.0087)	1000
Exp	1.7572	0.1040	0.3008 (0.0068)	0.5072 (0.0096)	0.7298 (0.0141)	0.3476 (0.0113)	992
Weibull	1.6378	0.0956	0.2977 (0.0067)	0.3878 (0.0094)	0.8602 (0.0110)	0.2389 (0.0093)	994
Gompertz	1.7552	0.1081	0.2901 (0.0110)	0.5052 (0.0155)	0.7600 (0.0228)	0.3391 (0.0184)	350
RP (3)	1.6398	0.0980	0.3018 (0.0068)	0.3898 (0.0095)	0.8600 (0.0110)	0.2430 (0.0095)	1000
RP (5)	1.6397	0.0979	0.3014 (0.0067)	0.3897 (0.0095)	0.8590 (0.0110)	0.2426 (0.0094)	1000
RP (9)	1.6399	0.0979	0.3014 (0.0067)	0.3899 (0.0095)	0.8600 (0.0110)	0.2428 (0.0094)	1000
RP (P)	1.6466	0.0985	0.3028 (0.0068)	0.3966 (0.0096)	0.8540 (0.0112)	0.2489 (0.0096)	1000
FP (W)	1.6661	0.0999	0.3046 (0.0069)	0.4161 (0.0098)	0.8431 (0.0116)	0.2658 (0.0102)	975
FP (k=10)	1.6486	0.0994	0.3044 (0.0069)	0.3986 (0.0097)	0.8561 (0.0112)	0.2514 (0.0098)	987
FP (k=10000)	1.6216	0.0931	0.2970 (0.0066)	0.3716 (0.0094)	0.8649 (0.0108)	0.2262 (0.0089)	999

Table 296: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.9709	0.0221	0.1505 (0.0034)	-0.2791 (0.0048)	0.4955 (0.0159)	0.1005 (0.0027)	995
Exp	0.9916	0.0213	0.1499 (0.0034)	-0.2584 (0.0047)	0.5330 (0.0158)	0.0892 (0.0025)	1000
Weibull	0.9750	0.0222	0.1501 (0.0034)	-0.2750 (0.0047)	0.5050 (0.0158)	0.0982 (0.0026)	1000
Gompertz	0.9662	0.0218	0.1477 (0.0058)	-0.2838 (0.0082)	0.4985 (0.0278)	0.1023 (0.0048)	323
RP (3)	0.9729	0.0223	0.1513 (0.0034)	-0.2771 (0.0048)	0.5086 (0.0159)	0.0996 (0.0027)	993
RP (5)	0.9738	0.0224	0.1511 (0.0034)	-0.2762 (0.0048)	0.5115 (0.0158)	0.0991 (0.0026)	999
RP (9)	0.9733	0.0223	0.1504 (0.0034)	-0.2767 (0.0048)	0.5105 (0.0158)	0.0992 (0.0026)	999
RP (P)	0.9744	0.0222	0.1505 (0.0034)	-0.2756 (0.0048)	0.5050 (0.0159)	0.0986 (0.0026)	994
FP (W)	0.9750	0.0222	0.1501 (0.0034)	-0.2750 (0.0047)	0.5050 (0.0158)	0.0982 (0.0026)	1000
FP (k=10)	0.9733	0.0223	0.1521 (0.0034)	-0.2767 (0.0048)	0.5080 (0.0158)	0.0997 (0.0027)	1000
FP (k=10000)	0.9800	0.0206	0.1530 (0.0034)	-0.2700 (0.0048)	0.4960 (0.0158)	0.0963 (0.0026)	1000
Model frailty: Normal							
Cox	1.2136	0.0485	0.2050 (0.0046)	-0.0364 (0.0065)	0.9239 (0.0084)	0.0433 (0.0021)	999
Exp	1.2273	0.0428	0.2059 (0.0046)	-0.0227 (0.0065)	0.9323 (0.0080)	0.0429 (0.0019)	989
Weibull	1.2340	0.0462	0.2168 (0.0049)	-0.0160 (0.0069)	0.9263 (0.0083)	0.0472 (0.0021)	990
Gompertz	1.2200	0.0454	0.2041 (0.0078)	-0.0300 (0.0111)	0.9296 (0.0139)	0.0424 (0.0032)	341
RP (3)	1.2443	0.0477	0.2199 (0.0049)	-0.0057 (0.0070)	0.9360 (0.0077)	0.0484 (0.0022)	1000
RP (5)	1.2445	0.0477	0.2198 (0.0049)	-0.0055 (0.0070)	0.9380 (0.0076)	0.0483 (0.0022)	1000
RP (9)	1.2447	0.0477	0.2198 (0.0049)	-0.0053 (0.0070)	0.9380 (0.0076)	0.0483 (0.0022)	1000
RP (P)	1.2459	0.0474	0.2188 (0.0049)	-0.0041 (0.0069)	0.9320 (0.0080)	0.0478 (0.0022)	1000
FP (W)	1.2492	0.0475	0.2196 (0.0050)	-0.0008 (0.0071)	0.9317 (0.0081)	0.0482 (0.0023)	966
FP (k=10)	1.2453	0.0478	0.2199 (0.0049)	-0.0047 (0.0070)	0.9384 (0.0076)	0.0483 (0.0022)	991
FP (k=10000)	1.2439	0.0452	0.2181 (0.0049)	-0.0061 (0.0069)	0.9288 (0.0081)	0.0476 (0.0022)	997

Table 297: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.9818	0.0231	0.1538 (0.0034)	-0.2682 (0.0049)	0.5467 (0.0158)	0.0956 (0.0027)	995
Exp	1.2980	0.0345	0.2057 (0.0046)	0.0480 (0.0065)	0.9210 (0.0085)	0.0446 (0.0021)	1000
Weibull	0.9926	0.0235	0.1551 (0.0035)	-0.2574 (0.0049)	0.5730 (0.0156)	0.0903 (0.0026)	1000
Gompertz	1.2883	0.0359	0.2042 (0.0111)	0.0383 (0.0156)	0.9298 (0.0195)	0.0429 (0.0043)	171
RP (3)	0.9855	0.0235	0.1547 (0.0035)	-0.2645 (0.0049)	0.5566 (0.0157)	0.0939 (0.0026)	999
RP (5)	0.9854	0.0235	0.1546 (0.0035)	-0.2646 (0.0049)	0.5577 (0.0157)	0.0939 (0.0026)	997
RP (9)	0.9854	0.0235	0.1544 (0.0035)	-0.2646 (0.0049)	0.5580 (0.0157)	0.0939 (0.0026)	1000
RP (P)	0.9882	0.0235	0.1547 (0.0035)	-0.2618 (0.0049)	0.5657 (0.0157)	0.0925 (0.0026)	997
FP (W)	0.9926	0.0236	0.1551 (0.0035)	-0.2574 (0.0049)	0.5730 (0.0156)	0.0903 (0.0026)	1000
FP (k=10)	1.0221	0.0251	0.1691 (0.0038)	-0.2279 (0.0053)	0.6490 (0.0151)	0.0805 (0.0025)	1000
FP (k=10000)	1.1148	0.0268	0.1874 (0.0042)	-0.1352 (0.0059)	0.7730 (0.0132)	0.0534 (0.0020)	1000
Model frailty: Normal							
Cox	1.2100	0.0491	0.2071 (0.0046)	-0.0400 (0.0066)	0.9030 (0.0094)	0.0445 (0.0020)	1000
Exp	1.6093	0.0721	0.2758 (0.0062)	0.3593 (0.0088)	0.8020 (0.0127)	0.2051 (0.0077)	985
Weibull	1.2338	0.0481	0.2205 (0.0050)	-0.0162 (0.0070)	0.9095 (0.0092)	0.0489 (0.0022)	983
Gompertz	1.5642	0.0719	0.2608 (0.0117)	0.3142 (0.0165)	0.8600 (0.0219)	0.1665 (0.0126)	250
RP (3)	1.2387	0.0492	0.2206 (0.0049)	-0.0113 (0.0070)	0.9200 (0.0086)	0.0487 (0.0022)	1000
RP (5)	1.2386	0.0492	0.2206 (0.0049)	-0.0114 (0.0070)	0.9200 (0.0086)	0.0487 (0.0022)	1000
RP (9)	1.2387	0.0492	0.2206 (0.0049)	-0.0113 (0.0070)	0.9200 (0.0086)	0.0488 (0.0022)	1000
RP (P)	1.2433	0.0493	0.2209 (0.0049)	-0.0067 (0.0070)	0.9250 (0.0083)	0.0488 (0.0022)	1000
FP (W)	1.2513	0.0496	0.2220 (0.0050)	0.0013 (0.0071)	0.9262 (0.0084)	0.0493 (0.0023)	976
FP (k=10)	1.2899	0.0526	0.2331 (0.0053)	0.0399 (0.0075)	0.9406 (0.0076)	0.0559 (0.0026)	977
FP (k=10000)	1.3829	0.0565	0.2512 (0.0056)	0.1329 (0.0079)	0.9340 (0.0079)	0.0807 (0.0038)	1000

Table 298: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.9524	0.0209	0.1416 (0.0032)	-0.2976 (0.0045)	0.4481 (0.0158)	0.1086 (0.0027)	993
Exp	0.7549	0.0134	0.1222 (0.0027)	-0.4951 (0.0039)	0.0420 (0.0063)	0.2600 (0.0038)	1000
Weibull	0.9059	0.0196	0.1434 (0.0032)	-0.3441 (0.0045)	0.3300 (0.0149)	0.1390 (0.0031)	1000
Gompertz	0.7482	0.0143	0.1227 (0.0044)	-0.5018 (0.0063)	0.0496 (0.0111)	0.2668 (0.0062)	383
RP (3)	0.9547	0.0210	0.1428 (0.0032)	-0.2953 (0.0045)	0.4579 (0.0158)	0.1076 (0.0027)	998
RP (5)	0.9555	0.0211	0.1426 (0.0032)	-0.2945 (0.0045)	0.4595 (0.0158)	0.1070 (0.0027)	999
RP (9)	0.9560	0.0211	0.1426 (0.0032)	-0.2940 (0.0045)	0.4590 (0.0158)	0.1067 (0.0027)	1000
RP (P)	0.9461	0.0208	0.1431 (0.0032)	-0.3039 (0.0045)	0.4344 (0.0157)	0.1128 (0.0028)	999
FP (W)	0.9061	0.0196	0.1434 (0.0032)	-0.3439 (0.0045)	0.3307 (0.0149)	0.1388 (0.0031)	998
FP (k=10)	0.9544	0.0209	0.1431 (0.0032)	-0.2956 (0.0045)	0.4500 (0.0157)	0.1079 (0.0027)	1000
FP (k=10000)	0.9568	0.0189	0.1442 (0.0032)	-0.2932 (0.0046)	0.4360 (0.0157)	0.1067 (0.0027)	1000
Model frailty: Normal							
Cox	1.2113	0.0457	0.1940 (0.0043)	-0.0387 (0.0061)	0.9249 (0.0083)	0.0391 (0.0019)	999
Exp	0.9170	0.0241	0.1637 (0.0037)	-0.3330 (0.0052)	0.4061 (0.0156)	0.1376 (0.0034)	990
Weibull	1.1499	0.0388	0.2038 (0.0046)	-0.1001 (0.0065)	0.8529 (0.0113)	0.0515 (0.0020)	986
Gompertz	0.8857	0.0248	0.1542 (0.0059)	-0.3643 (0.0083)	0.3689 (0.0259)	0.1564 (0.0060)	347
RP (3)	1.2457	0.0456	0.2126 (0.0048)	-0.0043 (0.0067)	0.9350 (0.0078)	0.0452 (0.0020)	1000
RP (5)	1.2483	0.0459	0.2128 (0.0048)	-0.0017 (0.0067)	0.9370 (0.0077)	0.0453 (0.0020)	1000
RP (9)	1.2493	0.0459	0.2130 (0.0048)	-0.0007 (0.0067)	0.9380 (0.0076)	0.0453 (0.0020)	1000
RP (P)	1.2282	0.0443	0.2111 (0.0047)	-0.0218 (0.0067)	0.9270 (0.0082)	0.0450 (0.0019)	1000
FP (W)	1.1596	0.0395	0.2032 (0.0046)	-0.0904 (0.0065)	0.8732 (0.0106)	0.0494 (0.0020)	978
FP (k=10)	1.2480	0.0458	0.2127 (0.0048)	-0.0020 (0.0067)	0.9359 (0.0077)	0.0452 (0.0020)	999
FP (k=10000)	1.2464	0.0427	0.2115 (0.0047)	-0.0036 (0.0067)	0.9309 (0.0080)	0.0447 (0.0020)	999

Table 299: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.9537	0.0209	0.1420 (0.0032)	-0.2963 (0.0045)	0.4458 (0.0157)	0.1079 (0.0026)	996
Exp	0.5384	0.0076	0.0834 (0.0019)	-0.7116 (0.0026)	0.0000 (0.0000)	0.5133 (0.0037)	1000
Weibull	0.9992	0.0220	0.1379 (0.0031)	-0.2508 (0.0044)	0.5730 (0.0156)	0.0819 (0.0022)	1000
Gompertz	0.5937	0.0098	0.1114 (0.0030)	-0.6563 (0.0043)	0.0015 (0.0015)	0.4431 (0.0053)	683
RP (3)	0.9576	0.0212	0.1429 (0.0032)	-0.2924 (0.0045)	0.4578 (0.0158)	0.1059 (0.0026)	996
RP (5)	0.9568	0.0212	0.1434 (0.0032)	-0.2932 (0.0045)	0.4555 (0.0158)	0.1065 (0.0026)	999
RP (9)	0.9574	0.0212	0.1436 (0.0032)	-0.2926 (0.0045)	0.4555 (0.0158)	0.1062 (0.0026)	999
RP (P)	0.9556	0.0211	0.1415 (0.0032)	-0.2944 (0.0045)	0.4555 (0.0158)	0.1067 (0.0026)	988
FP (W)	0.9993	0.0220	0.1380 (0.0031)	-0.2507 (0.0044)	0.5736 (0.0156)	0.0819 (0.0022)	999
FP (k=10)	0.9591	0.0213	0.1418 (0.0032)	-0.2909 (0.0045)	0.4600 (0.0158)	0.1047 (0.0026)	1000
FP (k=10000)	1.0890	0.0231	0.1576 (0.0035)	-0.1610 (0.0050)	0.7620 (0.0135)	0.0507 (0.0018)	1000
Model frailty: Normal							
Cox	1.2104	0.0452	0.1977 (0.0044)	-0.0396 (0.0063)	0.9249 (0.0083)	0.0406 (0.0020)	999
Exp	0.6383	0.0134	0.1142 (0.0026)	-0.6117 (0.0036)	0.0181 (0.0042)	0.3872 (0.0043)	994
Weibull	1.3251	0.0508	0.2193 (0.0049)	0.0751 (0.0070)	0.9605 (0.0062)	0.0537 (0.0027)	988
Gompertz	0.7062	0.0178	0.1513 (0.0043)	-0.5438 (0.0060)	0.0968 (0.0118)	0.3186 (0.0059)	630
RP (3)	1.2429	0.0459	0.2127 (0.0048)	-0.0071 (0.0067)	0.9410 (0.0075)	0.0453 (0.0021)	1000
RP (5)	1.2433	0.0459	0.2133 (0.0048)	-0.0067 (0.0067)	0.9410 (0.0075)	0.0455 (0.0021)	1000
RP (9)	1.2442	0.0460	0.2134 (0.0048)	-0.0058 (0.0067)	0.9400 (0.0075)	0.0455 (0.0021)	1000
RP (P)	1.2450	0.0461	0.2125 (0.0048)	-0.0050 (0.0067)	0.9430 (0.0073)	0.0451 (0.0021)	1000
FP (W)	1.3384	0.0519	0.2192 (0.0050)	0.0884 (0.0070)	0.9599 (0.0063)	0.0558 (0.0028)	972
FP (k=10)	1.2706	0.0479	0.2166 (0.0048)	0.0206 (0.0069)	0.9479 (0.0070)	0.0473 (0.0023)	999
FP (k=10000)	1.5470	0.0658	0.2778 (0.0062)	0.2970 (0.0088)	0.8469 (0.0114)	0.1653 (0.0071)	993

Table 300: Simulation results for frailty variance, scenario with 100 clusters of 10 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.9752	0.0225	0.1513 (0.0034)	-0.2748 (0.0048)	0.5126 (0.0158)	0.0984 (0.0027)	995
Exp	1.1067	0.0258	0.1697 (0.0038)	-0.1433 (0.0054)	0.7890 (0.0129)	0.0493 (0.0019)	1000
Weibull	0.9719	0.0222	0.1491 (0.0033)	-0.2781 (0.0047)	0.4960 (0.0158)	0.0996 (0.0026)	1000
Gompertz	1.0842	0.0265	0.1856 (0.0077)	-0.1658 (0.0108)	0.7517 (0.0252)	0.0618 (0.0041)	294
RP (3)	0.9771	0.0227	0.1524 (0.0034)	-0.2729 (0.0048)	0.5216 (0.0158)	0.0977 (0.0027)	995
RP (5)	0.9775	0.0227	0.1523 (0.0034)	-0.2725 (0.0048)	0.5180 (0.0158)	0.0974 (0.0027)	1000
RP (9)	0.9780	0.0227	0.1524 (0.0034)	-0.2720 (0.0048)	0.5190 (0.0158)	0.0972 (0.0027)	1000
RP (P)	0.9757	0.0226	0.1515 (0.0034)	-0.2743 (0.0048)	0.5185 (0.0158)	0.0982 (0.0027)	999
FP (W)	0.9719	0.0222	0.1491 (0.0033)	-0.2781 (0.0047)	0.4960 (0.0158)	0.0996 (0.0026)	1000
FP (k=10)	0.9891	0.0232	0.1586 (0.0035)	-0.2609 (0.0050)	0.5450 (0.0157)	0.0932 (0.0026)	1000
FP (k=10000)	0.9854	0.0213	0.1589 (0.0036)	-0.2646 (0.0050)	0.5140 (0.0158)	0.0953 (0.0027)	1000
Model frailty: Normal							
Cox	1.2157	0.0484	0.2129 (0.0048)	-0.0343 (0.0067)	0.9249 (0.0083)	0.0465 (0.0025)	999
Exp	1.3865	0.0541	0.2355 (0.0053)	0.1365 (0.0075)	0.9475 (0.0071)	0.0741 (0.0038)	990
Weibull	1.2274	0.0466	0.2156 (0.0048)	-0.0226 (0.0068)	0.9296 (0.0081)	0.0470 (0.0023)	994
Gompertz	1.3551	0.0551	0.2315 (0.0096)	0.1051 (0.0135)	0.9486 (0.0129)	0.0644 (0.0055)	292
RP (3)	1.2425	0.0484	0.2207 (0.0049)	-0.0075 (0.0070)	0.9370 (0.0077)	0.0487 (0.0024)	1000
RP (5)	1.2427	0.0484	0.2204 (0.0049)	-0.0073 (0.0070)	0.9370 (0.0077)	0.0486 (0.0024)	1000
RP (9)	1.2432	0.0484	0.2205 (0.0049)	-0.0068 (0.0070)	0.9370 (0.0077)	0.0486 (0.0024)	1000
RP (P)	1.2422	0.0483	0.2199 (0.0049)	-0.0078 (0.0070)	0.9360 (0.0077)	0.0484 (0.0024)	1000
FP (W)	1.2421	0.0478	0.2171 (0.0049)	-0.0079 (0.0069)	0.9387 (0.0077)	0.0472 (0.0024)	978
FP (k=10)	1.2593	0.0494	0.2258 (0.0051)	0.0093 (0.0072)	0.9392 (0.0076)	0.0510 (0.0026)	987
FP (k=10000)	1.2397	0.0457	0.2222 (0.0050)	-0.0103 (0.0070)	0.9319 (0.0080)	0.0494 (0.0024)	998

Table 301: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2445	0.0028	0.0513 (0.0012)	-0.0055 (0.0016)	0.9239 (0.0084)	0.0027 (0.0001)	986
Exp	0.2446	0.0028	0.0510 (0.0011)	-0.0054 (0.0016)	0.9260 (0.0083)	0.0026 (0.0001)	1000
Weibull	0.2447	0.0028	0.0511 (0.0011)	-0.0053 (0.0016)	0.9280 (0.0082)	0.0026 (0.0001)	1000
Gompertz	0.2446	0.0028	0.0538 (0.0017)	-0.0054 (0.0024)	0.9178 (0.0122)	0.0029 (0.0002)	511
RP (3)	0.2444	0.0028	0.0511 (0.0011)	-0.0056 (0.0016)	0.9280 (0.0082)	0.0026 (0.0001)	1000
RP (5)	0.2444	0.0028	0.0511 (0.0011)	-0.0056 (0.0016)	0.9300 (0.0081)	0.0026 (0.0001)	1000
RP (9)	0.2444	0.0028	0.0511 (0.0011)	-0.0056 (0.0016)	0.9300 (0.0081)	0.0026 (0.0001)	1000
RP (P)	0.2444	0.0028	0.0510 (0.0011)	-0.0056 (0.0016)	0.9299 (0.0081)	0.0026 (0.0001)	998
FP (W)	0.2447	0.0028	0.0512 (0.0011)	-0.0053 (0.0016)	0.9279 (0.0082)	0.0026 (0.0001)	999
FP (k=10)	0.2442	0.0028	0.0511 (0.0011)	-0.0058 (0.0016)	0.9280 (0.0082)	0.0026 (0.0001)	1000
FP (k=10000)	0.2443	0.0028	0.0511 (0.0011)	-0.0057 (0.0016)	0.9280 (0.0082)	0.0026 (0.0001)	1000
Model frailty: Normal							
Cox	0.2715	0.0041	0.0632 (0.0014)	0.0215 (0.0020)	0.9370 (0.0077)	0.0045 (0.0002)	1000
Exp	0.2709	0.0038	0.0630 (0.0014)	0.0209 (0.0020)	0.9520 (0.0068)	0.0044 (0.0002)	1000
Weibull	0.2712	0.0039	0.0633 (0.0014)	0.0212 (0.0020)	0.9499 (0.0069)	0.0045 (0.0002)	999
Gompertz	0.2709	0.0039	0.0654 (0.0020)	0.0209 (0.0028)	0.9431 (0.0099)	0.0047 (0.0004)	545
RP (3)	0.2713	0.0039	0.0633 (0.0014)	0.0213 (0.0020)	0.9510 (0.0068)	0.0045 (0.0002)	1000
RP (5)	0.2714	0.0039	0.0633 (0.0014)	0.0214 (0.0020)	0.9510 (0.0068)	0.0045 (0.0002)	1000
RP (9)	0.2714	0.0039	0.0633 (0.0014)	0.0214 (0.0020)	0.9510 (0.0068)	0.0045 (0.0002)	1000
RP (P)	0.2715	0.0039	0.0633 (0.0014)	0.0215 (0.0020)	0.9520 (0.0068)	0.0045 (0.0002)	1000
FP (W)	0.2752	0.0040	0.0650 (0.0015)	0.0252 (0.0021)	0.9477 (0.0073)	0.0049 (0.0003)	918
FP (k=10)	0.2826	0.0043	0.0696 (0.0016)	0.0326 (0.0022)	0.9496 (0.0069)	0.0059 (0.0005)	993
FP (k=10000)	0.2874	0.0043	0.0729 (0.0016)	0.0374 (0.0023)	0.9358 (0.0078)	0.0067 (0.0004)	997

Table 302: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2459	0.0029	0.0553 (0.0012)	-0.0041 (0.0018)	0.9007 (0.0095)	0.0031 (0.0001)	997
Exp	0.2936	0.0039	0.0643 (0.0014)	0.0436 (0.0020)	0.9440 (0.0073)	0.0060 (0.0003)	1000
Weibull	0.2468	0.0029	0.0555 (0.0012)	-0.0032 (0.0018)	0.9070 (0.0092)	0.0031 (0.0001)	1000
Gompertz	0.2969	0.0040	0.0625 (0.0022)	0.0469 (0.0032)	0.9562 (0.0104)	0.0061 (0.0004)	388
RP (3)	0.2459	0.0029	0.0553 (0.0012)	-0.0041 (0.0017)	0.9060 (0.0092)	0.0031 (0.0001)	1000
RP (5)	0.2460	0.0029	0.0553 (0.0012)	-0.0040 (0.0017)	0.9060 (0.0092)	0.0031 (0.0001)	1000
RP (9)	0.2460	0.0029	0.0553 (0.0012)	-0.0040 (0.0017)	0.9060 (0.0092)	0.0031 (0.0001)	1000
RP (P)	0.2464	0.0029	0.0553 (0.0012)	-0.0036 (0.0018)	0.9060 (0.0092)	0.0031 (0.0001)	1000
FP (W)	0.2466	0.0029	0.0555 (0.0012)	-0.0034 (0.0018)	0.9061 (0.0093)	0.0031 (0.0001)	990
FP (k=10)	0.2469	0.0030	0.0556 (0.0012)	-0.0031 (0.0018)	0.9060 (0.0092)	0.0031 (0.0001)	1000
FP (k=10000)	0.2539	0.0031	0.0570 (0.0013)	0.0039 (0.0018)	0.9210 (0.0085)	0.0033 (0.0002)	1000
Model frailty: Normal							
Cox	0.2713	0.0042	0.0678 (0.0015)	0.0213 (0.0021)	0.9320 (0.0080)	0.0051 (0.0003)	1000
Exp	0.3245	0.0055	0.0785 (0.0018)	0.0745 (0.0025)	0.9140 (0.0089)	0.0117 (0.0006)	1000
Weibull	0.2715	0.0041	0.0679 (0.0015)	0.0215 (0.0022)	0.9339 (0.0079)	0.0051 (0.0003)	998
Gompertz	0.3259	0.0056	0.0786 (0.0028)	0.0759 (0.0039)	0.9291 (0.0127)	0.0119 (0.0009)	409
RP (3)	0.2711	0.0041	0.0679 (0.0015)	0.0211 (0.0021)	0.9350 (0.0078)	0.0050 (0.0003)	1000
RP (5)	0.2712	0.0041	0.0679 (0.0015)	0.0212 (0.0021)	0.9350 (0.0078)	0.0051 (0.0003)	1000
RP (9)	0.2712	0.0041	0.0679 (0.0015)	0.0212 (0.0021)	0.9350 (0.0078)	0.0051 (0.0003)	1000
RP (P)	0.2716	0.0041	0.0679 (0.0015)	0.0216 (0.0021)	0.9350 (0.0078)	0.0051 (0.0003)	1000
FP (W)	0.2744	0.0042	0.0688 (0.0016)	0.0244 (0.0022)	0.9379 (0.0077)	0.0053 (0.0003)	982
FP (k=10)	0.2833	0.0044	0.0734 (0.0016)	0.0333 (0.0023)	0.9356 (0.0078)	0.0065 (0.0004)	994
FP (k=10000)	0.2938	0.0046	0.0799 (0.0018)	0.0438 (0.0025)	0.9208 (0.0086)	0.0083 (0.0007)	997

Table 303: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2457	0.0028	0.0534 (0.0012)	-0.0043 (0.0017)	0.9160 (0.0088)	0.0029 (0.0001)	988
Exp	0.1780	0.0016	0.0414 (0.0009)	-0.0720 (0.0013)	0.4840 (0.0158)	0.0069 (0.0002)	1000
Weibull	0.2237	0.0024	0.0496 (0.0011)	-0.0263 (0.0016)	0.8480 (0.0114)	0.0031 (0.0001)	1000
Gompertz	0.2457	0.0028	0.0532 (0.0012)	-0.0043 (0.0017)	0.9220 (0.0085)	0.0028 (0.0001)	1000
RP (3)	0.2449	0.0028	0.0531 (0.0012)	-0.0051 (0.0017)	0.9220 (0.0085)	0.0028 (0.0001)	1000
RP (5)	0.2455	0.0028	0.0532 (0.0012)	-0.0045 (0.0017)	0.9210 (0.0085)	0.0028 (0.0001)	1000
RP (9)	0.2457	0.0028	0.0532 (0.0012)	-0.0043 (0.0017)	0.9220 (0.0085)	0.0028 (0.0001)	1000
RP (P)	0.2426	0.0027	0.0528 (0.0012)	-0.0074 (0.0017)	0.9190 (0.0086)	0.0028 (0.0001)	1000
FP (W)	0.2235	0.0024	0.0495 (0.0011)	-0.0265 (0.0016)	0.8472 (0.0114)	0.0032 (0.0001)	995
FP (k=10)	0.2453	0.0028	0.0531 (0.0012)	-0.0047 (0.0017)	0.9220 (0.0085)	0.0028 (0.0001)	1000
FP (k=10000)	0.2430	0.0027	0.0528 (0.0012)	-0.0070 (0.0017)	0.9190 (0.0086)	0.0028 (0.0001)	1000
Model frailty: Normal							
Cox	0.2757	0.0043	0.0681 (0.0015)	0.0257 (0.0022)	0.9240 (0.0084)	0.0053 (0.0003)	1000
Exp	0.1954	0.0021	0.0514 (0.0011)	-0.0546 (0.0016)	0.6360 (0.0152)	0.0056 (0.0002)	1000
Weibull	0.2478	0.0032	0.0620 (0.0014)	-0.0022 (0.0020)	0.9119 (0.0090)	0.0038 (0.0002)	999
Gompertz	0.2753	0.0039	0.0681 (0.0015)	0.0253 (0.0022)	0.9350 (0.0078)	0.0053 (0.0003)	1000
RP (3)	0.2744	0.0039	0.0678 (0.0015)	0.0244 (0.0021)	0.9300 (0.0081)	0.0052 (0.0003)	1000
RP (5)	0.2753	0.0039	0.0680 (0.0015)	0.0253 (0.0022)	0.9330 (0.0079)	0.0053 (0.0003)	1000
RP (9)	0.2756	0.0039	0.0681 (0.0015)	0.0256 (0.0022)	0.9350 (0.0078)	0.0053 (0.0003)	1000
RP (P)	0.2715	0.0038	0.0672 (0.0015)	0.0215 (0.0021)	0.9250 (0.0083)	0.0050 (0.0003)	1000
FP (W)	0.2519	0.0033	0.0636 (0.0015)	0.0019 (0.0021)	0.9067 (0.0095)	0.0041 (0.0002)	932
FP (k=10)	0.2917	0.0044	0.0773 (0.0017)	0.0417 (0.0025)	0.9291 (0.0082)	0.0077 (0.0005)	988
FP (k=10000)	0.3026	0.0047	0.0941 (0.0021)	0.0526 (0.0030)	0.8824 (0.0102)	0.0116 (0.0010)	995

Table 304: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2454	0.0028	0.0536 (0.0012)	-0.0046 (0.0017)	0.9178 (0.0087)	0.0029 (0.0001)	986
Exp	0.1545	0.0012	0.0375 (0.0008)	-0.0955 (0.0012)	0.2800 (0.0142)	0.0105 (0.0002)	1000
Weibull	0.2682	0.0032	0.0569 (0.0013)	0.0182 (0.0018)	0.9510 (0.0068)	0.0036 (0.0002)	1000
Gompertz	0.2470	0.0028	0.0528 (0.0012)	-0.0030 (0.0017)	0.9290 (0.0081)	0.0028 (0.0001)	1000
RP (3)	0.2453	0.0028	0.0536 (0.0012)	-0.0047 (0.0017)	0.9220 (0.0085)	0.0029 (0.0001)	1000
RP (5)	0.2452	0.0028	0.0534 (0.0012)	-0.0048 (0.0017)	0.9220 (0.0085)	0.0029 (0.0001)	1000
RP (9)	0.2453	0.0028	0.0535 (0.0012)	-0.0047 (0.0017)	0.9220 (0.0085)	0.0029 (0.0001)	1000
RP (P)	0.2458	0.0028	0.0535 (0.0012)	-0.0042 (0.0017)	0.9257 (0.0083)	0.0029 (0.0001)	996
FP (W)	0.2682	0.0032	0.0569 (0.0013)	0.0182 (0.0018)	0.9509 (0.0068)	0.0036 (0.0002)	998
FP (k=10)	0.2468	0.0028	0.0540 (0.0012)	-0.0032 (0.0017)	0.9260 (0.0083)	0.0029 (0.0001)	1000
FP (k=10000)	0.2869	0.0037	0.0611 (0.0014)	0.0369 (0.0019)	0.9370 (0.0077)	0.0051 (0.0002)	1000
Model frailty: Normal							
Cox	0.2753	0.0042	0.0676 (0.0015)	0.0253 (0.0021)	0.9280 (0.0082)	0.0052 (0.0003)	1000
Exp	0.1703	0.0017	0.0466 (0.0010)	-0.0797 (0.0015)	0.4525 (0.0157)	0.0085 (0.0002)	999
Weibull	0.3036	0.0047	0.0733 (0.0016)	0.0536 (0.0023)	0.9249 (0.0083)	0.0082 (0.0004)	999
Gompertz	0.2813	0.0041	0.0695 (0.0016)	0.0313 (0.0022)	0.9310 (0.0080)	0.0058 (0.0003)	1000
RP (3)	0.2747	0.0039	0.0675 (0.0015)	0.0247 (0.0021)	0.9380 (0.0076)	0.0052 (0.0003)	1000
RP (5)	0.2751	0.0039	0.0676 (0.0015)	0.0251 (0.0021)	0.9370 (0.0077)	0.0052 (0.0003)	1000
RP (9)	0.2752	0.0039	0.0676 (0.0015)	0.0252 (0.0021)	0.9380 (0.0076)	0.0052 (0.0003)	1000
RP (P)	0.2759	0.0039	0.0678 (0.0015)	0.0259 (0.0021)	0.9370 (0.0077)	0.0053 (0.0003)	1000
FP (W)	0.3082	0.0048	0.0743 (0.0017)	0.0582 (0.0024)	0.9202 (0.0089)	0.0089 (0.0004)	927
FP (k=10)	0.2912	0.0044	0.0728 (0.0016)	0.0412 (0.0023)	0.9256 (0.0083)	0.0070 (0.0004)	995
FP (k=10000)	0.4294	0.0099	0.1746 (0.0039)	0.1794 (0.0055)	0.5954 (0.0156)	0.0626 (0.0038)	996

Table 305: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2468	0.0029	0.0531 (0.0012)	-0.0032 (0.0017)	0.9240 (0.0084)	0.0028 (0.0001)	1000
Exp	0.2746	0.0034	0.0572 (0.0013)	0.0246 (0.0018)	0.9560 (0.0065)	0.0039 (0.0002)	1000
Weibull	0.2521	0.0030	0.0536 (0.0012)	0.0021 (0.0017)	0.9350 (0.0078)	0.0029 (0.0001)	1000
Gompertz	0.2710	0.0034	0.0583 (0.0020)	0.0210 (0.0029)	0.9561 (0.0101)	0.0038 (0.0003)	410
RP (3)	0.2471	0.0029	0.0531 (0.0012)	-0.0029 (0.0017)	0.9310 (0.0080)	0.0028 (0.0001)	1000
RP (5)	0.2470	0.0029	0.0531 (0.0012)	-0.0030 (0.0017)	0.9300 (0.0081)	0.0028 (0.0001)	1000
RP (9)	0.2471	0.0029	0.0531 (0.0012)	-0.0029 (0.0017)	0.9310 (0.0080)	0.0028 (0.0001)	1000
RP (P)	0.2472	0.0029	0.0529 (0.0012)	-0.0028 (0.0017)	0.9299 (0.0081)	0.0028 (0.0001)	998
FP (W)	0.2521	0.0030	0.0536 (0.0012)	0.0021 (0.0017)	0.9350 (0.0078)	0.0029 (0.0001)	1000
FP (k=10)	0.2469	0.0029	0.0532 (0.0012)	-0.0031 (0.0017)	0.9289 (0.0081)	0.0028 (0.0001)	999
FP (k=10000)	0.2446	0.0028	0.0526 (0.0012)	-0.0054 (0.0017)	0.9240 (0.0084)	0.0028 (0.0001)	1000
Model frailty: Normal							
Cox	0.2740	0.0044	0.0663 (0.0015)	0.0240 (0.0021)	0.9320 (0.0080)	0.0050 (0.0003)	1000
Exp	0.3057	0.0049	0.0720 (0.0016)	0.0557 (0.0023)	0.9399 (0.0075)	0.0083 (0.0004)	998
Weibull	0.2801	0.0042	0.0674 (0.0015)	0.0301 (0.0021)	0.9480 (0.0070)	0.0054 (0.0003)	1000
Gompertz	0.3044	0.0049	0.0708 (0.0024)	0.0544 (0.0034)	0.9452 (0.0109)	0.0080 (0.0006)	438
RP (3)	0.2742	0.0041	0.0664 (0.0015)	0.0242 (0.0021)	0.9480 (0.0070)	0.0050 (0.0003)	1000
RP (5)	0.2739	0.0040	0.0663 (0.0015)	0.0239 (0.0021)	0.9480 (0.0070)	0.0050 (0.0003)	1000
RP (9)	0.2739	0.0040	0.0663 (0.0015)	0.0239 (0.0021)	0.9480 (0.0070)	0.0050 (0.0003)	1000
RP (P)	0.2746	0.0041	0.0665 (0.0015)	0.0246 (0.0021)	0.9490 (0.0070)	0.0050 (0.0003)	1000
FP (W)	0.2832	0.0043	0.0683 (0.0015)	0.0332 (0.0022)	0.9506 (0.0069)	0.0058 (0.0003)	972
FP (k=10)	0.2843	0.0044	0.0707 (0.0016)	0.0343 (0.0022)	0.9390 (0.0076)	0.0062 (0.0003)	1000
FP (k=10000)	0.2845	0.0043	0.0718 (0.0016)	0.0345 (0.0023)	0.9379 (0.0076)	0.0063 (0.0004)	998

Table 306: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2298	0.0025	0.0522 (0.0012)	-0.0202 (0.0017)	0.8605 (0.0111)	0.0031 (0.0001)	982
Exp	0.2299	0.0025	0.0519 (0.0012)	-0.0201 (0.0016)	0.8660 (0.0108)	0.0031 (0.0001)	1000
Weibull	0.2301	0.0025	0.0521 (0.0012)	-0.0199 (0.0016)	0.8680 (0.0107)	0.0031 (0.0001)	1000
Gompertz	0.2260	0.0025	0.0523 (0.0021)	-0.0240 (0.0029)	0.8380 (0.0206)	0.0033 (0.0002)	321
RP (3)	0.2297	0.0025	0.0521 (0.0012)	-0.0203 (0.0016)	0.8650 (0.0108)	0.0031 (0.0001)	1000
RP (5)	0.2298	0.0025	0.0521 (0.0012)	-0.0202 (0.0016)	0.8670 (0.0107)	0.0031 (0.0001)	1000
RP (9)	0.2298	0.0026	0.0521 (0.0012)	-0.0202 (0.0016)	0.8660 (0.0108)	0.0031 (0.0001)	1000
RP (P)	0.2299	0.0025	0.0521 (0.0012)	-0.0201 (0.0016)	0.8679 (0.0107)	0.0031 (0.0001)	999
FP (W)	0.2301	0.0025	0.0522 (0.0012)	-0.0199 (0.0017)	0.8679 (0.0107)	0.0031 (0.0001)	999
FP (k=10)	0.2295	0.0025	0.0521 (0.0012)	-0.0205 (0.0016)	0.8640 (0.0108)	0.0031 (0.0001)	1000
FP (k=10000)	0.2296	0.0025	0.0522 (0.0012)	-0.0204 (0.0016)	0.8630 (0.0109)	0.0031 (0.0001)	1000
Model frailty: Normal							
Cox	0.2439	0.0029	0.0572 (0.0013)	-0.0061 (0.0018)	0.8860 (0.0101)	0.0033 (0.0001)	1000
Exp	0.2432	0.0031	0.0566 (0.0013)	-0.0068 (0.0018)	0.9110 (0.0090)	0.0032 (0.0001)	1000
Weibull	0.2438	0.0031	0.0572 (0.0013)	-0.0062 (0.0018)	0.9069 (0.0092)	0.0033 (0.0001)	999
Gompertz	0.2424	0.0031	0.0572 (0.0018)	-0.0076 (0.0025)	0.8992 (0.0133)	0.0033 (0.0002)	516
RP (3)	0.2438	0.0031	0.0572 (0.0013)	-0.0062 (0.0018)	0.9070 (0.0092)	0.0033 (0.0001)	1000
RP (5)	0.2438	0.0031	0.0572 (0.0013)	-0.0062 (0.0018)	0.9060 (0.0092)	0.0033 (0.0001)	1000
RP (9)	0.2438	0.0031	0.0572 (0.0013)	-0.0062 (0.0018)	0.9070 (0.0092)	0.0033 (0.0001)	1000
RP (P)	0.2440	0.0031	0.0572 (0.0013)	-0.0060 (0.0018)	0.9080 (0.0091)	0.0033 (0.0001)	1000
FP (W)	0.2470	0.0032	0.0586 (0.0013)	-0.0030 (0.0019)	0.9108 (0.0092)	0.0034 (0.0002)	953
FP (k=10)	0.2552	0.0034	0.0606 (0.0014)	0.0052 (0.0019)	0.9228 (0.0085)	0.0037 (0.0002)	997
FP (k=10000)	0.2616	0.0035	0.0696 (0.0016)	0.0116 (0.0022)	0.9095 (0.0091)	0.0050 (0.0003)	995

Table 307: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2319	0.0026	0.0523 (0.0012)	-0.0181 (0.0017)	0.8693 (0.0107)	0.0031 (0.0001)	995
Exp	0.2884	0.0038	0.0663 (0.0015)	0.0384 (0.0021)	0.9380 (0.0076)	0.0059 (0.0003)	1000
Weibull	0.2330	0.0027	0.0525 (0.0012)	-0.0170 (0.0017)	0.8800 (0.0103)	0.0030 (0.0001)	1000
Gompertz	0.2934	0.0040	0.0688 (0.0025)	0.0434 (0.0035)	0.9418 (0.0118)	0.0066 (0.0006)	395
RP (3)	0.2319	0.0026	0.0522 (0.0012)	-0.0181 (0.0017)	0.8760 (0.0104)	0.0031 (0.0001)	1000
RP (5)	0.2320	0.0026	0.0523 (0.0012)	-0.0180 (0.0017)	0.8760 (0.0104)	0.0031 (0.0001)	1000
RP (9)	0.2320	0.0026	0.0523 (0.0012)	-0.0180 (0.0017)	0.8750 (0.0105)	0.0031 (0.0001)	1000
RP (P)	0.2324	0.0026	0.0523 (0.0012)	-0.0176 (0.0017)	0.8770 (0.0104)	0.0030 (0.0001)	1000
FP (W)	0.2329	0.0027	0.0524 (0.0012)	-0.0171 (0.0017)	0.8799 (0.0103)	0.0030 (0.0001)	999
FP (k=10)	0.2333	0.0027	0.0529 (0.0012)	-0.0167 (0.0017)	0.8790 (0.0103)	0.0031 (0.0001)	1000
FP (k=10000)	0.2431	0.0029	0.0563 (0.0013)	-0.0069 (0.0018)	0.9130 (0.0089)	0.0032 (0.0001)	1000
Model frailty: Normal							
Cox	0.2451	0.0030	0.0568 (0.0013)	-0.0049 (0.0018)	0.9050 (0.0093)	0.0032 (0.0001)	1000
Exp	0.3030	0.0047	0.0696 (0.0016)	0.0530 (0.0022)	0.9449 (0.0072)	0.0076 (0.0004)	999
Weibull	0.2455	0.0032	0.0569 (0.0013)	-0.0045 (0.0018)	0.9279 (0.0082)	0.0033 (0.0001)	999
Gompertz	0.3094	0.0049	0.0718 (0.0025)	0.0594 (0.0035)	0.9423 (0.0114)	0.0087 (0.0007)	416
RP (3)	0.2450	0.0032	0.0568 (0.0013)	-0.0050 (0.0018)	0.9310 (0.0080)	0.0033 (0.0001)	1000
RP (5)	0.2450	0.0032	0.0568 (0.0013)	-0.0050 (0.0018)	0.9300 (0.0081)	0.0033 (0.0001)	1000
RP (9)	0.2450	0.0032	0.0569 (0.0013)	-0.0050 (0.0018)	0.9310 (0.0080)	0.0033 (0.0001)	1000
RP (P)	0.2454	0.0032	0.0569 (0.0013)	-0.0046 (0.0018)	0.9310 (0.0080)	0.0032 (0.0001)	1000
FP (W)	0.2484	0.0033	0.0572 (0.0013)	-0.0016 (0.0018)	0.9385 (0.0077)	0.0033 (0.0002)	976
FP (k=10)	0.2560	0.0035	0.0603 (0.0014)	0.0060 (0.0019)	0.9367 (0.0077)	0.0037 (0.0002)	996
FP (k=10000)	0.2707	0.0038	0.0695 (0.0016)	0.0207 (0.0022)	0.9297 (0.0081)	0.0053 (0.0004)	996

Table 308: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2301	0.0025	0.0490 (0.0011)	-0.0199 (0.0016)	0.8666 (0.0108)	0.0028 (0.0001)	997
Exp	0.1626	0.0013	0.0365 (0.0008)	-0.0874 (0.0012)	0.3530 (0.0151)	0.0090 (0.0002)	1000
Weibull	0.2098	0.0021	0.0464 (0.0010)	-0.0402 (0.0015)	0.7620 (0.0135)	0.0038 (0.0001)	1000
Gompertz	0.2303	0.0025	0.0489 (0.0011)	-0.0197 (0.0015)	0.8720 (0.0106)	0.0028 (0.0001)	1000
RP (3)	0.2297	0.0025	0.0490 (0.0011)	-0.0203 (0.0016)	0.8680 (0.0107)	0.0028 (0.0001)	1000
RP (5)	0.2302	0.0025	0.0490 (0.0011)	-0.0198 (0.0015)	0.8710 (0.0106)	0.0028 (0.0001)	1000
RP (9)	0.2304	0.0025	0.0490 (0.0011)	-0.0196 (0.0015)	0.8710 (0.0106)	0.0028 (0.0001)	1000
RP (P)	0.2276	0.0025	0.0487 (0.0011)	-0.0224 (0.0015)	0.8569 (0.0111)	0.0029 (0.0001)	999
FP (W)	0.2098	0.0021	0.0465 (0.0010)	-0.0402 (0.0015)	0.7618 (0.0135)	0.0038 (0.0001)	999
FP (k=10)	0.2300	0.0025	0.0490 (0.0011)	-0.0200 (0.0015)	0.8690 (0.0107)	0.0028 (0.0001)	1000
FP (k=10000)	0.2284	0.0024	0.0491 (0.0011)	-0.0216 (0.0016)	0.8620 (0.0109)	0.0029 (0.0001)	1000
Model frailty: Normal							
Cox	0.2449	0.0029	0.0530 (0.0012)	-0.0051 (0.0017)	0.9100 (0.0090)	0.0028 (0.0001)	1000
Exp	0.1703	0.0016	0.0388 (0.0009)	-0.0797 (0.0012)	0.4404 (0.0157)	0.0079 (0.0002)	999
Weibull	0.2204	0.0025	0.0488 (0.0011)	-0.0296 (0.0015)	0.8330 (0.0118)	0.0033 (0.0001)	1000
Gompertz	0.2444	0.0030	0.0528 (0.0012)	-0.0056 (0.0017)	0.9248 (0.0084)	0.0028 (0.0001)	997
RP (3)	0.2438	0.0030	0.0528 (0.0012)	-0.0062 (0.0017)	0.9220 (0.0085)	0.0028 (0.0001)	1000
RP (5)	0.2446	0.0031	0.0529 (0.0012)	-0.0054 (0.0017)	0.9250 (0.0083)	0.0028 (0.0001)	1000
RP (9)	0.2448	0.0031	0.0530 (0.0012)	-0.0052 (0.0017)	0.9250 (0.0083)	0.0028 (0.0001)	1000
RP (P)	0.2414	0.0030	0.0523 (0.0012)	-0.0086 (0.0017)	0.9190 (0.0086)	0.0028 (0.0001)	1000
FP (W)	0.2252	0.0026	0.0501 (0.0012)	-0.0248 (0.0016)	0.8564 (0.0115)	0.0031 (0.0001)	926
FP (k=10)	0.2586	0.0034	0.0595 (0.0013)	0.0086 (0.0019)	0.9300 (0.0081)	0.0036 (0.0002)	986
FP (k=10000)	0.2703	0.0037	0.0742 (0.0017)	0.0203 (0.0024)	0.9163 (0.0088)	0.0059 (0.0004)	992

Table 309: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2336	0.0026	0.0519 (0.0012)	-0.0164 (0.0017)	0.8731 (0.0106)	0.0030 (0.0001)	985
Exp	0.1322	0.0009	0.0304 (0.0007)	-0.1178 (0.0010)	0.0880 (0.0090)	0.0148 (0.0002)	1000
Weibull	0.2562	0.0030	0.0546 (0.0012)	0.0062 (0.0017)	0.9370 (0.0077)	0.0030 (0.0001)	1000
Gompertz	0.2282	0.0025	0.0470 (0.0011)	-0.0218 (0.0015)	0.8770 (0.0104)	0.0027 (0.0001)	1000
RP (3)	0.2339	0.0026	0.0519 (0.0012)	-0.0161 (0.0016)	0.8840 (0.0101)	0.0029 (0.0001)	1000
RP (5)	0.2335	0.0026	0.0517 (0.0012)	-0.0165 (0.0016)	0.8840 (0.0101)	0.0029 (0.0001)	1000
RP (9)	0.2336	0.0026	0.0517 (0.0012)	-0.0164 (0.0016)	0.8850 (0.0101)	0.0029 (0.0001)	1000
RP (P)	0.2340	0.0026	0.0516 (0.0012)	-0.0160 (0.0016)	0.8837 (0.0102)	0.0029 (0.0001)	997
FP (W)	0.2563	0.0030	0.0546 (0.0012)	0.0063 (0.0017)	0.9379 (0.0076)	0.0030 (0.0001)	998
FP (k=10)	0.2354	0.0027	0.0524 (0.0012)	-0.0146 (0.0017)	0.8930 (0.0098)	0.0030 (0.0001)	1000
FP (k=10000)	0.2772	0.0035	0.0594 (0.0013)	0.0272 (0.0019)	0.9510 (0.0068)	0.0043 (0.0002)	1000
Model frailty: Normal							
Cox	0.2484	0.0029	0.0563 (0.0013)	-0.0016 (0.0018)	0.8970 (0.0096)	0.0032 (0.0001)	1000
Exp	0.1399	0.0011	0.0341 (0.0008)	-0.1101 (0.0011)	0.1673 (0.0118)	0.0133 (0.0002)	998
Weibull	0.2749	0.0038	0.0611 (0.0014)	0.0249 (0.0019)	0.9560 (0.0065)	0.0044 (0.0002)	999
Gompertz	0.2472	0.0031	0.0546 (0.0012)	-0.0028 (0.0017)	0.9259 (0.0083)	0.0030 (0.0001)	998
RP (3)	0.2483	0.0032	0.0563 (0.0013)	-0.0017 (0.0018)	0.9160 (0.0088)	0.0032 (0.0001)	1000
RP (5)	0.2482	0.0032	0.0562 (0.0013)	-0.0018 (0.0018)	0.9170 (0.0087)	0.0032 (0.0001)	1000
RP (9)	0.2483	0.0032	0.0563 (0.0013)	-0.0017 (0.0018)	0.9180 (0.0087)	0.0032 (0.0001)	1000
RP (P)	0.2489	0.0032	0.0563 (0.0013)	-0.0011 (0.0018)	0.9210 (0.0085)	0.0032 (0.0001)	1000
FP (W)	0.2800	0.0040	0.0634 (0.0015)	0.0300 (0.0021)	0.9529 (0.0070)	0.0049 (0.0003)	913
FP (k=10)	0.2652	0.0036	0.0620 (0.0014)	0.0152 (0.0020)	0.9336 (0.0079)	0.0041 (0.0002)	994
FP (k=10000)	0.3981	0.0086	0.1727 (0.0039)	0.1481 (0.0055)	0.6921 (0.0146)	0.0517 (0.0038)	997

Table 310: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2339	0.0026	0.0513 (0.0012)	-0.0161 (0.0016)	0.8881 (0.0100)	0.0029 (0.0001)	992
Exp	0.2632	0.0032	0.0562 (0.0013)	0.0132 (0.0018)	0.9530 (0.0067)	0.0033 (0.0002)	1000
Weibull	0.2377	0.0027	0.0511 (0.0011)	-0.0123 (0.0016)	0.9040 (0.0093)	0.0028 (0.0001)	1000
Gompertz	0.2646	0.0033	0.0569 (0.0020)	0.0146 (0.0028)	0.9633 (0.0093)	0.0034 (0.0002)	409
RP (3)	0.2338	0.0026	0.0510 (0.0011)	-0.0162 (0.0016)	0.8950 (0.0097)	0.0029 (0.0001)	1000
RP (5)	0.2340	0.0026	0.0511 (0.0011)	-0.0160 (0.0016)	0.8940 (0.0097)	0.0029 (0.0001)	1000
RP (9)	0.2341	0.0026	0.0512 (0.0011)	-0.0159 (0.0016)	0.8940 (0.0097)	0.0029 (0.0001)	1000
RP (P)	0.2343	0.0027	0.0511 (0.0011)	-0.0157 (0.0016)	0.8950 (0.0097)	0.0029 (0.0001)	1000
FP (W)	0.2377	0.0027	0.0511 (0.0011)	-0.0123 (0.0016)	0.9040 (0.0093)	0.0028 (0.0001)	1000
FP (k=10)	0.2340	0.0026	0.0512 (0.0011)	-0.0160 (0.0016)	0.8940 (0.0097)	0.0029 (0.0001)	1000
FP (k=10000)	0.2311	0.0026	0.0504 (0.0011)	-0.0189 (0.0016)	0.8850 (0.0101)	0.0029 (0.0001)	1000
Model frailty: Normal							
Cox	0.2477	0.0030	0.0560 (0.0013)	-0.0023 (0.0018)	0.9130 (0.0089)	0.0031 (0.0002)	1000
Exp	0.2785	0.0039	0.0614 (0.0014)	0.0285 (0.0019)	0.9670 (0.0057)	0.0046 (0.0002)	999
Weibull	0.2520	0.0033	0.0565 (0.0013)	0.0020 (0.0018)	0.9399 (0.0075)	0.0032 (0.0002)	998
Gompertz	0.2817	0.0041	0.0650 (0.0022)	0.0317 (0.0032)	0.9691 (0.0084)	0.0052 (0.0004)	421
RP (3)	0.2475	0.0032	0.0560 (0.0013)	-0.0025 (0.0018)	0.9310 (0.0080)	0.0031 (0.0002)	1000
RP (5)	0.2476	0.0032	0.0560 (0.0013)	-0.0024 (0.0018)	0.9300 (0.0081)	0.0031 (0.0002)	1000
RP (9)	0.2476	0.0032	0.0560 (0.0013)	-0.0024 (0.0018)	0.9300 (0.0081)	0.0031 (0.0002)	1000
RP (P)	0.2479	0.0032	0.0560 (0.0013)	-0.0021 (0.0018)	0.9310 (0.0080)	0.0031 (0.0002)	1000
FP (W)	0.2553	0.0034	0.0576 (0.0013)	0.0053 (0.0019)	0.9372 (0.0079)	0.0033 (0.0002)	939
FP (k=10)	0.2594	0.0036	0.0612 (0.0014)	0.0094 (0.0019)	0.9369 (0.0077)	0.0038 (0.0002)	998
FP (k=10000)	0.2580	0.0034	0.0616 (0.0014)	0.0080 (0.0020)	0.9348 (0.0078)	0.0039 (0.0002)	997

Table 311: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7463	0.0205	0.1376 (0.0031)	-0.0037 (0.0044)	0.9409 (0.0075)	0.0189 (0.0009)	981
Exp	0.7445	0.0204	0.1367 (0.0031)	-0.0055 (0.0043)	0.9490 (0.0070)	0.0187 (0.0009)	1000
Weibull	0.7456	0.0206	0.1375 (0.0031)	-0.0044 (0.0043)	0.9480 (0.0070)	0.0189 (0.0009)	1000
Gompertz	0.7405	0.0204	0.1378 (0.0045)	-0.0095 (0.0064)	0.9391 (0.0111)	0.0190 (0.0013)	460
RP (3)	0.7447	0.0206	0.1373 (0.0031)	-0.0053 (0.0043)	0.9460 (0.0071)	0.0189 (0.0009)	1000
RP (5)	0.7448	0.0206	0.1373 (0.0031)	-0.0052 (0.0043)	0.9480 (0.0070)	0.0189 (0.0009)	1000
RP (9)	0.7449	0.0206	0.1374 (0.0031)	-0.0051 (0.0043)	0.9480 (0.0070)	0.0189 (0.0009)	1000
RP (P)	0.7421	0.0205	0.1364 (0.0031)	-0.0079 (0.0044)	0.9458 (0.0073)	0.0186 (0.0009)	960
FP (W)	0.7465	0.0207	0.1380 (0.0031)	-0.0035 (0.0044)	0.9473 (0.0071)	0.0190 (0.0009)	987
FP (k=10)	0.7445	0.0206	0.1373 (0.0031)	-0.0055 (0.0043)	0.9479 (0.0070)	0.0189 (0.0009)	998
FP (k=10000)	0.7442	0.0205	0.1372 (0.0031)	-0.0058 (0.0043)	0.9479 (0.0070)	0.0188 (0.0009)	999
Model frailty: Normal							
Cox	1.0008	0.0634	0.2410 (0.0054)	0.2508 (0.0076)	0.9160 (0.0088)	0.1209 (0.0058)	1000
Exp	0.9996	0.0501	0.2405 (0.0054)	0.2496 (0.0076)	0.8798 (0.0103)	0.1201 (0.0058)	998
Weibull	1.0030	0.0508	0.2427 (0.0054)	0.2530 (0.0077)	0.8737 (0.0105)	0.1229 (0.0059)	998
Gompertz	0.9985	0.0505	0.2456 (0.0084)	0.2485 (0.0118)	0.8677 (0.0163)	0.1219 (0.0087)	431
RP (3)	1.0036	0.0510	0.2429 (0.0054)	0.2536 (0.0077)	0.8730 (0.0105)	0.1232 (0.0059)	1000
RP (5)	1.0036	0.0510	0.2429 (0.0054)	0.2536 (0.0077)	0.8750 (0.0105)	0.1233 (0.0059)	1000
RP (9)	1.0036	0.0510	0.2429 (0.0054)	0.2536 (0.0077)	0.8750 (0.0105)	0.1232 (0.0059)	1000
RP (P)	1.0027	0.0509	0.2443 (0.0055)	0.2527 (0.0077)	0.8740 (0.0105)	0.1235 (0.0059)	1000
FP (W)	1.0185	0.0530	0.2543 (0.0058)	0.2685 (0.0083)	0.8647 (0.0111)	0.1367 (0.0071)	946
FP (k=10)	1.0418	0.0560	0.2795 (0.0063)	0.2918 (0.0089)	0.8448 (0.0115)	0.1632 (0.0111)	992
FP (k=10000)	1.0415	0.0539	0.2508 (0.0056)	0.2915 (0.0079)	0.8445 (0.0115)	0.1478 (0.0067)	997

Table 312: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7443	0.0207	0.1481 (0.0033)	-0.0057 (0.0047)	0.9043 (0.0094)	0.0220 (0.0012)	982
Exp	0.8553	0.0265	0.1656 (0.0037)	0.1053 (0.0052)	0.9520 (0.0068)	0.0385 (0.0020)	1000
Weibull	0.7451	0.0210	0.1481 (0.0033)	-0.0049 (0.0047)	0.9180 (0.0087)	0.0219 (0.0012)	1000
Gompertz	0.8500	0.0264	0.1614 (0.0059)	0.1000 (0.0083)	0.9545 (0.0108)	0.0360 (0.0030)	374
RP (3)	0.7427	0.0210	0.1477 (0.0033)	-0.0073 (0.0047)	0.9170 (0.0087)	0.0219 (0.0011)	1000
RP (5)	0.7428	0.0210	0.1478 (0.0033)	-0.0072 (0.0047)	0.9170 (0.0087)	0.0219 (0.0011)	1000
RP (9)	0.7429	0.0210	0.1478 (0.0033)	-0.0071 (0.0047)	0.9170 (0.0087)	0.0219 (0.0012)	1000
RP (P)	0.7422	0.0209	0.1479 (0.0034)	-0.0078 (0.0047)	0.9168 (0.0089)	0.0219 (0.0012)	973
FP (W)	0.7458	0.0211	0.1476 (0.0033)	-0.0042 (0.0047)	0.9188 (0.0087)	0.0218 (0.0012)	997
FP (k=10)	0.7482	0.0214	0.1494 (0.0034)	-0.0018 (0.0047)	0.9205 (0.0086)	0.0223 (0.0012)	994
FP (k=10000)	0.7670	0.0222	0.1531 (0.0034)	0.0170 (0.0048)	0.9329 (0.0079)	0.0237 (0.0013)	998
Model frailty: Normal							
Cox	0.9805	0.0594	0.2492 (0.0056)	0.2305 (0.0079)	0.8990 (0.0095)	0.1152 (0.0066)	1000
Exp	1.1311	0.0649	0.2795 (0.0063)	0.3811 (0.0089)	0.7641 (0.0135)	0.2233 (0.0101)	996
Weibull	0.9842	0.0507	0.2516 (0.0056)	0.2342 (0.0080)	0.8969 (0.0096)	0.1181 (0.0068)	999
Gompertz	1.1465	0.0673	0.2869 (0.0105)	0.3965 (0.0148)	0.7360 (0.0228)	0.2393 (0.0160)	375
RP (3)	0.9836	0.0508	0.2520 (0.0056)	0.2336 (0.0080)	0.8970 (0.0096)	0.1180 (0.0068)	1000
RP (5)	0.9836	0.0508	0.2520 (0.0056)	0.2336 (0.0080)	0.8960 (0.0097)	0.1180 (0.0068)	1000
RP (9)	0.9838	0.0508	0.2520 (0.0056)	0.2338 (0.0080)	0.8970 (0.0096)	0.1181 (0.0068)	1000
RP (P)	0.9846	0.0508	0.2515 (0.0056)	0.2346 (0.0080)	0.8950 (0.0097)	0.1183 (0.0068)	1000
FP (W)	0.9982	0.0527	0.2609 (0.0059)	0.2482 (0.0084)	0.8817 (0.0104)	0.1296 (0.0075)	964
FP (k=10)	1.0223	0.0558	0.2981 (0.0067)	0.2723 (0.0095)	0.8628 (0.0109)	0.1629 (0.0138)	991
FP (k=10000)	1.0415	0.0555	0.2619 (0.0059)	0.2915 (0.0083)	0.8547 (0.0112)	0.1535 (0.0078)	998

Table 313: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7362	0.0196	0.1426 (0.0032)	-0.0138 (0.0046)	0.9052 (0.0094)	0.0205 (0.0009)	981
Exp	0.5876	0.0132	0.1233 (0.0028)	-0.1624 (0.0039)	0.6150 (0.0154)	0.0415 (0.0013)	1000
Weibull	0.6902	0.0177	0.1370 (0.0031)	-0.0598 (0.0043)	0.8560 (0.0111)	0.0223 (0.0009)	1000
Gompertz	0.5928	0.0136	0.1174 (0.0034)	-0.1572 (0.0049)	0.6212 (0.0200)	0.0385 (0.0014)	586
RP (3)	0.7333	0.0197	0.1421 (0.0032)	-0.0167 (0.0045)	0.9160 (0.0088)	0.0205 (0.0009)	1000
RP (5)	0.7344	0.0198	0.1422 (0.0032)	-0.0156 (0.0045)	0.9150 (0.0088)	0.0204 (0.0009)	1000
RP (9)	0.7348	0.0198	0.1423 (0.0032)	-0.0152 (0.0045)	0.9150 (0.0088)	0.0205 (0.0009)	1000
RP (P)	0.7269	0.0194	0.1417 (0.0032)	-0.0231 (0.0045)	0.9084 (0.0093)	0.0206 (0.0009)	972
FP (W)	0.6904	0.0177	0.1370 (0.0031)	-0.0596 (0.0043)	0.8567 (0.0111)	0.0223 (0.0009)	998
FP (k=10)	0.7340	0.0198	0.1423 (0.0032)	-0.0160 (0.0045)	0.9139 (0.0089)	0.0205 (0.0009)	999
FP (k=10000)	0.7304	0.0195	0.1419 (0.0032)	-0.0196 (0.0045)	0.9110 (0.0090)	0.0205 (0.0009)	1000
Model frailty: Normal							
Cox	1.0115	0.0653	0.2581 (0.0058)	0.2615 (0.0082)	0.8970 (0.0096)	0.1349 (0.0063)	1000
Exp	0.7867	0.0312	0.2151 (0.0048)	0.0367 (0.0068)	0.8928 (0.0098)	0.0476 (0.0026)	998
Weibull	0.9334	0.0429	0.2418 (0.0054)	0.1834 (0.0076)	0.8930 (0.0098)	0.0921 (0.0047)	1000
Gompertz	0.7787	0.0306	0.2007 (0.0055)	0.0287 (0.0077)	0.9183 (0.0106)	0.0410 (0.0028)	673
RP (3)	1.0104	0.0500	0.2593 (0.0058)	0.2604 (0.0082)	0.8510 (0.0113)	0.1350 (0.0063)	1000
RP (5)	1.0135	0.0504	0.2601 (0.0058)	0.2635 (0.0082)	0.8470 (0.0114)	0.1370 (0.0064)	1000
RP (9)	1.0142	0.0504	0.2605 (0.0058)	0.2642 (0.0082)	0.8450 (0.0114)	0.1376 (0.0064)	1000
RP (P)	1.0015	0.0492	0.2573 (0.0058)	0.2515 (0.0081)	0.8560 (0.0111)	0.1294 (0.0061)	1000
FP (W)	0.9469	0.0445	0.2474 (0.0057)	0.1969 (0.0080)	0.8908 (0.0101)	0.0999 (0.0053)	952
FP (k=10)	1.0954	0.0612	0.3689 (0.0083)	0.3454 (0.0118)	0.7699 (0.0135)	0.2553 (0.0243)	978
FP (k=10000)	1.1323	0.0618	0.3259 (0.0073)	0.3823 (0.0104)	0.7094 (0.0144)	0.2523 (0.0113)	991

Table 314: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7384	0.0198	0.1394 (0.0031)	-0.0116 (0.0044)	0.9157 (0.0089)	0.0195 (0.0009)	985
Exp	0.5284	0.0111	0.1139 (0.0025)	-0.2216 (0.0036)	0.4300 (0.0157)	0.0621 (0.0015)	1000
Weibull	0.7810	0.0220	0.1432 (0.0032)	0.0310 (0.0045)	0.9520 (0.0068)	0.0215 (0.0011)	1000
Gompertz	0.6710	0.0168	0.1038 (0.0024)	-0.0790 (0.0034)	0.8996 (0.0097)	0.0170 (0.0007)	956
RP (3)	0.7376	0.0200	0.1394 (0.0031)	-0.0124 (0.0044)	0.9240 (0.0084)	0.0196 (0.0009)	1000
RP (5)	0.7371	0.0200	0.1393 (0.0031)	-0.0129 (0.0044)	0.9250 (0.0083)	0.0196 (0.0009)	1000
RP (9)	0.7371	0.0200	0.1392 (0.0031)	-0.0129 (0.0044)	0.9245 (0.0084)	0.0195 (0.0009)	993
RP (P)	0.7345	0.0198	0.1397 (0.0032)	-0.0155 (0.0046)	0.9245 (0.0086)	0.0197 (0.0009)	941
FP (W)	0.7808	0.0220	0.1433 (0.0032)	0.0308 (0.0045)	0.9519 (0.0068)	0.0215 (0.0011)	998
FP (k=10)	0.7449	0.0208	0.1413 (0.0032)	-0.0051 (0.0045)	0.9339 (0.0079)	0.0200 (0.0009)	998
FP (k=10000)	0.8298	0.0249	0.1531 (0.0034)	0.0798 (0.0048)	0.9600 (0.0062)	0.0298 (0.0015)	1000
Model frailty: Normal							
Cox	1.0094	0.0673	0.2505 (0.0056)	0.2594 (0.0079)	0.9220 (0.0085)	0.1300 (0.0061)	1000
Exp	0.7171	0.0269	0.2005 (0.0045)	-0.0329 (0.0064)	0.8144 (0.0123)	0.0413 (0.0019)	997
Weibull	1.0901	0.0580	0.2680 (0.0060)	0.3401 (0.0085)	0.7851 (0.0130)	0.1874 (0.0079)	996
Gompertz	0.9126	0.0408	0.1841 (0.0044)	0.1626 (0.0062)	0.9724 (0.0056)	0.0603 (0.0031)	869
RP (3)	1.0106	0.0505	0.2519 (0.0056)	0.2606 (0.0080)	0.8710 (0.0106)	0.1313 (0.0062)	1000
RP (5)	1.0122	0.0507	0.2528 (0.0057)	0.2622 (0.0080)	0.8690 (0.0107)	0.1326 (0.0062)	1000
RP (9)	1.0126	0.0507	0.2530 (0.0057)	0.2626 (0.0080)	0.8700 (0.0106)	0.1329 (0.0062)	1000
RP (P)	1.0148	0.0509	0.2540 (0.0057)	0.2648 (0.0080)	0.8680 (0.0107)	0.1345 (0.0063)	1000
FP (W)	1.1173	0.0620	0.3011 (0.0070)	0.3673 (0.0099)	0.7565 (0.0141)	0.2254 (0.0138)	920
FP (k=10)	1.0547	0.0551	0.2770 (0.0062)	0.3047 (0.0088)	0.8189 (0.0123)	0.1695 (0.0083)	983
FP (k=10000)	1.9232	0.2045	1.0280 (0.0231)	1.1732 (0.0327)	0.2085 (0.0129)	2.4321 (0.1678)	988

Table 315: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7373	0.0202	0.1460 (0.0033)	-0.0127 (0.0047)	0.9065 (0.0093)	0.0215 (0.0010)	984
Exp	0.7946	0.0231	0.1524 (0.0034)	0.0446 (0.0048)	0.9570 (0.0064)	0.0252 (0.0013)	1000
Weibull	0.7443	0.0207	0.1458 (0.0033)	-0.0057 (0.0046)	0.9280 (0.0082)	0.0213 (0.0010)	1000
Gompertz	0.7894	0.0231	0.1616 (0.0070)	0.0394 (0.0099)	0.9398 (0.0146)	0.0276 (0.0028)	266
RP (3)	0.7356	0.0204	0.1454 (0.0033)	-0.0144 (0.0046)	0.9208 (0.0086)	0.0213 (0.0010)	997
RP (5)	0.7361	0.0204	0.1456 (0.0033)	-0.0139 (0.0046)	0.9210 (0.0085)	0.0214 (0.0010)	1000
RP (9)	0.7362	0.0204	0.1456 (0.0033)	-0.0138 (0.0046)	0.9210 (0.0085)	0.0214 (0.0010)	1000
RP (P)	0.7353	0.0204	0.1455 (0.0033)	-0.0147 (0.0047)	0.9187 (0.0088)	0.0214 (0.0010)	960
FP (W)	0.7453	0.0208	0.1456 (0.0033)	-0.0047 (0.0046)	0.9286 (0.0082)	0.0212 (0.0010)	994
FP (k=10)	0.7364	0.0205	0.1459 (0.0033)	-0.0136 (0.0046)	0.9215 (0.0085)	0.0215 (0.0010)	993
FP (k=10000)	0.7300	0.0201	0.1448 (0.0032)	-0.0200 (0.0046)	0.9128 (0.0089)	0.0213 (0.0010)	998
Model frailty: Normal							
Cox	0.9798	0.0600	0.2494 (0.0056)	0.2298 (0.0079)	0.9080 (0.0091)	0.1149 (0.0059)	1000
Exp	1.0665	0.0573	0.2652 (0.0059)	0.3165 (0.0084)	0.8210 (0.0121)	0.1704 (0.0077)	1000
Weibull	0.9980	0.0511	0.2539 (0.0057)	0.2480 (0.0080)	0.8819 (0.0102)	0.1259 (0.0063)	999
Gompertz	1.0684	0.0586	0.2824 (0.0103)	0.3184 (0.0145)	0.8000 (0.0205)	0.1809 (0.0135)	380
RP (3)	0.9836	0.0499	0.2518 (0.0056)	0.2336 (0.0080)	0.8890 (0.0099)	0.1179 (0.0060)	1000
RP (5)	0.9826	0.0498	0.2514 (0.0056)	0.2326 (0.0080)	0.8900 (0.0099)	0.1172 (0.0060)	1000
RP (9)	0.9826	0.0498	0.2514 (0.0056)	0.2326 (0.0079)	0.8900 (0.0099)	0.1172 (0.0060)	1000
RP (P)	0.9845	0.0500	0.2519 (0.0056)	0.2345 (0.0080)	0.8870 (0.0100)	0.1184 (0.0060)	1000
FP (W)	1.0089	0.0527	0.2591 (0.0059)	0.2589 (0.0084)	0.8755 (0.0107)	0.1341 (0.0069)	956
FP (k=10)	1.0204	0.0546	0.2883 (0.0065)	0.2704 (0.0092)	0.8589 (0.0111)	0.1561 (0.0118)	992
FP (k=10000)	1.0015	0.0513	0.2618 (0.0059)	0.2515 (0.0083)	0.8756 (0.0105)	0.1317 (0.0088)	997

Table 316: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6469	0.0158	0.1354 (0.0031)	-0.1031 (0.0043)	0.7649 (0.0136)	0.0289 (0.0011)	970
Exp	0.6490	0.0158	0.1342 (0.0030)	-0.1010 (0.0042)	0.7850 (0.0130)	0.0282 (0.0011)	1000
Weibull	0.6482	0.0160	0.1342 (0.0030)	-0.1018 (0.0042)	0.7810 (0.0131)	0.0283 (0.0011)	1000
Gompertz	0.6418	0.0158	0.1449 (0.0075)	-0.1082 (0.0106)	0.7473 (0.0319)	0.0326 (0.0031)	186
RP (3)	0.6466	0.0160	0.1340 (0.0030)	-0.1034 (0.0042)	0.7770 (0.0132)	0.0286 (0.0011)	1000
RP (5)	0.6467	0.0160	0.1339 (0.0030)	-0.1033 (0.0042)	0.7790 (0.0131)	0.0286 (0.0011)	1000
RP (9)	0.6468	0.0160	0.1339 (0.0030)	-0.1032 (0.0042)	0.7790 (0.0131)	0.0286 (0.0011)	1000
RP (P)	0.6463	0.0159	0.1335 (0.0030)	-0.1037 (0.0043)	0.7778 (0.0133)	0.0286 (0.0011)	981
FP (W)	0.6482	0.0160	0.1339 (0.0030)	-0.1018 (0.0042)	0.7801 (0.0131)	0.0283 (0.0011)	996
FP (k=10)	0.6464	0.0160	0.1340 (0.0030)	-0.1036 (0.0042)	0.7798 (0.0131)	0.0287 (0.0011)	999
FP (k=10000)	0.6468	0.0158	0.1345 (0.0030)	-0.1032 (0.0043)	0.7740 (0.0132)	0.0287 (0.0011)	1000
Model frailty: Normal							
Cox	0.7349	0.0228	0.1551 (0.0035)	-0.0151 (0.0049)	0.8920 (0.0098)	0.0243 (0.0010)	1000
Exp	0.7371	0.0250	0.1563 (0.0035)	-0.0129 (0.0049)	0.9169 (0.0087)	0.0246 (0.0011)	999
Weibull	0.7389	0.0254	0.1576 (0.0035)	-0.0111 (0.0050)	0.9120 (0.0090)	0.0249 (0.0011)	1000
Gompertz	0.7193	0.0242	0.1563 (0.0053)	-0.0307 (0.0075)	0.8984 (0.0145)	0.0253 (0.0015)	433
RP (3)	0.7377	0.0254	0.1578 (0.0035)	-0.0123 (0.0050)	0.9110 (0.0090)	0.0250 (0.0011)	1000
RP (5)	0.7379	0.0254	0.1578 (0.0035)	-0.0121 (0.0050)	0.9110 (0.0090)	0.0250 (0.0011)	1000
RP (9)	0.7379	0.0254	0.1578 (0.0035)	-0.0121 (0.0050)	0.9130 (0.0089)	0.0250 (0.0011)	1000
RP (P)	0.7387	0.0254	0.1578 (0.0035)	-0.0113 (0.0050)	0.9130 (0.0089)	0.0250 (0.0011)	1000
FP (W)	0.7496	0.0265	0.1658 (0.0037)	-0.0004 (0.0053)	0.9216 (0.0086)	0.0275 (0.0017)	982
FP (k=10)	0.7714	0.0282	0.1869 (0.0042)	0.0214 (0.0060)	0.9268 (0.0083)	0.0354 (0.0033)	984
FP (k=10000)	0.7815	0.0280	0.1734 (0.0039)	0.0315 (0.0055)	0.9458 (0.0072)	0.0310 (0.0016)	997

Table 317: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6439	0.0157	0.1340 (0.0030)	-0.1061 (0.0043)	0.7723 (0.0134)	0.0292 (0.0010)	975
Exp	0.8142	0.0240	0.1821 (0.0041)	0.0642 (0.0058)	0.9110 (0.0090)	0.0372 (0.0023)	1000
Weibull	0.6472	0.0160	0.1339 (0.0030)	-0.1028 (0.0042)	0.7840 (0.0130)	0.0285 (0.0010)	1000
Gompertz	0.8124	0.0241	0.1784 (0.0064)	0.0624 (0.0090)	0.9256 (0.0133)	0.0356 (0.0034)	390
RP (3)	0.6435	0.0159	0.1330 (0.0030)	-0.1065 (0.0042)	0.7840 (0.0130)	0.0290 (0.0010)	1000
RP (5)	0.6436	0.0159	0.1329 (0.0030)	-0.1064 (0.0042)	0.7850 (0.0130)	0.0290 (0.0010)	1000
RP (9)	0.6438	0.0159	0.1328 (0.0030)	-0.1062 (0.0042)	0.7850 (0.0130)	0.0289 (0.0010)	1000
RP (P)	0.6438	0.0159	0.1328 (0.0030)	-0.1062 (0.0042)	0.7825 (0.0132)	0.0289 (0.0010)	984
FP (W)	0.6468	0.0160	0.1339 (0.0030)	-0.1032 (0.0042)	0.7835 (0.0131)	0.0286 (0.0010)	993
FP (k=10)	0.6571	0.0168	0.1417 (0.0032)	-0.0929 (0.0045)	0.7974 (0.0127)	0.0287 (0.0011)	997
FP (k=10000)	0.6994	0.0185	0.1589 (0.0036)	-0.0506 (0.0050)	0.8335 (0.0118)	0.0278 (0.0013)	997
Model frailty: Normal							
Cox	0.7324	0.0230	0.1565 (0.0035)	-0.0176 (0.0049)	0.8980 (0.0096)	0.0248 (0.0011)	1000
Exp	0.9126	0.0382	0.1987 (0.0044)	0.1626 (0.0063)	0.9420 (0.0074)	0.0659 (0.0032)	1000
Weibull	0.7374	0.0257	0.1594 (0.0036)	-0.0126 (0.0050)	0.9197 (0.0086)	0.0255 (0.0012)	996
Gompertz	0.8980	0.0374	0.1956 (0.0073)	0.1480 (0.0103)	0.9533 (0.0111)	0.0601 (0.0048)	364
RP (3)	0.7340	0.0256	0.1584 (0.0035)	-0.0160 (0.0050)	0.9170 (0.0087)	0.0253 (0.0012)	1000
RP (5)	0.7342	0.0256	0.1584 (0.0035)	-0.0158 (0.0050)	0.9170 (0.0087)	0.0253 (0.0012)	1000
RP (9)	0.7343	0.0256	0.1584 (0.0035)	-0.0157 (0.0050)	0.9170 (0.0087)	0.0253 (0.0012)	1000
RP (P)	0.7352	0.0257	0.1584 (0.0035)	-0.0148 (0.0050)	0.9170 (0.0087)	0.0253 (0.0012)	1000
FP (W)	0.7449	0.0265	0.1640 (0.0037)	-0.0051 (0.0053)	0.9241 (0.0085)	0.0269 (0.0013)	975
FP (k=10)	0.7709	0.0284	0.1813 (0.0041)	0.0209 (0.0057)	0.9256 (0.0083)	0.0333 (0.0021)	994
FP (k=10000)	0.8209	0.0312	0.1861 (0.0042)	0.0709 (0.0059)	0.9439 (0.0073)	0.0396 (0.0021)	999

Table 318: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6440	0.0155	0.1302 (0.0030)	-0.1060 (0.0042)	0.7557 (0.0139)	0.0282 (0.0010)	962
Exp	0.4931	0.0096	0.1048 (0.0023)	-0.2569 (0.0033)	0.2890 (0.0143)	0.0769 (0.0016)	1000
Weibull	0.6108	0.0144	0.1312 (0.0029)	-0.1392 (0.0041)	0.6790 (0.0148)	0.0366 (0.0012)	1000
Gompertz	0.4961	0.0099	0.0940 (0.0026)	-0.2539 (0.0036)	0.2891 (0.0175)	0.0733 (0.0017)	671
RP (3)	0.6434	0.0157	0.1289 (0.0029)	-0.1066 (0.0041)	0.7720 (0.0133)	0.0280 (0.0010)	1000
RP (5)	0.6439	0.0157	0.1287 (0.0029)	-0.1061 (0.0041)	0.7760 (0.0132)	0.0278 (0.0010)	1000
RP (9)	0.6440	0.0157	0.1287 (0.0029)	-0.1060 (0.0041)	0.7770 (0.0132)	0.0278 (0.0010)	1000
RP (P)	0.6397	0.0156	0.1292 (0.0029)	-0.1103 (0.0041)	0.7601 (0.0136)	0.0288 (0.0010)	992
FP (W)	0.6105	0.0144	0.1308 (0.0029)	-0.1395 (0.0041)	0.6784 (0.0148)	0.0366 (0.0012)	995
FP (k=10)	0.6434	0.0157	0.1287 (0.0029)	-0.1066 (0.0041)	0.7740 (0.0132)	0.0279 (0.0010)	1000
FP (k=10000)	0.6444	0.0156	0.1309 (0.0029)	-0.1056 (0.0041)	0.7690 (0.0133)	0.0283 (0.0010)	1000
Model frailty: Normal							
Cox	0.7334	0.0221	0.1504 (0.0034)	-0.0166 (0.0048)	0.9030 (0.0094)	0.0229 (0.0010)	1000
Exp	0.5472	0.0139	0.1189 (0.0027)	-0.2028 (0.0038)	0.5165 (0.0158)	0.0552 (0.0015)	999
Weibull	0.6790	0.0212	0.1442 (0.0032)	-0.0710 (0.0046)	0.8497 (0.0113)	0.0258 (0.0010)	998
Gompertz	0.5506	0.0141	0.1034 (0.0027)	-0.1994 (0.0039)	0.5337 (0.0187)	0.0504 (0.0014)	712
RP (3)	0.7341	0.0247	0.1524 (0.0034)	-0.0159 (0.0048)	0.9260 (0.0083)	0.0234 (0.0010)	1000
RP (5)	0.7359	0.0248	0.1527 (0.0034)	-0.0141 (0.0048)	0.9290 (0.0081)	0.0235 (0.0010)	1000
RP (9)	0.7364	0.0249	0.1528 (0.0034)	-0.0136 (0.0048)	0.9290 (0.0081)	0.0235 (0.0010)	1000
RP (P)	0.7289	0.0244	0.1520 (0.0034)	-0.0211 (0.0048)	0.9160 (0.0088)	0.0235 (0.0010)	1000
FP (W)	0.6935	0.0224	0.1549 (0.0036)	-0.0565 (0.0050)	0.8666 (0.0110)	0.0272 (0.0017)	952
FP (k=10)	0.7853	0.0290	0.2048 (0.0046)	0.0353 (0.0065)	0.9244 (0.0084)	0.0432 (0.0060)	979
FP (k=10000)	0.8684	0.0352	0.2488 (0.0056)	0.1184 (0.0079)	0.8870 (0.0101)	0.0758 (0.0056)	991

Table 319: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6351	0.0150	0.1314 (0.0030)	-0.1149 (0.0042)	0.7324 (0.0142)	0.0305 (0.0011)	968
Exp	0.3668	0.0056	0.0706 (0.0016)	-0.3832 (0.0022)	0.0110 (0.0033)	0.1518 (0.0017)	1000
Weibull	0.6663	0.0165	0.1240 (0.0028)	-0.0837 (0.0039)	0.8550 (0.0111)	0.0224 (0.0009)	1000
Gompertz	0.5537	0.0118	0.0902 (0.0020)	-0.1963 (0.0029)	0.5295 (0.0159)	0.0467 (0.0011)	982
RP (3)	0.6355	0.0154	0.1293 (0.0029)	-0.1145 (0.0041)	0.7598 (0.0135)	0.0298 (0.0011)	999
RP (5)	0.6350	0.0154	0.1299 (0.0029)	-0.1150 (0.0041)	0.7590 (0.0135)	0.0301 (0.0011)	1000
RP (9)	0.6348	0.0154	0.1296 (0.0029)	-0.1152 (0.0041)	0.7585 (0.0135)	0.0301 (0.0011)	998
RP (P)	0.6340	0.0153	0.1286 (0.0029)	-0.1160 (0.0041)	0.7564 (0.0137)	0.0300 (0.0011)	977
FP (W)	0.6662	0.0165	0.1242 (0.0028)	-0.0838 (0.0039)	0.8540 (0.0112)	0.0224 (0.0009)	993
FP (k=10)	0.6480	0.0166	0.1341 (0.0030)	-0.1020 (0.0042)	0.7980 (0.0127)	0.0284 (0.0011)	1000
FP (k=10000)	0.7197	0.0190	0.1332 (0.0030)	-0.0303 (0.0042)	0.9170 (0.0087)	0.0187 (0.0008)	1000
Model frailty: Normal							
Cox	0.7222	0.0216	0.1473 (0.0033)	-0.0278 (0.0047)	0.9050 (0.0093)	0.0225 (0.0010)	1000
Exp	0.4238	0.0087	0.0928 (0.0021)	-0.3262 (0.0029)	0.1443 (0.0111)	0.1150 (0.0018)	998
Weibull	0.7839	0.0280	0.1586 (0.0036)	0.0339 (0.0050)	0.9529 (0.0067)	0.0263 (0.0012)	998
Gompertz	0.6609	0.0202	0.1207 (0.0027)	-0.0891 (0.0039)	0.8678 (0.0108)	0.0225 (0.0009)	976
RP (3)	0.7247	0.0242	0.1496 (0.0033)	-0.0253 (0.0047)	0.9150 (0.0088)	0.0230 (0.0010)	1000
RP (5)	0.7247	0.0242	0.1498 (0.0034)	-0.0253 (0.0047)	0.9150 (0.0088)	0.0230 (0.0010)	1000
RP (9)	0.7250	0.0242	0.1499 (0.0034)	-0.0250 (0.0047)	0.9150 (0.0088)	0.0231 (0.0010)	1000
RP (P)	0.7257	0.0243	0.1497 (0.0033)	-0.0243 (0.0047)	0.9150 (0.0088)	0.0230 (0.0010)	1000
FP (W)	0.8032	0.0300	0.1881 (0.0044)	0.0532 (0.0062)	0.9505 (0.0071)	0.0382 (0.0054)	929
FP (k=10)	0.7666	0.0274	0.1763 (0.0040)	0.0166 (0.0056)	0.9270 (0.0083)	0.0313 (0.0027)	986
FP (k=10000)	1.5505	0.1346	0.8865 (0.0200)	0.8005 (0.0282)	0.3884 (0.0155)	1.4258 (0.1524)	986

Table 320: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6466	0.0158	0.1349 (0.0031)	-0.1034 (0.0043)	0.7696 (0.0135)	0.0289 (0.0010)	968
Exp	0.7170	0.0189	0.1498 (0.0034)	-0.0330 (0.0047)	0.8890 (0.0099)	0.0235 (0.0010)	1000
Weibull	0.6458	0.0159	0.1302 (0.0029)	-0.1042 (0.0041)	0.7860 (0.0130)	0.0278 (0.0010)	1000
Gompertz	0.7201	0.0193	0.1448 (0.0051)	-0.0299 (0.0073)	0.9095 (0.0144)	0.0218 (0.0015)	398
RP (3)	0.6454	0.0160	0.1336 (0.0030)	-0.1046 (0.0042)	0.7816 (0.0131)	0.0288 (0.0010)	998
RP (5)	0.6464	0.0160	0.1334 (0.0030)	-0.1036 (0.0042)	0.7830 (0.0130)	0.0285 (0.0010)	1000
RP (9)	0.6468	0.0160	0.1335 (0.0030)	-0.1032 (0.0042)	0.7830 (0.0130)	0.0285 (0.0010)	1000
RP (P)	0.6460	0.0160	0.1332 (0.0030)	-0.1040 (0.0042)	0.7807 (0.0131)	0.0285 (0.0010)	994
FP (W)	0.6458	0.0159	0.1302 (0.0029)	-0.1042 (0.0041)	0.7858 (0.0130)	0.0278 (0.0010)	999
FP (k=10)	0.6500	0.0162	0.1367 (0.0031)	-0.1000 (0.0043)	0.7884 (0.0129)	0.0287 (0.0010)	997
FP (k=10000)	0.6422	0.0157	0.1360 (0.0030)	-0.1078 (0.0043)	0.7660 (0.0134)	0.0301 (0.0010)	1000
Model frailty: Normal							
Cox	0.7339	0.0231	0.1542 (0.0035)	-0.0161 (0.0049)	0.9020 (0.0094)	0.0240 (0.0010)	1000
Exp	0.8166	0.0306	0.1705 (0.0038)	0.0666 (0.0054)	0.9599 (0.0062)	0.0335 (0.0016)	998
Weibull	0.7404	0.0257	0.1547 (0.0035)	-0.0096 (0.0049)	0.9260 (0.0083)	0.0240 (0.0010)	1000
Gompertz	0.8043	0.0300	0.1669 (0.0059)	0.0543 (0.0084)	0.9497 (0.0110)	0.0307 (0.0026)	398
RP (3)	0.7356	0.0254	0.1558 (0.0035)	-0.0144 (0.0049)	0.9220 (0.0085)	0.0244 (0.0010)	1000
RP (5)	0.7356	0.0254	0.1557 (0.0035)	-0.0144 (0.0049)	0.9220 (0.0085)	0.0244 (0.0010)	1000
RP (9)	0.7358	0.0254	0.1557 (0.0035)	-0.0142 (0.0049)	0.9220 (0.0085)	0.0244 (0.0010)	1000
RP (P)	0.7361	0.0255	0.1556 (0.0035)	-0.0139 (0.0049)	0.9230 (0.0084)	0.0244 (0.0010)	1000
FP (W)	0.7490	0.0266	0.1612 (0.0037)	-0.0010 (0.0052)	0.9278 (0.0083)	0.0259 (0.0013)	970
FP (k=10)	0.7668	0.0279	0.1839 (0.0041)	0.0168 (0.0059)	0.9302 (0.0081)	0.0341 (0.0038)	988
FP (k=10000)	0.7626	0.0269	0.1643 (0.0037)	0.0126 (0.0052)	0.9329 (0.0079)	0.0271 (0.0013)	999

Table 321: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2382	0.0523	0.2319 (0.0052)	-0.0118 (0.0073)	0.9147 (0.0088)	0.0539 (0.0026)	997
Exp	1.2384	0.0527	0.2305 (0.0052)	-0.0116 (0.0073)	0.9230 (0.0084)	0.0532 (0.0026)	1000
Weibull	1.2405	0.0532	0.2320 (0.0052)	-0.0095 (0.0073)	0.9250 (0.0083)	0.0538 (0.0026)	1000
Gompertz	1.2492	0.0539	0.2286 (0.0074)	-0.0008 (0.0105)	0.9283 (0.0119)	0.0521 (0.0039)	474
RP (3)	1.2393	0.0532	0.2319 (0.0052)	-0.0107 (0.0073)	0.9240 (0.0084)	0.0539 (0.0026)	1000
RP (5)	1.2395	0.0532	0.2320 (0.0052)	-0.0105 (0.0073)	0.9240 (0.0084)	0.0539 (0.0026)	1000
RP (9)	1.2388	0.0531	0.2320 (0.0052)	-0.0112 (0.0074)	0.9247 (0.0084)	0.0539 (0.0026)	996
RP (P)	1.2374	0.0529	0.2297 (0.0055)	-0.0126 (0.0077)	0.9222 (0.0090)	0.0529 (0.0027)	887
FP (W)	1.2405	0.0532	0.2320 (0.0052)	-0.0095 (0.0073)	0.9250 (0.0083)	0.0538 (0.0026)	1000
FP (k=10)	1.2372	0.0531	0.2310 (0.0052)	-0.0128 (0.0073)	0.9235 (0.0084)	0.0535 (0.0026)	994
FP (k=10000)	1.2388	0.0530	0.2319 (0.0052)	-0.0112 (0.0073)	0.9227 (0.0085)	0.0538 (0.0026)	996
Model frailty: Normal							
Cox	1.8764	0.2202	0.4550 (0.0102)	0.6264 (0.0144)	0.8280 (0.0119)	0.5992 (0.0246)	1000
Exp	1.9010	0.1910	0.4700 (0.0105)	0.6510 (0.0149)	0.7675 (0.0134)	0.6444 (0.0260)	998
Weibull	1.9087	0.1931	0.4730 (0.0106)	0.6587 (0.0150)	0.7633 (0.0135)	0.6574 (0.0263)	997
Gompertz	1.9135	0.1939	0.4497 (0.0141)	0.6635 (0.0200)	0.7677 (0.0187)	0.6420 (0.0349)	508
RP (3)	1.9130	0.1952	0.4762 (0.0107)	0.6630 (0.0151)	0.7590 (0.0135)	0.6662 (0.0267)	1000
RP (5)	1.9132	0.1953	0.4764 (0.0107)	0.6632 (0.0151)	0.7600 (0.0135)	0.6666 (0.0267)	1000
RP (9)	1.9117	0.1951	0.4787 (0.0107)	0.6617 (0.0151)	0.7590 (0.0135)	0.6667 (0.0267)	1000
RP (P)	1.9115	0.1949	0.4800 (0.0107)	0.6615 (0.0152)	0.7548 (0.0136)	0.6678 (0.0268)	999
FP (W)	1.9918	0.2153	0.5744 (0.0131)	0.7418 (0.0185)	0.7125 (0.0146)	0.8799 (0.0567)	967
FP (k=10)	1.9722	0.2048	0.4937 (0.0111)	0.7222 (0.0157)	0.7126 (0.0143)	0.7651 (0.0295)	995
FP (k=10000)	1.9476	0.1973	0.4781 (0.0107)	0.6976 (0.0151)	0.7244 (0.0141)	0.7150 (0.0273)	998

Table 322: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2431	0.0535	0.2280 (0.0051)	-0.0069 (0.0072)	0.9195 (0.0086)	0.0520 (0.0026)	994
Exp	1.4095	0.0671	0.2540 (0.0057)	0.1595 (0.0080)	0.9530 (0.0067)	0.0899 (0.0046)	1000
Weibull	1.2483	0.0548	0.2286 (0.0051)	-0.0017 (0.0072)	0.9320 (0.0080)	0.0522 (0.0026)	1000
Gompertz	1.4049	0.0670	0.2565 (0.0090)	0.1549 (0.0127)	0.9512 (0.0106)	0.0896 (0.0070)	410
RP (3)	1.2443	0.0546	0.2278 (0.0051)	-0.0057 (0.0072)	0.9320 (0.0080)	0.0519 (0.0025)	1000
RP (5)	1.2446	0.0546	0.2278 (0.0051)	-0.0054 (0.0072)	0.9310 (0.0080)	0.0519 (0.0025)	1000
RP (9)	1.2442	0.0546	0.2274 (0.0051)	-0.0058 (0.0072)	0.9309 (0.0080)	0.0517 (0.0025)	998
RP (P)	1.2433	0.0545	0.2268 (0.0053)	-0.0067 (0.0075)	0.9276 (0.0085)	0.0514 (0.0026)	925
FP (W)	1.2479	0.0548	0.2284 (0.0051)	-0.0021 (0.0072)	0.9319 (0.0080)	0.0521 (0.0026)	999
FP (k=10)	1.2581	0.0565	0.2321 (0.0052)	0.0081 (0.0074)	0.9341 (0.0079)	0.0539 (0.0028)	987
FP (k=10000)	1.2869	0.0579	0.2371 (0.0053)	0.0369 (0.0075)	0.9438 (0.0073)	0.0575 (0.0030)	997
Model frailty: Normal							
Cox	1.8281	0.2015	0.4275 (0.0096)	0.5781 (0.0135)	0.8420 (0.0115)	0.5167 (0.0217)	1000
Exp	2.1064	0.2349	0.4905 (0.0110)	0.8564 (0.0155)	0.6396 (0.0152)	0.9737 (0.0338)	999
Weibull	1.8644	0.1891	0.4456 (0.0100)	0.6144 (0.0141)	0.8219 (0.0121)	0.5759 (0.0238)	994
Gompertz	2.1117	0.2363	0.4787 (0.0162)	0.8617 (0.0230)	0.6345 (0.0231)	0.9712 (0.0487)	435
RP (3)	1.8685	0.1911	0.4494 (0.0101)	0.6185 (0.0142)	0.8200 (0.0121)	0.5843 (0.0243)	1000
RP (5)	1.8686	0.1912	0.4493 (0.0101)	0.6186 (0.0142)	0.8210 (0.0121)	0.5844 (0.0243)	1000
RP (9)	1.8689	0.1912	0.4494 (0.0101)	0.6189 (0.0142)	0.8190 (0.0122)	0.5848 (0.0243)	1000
RP (P)	1.8710	0.1916	0.4501 (0.0101)	0.6210 (0.0142)	0.8200 (0.0121)	0.5880 (0.0243)	1000
FP (W)	1.9197	0.2038	0.5094 (0.0115)	0.6697 (0.0162)	0.7907 (0.0130)	0.7077 (0.0468)	984
FP (k=10)	1.9381	0.2020	0.4863 (0.0109)	0.6881 (0.0154)	0.7806 (0.0131)	0.7097 (0.0296)	998
FP (k=10000)	1.9548	0.2039	0.4965 (0.0111)	0.7048 (0.0157)	0.7500 (0.0137)	0.7430 (0.0406)	1000

Table 323: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2166	0.0487	0.2187 (0.0049)	-0.0334 (0.0069)	0.9038 (0.0093)	0.0489 (0.0021)	998
Exp	1.0193	0.0365	0.1974 (0.0044)	-0.2307 (0.0062)	0.6760 (0.0148)	0.0921 (0.0029)	1000
Weibull	1.1598	0.0459	0.2126 (0.0048)	-0.0902 (0.0067)	0.8740 (0.0105)	0.0533 (0.0021)	1000
Gompertz	1.0100	0.0364	0.2042 (0.0073)	-0.2400 (0.0104)	0.6486 (0.0243)	0.0992 (0.0050)	387
RP (3)	1.2159	0.0498	0.2189 (0.0049)	-0.0341 (0.0069)	0.9168 (0.0087)	0.0490 (0.0021)	998
RP (5)	1.2176	0.0499	0.2189 (0.0049)	-0.0324 (0.0069)	0.9180 (0.0087)	0.0489 (0.0021)	1000
RP (9)	1.2180	0.0500	0.2190 (0.0049)	-0.0320 (0.0069)	0.9180 (0.0087)	0.0489 (0.0021)	1000
RP (P)	1.2011	0.0487	0.2160 (0.0050)	-0.0489 (0.0071)	0.9086 (0.0094)	0.0490 (0.0021)	930
FP (W)	1.1610	0.0460	0.2125 (0.0048)	-0.0890 (0.0068)	0.8739 (0.0105)	0.0531 (0.0021)	991
FP (k=10)	1.2163	0.0499	0.2183 (0.0049)	-0.0337 (0.0069)	0.9177 (0.0087)	0.0488 (0.0021)	996
FP (k=10000)	1.2135	0.0494	0.2188 (0.0049)	-0.0365 (0.0069)	0.9110 (0.0090)	0.0492 (0.0021)	1000
Model frailty: Normal							
Cox	1.9080	0.2312	0.4677 (0.0105)	0.6580 (0.0148)	0.8170 (0.0122)	0.6515 (0.0256)	1000
Exp	1.5717	0.1287	0.4143 (0.0093)	0.3217 (0.0131)	0.9130 (0.0089)	0.2750 (0.0141)	1000
Weibull	1.8037	0.1661	0.4513 (0.0101)	0.5537 (0.0143)	0.8014 (0.0126)	0.5101 (0.0215)	997
Gompertz	1.5629	0.1288	0.4187 (0.0122)	0.3129 (0.0172)	0.9123 (0.0116)	0.2729 (0.0185)	593
RP (3)	1.9332	0.1903	0.4824 (0.0108)	0.6832 (0.0153)	0.7250 (0.0141)	0.6992 (0.0272)	1000
RP (5)	1.9370	0.1910	0.4829 (0.0108)	0.6870 (0.0153)	0.7247 (0.0141)	0.7050 (0.0274)	999
RP (9)	1.9393	0.1915	0.4841 (0.0108)	0.6893 (0.0153)	0.7220 (0.0142)	0.7092 (0.0275)	1000
RP (P)	1.9167	0.1871	0.4777 (0.0107)	0.6667 (0.0151)	0.7390 (0.0139)	0.6725 (0.0263)	1000
FP (W)	1.9448	0.2070	0.7311 (0.0170)	0.6948 (0.0240)	0.7389 (0.0144)	1.0167 (0.1092)	927
FP (k=10)	2.0392	0.2094	0.5749 (0.0129)	0.7892 (0.0183)	0.6650 (0.0150)	0.9529 (0.0504)	988
FP (k=10000)	2.1073	0.2167	0.5526 (0.0124)	0.8573 (0.0176)	0.5752 (0.0157)	1.0401 (0.0414)	991

Table 324: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2259	0.0501	0.2239 (0.0050)	-0.0241 (0.0071)	0.9068 (0.0092)	0.0507 (0.0026)	998
Exp	0.9297	0.0315	0.1897 (0.0042)	-0.3203 (0.0060)	0.5040 (0.0158)	0.1386 (0.0037)	1000
Weibull	1.2838	0.0549	0.2290 (0.0051)	0.0338 (0.0072)	0.9310 (0.0080)	0.0535 (0.0029)	1000
Gompertz	0.9347	0.0318	0.1709 (0.0046)	-0.3153 (0.0066)	0.5154 (0.0192)	0.1286 (0.0039)	681
RP (3)	1.2280	0.0510	0.2242 (0.0050)	-0.0220 (0.0071)	0.9150 (0.0088)	0.0507 (0.0026)	1000
RP (5)	1.2270	0.0510	0.2242 (0.0050)	-0.0230 (0.0071)	0.9149 (0.0088)	0.0507 (0.0026)	999
RP (9)	1.2273	0.0510	0.2237 (0.0050)	-0.0227 (0.0071)	0.9147 (0.0089)	0.0505 (0.0026)	985
RP (P)	1.2181	0.0503	0.2285 (0.0054)	-0.0319 (0.0077)	0.9080 (0.0097)	0.0532 (0.0031)	880
FP (W)	1.2849	0.0550	0.2294 (0.0052)	0.0349 (0.0073)	0.9314 (0.0080)	0.0538 (0.0029)	991
FP (k=10)	1.2440	0.0534	0.2287 (0.0051)	-0.0060 (0.0072)	0.9237 (0.0084)	0.0523 (0.0027)	996
FP (k=10000)	1.3703	0.0634	0.2731 (0.0062)	0.1203 (0.0087)	0.9462 (0.0072)	0.0890 (0.0094)	985
Model frailty: Normal							
Cox	1.9017	0.2240	0.4644 (0.0104)	0.6517 (0.0147)	0.8160 (0.0123)	0.6401 (0.0255)	1000
Exp	1.4463	0.1125	0.3977 (0.0089)	0.1963 (0.0126)	0.9137 (0.0089)	0.1966 (0.0115)	997
Weibull	2.0566	0.2143	0.5104 (0.0114)	0.8066 (0.0161)	0.6376 (0.0152)	0.9109 (0.0341)	999
Gompertz	1.4655	0.1150	0.3663 (0.0102)	0.2155 (0.0144)	0.9443 (0.0090)	0.1804 (0.0127)	646
RP (3)	1.9301	0.1915	0.4859 (0.0109)	0.6801 (0.0154)	0.7437 (0.0138)	0.6984 (0.0286)	999
RP (5)	1.9334	0.1922	0.4874 (0.0109)	0.6834 (0.0154)	0.7430 (0.0138)	0.7044 (0.0288)	1000
RP (9)	1.9330	0.1921	0.4875 (0.0109)	0.6830 (0.0154)	0.7430 (0.0138)	0.7040 (0.0288)	1000
RP (P)	1.9364	0.1926	0.4861 (0.0109)	0.6864 (0.0154)	0.7417 (0.0138)	0.7072 (0.0287)	999
FP (W)	2.2550	0.2825	0.9478 (0.0224)	1.0050 (0.0317)	0.5521 (0.0166)	1.9074 (0.2051)	893
FP (k=10)	2.0029	0.2018	0.5207 (0.0117)	0.7529 (0.0166)	0.6873 (0.0148)	0.8377 (0.0361)	985
FP (k=10000)	3.3166	0.5453	1.2585 (0.0283)	2.0666 (0.0400)	0.1325 (0.0108)	5.8530 (0.2403)	989

Table 325: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.2362	0.0529	0.2333 (0.0052)	-0.0138 (0.0074)	0.9188 (0.0087)	0.0546 (0.0025)	997
Exp	1.3176	0.0590	0.2417 (0.0054)	0.0676 (0.0076)	0.9550 (0.0066)	0.0629 (0.0030)	1000
Weibull	1.2457	0.0540	0.2329 (0.0052)	-0.0043 (0.0074)	0.9310 (0.0080)	0.0542 (0.0025)	1000
Gompertz	1.3092	0.0591	0.2556 (0.0114)	0.0592 (0.0160)	0.9409 (0.0148)	0.0686 (0.0069)	254
RP (3)	1.2375	0.0535	0.2333 (0.0052)	-0.0125 (0.0074)	0.9259 (0.0083)	0.0545 (0.0025)	998
RP (5)	1.2375	0.0535	0.2335 (0.0052)	-0.0125 (0.0074)	0.9260 (0.0083)	0.0546 (0.0025)	1000
RP (9)	1.2376	0.0535	0.2334 (0.0052)	-0.0124 (0.0074)	0.9250 (0.0083)	0.0546 (0.0025)	1000
RP (P)	1.2319	0.0531	0.2336 (0.0055)	-0.0181 (0.0077)	0.9194 (0.0090)	0.0548 (0.0025)	918
FP (W)	1.2457	0.0540	0.2329 (0.0052)	-0.0043 (0.0074)	0.9310 (0.0080)	0.0542 (0.0025)	1000
FP (k=10)	1.2389	0.0538	0.2348 (0.0053)	-0.0111 (0.0074)	0.9247 (0.0084)	0.0552 (0.0025)	996
FP (k=10000)	1.2295	0.0528	0.2328 (0.0052)	-0.0205 (0.0074)	0.9168 (0.0087)	0.0546 (0.0025)	997
Model frailty: Normal							
Cox	1.8451	0.2073	0.4458 (0.0100)	0.5951 (0.0141)	0.8290 (0.0119)	0.5526 (0.0223)	1000
Exp	2.0125	0.2139	0.4888 (0.0109)	0.7625 (0.0155)	0.6834 (0.0147)	0.8201 (0.0295)	998
Weibull	1.9049	0.1945	0.4712 (0.0106)	0.6549 (0.0149)	0.7678 (0.0134)	0.6507 (0.0254)	995
Gompertz	2.0500	0.2244	0.5042 (0.0171)	0.8000 (0.0242)	0.6590 (0.0228)	0.8936 (0.0488)	434
RP (3)	1.8862	0.1924	0.4727 (0.0106)	0.6362 (0.0149)	0.7890 (0.0129)	0.6279 (0.0251)	1000
RP (5)	1.8843	0.1919	0.4717 (0.0106)	0.6343 (0.0149)	0.7910 (0.0129)	0.6246 (0.0250)	1000
RP (9)	1.8840	0.1918	0.4714 (0.0105)	0.6340 (0.0149)	0.7920 (0.0128)	0.6239 (0.0249)	1000
RP (P)	1.8860	0.1924	0.4761 (0.0107)	0.6360 (0.0151)	0.7878 (0.0129)	0.6310 (0.0252)	999
FP (W)	1.9784	0.2172	0.6010 (0.0136)	0.7284 (0.0192)	0.7405 (0.0140)	0.8914 (0.0803)	975
FP (k=10)	1.9446	0.2020	0.4966 (0.0111)	0.6946 (0.0157)	0.7387 (0.0139)	0.7288 (0.0285)	995
FP (k=10000)	1.8978	0.1913	0.4725 (0.0106)	0.6478 (0.0149)	0.7660 (0.0134)	0.6427 (0.0253)	1000

Table 326: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.9949	0.0339	0.2045 (0.0046)	-0.2551 (0.0065)	0.6169 (0.0154)	0.1068 (0.0033)	997
Exp	1.0017	0.0343	0.2096 (0.0047)	-0.2483 (0.0066)	0.6240 (0.0153)	0.1056 (0.0036)	1000
Weibull	0.9987	0.0346	0.2068 (0.0046)	-0.2513 (0.0065)	0.6230 (0.0153)	0.1059 (0.0034)	1000
Gompertz	0.9859	0.0335	0.1864 (0.0064)	-0.2641 (0.0091)	0.6038 (0.0238)	0.1044 (0.0046)	424
RP (3)	0.9962	0.0346	0.2073 (0.0046)	-0.2538 (0.0066)	0.6256 (0.0153)	0.1073 (0.0035)	999
RP (5)	0.9962	0.0345	0.2067 (0.0046)	-0.2538 (0.0065)	0.6270 (0.0153)	0.1071 (0.0035)	1000
RP (9)	0.9963	0.0346	0.2063 (0.0046)	-0.2537 (0.0065)	0.6280 (0.0153)	0.1069 (0.0034)	1000
RP (P)	0.9978	0.0346	0.2072 (0.0047)	-0.2522 (0.0066)	0.6269 (0.0155)	0.1065 (0.0034)	973
FP (W)	0.9980	0.0346	0.2067 (0.0046)	-0.2520 (0.0065)	0.6215 (0.0154)	0.1062 (0.0034)	996
FP (k=10)	0.9958	0.0345	0.2075 (0.0046)	-0.2542 (0.0066)	0.6229 (0.0153)	0.1076 (0.0035)	997
FP (k=10000)	0.9976	0.0342	0.2090 (0.0047)	-0.2524 (0.0066)	0.6232 (0.0153)	0.1074 (0.0035)	998
Model frailty: Normal							
Cox	1.1784	0.0602	0.2408 (0.0054)	-0.0716 (0.0076)	0.8830 (0.0102)	0.0631 (0.0026)	1000
Exp	1.2034	0.0656	0.2552 (0.0057)	-0.0466 (0.0081)	0.9089 (0.0091)	0.0672 (0.0030)	999
Weibull	1.2058	0.0666	0.2563 (0.0057)	-0.0442 (0.0081)	0.9149 (0.0088)	0.0676 (0.0029)	999
Gompertz	1.2023	0.0660	0.2476 (0.0086)	-0.0477 (0.0121)	0.9143 (0.0137)	0.0635 (0.0042)	420
RP (3)	1.2038	0.0666	0.2561 (0.0057)	-0.0462 (0.0081)	0.9130 (0.0089)	0.0676 (0.0029)	1000
RP (5)	1.2038	0.0666	0.2559 (0.0057)	-0.0462 (0.0081)	0.9120 (0.0090)	0.0675 (0.0029)	1000
RP (9)	1.2040	0.0666	0.2559 (0.0057)	-0.0460 (0.0081)	0.9140 (0.0089)	0.0675 (0.0029)	1000
RP (P)	1.2046	0.0665	0.2558 (0.0057)	-0.0454 (0.0081)	0.9129 (0.0089)	0.0674 (0.0029)	999
FP (W)	1.2317	0.0707	0.2770 (0.0064)	-0.0183 (0.0090)	0.9179 (0.0089)	0.0770 (0.0039)	950
FP (k=10)	1.2595	0.0742	0.3142 (0.0071)	0.0095 (0.0100)	0.9104 (0.0091)	0.0987 (0.0115)	982
FP (k=10000)	1.2676	0.0727	0.2845 (0.0064)	0.0176 (0.0090)	0.9214 (0.0085)	0.0811 (0.0045)	992

Table 327: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.0219	0.0356	0.2112 (0.0047)	-0.2281 (0.0067)	0.6583 (0.0151)	0.0966 (0.0031)	992
Exp	1.3169	0.0565	0.3019 (0.0068)	0.0669 (0.0095)	0.8810 (0.0102)	0.0956 (0.0052)	1000
Weibull	1.0302	0.0368	0.2151 (0.0048)	-0.2198 (0.0068)	0.6790 (0.0148)	0.0945 (0.0031)	1000
Gompertz	1.3037	0.0557	0.2780 (0.0127)	0.0537 (0.0179)	0.9125 (0.0182)	0.0798 (0.0076)	240
RP (3)	1.0239	0.0365	0.2147 (0.0048)	-0.2261 (0.0068)	0.6700 (0.0149)	0.0972 (0.0031)	1000
RP (5)	1.0233	0.0364	0.2137 (0.0048)	-0.2267 (0.0068)	0.6710 (0.0149)	0.0970 (0.0031)	1000
RP (9)	1.0232	0.0364	0.2131 (0.0048)	-0.2268 (0.0067)	0.6710 (0.0149)	0.0968 (0.0031)	1000
RP (P)	1.0192	0.0361	0.2112 (0.0048)	-0.2308 (0.0068)	0.6653 (0.0151)	0.0978 (0.0032)	971
FP (W)	1.0304	0.0368	0.2162 (0.0049)	-0.2196 (0.0069)	0.6782 (0.0149)	0.0949 (0.0031)	982
FP (k=10)	1.0734	0.0409	0.2479 (0.0056)	-0.1766 (0.0079)	0.7101 (0.0144)	0.0926 (0.0032)	997
FP (k=10000)	1.1517	0.0450	0.2748 (0.0062)	-0.0983 (0.0087)	0.7962 (0.0128)	0.0851 (0.0035)	991
Model frailty: Normal							
Cox	1.1982	0.0638	0.2590 (0.0058)	-0.0518 (0.0082)	0.8830 (0.0102)	0.0697 (0.0030)	1000
Exp	1.5360	0.1065	0.3352 (0.0075)	0.2860 (0.0106)	0.9339 (0.0079)	0.1941 (0.0090)	999
Weibull	1.2331	0.0707	0.2686 (0.0060)	-0.0169 (0.0085)	0.9155 (0.0088)	0.0724 (0.0032)	994
Gompertz	1.5238	0.1056	0.3171 (0.0115)	0.2738 (0.0163)	0.9553 (0.0106)	0.1753 (0.0137)	380
RP (3)	1.2263	0.0701	0.2669 (0.0060)	-0.0237 (0.0084)	0.9110 (0.0090)	0.0717 (0.0031)	1000
RP (5)	1.2261	0.0701	0.2666 (0.0060)	-0.0239 (0.0084)	0.9120 (0.0090)	0.0716 (0.0031)	1000
RP (9)	1.2261	0.0701	0.2667 (0.0060)	-0.0239 (0.0084)	0.9130 (0.0089)	0.0716 (0.0031)	1000
RP (P)	1.2265	0.0701	0.2674 (0.0060)	-0.0235 (0.0085)	0.9120 (0.0090)	0.0720 (0.0032)	1000
FP (W)	1.2737	0.0782	0.3492 (0.0080)	0.0237 (0.0113)	0.9084 (0.0094)	0.1224 (0.0168)	950
FP (k=10)	1.3033	0.0796	0.3061 (0.0069)	0.0533 (0.0097)	0.9283 (0.0082)	0.0965 (0.0051)	990
FP (k=10000)	1.3826	0.0868	0.3098 (0.0069)	0.1326 (0.0098)	0.9418 (0.0074)	0.1135 (0.0058)	997

Table 328: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.0066	0.0344	0.2053 (0.0046)	-0.2434 (0.0065)	0.6253 (0.0153)	0.1014 (0.0031)	998
Exp	0.8067	0.0234	0.1794 (0.0040)	-0.4433 (0.0057)	0.2400 (0.0135)	0.2286 (0.0047)	1000
Weibull	0.9801	0.0339	0.2245 (0.0050)	-0.2699 (0.0071)	0.5610 (0.0157)	0.1232 (0.0036)	1000
Gompertz	0.7851	0.0226	0.1786 (0.0059)	-0.4649 (0.0083)	0.2232 (0.0193)	0.2479 (0.0073)	466
RP (3)	1.0072	0.0351	0.2074 (0.0046)	-0.2428 (0.0066)	0.6360 (0.0152)	0.1019 (0.0032)	1000
RP (5)	1.0075	0.0351	0.2070 (0.0046)	-0.2425 (0.0065)	0.6370 (0.0152)	0.1016 (0.0031)	1000
RP (9)	1.0073	0.0351	0.2066 (0.0046)	-0.2427 (0.0065)	0.6370 (0.0152)	0.1015 (0.0031)	1000
RP (P)	1.0043	0.0350	0.2086 (0.0047)	-0.2457 (0.0066)	0.6299 (0.0154)	0.1038 (0.0032)	989
FP (W)	0.9799	0.0338	0.2251 (0.0051)	-0.2701 (0.0072)	0.5616 (0.0158)	0.1236 (0.0036)	990
FP (k=10)	1.0072	0.0351	0.2075 (0.0046)	-0.2428 (0.0066)	0.6356 (0.0152)	0.1020 (0.0032)	999
FP (k=10000)	1.0128	0.0350	0.2116 (0.0047)	-0.2372 (0.0067)	0.6390 (0.0152)	0.1010 (0.0032)	1000
Model frailty: Normal							
Cox	1.1887	0.0636	0.2582 (0.0058)	-0.0613 (0.0082)	0.8680 (0.0107)	0.0704 (0.0036)	1000
Exp	0.9370	0.0397	0.2081 (0.0047)	-0.3130 (0.0066)	0.5673 (0.0157)	0.1413 (0.0040)	996
Weibull	1.1390	0.0586	0.2467 (0.0055)	-0.1110 (0.0078)	0.8475 (0.0114)	0.0731 (0.0030)	997
Gompertz	0.9140	0.0387	0.2093 (0.0069)	-0.3360 (0.0098)	0.5163 (0.0233)	0.1567 (0.0064)	459
RP (3)	1.2177	0.0669	0.2566 (0.0057)	-0.0323 (0.0081)	0.9020 (0.0094)	0.0668 (0.0031)	1000
RP (5)	1.2205	0.0672	0.2570 (0.0058)	-0.0295 (0.0081)	0.9050 (0.0093)	0.0669 (0.0031)	1000
RP (9)	1.2212	0.0673	0.2572 (0.0058)	-0.0288 (0.0081)	0.9050 (0.0093)	0.0669 (0.0031)	1000
RP (P)	1.2113	0.0662	0.2562 (0.0057)	-0.0387 (0.0081)	0.8970 (0.0096)	0.0671 (0.0031)	1000
FP (W)	1.1815	0.0651	0.3207 (0.0073)	-0.0685 (0.0104)	0.8594 (0.0112)	0.1074 (0.0164)	960
FP (k=10)	1.3183	0.0801	0.3459 (0.0078)	0.0683 (0.0110)	0.9123 (0.0090)	0.1242 (0.0129)	981
FP (k=10000)	1.4618	0.0970	0.4029 (0.0091)	0.2118 (0.0128)	0.8848 (0.0101)	0.2070 (0.0153)	990

Table 329: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.0121	0.0348	0.1977 (0.0044)	-0.2379 (0.0063)	0.6509 (0.0151)	0.0957 (0.0030)	994
Exp	0.5788	0.0126	0.1052 (0.0024)	-0.6712 (0.0033)	0.0020 (0.0014)	0.4615 (0.0044)	1000
Weibull	1.0327	0.0361	0.1840 (0.0041)	-0.2173 (0.0058)	0.7240 (0.0141)	0.0810 (0.0026)	1000
Gompertz	0.6282	0.0148	0.1025 (0.0027)	-0.6218 (0.0038)	0.0054 (0.0027)	0.3971 (0.0046)	736
RP (3)	1.0125	0.0353	0.1986 (0.0044)	-0.2375 (0.0063)	0.6630 (0.0149)	0.0958 (0.0030)	1000
RP (5)	1.0130	0.0354	0.1997 (0.0045)	-0.2370 (0.0063)	0.6600 (0.0150)	0.0960 (0.0030)	1000
RP (9)	1.0131	0.0354	0.1996 (0.0045)	-0.2369 (0.0063)	0.6617 (0.0150)	0.0959 (0.0031)	999
RP (P)	1.0108	0.0352	0.1980 (0.0046)	-0.2392 (0.0064)	0.6582 (0.0154)	0.0964 (0.0031)	945
FP (W)	1.0327	0.0361	0.1842 (0.0041)	-0.2173 (0.0059)	0.7230 (0.0142)	0.0811 (0.0027)	989
FP (k=10)	1.0513	0.0405	0.2156 (0.0048)	-0.1987 (0.0068)	0.7267 (0.0141)	0.0859 (0.0029)	999
FP (k=10000)	1.1177	0.0416	0.1974 (0.0044)	-0.1323 (0.0063)	0.8427 (0.0115)	0.0564 (0.0022)	998
Model frailty: Normal							
Cox	1.2049	0.0652	0.2521 (0.0056)	-0.0451 (0.0080)	0.8960 (0.0097)	0.0655 (0.0031)	1000
Exp	0.7181	0.0242	0.1553 (0.0035)	-0.5319 (0.0049)	0.1480 (0.0112)	0.3070 (0.0049)	1000
Weibull	1.3109	0.0772	0.2673 (0.0060)	0.0609 (0.0085)	0.9618 (0.0061)	0.0751 (0.0041)	994
Gompertz	0.7752	0.0280	0.1371 (0.0036)	-0.4748 (0.0051)	0.2210 (0.0153)	0.2442 (0.0046)	733
RP (3)	1.2310	0.0686	0.2567 (0.0057)	-0.0190 (0.0081)	0.9230 (0.0084)	0.0662 (0.0033)	1000
RP (5)	1.2315	0.0686	0.2570 (0.0057)	-0.0185 (0.0081)	0.9240 (0.0084)	0.0663 (0.0033)	1000
RP (9)	1.2323	0.0687	0.2572 (0.0058)	-0.0177 (0.0081)	0.9240 (0.0084)	0.0664 (0.0033)	1000
RP (P)	1.2323	0.0687	0.2566 (0.0057)	-0.0177 (0.0081)	0.9240 (0.0084)	0.0661 (0.0033)	1000
FP (W)	1.3493	0.0835	0.3246 (0.0075)	0.0993 (0.0106)	0.9576 (0.0066)	0.1151 (0.0177)	943
FP (k=10)	1.3101	0.0779	0.3065 (0.0070)	0.0601 (0.0098)	0.9373 (0.0078)	0.0974 (0.0064)	973
FP (k=10000)	2.6812	0.3670	1.2850 (0.0290)	1.4312 (0.0409)	0.3482 (0.0152)	3.6979 (0.2593)	985

Table 330: Simulation results for frailty variance, scenario with 50 clusters of 50 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.0142	0.0352	0.2211 (0.0050)	-0.2358 (0.0070)	0.6235 (0.0154)	0.1044 (0.0034)	996
Exp	1.1275	0.0427	0.2632 (0.0059)	-0.1225 (0.0083)	0.7810 (0.0131)	0.0842 (0.0048)	1000
Weibull	1.0093	0.0355	0.2240 (0.0050)	-0.2407 (0.0071)	0.6230 (0.0153)	0.1081 (0.0036)	1000
Gompertz	1.1027	0.0413	0.2364 (0.0082)	-0.1473 (0.0116)	0.7716 (0.0206)	0.0775 (0.0046)	416
RP (3)	1.0163	0.0361	0.2271 (0.0051)	-0.2337 (0.0072)	0.6336 (0.0152)	0.1061 (0.0035)	999
RP (5)	1.0159	0.0360	0.2248 (0.0050)	-0.2341 (0.0071)	0.6350 (0.0152)	0.1053 (0.0035)	1000
RP (9)	1.0161	0.0360	0.2238 (0.0050)	-0.2339 (0.0071)	0.6350 (0.0152)	0.1048 (0.0034)	1000
RP (P)	1.0147	0.0359	0.2214 (0.0050)	-0.2353 (0.0071)	0.6352 (0.0153)	0.1044 (0.0034)	984
FP (W)	1.0091	0.0355	0.2246 (0.0050)	-0.2409 (0.0071)	0.6207 (0.0154)	0.1084 (0.0036)	994
FP (k=10)	1.0342	0.0375	0.2488 (0.0056)	-0.2158 (0.0079)	0.6439 (0.0152)	0.1084 (0.0044)	994
FP (k=10000)	1.0236	0.0362	0.2421 (0.0054)	-0.2264 (0.0077)	0.6329 (0.0153)	0.1098 (0.0039)	997
Model frailty: Normal							
Cox	1.1911	0.0638	0.2610 (0.0058)	-0.0589 (0.0083)	0.8799 (0.0103)	0.0715 (0.0036)	999
Exp	1.3520	0.0829	0.2977 (0.0067)	0.1020 (0.0094)	0.9409 (0.0075)	0.0990 (0.0057)	999
Weibull	1.2223	0.0690	0.2675 (0.0060)	-0.0277 (0.0085)	0.8977 (0.0096)	0.0723 (0.0037)	997
Gompertz	1.3303	0.0806	0.2662 (0.0094)	0.0803 (0.0133)	0.9529 (0.0106)	0.0771 (0.0057)	403
RP (3)	1.2237	0.0695	0.2741 (0.0061)	-0.0263 (0.0087)	0.8920 (0.0098)	0.0757 (0.0041)	1000
RP (5)	1.2232	0.0694	0.2733 (0.0061)	-0.0268 (0.0086)	0.8930 (0.0098)	0.0753 (0.0040)	1000
RP (9)	1.2233	0.0694	0.2732 (0.0061)	-0.0267 (0.0086)	0.8920 (0.0098)	0.0753 (0.0040)	1000
RP (P)	1.2234	0.0694	0.2729 (0.0061)	-0.0266 (0.0086)	0.8930 (0.0098)	0.0751 (0.0040)	1000
FP (W)	1.2492	0.0742	0.3234 (0.0074)	-0.0008 (0.0105)	0.9002 (0.0097)	0.1045 (0.0161)	952
FP (k=10)	1.2856	0.0780	0.3356 (0.0075)	0.0356 (0.0107)	0.8960 (0.0097)	0.1138 (0.0091)	990
FP (k=10000)	1.2629	0.0728	0.2905 (0.0065)	0.0129 (0.0092)	0.9038 (0.0093)	0.0845 (0.0050)	998

Table 331: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2307	0.0075	0.0842 (0.0019)	-0.0193 (0.0027)	0.8454 (0.0116)	0.0074 (0.0003)	977
Exp	0.2304	0.0076	0.0845 (0.0019)	-0.0196 (0.0027)	0.8560 (0.0111)	0.0075 (0.0003)	1000
Weibull	0.2307	0.0077	0.0848 (0.0019)	-0.0193 (0.0027)	0.8530 (0.0112)	0.0076 (0.0003)	1000
Gompertz	0.2233	0.0071	0.0780 (0.0029)	-0.0267 (0.0041)	0.8310 (0.0197)	0.0068 (0.0005)	361
RP (3)	0.2303	0.0076	0.0845 (0.0019)	-0.0197 (0.0027)	0.8547 (0.0112)	0.0075 (0.0003)	998
RP (5)	0.2309	0.0077	0.0849 (0.0019)	-0.0191 (0.0027)	0.8530 (0.0112)	0.0076 (0.0003)	1000
RP (9)	0.2305	0.0077	0.0848 (0.0019)	-0.0195 (0.0027)	0.8530 (0.0112)	0.0076 (0.0003)	1000
RP (P)	0.2306	0.0077	0.0848 (0.0019)	-0.0194 (0.0027)	0.8530 (0.0112)	0.0076 (0.0003)	1000
FP (W)	0.2306	0.0077	0.0849 (0.0019)	-0.0194 (0.0027)	0.8527 (0.0112)	0.0076 (0.0003)	998
FP (k=10)	0.2308	0.0077	0.0850 (0.0019)	-0.0192 (0.0027)	0.8530 (0.0112)	0.0076 (0.0003)	1000
FP (k=10000)	0.2305	0.0077	0.0848 (0.0019)	-0.0195 (0.0027)	0.8530 (0.0112)	0.0076 (0.0003)	1000
Model frailty: Normal							
Cox	0.2795	0.0114	0.1167 (0.0026)	0.0295 (0.0037)	0.8570 (0.0111)	0.0145 (0.0008)	1000
Exp	0.2599	0.0111	0.1082 (0.0024)	0.0099 (0.0034)	0.8820 (0.0102)	0.0118 (0.0006)	1000
Weibull	0.2603	0.0111	0.1087 (0.0024)	0.0103 (0.0034)	0.8770 (0.0104)	0.0119 (0.0007)	1000
Gompertz	0.2553	0.0107	0.1062 (0.0039)	0.0053 (0.0054)	0.8684 (0.0173)	0.0113 (0.0011)	380
RP (3)	0.2601	0.0111	0.1086 (0.0024)	0.0101 (0.0034)	0.8790 (0.0103)	0.0119 (0.0006)	1000
RP (5)	0.2607	0.0112	0.1088 (0.0024)	0.0107 (0.0034)	0.8790 (0.0103)	0.0119 (0.0006)	1000
RP (9)	0.2601	0.0111	0.1087 (0.0024)	0.0101 (0.0034)	0.8780 (0.0103)	0.0119 (0.0007)	1000
RP (P)	0.2602	0.0111	0.1087 (0.0024)	0.0102 (0.0034)	0.8780 (0.0103)	0.0119 (0.0007)	1000
FP (W)	1.2014	0.4679	1.4347 (0.0410)	0.9514 (0.0580)	0.6111 (0.0197)	2.9603 (0.3065)	612
FP (k=10)	0.3226	0.0187	0.1792 (0.0041)	0.0726 (0.0058)	0.9256 (0.0086)	0.0374 (0.0041)	941
FP (k=10000)	0.3312	0.0180	0.1512 (0.0034)	0.0812 (0.0048)	0.9517 (0.0069)	0.0294 (0.0031)	973

Table 332: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2322	0.0077	0.0845 (0.0019)	-0.0178 (0.0027)	0.8552 (0.0112)	0.0074 (0.0003)	981
Exp	0.2720	0.0104	0.0978 (0.0022)	0.0220 (0.0031)	0.9180 (0.0087)	0.0100 (0.0006)	1000
Weibull	0.2325	0.0078	0.0850 (0.0019)	-0.0175 (0.0027)	0.8670 (0.0107)	0.0075 (0.0004)	1000
Gompertz	0.2738	0.0106	0.1008 (0.0033)	0.0238 (0.0047)	0.9186 (0.0127)	0.0107 (0.0009)	467
RP (3)	0.2319	0.0078	0.0847 (0.0019)	-0.0181 (0.0027)	0.8640 (0.0108)	0.0075 (0.0004)	1000
RP (5)	0.2322	0.0078	0.0849 (0.0019)	-0.0178 (0.0027)	0.8657 (0.0108)	0.0075 (0.0004)	998
RP (9)	0.2332	0.0079	0.0858 (0.0020)	-0.0168 (0.0028)	0.8641 (0.0110)	0.0076 (0.0004)	964
RP (P)	0.2321	0.0078	0.0849 (0.0019)	-0.0179 (0.0027)	0.8680 (0.0107)	0.0075 (0.0004)	1000
FP (W)	0.2325	0.0078	0.0850 (0.0019)	-0.0175 (0.0027)	0.8670 (0.0107)	0.0075 (0.0004)	1000
FP (k=10)	0.2408	0.0091	0.0905 (0.0020)	-0.0092 (0.0029)	0.8780 (0.0103)	0.0083 (0.0004)	1000
FP (k=10000)	0.2518	0.0097	0.1017 (0.0023)	0.0018 (0.0032)	0.8870 (0.0100)	0.0103 (0.0010)	1000
Model frailty: Normal							
Cox	0.2808	0.0117	0.1181 (0.0026)	0.0308 (0.0037)	0.8790 (0.0103)	0.0149 (0.0011)	1000
Exp	0.3060	0.0153	0.1252 (0.0028)	0.0560 (0.0040)	0.9310 (0.0080)	0.0188 (0.0013)	1000
Weibull	0.2619	0.0114	0.1101 (0.0025)	0.0119 (0.0035)	0.8890 (0.0099)	0.0123 (0.0009)	1000
Gompertz	0.3084	0.0156	0.1292 (0.0043)	0.0584 (0.0061)	0.9267 (0.0123)	0.0201 (0.0022)	450
RP (3)	0.2613	0.0113	0.1099 (0.0025)	0.0113 (0.0035)	0.8870 (0.0100)	0.0122 (0.0009)	1000
RP (5)	0.2619	0.0114	0.1102 (0.0025)	0.0119 (0.0035)	0.8870 (0.0100)	0.0123 (0.0009)	1000
RP (9)	0.2613	0.0113	0.1099 (0.0025)	0.0113 (0.0035)	0.8870 (0.0100)	0.0122 (0.0008)	1000
RP (P)	0.2615	0.0113	0.1100 (0.0025)	0.0115 (0.0035)	0.8870 (0.0100)	0.0122 (0.0009)	1000
FP (W)	1.2558	0.5689	1.6353 (0.0435)	1.0058 (0.0615)	0.6105 (0.0184)	3.6821 (0.3857)	706
FP (k=10)	0.3188	0.0176	0.1623 (0.0037)	0.0688 (0.0053)	0.9296 (0.0083)	0.0310 (0.0032)	952
FP (k=10000)	0.3299	0.0174	0.1364 (0.0031)	0.0799 (0.0044)	0.9571 (0.0065)	0.0250 (0.0016)	979

Table 333: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2326	0.0076	0.0875 (0.0020)	-0.0174 (0.0028)	0.8436 (0.0116)	0.0079 (0.0004)	978
Exp	0.1725	0.0045	0.0691 (0.0015)	-0.0775 (0.0022)	0.5960 (0.0155)	0.0108 (0.0003)	1000
Weibull	0.2127	0.0066	0.0813 (0.0018)	-0.0373 (0.0026)	0.7880 (0.0129)	0.0080 (0.0003)	1000
Gompertz	0.2299	0.0076	0.0837 (0.0019)	-0.0201 (0.0027)	0.8534 (0.0112)	0.0074 (0.0003)	996
RP (3)	0.2314	0.0077	0.0871 (0.0019)	-0.0186 (0.0028)	0.8530 (0.0112)	0.0079 (0.0004)	1000
RP (5)	0.2323	0.0078	0.0875 (0.0020)	-0.0177 (0.0028)	0.8550 (0.0111)	0.0080 (0.0004)	1000
RP (9)	0.2321	0.0078	0.0873 (0.0020)	-0.0179 (0.0028)	0.8540 (0.0112)	0.0079 (0.0004)	1000
RP (P)	0.2299	0.0076	0.0867 (0.0019)	-0.0201 (0.0027)	0.8498 (0.0113)	0.0079 (0.0004)	999
FP (W)	0.2127	0.0066	0.0813 (0.0018)	-0.0373 (0.0026)	0.7880 (0.0129)	0.0080 (0.0003)	1000
FP (k=10)	0.2322	0.0078	0.0875 (0.0020)	-0.0178 (0.0028)	0.8550 (0.0111)	0.0080 (0.0004)	1000
FP (k=10000)	0.2301	0.0076	0.0868 (0.0019)	-0.0199 (0.0027)	0.8510 (0.0113)	0.0079 (0.0004)	1000
Model frailty: Normal							
Cox	0.2823	0.0122	0.1252 (0.0028)	0.0323 (0.0040)	0.8650 (0.0108)	0.0167 (0.0012)	1000
Exp	0.1928	0.0064	0.0910 (0.0020)	-0.0572 (0.0029)	0.6610 (0.0150)	0.0115 (0.0005)	1000
Weibull	0.2384	0.0095	0.1066 (0.0024)	-0.0116 (0.0034)	0.8330 (0.0118)	0.0115 (0.0008)	1000
Gompertz	0.2566	0.0107	0.1061 (0.0024)	0.0066 (0.0034)	0.8792 (0.0104)	0.0113 (0.0006)	985
RP (3)	0.2617	0.0114	0.1160 (0.0026)	0.0117 (0.0037)	0.8790 (0.0103)	0.0136 (0.0010)	1000
RP (5)	0.2632	0.0115	0.1168 (0.0026)	0.0132 (0.0037)	0.8810 (0.0102)	0.0138 (0.0010)	1000
RP (9)	0.2629	0.0115	0.1168 (0.0026)	0.0129 (0.0037)	0.8800 (0.0103)	0.0138 (0.0010)	1000
RP (P)	0.2600	0.0112	0.1154 (0.0026)	0.0100 (0.0036)	0.8730 (0.0105)	0.0134 (0.0009)	1000
FP (W)	1.0977	0.3690	1.2606 (0.0421)	0.8477 (0.0594)	0.5978 (0.0231)	2.3041 (0.2653)	450
FP (k=10)	0.3314	0.0191	0.1776 (0.0042)	0.0814 (0.0059)	0.9182 (0.0091)	0.0382 (0.0033)	905
FP (k=10000)	0.3594	0.0216	0.1784 (0.0041)	0.1094 (0.0058)	0.9480 (0.0072)	0.0438 (0.0036)	942

Table 334: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2289	0.0073	0.0838 (0.0019)	-0.0211 (0.0027)	0.8265 (0.0121)	0.0075 (0.0003)	980
Exp	0.1509	0.0035	0.0611 (0.0014)	-0.0991 (0.0019)	0.4930 (0.0158)	0.0135 (0.0003)	1000
Weibull	0.2490	0.0088	0.0904 (0.0020)	-0.0010 (0.0029)	0.8860 (0.0101)	0.0082 (0.0004)	1000
Gompertz	0.2311	0.0076	0.0842 (0.0019)	-0.0189 (0.0027)	0.8440 (0.0115)	0.0074 (0.0004)	1000
RP (3)	0.2269	0.0074	0.0838 (0.0019)	-0.0231 (0.0027)	0.8407 (0.0117)	0.0076 (0.0004)	979
RP (5)	0.2294	0.0076	0.0849 (0.0019)	-0.0206 (0.0027)	0.8438 (0.0115)	0.0076 (0.0004)	999
RP (9)	0.2289	0.0075	0.0844 (0.0019)	-0.0211 (0.0027)	0.8440 (0.0115)	0.0076 (0.0004)	1000
RP (P)	0.2293	0.0075	0.0845 (0.0019)	-0.0207 (0.0027)	0.8458 (0.0114)	0.0076 (0.0004)	999
FP (W)	0.2490	0.0088	0.0904 (0.0020)	-0.0010 (0.0029)	0.8860 (0.0101)	0.0082 (0.0004)	1000
FP (k=10)	0.2437	0.0095	0.0936 (0.0021)	-0.0063 (0.0030)	0.8650 (0.0108)	0.0088 (0.0005)	1000
FP (k=10000)	19.0344	45.1003	3.8052 (0.0860)	18.7844 (0.1215)	0.0000 (0.0000)	367.3184 (4.8512)	981
Model frailty: Normal							
Cox	0.2795	0.0119	0.1207 (0.0027)	0.0295 (0.0038)	0.8620 (0.0109)	0.0154 (0.0012)	1000
Exp	0.1712	0.0051	0.0822 (0.0018)	-0.0788 (0.0026)	0.5780 (0.0156)	0.0130 (0.0004)	1000
Weibull	0.2849	0.0133	0.1221 (0.0027)	0.0349 (0.0039)	0.9080 (0.0091)	0.0161 (0.0012)	1000
Gompertz	0.2667	0.0118	0.1166 (0.0026)	0.0167 (0.0037)	0.8780 (0.0103)	0.0139 (0.0011)	1000
RP (3)	0.2596	0.0111	0.1120 (0.0025)	0.0096 (0.0035)	0.8680 (0.0107)	0.0126 (0.0009)	1000
RP (5)	0.2603	0.0112	0.1125 (0.0025)	0.0103 (0.0036)	0.8690 (0.0107)	0.0128 (0.0009)	1000
RP (9)	0.2597	0.0111	0.1121 (0.0025)	0.0097 (0.0035)	0.8690 (0.0107)	0.0127 (0.0009)	1000
RP (P)	0.2605	0.0112	0.1126 (0.0025)	0.0105 (0.0036)	0.8710 (0.0106)	0.0128 (0.0010)	1000
FP (W)	1.2264	0.4605	1.3905 (0.0444)	0.9764 (0.0628)	0.5886 (0.0222)	2.8829 (0.3504)	491
FP (k=10)	0.3243	0.0184	0.1752 (0.0041)	0.0743 (0.0058)	0.9197 (0.0089)	0.0362 (0.0045)	922
FP (k=10000)	0.5021	0.0436	0.2713 (0.0062)	0.2521 (0.0088)	0.9131 (0.0092)	0.1371 (0.0109)	944

Table 335: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2337	0.0078	0.0873 (0.0020)	-0.0163 (0.0028)	0.8416 (0.0116)	0.0079 (0.0004)	985
Exp	0.2570	0.0094	0.0945 (0.0021)	0.0070 (0.0030)	0.8970 (0.0096)	0.0090 (0.0005)	1000
Weibull	0.2378	0.0081	0.0885 (0.0020)	-0.0122 (0.0028)	0.8580 (0.0110)	0.0080 (0.0004)	1000
Gompertz	0.2517	0.0092	0.1012 (0.0060)	0.0017 (0.0085)	0.8794 (0.0274)	0.0102 (0.0014)	141
RP (3)	0.2335	0.0079	0.0874 (0.0020)	-0.0165 (0.0028)	0.8478 (0.0114)	0.0079 (0.0004)	999
RP (5)	0.2337	0.0079	0.0874 (0.0020)	-0.0163 (0.0028)	0.8490 (0.0113)	0.0079 (0.0004)	1000
RP (9)	0.2338	0.0079	0.0875 (0.0020)	-0.0162 (0.0028)	0.8501 (0.0113)	0.0079 (0.0004)	994
RP (P)	0.2337	0.0079	0.0874 (0.0020)	-0.0163 (0.0028)	0.8490 (0.0113)	0.0079 (0.0004)	1000
FP (W)	0.2379	0.0081	0.0886 (0.0020)	-0.0121 (0.0028)	0.8579 (0.0110)	0.0080 (0.0004)	999
FP (k=10)	0.2354	0.0082	0.0888 (0.0020)	-0.0146 (0.0028)	0.8540 (0.0112)	0.0081 (0.0004)	1000
FP (k=10000)	0.2319	0.0078	0.0870 (0.0019)	-0.0181 (0.0028)	0.8450 (0.0114)	0.0079 (0.0004)	1000
Model frailty: Normal							
Cox	0.2849	0.0124	0.1249 (0.0028)	0.0349 (0.0040)	0.8530 (0.0112)	0.0168 (0.0013)	1000
Exp	0.2929	0.0142	0.1259 (0.0028)	0.0429 (0.0040)	0.9130 (0.0089)	0.0177 (0.0013)	1000
Weibull	0.2710	0.0123	0.1186 (0.0027)	0.0210 (0.0038)	0.8870 (0.0100)	0.0145 (0.0011)	1000
Gompertz	0.2888	0.0138	0.1251 (0.0042)	0.0388 (0.0059)	0.9213 (0.0128)	0.0171 (0.0016)	445
RP (3)	0.2655	0.0118	0.1165 (0.0026)	0.0155 (0.0037)	0.8780 (0.0103)	0.0138 (0.0010)	1000
RP (5)	0.2655	0.0118	0.1164 (0.0026)	0.0155 (0.0037)	0.8770 (0.0104)	0.0138 (0.0010)	1000
RP (9)	0.2652	0.0118	0.1164 (0.0026)	0.0152 (0.0037)	0.8770 (0.0104)	0.0138 (0.0010)	1000
RP (P)	0.2655	0.0118	0.1164 (0.0026)	0.0155 (0.0037)	0.8780 (0.0103)	0.0138 (0.0010)	1000
FP (W)	1.1292	0.4363	1.4092 (0.0379)	0.8792 (0.0536)	0.6425 (0.0182)	2.7561 (0.2913)	691
FP (k=10)	0.3362	0.0204	0.1911 (0.0044)	0.0862 (0.0062)	0.9104 (0.0093)	0.0439 (0.0048)	938
FP (k=10000)	0.3186	0.0163	0.1368 (0.0031)	0.0686 (0.0044)	0.9416 (0.0076)	0.0234 (0.0018)	959

Table 336: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2182	0.0068	0.0848 (0.0019)	-0.0318 (0.0027)	0.7916 (0.0130)	0.0082 (0.0004)	979
Exp	0.2181	0.0070	0.0846 (0.0019)	-0.0319 (0.0027)	0.8100 (0.0124)	0.0082 (0.0004)	1000
Weibull	0.2183	0.0070	0.0846 (0.0019)	-0.0317 (0.0027)	0.8070 (0.0125)	0.0082 (0.0004)	1000
Gompertz	0.2062	0.0063	0.0808 (0.0036)	-0.0438 (0.0051)	0.7729 (0.0264)	0.0084 (0.0007)	251
RP (3)	0.2181	0.0070	0.0844 (0.0019)	-0.0319 (0.0027)	0.8068 (0.0125)	0.0081 (0.0004)	999
RP (5)	0.2184	0.0070	0.0847 (0.0019)	-0.0316 (0.0027)	0.8030 (0.0126)	0.0082 (0.0004)	1000
RP (9)	0.2180	0.0070	0.0846 (0.0019)	-0.0320 (0.0027)	0.8030 (0.0126)	0.0082 (0.0004)	1000
RP (P)	0.2181	0.0070	0.0845 (0.0019)	-0.0319 (0.0027)	0.8060 (0.0125)	0.0082 (0.0004)	1000
FP (W)	0.2183	0.0070	0.0846 (0.0019)	-0.0317 (0.0027)	0.8070 (0.0125)	0.0082 (0.0004)	1000
FP (k=10)	0.2182	0.0070	0.0848 (0.0019)	-0.0318 (0.0027)	0.8040 (0.0126)	0.0082 (0.0004)	1000
FP (k=10000)	0.2180	0.0070	0.0846 (0.0019)	-0.0320 (0.0027)	0.8030 (0.0126)	0.0082 (0.0004)	1000
Model frailty: Normal							
Cox	0.2465	0.0077	0.0969 (0.0022)	-0.0035 (0.0031)	0.8340 (0.0118)	0.0094 (0.0005)	1000
Exp	0.2295	0.0084	0.0901 (0.0020)	-0.0205 (0.0029)	0.8380 (0.0117)	0.0085 (0.0004)	1000
Weibull	0.2297	0.0085	0.0904 (0.0020)	-0.0203 (0.0029)	0.8360 (0.0117)	0.0086 (0.0004)	1000
Gompertz	0.2171	0.0076	0.0867 (0.0026)	-0.0329 (0.0036)	0.8024 (0.0166)	0.0086 (0.0005)	577
RP (3)	0.2294	0.0085	0.0901 (0.0020)	-0.0206 (0.0029)	0.8370 (0.0117)	0.0085 (0.0004)	1000
RP (5)	0.2299	0.0085	0.0905 (0.0020)	-0.0201 (0.0029)	0.8360 (0.0117)	0.0086 (0.0004)	1000
RP (9)	0.2294	0.0085	0.0902 (0.0020)	-0.0206 (0.0029)	0.8360 (0.0117)	0.0086 (0.0004)	1000
RP (P)	0.2295	0.0085	0.0902 (0.0020)	-0.0205 (0.0029)	0.8360 (0.0117)	0.0086 (0.0004)	1000
FP (W)	1.0358	0.3607	1.2616 (0.0358)	0.7858 (0.0506)	0.6329 (0.0193)	2.2066 (0.2541)	621
FP (k=10)	0.2801	0.0136	0.1474 (0.0034)	0.0301 (0.0048)	0.8977 (0.0099)	0.0226 (0.0031)	929
FP (k=10000)	0.2909	0.0135	0.1224 (0.0028)	0.0409 (0.0040)	0.9310 (0.0082)	0.0166 (0.0016)	957

Table 337: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2201	0.0070	0.0829 (0.0019)	-0.0299 (0.0027)	0.8035 (0.0127)	0.0078 (0.0003)	977
Exp	0.2692	0.0104	0.1063 (0.0024)	0.0192 (0.0034)	0.9080 (0.0091)	0.0116 (0.0007)	1000
Weibull	0.2212	0.0072	0.0838 (0.0019)	-0.0288 (0.0027)	0.8130 (0.0123)	0.0078 (0.0003)	1000
Gompertz	0.2673	0.0103	0.1060 (0.0037)	0.0173 (0.0052)	0.8905 (0.0152)	0.0115 (0.0012)	420
RP (3)	0.2203	0.0071	0.0832 (0.0019)	-0.0297 (0.0026)	0.8150 (0.0123)	0.0078 (0.0003)	1000
RP (5)	0.2208	0.0071	0.0835 (0.0019)	-0.0292 (0.0026)	0.8170 (0.0122)	0.0078 (0.0003)	1000
RP (9)	0.2211	0.0071	0.0837 (0.0019)	-0.0289 (0.0027)	0.8163 (0.0124)	0.0078 (0.0003)	980
RP (P)	0.2205	0.0071	0.0834 (0.0019)	-0.0295 (0.0026)	0.8140 (0.0123)	0.0078 (0.0003)	1000
FP (W)	0.2212	0.0072	0.0838 (0.0019)	-0.0288 (0.0027)	0.8130 (0.0123)	0.0078 (0.0003)	1000
FP (k=10)	0.2309	0.0086	0.0912 (0.0020)	-0.0191 (0.0029)	0.8370 (0.0117)	0.0087 (0.0004)	1000
FP (k=10000)	0.2393	0.0086	0.0966 (0.0022)	-0.0107 (0.0031)	0.8485 (0.0114)	0.0094 (0.0005)	997
Model frailty: Normal							
Cox	0.2487	0.0079	0.0954 (0.0021)	-0.0013 (0.0030)	0.8440 (0.0115)	0.0091 (0.0005)	1000
Exp	0.2808	0.0126	0.1088 (0.0024)	0.0308 (0.0034)	0.9270 (0.0082)	0.0128 (0.0008)	1000
Weibull	0.2323	0.0087	0.0893 (0.0020)	-0.0177 (0.0028)	0.8430 (0.0115)	0.0083 (0.0004)	1000
Gompertz	0.2770	0.0123	0.1070 (0.0037)	0.0270 (0.0052)	0.9207 (0.0133)	0.0122 (0.0011)	416
RP (3)	0.2314	0.0086	0.0887 (0.0020)	-0.0186 (0.0028)	0.8440 (0.0115)	0.0082 (0.0004)	1000
RP (5)	0.2320	0.0087	0.0890 (0.0020)	-0.0180 (0.0028)	0.8420 (0.0115)	0.0082 (0.0004)	1000
RP (9)	0.2314	0.0086	0.0888 (0.0020)	-0.0186 (0.0028)	0.8420 (0.0115)	0.0082 (0.0004)	1000
RP (P)	0.2316	0.0086	0.0889 (0.0020)	-0.0184 (0.0028)	0.8420 (0.0115)	0.0082 (0.0004)	1000
FP (W)	1.0871	0.4331	1.4335 (0.0383)	0.8371 (0.0541)	0.6302 (0.0182)	2.7527 (0.3059)	703
FP (k=10)	0.2951	0.0154	0.1600 (0.0037)	0.0451 (0.0052)	0.9039 (0.0096)	0.0276 (0.0029)	947
FP (k=10000)	0.2967	0.0139	0.1186 (0.0027)	0.0467 (0.0038)	0.9446 (0.0073)	0.0162 (0.0012)	975

Table 338: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2215	0.0069	0.0793 (0.0018)	-0.0285 (0.0025)	0.8104 (0.0125)	0.0071 (0.0003)	981
Exp	0.1610	0.0039	0.0603 (0.0013)	-0.0890 (0.0019)	0.5740 (0.0156)	0.0115 (0.0003)	1000
Weibull	0.2033	0.0060	0.0757 (0.0017)	-0.0467 (0.0024)	0.7550 (0.0136)	0.0079 (0.0003)	1000
Gompertz	0.2209	0.0070	0.0785 (0.0018)	-0.0291 (0.0025)	0.8226 (0.0121)	0.0070 (0.0003)	998
RP (3)	0.2215	0.0071	0.0803 (0.0018)	-0.0285 (0.0025)	0.8210 (0.0121)	0.0073 (0.0003)	1000
RP (5)	0.2222	0.0071	0.0805 (0.0018)	-0.0278 (0.0025)	0.8230 (0.0121)	0.0073 (0.0003)	1000
RP (9)	0.2220	0.0071	0.0803 (0.0018)	-0.0280 (0.0025)	0.8240 (0.0120)	0.0072 (0.0003)	1000
RP (P)	0.2202	0.0070	0.0800 (0.0018)	-0.0298 (0.0025)	0.8160 (0.0123)	0.0073 (0.0003)	1000
FP (W)	0.2033	0.0060	0.0757 (0.0017)	-0.0467 (0.0024)	0.7550 (0.0136)	0.0079 (0.0003)	1000
FP (k=10)	0.2221	0.0071	0.0804 (0.0018)	-0.0279 (0.0025)	0.8240 (0.0120)	0.0072 (0.0003)	1000
FP (k=10000)	0.2206	0.0070	0.0806 (0.0018)	-0.0294 (0.0025)	0.8170 (0.0122)	0.0074 (0.0003)	1000
Model frailty: Normal							
Cox	0.2513	0.0073	0.0914 (0.0020)	0.0013 (0.0029)	0.8490 (0.0113)	0.0083 (0.0004)	1000
Exp	0.1676	0.0045	0.0630 (0.0014)	-0.0824 (0.0020)	0.6150 (0.0154)	0.0107 (0.0003)	1000
Weibull	0.2117	0.0071	0.0780 (0.0017)	-0.0383 (0.0025)	0.7910 (0.0129)	0.0075 (0.0003)	1000
Gompertz	0.2314	0.0084	0.0818 (0.0018)	-0.0186 (0.0026)	0.8547 (0.0112)	0.0070 (0.0003)	991
RP (3)	0.2330	0.0085	0.0848 (0.0019)	-0.0170 (0.0027)	0.8530 (0.0112)	0.0075 (0.0003)	1000
RP (5)	0.2342	0.0086	0.0852 (0.0019)	-0.0158 (0.0027)	0.8570 (0.0111)	0.0075 (0.0003)	1000
RP (9)	0.2338	0.0086	0.0850 (0.0019)	-0.0162 (0.0027)	0.8560 (0.0111)	0.0075 (0.0003)	1000
RP (P)	0.2314	0.0084	0.0843 (0.0019)	-0.0186 (0.0027)	0.8490 (0.0113)	0.0074 (0.0003)	1000
FP (W)	1.0139	0.3435	1.2425 (0.0444)	0.7639 (0.0628)	0.5995 (0.0247)	2.1234 (0.3555)	392
FP (k=10)	0.2941	0.0143	0.1414 (0.0033)	0.0441 (0.0047)	0.9129 (0.0093)	0.0219 (0.0024)	919
FP (k=10000)	0.3394	0.0189	0.1609 (0.0037)	0.0894 (0.0052)	0.9469 (0.0073)	0.0339 (0.0029)	942

Table 339: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2207	0.0069	0.0814 (0.0018)	-0.0293 (0.0026)	0.8164 (0.0124)	0.0075 (0.0003)	975
Exp	0.1311	0.0026	0.0475 (0.0011)	-0.1189 (0.0015)	0.3410 (0.0150)	0.0164 (0.0003)	1000
Weibull	0.2403	0.0082	0.0858 (0.0019)	-0.0097 (0.0027)	0.8880 (0.0100)	0.0075 (0.0003)	1000
Gompertz	0.2160	0.0067	0.0740 (0.0017)	-0.0340 (0.0023)	0.8380 (0.0117)	0.0066 (0.0002)	1000
RP (3)	0.2203	0.0070	0.0817 (0.0018)	-0.0297 (0.0026)	0.8312 (0.0119)	0.0075 (0.0003)	995
RP (5)	0.2206	0.0070	0.0816 (0.0018)	-0.0294 (0.0026)	0.8270 (0.0120)	0.0075 (0.0003)	1000
RP (9)	0.2201	0.0070	0.0810 (0.0018)	-0.0299 (0.0026)	0.8290 (0.0119)	0.0075 (0.0003)	1000
RP (P)	0.2207	0.0070	0.0812 (0.0018)	-0.0293 (0.0026)	0.8320 (0.0118)	0.0075 (0.0003)	1000
FP (W)	0.2401	0.0082	0.0858 (0.0019)	-0.0099 (0.0027)	0.8878 (0.0100)	0.0075 (0.0003)	998
FP (k=10)	0.2404	0.0098	0.0954 (0.0021)	-0.0096 (0.0030)	0.8760 (0.0104)	0.0092 (0.0005)	1000
FP (k=10000)	22.2371	61.4492	4.2829 (0.0971)	21.9871 (0.1372)	0.0021 (0.0015)	501.7553 (6.5218)	974
Model frailty: Normal							
Cox	0.2495	0.0077	0.0942 (0.0021)	-0.0005 (0.0030)	0.8470 (0.0114)	0.0089 (0.0005)	1000
Exp	0.1392	0.0032	0.0541 (0.0012)	-0.1108 (0.0017)	0.3990 (0.0155)	0.0152 (0.0003)	1000
Weibull	0.2559	0.0103	0.0954 (0.0021)	0.0059 (0.0030)	0.9090 (0.0091)	0.0091 (0.0005)	1000
Gompertz	0.2329	0.0086	0.0861 (0.0019)	-0.0171 (0.0027)	0.8660 (0.0108)	0.0077 (0.0004)	1000
RP (3)	0.2322	0.0086	0.0878 (0.0020)	-0.0178 (0.0028)	0.8560 (0.0111)	0.0080 (0.0004)	1000
RP (5)	0.2324	0.0086	0.0880 (0.0020)	-0.0176 (0.0028)	0.8540 (0.0112)	0.0080 (0.0004)	1000
RP (9)	0.2319	0.0085	0.0874 (0.0020)	-0.0181 (0.0028)	0.8540 (0.0112)	0.0080 (0.0004)	1000
RP (P)	0.2326	0.0086	0.0878 (0.0020)	-0.0174 (0.0028)	0.8570 (0.0111)	0.0080 (0.0004)	1000
FP (W)	0.9884	0.3074	1.1414 (0.0381)	0.7384 (0.0538)	0.6600 (0.0223)	1.8453 (0.2626)	450
FP (k=10)	0.2953	0.0147	0.1489 (0.0035)	0.0453 (0.0049)	0.9175 (0.0091)	0.0242 (0.0022)	909
FP (k=10000)	0.4819	0.0392	0.2453 (0.0056)	0.2319 (0.0080)	0.9221 (0.0087)	0.1139 (0.0078)	950

Table 340: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.2191	0.0069	0.0812 (0.0018)	-0.0309 (0.0026)	0.8243 (0.0122)	0.0075 (0.0003)	973
Exp	0.2440	0.0085	0.0902 (0.0020)	-0.0060 (0.0029)	0.8740 (0.0105)	0.0082 (0.0004)	1000
Weibull	0.2223	0.0072	0.0815 (0.0018)	-0.0277 (0.0026)	0.8430 (0.0115)	0.0074 (0.0003)	1000
Gompertz	0.2451	0.0087	0.0946 (0.0030)	-0.0049 (0.0042)	0.8645 (0.0153)	0.0090 (0.0006)	502
RP (3)	0.2188	0.0070	0.0813 (0.0018)	-0.0312 (0.0026)	0.8338 (0.0118)	0.0076 (0.0003)	999
RP (5)	0.2194	0.0070	0.0816 (0.0018)	-0.0306 (0.0026)	0.8330 (0.0118)	0.0076 (0.0003)	1000
RP (9)	0.2191	0.0070	0.0817 (0.0018)	-0.0309 (0.0026)	0.8313 (0.0119)	0.0076 (0.0003)	996
RP (P)	0.2191	0.0070	0.0815 (0.0018)	-0.0309 (0.0026)	0.8330 (0.0118)	0.0076 (0.0003)	1000
FP (W)	0.2222	0.0072	0.0815 (0.0018)	-0.0278 (0.0026)	0.8430 (0.0115)	0.0074 (0.0003)	1000
FP (k=10)	0.2211	0.0073	0.0831 (0.0019)	-0.0289 (0.0026)	0.8340 (0.0118)	0.0077 (0.0003)	1000
FP (k=10000)	0.2168	0.0069	0.0807 (0.0018)	-0.0332 (0.0026)	0.8250 (0.0120)	0.0076 (0.0003)	1000
Model frailty: Normal							
Cox	0.2473	0.0078	0.0945 (0.0021)	-0.0027 (0.0030)	0.8420 (0.0115)	0.0089 (0.0005)	1000
Exp	0.2570	0.0105	0.0972 (0.0022)	0.0070 (0.0031)	0.8960 (0.0097)	0.0095 (0.0005)	1000
Weibull	0.2346	0.0088	0.0891 (0.0020)	-0.0154 (0.0028)	0.8610 (0.0109)	0.0082 (0.0004)	1000
Gompertz	0.2570	0.0106	0.1025 (0.0033)	0.0070 (0.0046)	0.8891 (0.0141)	0.0105 (0.0009)	496
RP (3)	0.2303	0.0085	0.0880 (0.0020)	-0.0197 (0.0028)	0.8550 (0.0111)	0.0081 (0.0004)	1000
RP (5)	0.2308	0.0086	0.0883 (0.0020)	-0.0192 (0.0028)	0.8540 (0.0112)	0.0082 (0.0004)	1000
RP (9)	0.2302	0.0085	0.0880 (0.0020)	-0.0198 (0.0028)	0.8530 (0.0112)	0.0081 (0.0004)	1000
RP (P)	0.2304	0.0085	0.0881 (0.0020)	-0.0196 (0.0028)	0.8530 (0.0112)	0.0081 (0.0004)	1000
FP (W)	1.0422	0.3751	1.3031 (0.0369)	0.7922 (0.0522)	0.6292 (0.0194)	2.3231 (0.2531)	623
FP (k=10)	0.2887	0.0149	0.1632 (0.0038)	0.0387 (0.0053)	0.8972 (0.0099)	0.0281 (0.0040)	934
FP (k=10000)	0.2847	0.0127	0.1129 (0.0026)	0.0347 (0.0036)	0.9337 (0.0080)	0.0139 (0.0008)	966

Table 341: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7214	0.0602	0.2559 (0.0058)	-0.0286 (0.0082)	0.8380 (0.0119)	0.0662 (0.0036)	963
Exp	0.7219	0.0634	0.2542 (0.0057)	-0.0281 (0.0080)	0.8710 (0.0106)	0.0653 (0.0035)	1000
Weibull	0.7228	0.0637	0.2552 (0.0057)	-0.0272 (0.0081)	0.8720 (0.0106)	0.0658 (0.0035)	1000
Gompertz	0.7173	0.0629	0.2517 (0.0080)	-0.0327 (0.0113)	0.8720 (0.0149)	0.0643 (0.0053)	500
RP (3)	0.7219	0.0636	0.2556 (0.0058)	-0.0281 (0.0081)	0.8709 (0.0107)	0.0661 (0.0036)	984
RP (5)	0.7134	0.0621	0.2507 (0.0057)	-0.0366 (0.0080)	0.8684 (0.0108)	0.0641 (0.0036)	973
RP (9)	0.7071	0.0610	0.2439 (0.0056)	-0.0429 (0.0079)	0.8660 (0.0110)	0.0613 (0.0035)	963
RP (P)	0.7211	0.0634	0.2543 (0.0057)	-0.0289 (0.0081)	0.8714 (0.0106)	0.0654 (0.0035)	995
FP (W)	0.7227	0.0637	0.2552 (0.0057)	-0.0273 (0.0081)	0.8720 (0.0106)	0.0658 (0.0035)	1000
FP (k=10)	0.7254	0.0649	0.2575 (0.0058)	-0.0246 (0.0081)	0.8740 (0.0105)	0.0668 (0.0037)	1000
FP (k=10000)	0.7227	0.0637	0.2555 (0.0057)	-0.0273 (0.0081)	0.8720 (0.0106)	0.0660 (0.0036)	1000
Model frailty: Normal							
Cox	1.0895	0.3002	0.5215 (0.0117)	0.3395 (0.0165)	0.9250 (0.0083)	0.3869 (0.0276)	1000
Exp	1.0230	0.1846	0.5043 (0.0113)	0.2730 (0.0159)	0.9440 (0.0073)	0.3286 (0.0253)	1000
Weibull	1.0251	0.1855	0.5061 (0.0113)	0.2751 (0.0160)	0.9389 (0.0076)	0.3316 (0.0255)	999
Gompertz	1.0162	0.1899	0.5394 (0.0175)	0.2662 (0.0247)	0.9223 (0.0123)	0.3612 (0.0430)	476
RP (3)	1.0240	0.1856	0.5068 (0.0113)	0.2740 (0.0160)	0.9400 (0.0075)	0.3316 (0.0257)	1000
RP (5)	1.0242	0.1857	0.5066 (0.0113)	0.2742 (0.0160)	0.9400 (0.0075)	0.3316 (0.0257)	1000
RP (9)	1.0255	0.1862	0.5066 (0.0113)	0.2755 (0.0160)	0.9400 (0.0075)	0.3323 (0.0257)	1000
RP (P)	1.0246	0.1857	0.5067 (0.0113)	0.2746 (0.0160)	0.9420 (0.0074)	0.3319 (0.0257)	1000
FP (W)	2.4492	1.2897	1.9143 (0.0581)	1.6992 (0.0822)	0.6759 (0.0201)	6.5451 (0.6144)	543
FP (k=10)	1.2061	0.2727	0.7198 (0.0171)	0.4561 (0.0242)	0.9266 (0.0088)	0.7256 (0.0783)	886
FP (k=10000)	1.0830	0.2018	0.5247 (0.0122)	0.3330 (0.0172)	0.9579 (0.0066)	0.3859 (0.0298)	927

Table 342: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7156	0.0605	0.2594 (0.0059)	-0.0344 (0.0084)	0.8229 (0.0123)	0.0684 (0.0030)	960
Exp	0.8110	0.0786	0.2831 (0.0063)	0.0610 (0.0090)	0.9200 (0.0086)	0.0838 (0.0042)	1000
Weibull	0.7164	0.0632	0.2574 (0.0058)	-0.0336 (0.0081)	0.8660 (0.0108)	0.0673 (0.0029)	1000
Gompertz	0.8150	0.0794	0.2848 (0.0097)	0.0650 (0.0137)	0.9101 (0.0137)	0.0851 (0.0065)	434
RP (3)	0.7126	0.0626	0.2567 (0.0058)	-0.0374 (0.0082)	0.8609 (0.0110)	0.0672 (0.0029)	992
RP (5)	0.7044	0.0613	0.2551 (0.0058)	-0.0456 (0.0083)	0.8561 (0.0114)	0.0671 (0.0030)	952
RP (9)	0.7064	0.0615	0.2511 (0.0057)	-0.0436 (0.0080)	0.8588 (0.0111)	0.0649 (0.0027)	977
RP (P)	0.7142	0.0629	0.2568 (0.0058)	-0.0358 (0.0081)	0.8624 (0.0109)	0.0672 (0.0029)	996
FP (W)	0.7164	0.0632	0.2573 (0.0058)	-0.0336 (0.0081)	0.8660 (0.0108)	0.0673 (0.0029)	1000
FP (k=10)	0.7792	0.0888	0.3035 (0.0068)	0.0292 (0.0096)	0.8930 (0.0098)	0.0929 (0.0053)	1000
FP (k=10000)	0.9441	0.1509	0.6262 (0.0141)	0.1941 (0.0199)	0.8662 (0.0108)	0.4294 (0.0535)	994
Model frailty: Normal							
Cox	1.0871	0.2833	0.5256 (0.0118)	0.3371 (0.0166)	0.8850 (0.0101)	0.3896 (0.0241)	1000
Exp	1.1502	0.2313	0.5479 (0.0123)	0.4002 (0.0173)	0.9510 (0.0068)	0.4600 (0.0284)	1000
Weibull	1.0223	0.1871	0.5045 (0.0113)	0.2723 (0.0160)	0.9279 (0.0082)	0.3284 (0.0218)	998
Gompertz	1.1688	0.2385	0.5607 (0.0196)	0.4188 (0.0277)	0.9513 (0.0106)	0.4891 (0.0450)	411
RP (3)	1.0192	0.1864	0.5048 (0.0113)	0.2692 (0.0160)	0.9260 (0.0083)	0.3270 (0.0218)	1000
RP (5)	1.0199	0.1868	0.5047 (0.0113)	0.2699 (0.0160)	0.9280 (0.0082)	0.3273 (0.0218)	1000
RP (9)	1.0200	0.1868	0.5048 (0.0113)	0.2700 (0.0160)	0.9260 (0.0083)	0.3274 (0.0218)	1000
RP (P)	1.0199	0.1866	0.5049 (0.0113)	0.2699 (0.0160)	0.9260 (0.0083)	0.3275 (0.0218)	1000
FP (W)	2.7365	1.8068	2.4229 (0.0679)	1.9865 (0.0960)	0.6641 (0.0187)	9.8077 (0.8960)	637
FP (k=10)	1.2179	0.2860	0.7489 (0.0175)	0.4679 (0.0248)	0.9168 (0.0091)	0.7792 (0.0756)	913
FP (k=10000)	1.0853	0.2042	0.5166 (0.0119)	0.3353 (0.0168)	0.9479 (0.0072)	0.3790 (0.0239)	941

Table 343: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.7030	0.0568	0.2442 (0.0056)	-0.0470 (0.0079)	0.8342 (0.0120)	0.0618 (0.0029)	959
Exp	0.5705	0.0416	0.2143 (0.0048)	-0.1795 (0.0068)	0.6940 (0.0146)	0.0781 (0.0026)	1000
Weibull	0.6622	0.0540	0.2332 (0.0052)	-0.0878 (0.0074)	0.8310 (0.0119)	0.0620 (0.0026)	1000
Gompertz	0.5742	0.0412	0.1903 (0.0055)	-0.1758 (0.0078)	0.7462 (0.0178)	0.0670 (0.0030)	595
RP (3)	0.6989	0.0594	0.2399 (0.0054)	-0.0511 (0.0076)	0.8644 (0.0109)	0.0601 (0.0028)	988
RP (5)	0.6999	0.0594	0.2372 (0.0053)	-0.0501 (0.0075)	0.8663 (0.0108)	0.0587 (0.0027)	995
RP (9)	0.6813	0.0563	0.2250 (0.0052)	-0.0687 (0.0073)	0.8617 (0.0113)	0.0553 (0.0024)	940
RP (P)	0.6979	0.0593	0.2406 (0.0054)	-0.0521 (0.0076)	0.8651 (0.0108)	0.0605 (0.0028)	993
FP (W)	0.6622	0.0540	0.2332 (0.0052)	-0.0878 (0.0074)	0.8310 (0.0119)	0.0620 (0.0026)	1000
FP (k=10)	0.7061	0.0611	0.2437 (0.0055)	-0.0439 (0.0077)	0.8700 (0.0106)	0.0613 (0.0029)	1000
FP (k=10000)	0.7020	0.0600	0.2429 (0.0054)	-0.0480 (0.0077)	0.8660 (0.0108)	0.0613 (0.0029)	1000
Model frailty: Normal							
Cox	1.0883	0.3663	0.5411 (0.0121)	0.3383 (0.0171)	0.9249 (0.0083)	0.4070 (0.0292)	999
Exp	0.8196	0.1253	0.4588 (0.0103)	0.0696 (0.0145)	0.8380 (0.0117)	0.2151 (0.0187)	1000
Weibull	0.9490	0.1615	0.4976 (0.0111)	0.1990 (0.0157)	0.9070 (0.0092)	0.2869 (0.0241)	1000
Gompertz	0.8020	0.1168	0.4236 (0.0113)	0.0520 (0.0159)	0.8870 (0.0119)	0.1819 (0.0224)	708
RP (3)	1.0195	0.1850	0.5259 (0.0118)	0.2695 (0.0166)	0.9330 (0.0079)	0.3490 (0.0281)	1000
RP (5)	1.0225	0.1860	0.5273 (0.0118)	0.2725 (0.0167)	0.9340 (0.0079)	0.3520 (0.0283)	1000
RP (9)	1.0241	0.1866	0.5275 (0.0118)	0.2741 (0.0167)	0.9320 (0.0080)	0.3531 (0.0283)	1000
RP (P)	1.0141	0.1832	0.5240 (0.0117)	0.2641 (0.0166)	0.9280 (0.0082)	0.3440 (0.0279)	1000
FP (W)	2.1259	0.9173	1.5105 (0.0494)	1.3759 (0.0697)	0.7186 (0.0208)	4.1698 (0.3922)	469
FP (k=10)	1.1663	0.2445	0.6500 (0.0158)	0.4163 (0.0224)	0.9192 (0.0094)	0.5953 (0.0524)	842
FP (k=10000)	1.1262	0.2138	0.5392 (0.0127)	0.3762 (0.0179)	0.9625 (0.0063)	0.4320 (0.0351)	906

Table 344: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6959	0.0571	0.2569 (0.0058)	-0.0541 (0.0083)	0.7983 (0.0129)	0.0689 (0.0034)	967
Exp	0.5124	0.0350	0.2131 (0.0048)	-0.2376 (0.0067)	0.5630 (0.0157)	0.1018 (0.0029)	1000
Weibull	0.7390	0.0663	0.2647 (0.0059)	-0.0110 (0.0084)	0.8770 (0.0104)	0.0701 (0.0039)	1000
Gompertz	0.6198	0.0469	0.1873 (0.0043)	-0.1302 (0.0061)	0.8165 (0.0126)	0.0520 (0.0021)	948
RP (3)	0.6816	0.0573	0.2462 (0.0059)	-0.0684 (0.0084)	0.8301 (0.0128)	0.0652 (0.0035)	865
RP (5)	0.6932	0.0591	0.2512 (0.0056)	-0.0568 (0.0080)	0.8317 (0.0119)	0.0663 (0.0033)	992
RP (9)	0.6766	0.0565	0.2439 (0.0056)	-0.0734 (0.0080)	0.8193 (0.0125)	0.0648 (0.0033)	941
RP (P)	0.6963	0.0597	0.2540 (0.0057)	-0.0537 (0.0081)	0.8323 (0.0119)	0.0673 (0.0034)	990
FP (W)	0.7390	0.0663	0.2647 (0.0059)	-0.0110 (0.0084)	0.8770 (0.0104)	0.0701 (0.0039)	1000
FP (k=10)	0.7692	0.0829	0.2903 (0.0065)	0.0192 (0.0092)	0.8880 (0.0100)	0.0845 (0.0049)	1000
FP (k=10000)	19.1439	46.8742	5.5061 (0.1232)	18.3939 (0.1741)	0.0010 (0.0010)	368.6227 (7.1971)	1000
Model frailty: Normal							
Cox	1.0652	0.3224	0.5345 (0.0120)	0.3152 (0.0169)	0.9139 (0.0089)	0.3847 (0.0295)	999
Exp	0.7485	0.1103	0.4507 (0.0101)	-0.0015 (0.0143)	0.7490 (0.0137)	0.2029 (0.0184)	1000
Weibull	1.0799	0.2084	0.5631 (0.0126)	0.3299 (0.0178)	0.9430 (0.0073)	0.4256 (0.0355)	1000
Gompertz	0.8674	0.1293	0.4003 (0.0096)	0.1174 (0.0135)	0.9279 (0.0087)	0.1738 (0.0184)	874
RP (3)	1.0050	0.1836	0.5339 (0.0119)	0.2550 (0.0169)	0.9310 (0.0080)	0.3498 (0.0309)	1000
RP (5)	1.0068	0.1843	0.5354 (0.0120)	0.2568 (0.0169)	0.9300 (0.0081)	0.3523 (0.0311)	1000
RP (9)	1.0074	0.1847	0.5363 (0.0120)	0.2574 (0.0170)	0.9280 (0.0082)	0.3536 (0.0312)	1000
RP (P)	1.0084	0.1849	0.5366 (0.0120)	0.2584 (0.0170)	0.9300 (0.0081)	0.3544 (0.0313)	1000
FP (W)	2.1908	0.9449	1.4812 (0.0502)	1.4408 (0.0709)	0.7156 (0.0216)	4.2647 (0.3840)	436
FP (k=10)	1.1288	0.2260	0.6069 (0.0146)	0.3788 (0.0206)	0.9399 (0.0081)	0.5113 (0.0479)	865
FP (k=10000)	1.3723	0.3149	0.6578 (0.0157)	0.6223 (0.0222)	0.9444 (0.0077)	0.8194 (0.0556)	881

Table 345: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6854	0.0550	0.2387 (0.0055)	-0.0646 (0.0077)	0.8104 (0.0127)	0.0611 (0.0028)	960
Exp	0.7375	0.0656	0.2485 (0.0056)	-0.0125 (0.0079)	0.8890 (0.0099)	0.0619 (0.0032)	1000
Weibull	0.6936	0.0589	0.2373 (0.0053)	-0.0564 (0.0075)	0.8530 (0.0112)	0.0594 (0.0028)	1000
Gompertz	0.7353	0.0653	0.2517 (0.0113)	-0.0147 (0.0160)	0.8594 (0.0220)	0.0633 (0.0054)	249
RP (3)	0.6842	0.0576	0.2367 (0.0053)	-0.0658 (0.0075)	0.8415 (0.0116)	0.0603 (0.0028)	984
RP (5)	0.6817	0.0572	0.2360 (0.0053)	-0.0683 (0.0075)	0.8430 (0.0116)	0.0603 (0.0028)	981
RP (9)	0.6766	0.0563	0.2301 (0.0052)	-0.0734 (0.0074)	0.8419 (0.0117)	0.0583 (0.0028)	974
RP (P)	0.6863	0.0579	0.2371 (0.0053)	-0.0637 (0.0075)	0.8435 (0.0115)	0.0602 (0.0028)	997
FP (W)	0.6935	0.0589	0.2373 (0.0053)	-0.0565 (0.0075)	0.8530 (0.0112)	0.0594 (0.0028)	1000
FP (k=10)	0.7010	0.0632	0.2464 (0.0055)	-0.0490 (0.0078)	0.8570 (0.0111)	0.0631 (0.0030)	1000
FP (k=10000)	0.6847	0.0578	0.2374 (0.0053)	-0.0653 (0.0075)	0.8410 (0.0116)	0.0606 (0.0028)	1000
Model frailty: Normal							
Cox	1.0363	0.2491	0.4741 (0.0106)	0.2863 (0.0150)	0.9070 (0.0092)	0.3066 (0.0199)	1000
Exp	1.0469	0.1894	0.4845 (0.0108)	0.2969 (0.0153)	0.9489 (0.0070)	0.3226 (0.0254)	999
Weibull	0.9879	0.1708	0.4677 (0.0105)	0.2379 (0.0148)	0.9339 (0.0079)	0.2751 (0.0230)	999
Gompertz	1.0592	0.1944	0.4964 (0.0168)	0.3092 (0.0238)	0.9427 (0.0111)	0.3414 (0.0310)	436
RP (3)	0.9740	0.1669	0.4640 (0.0104)	0.2240 (0.0147)	0.9310 (0.0080)	0.2652 (0.0228)	1000
RP (5)	0.9729	0.1665	0.4631 (0.0104)	0.2229 (0.0146)	0.9290 (0.0081)	0.2640 (0.0228)	1000
RP (9)	0.9735	0.1667	0.4630 (0.0104)	0.2235 (0.0146)	0.9300 (0.0081)	0.2641 (0.0227)	1000
RP (P)	0.9740	0.1668	0.4636 (0.0104)	0.2240 (0.0147)	0.9320 (0.0080)	0.2649 (0.0228)	1000
FP (W)	2.6390	1.6625	2.3427 (0.0676)	1.8890 (0.0955)	0.6645 (0.0192)	9.0475 (0.8088)	602
FP (k=10)	1.1860	0.2681	0.7261 (0.0170)	0.4360 (0.0240)	0.9126 (0.0093)	0.7168 (0.0754)	915
FP (k=10000)	1.0268	0.1807	0.4786 (0.0110)	0.2768 (0.0155)	0.9430 (0.0075)	0.3055 (0.0215)	948

Table 346: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6121	0.0438	0.2222 (0.0051)	-0.1379 (0.0072)	0.7264 (0.0144)	0.0683 (0.0024)	954
Exp	0.6166	0.0473	0.2218 (0.0050)	-0.1334 (0.0070)	0.7710 (0.0133)	0.0669 (0.0024)	1000
Weibull	0.6178	0.0477	0.2229 (0.0050)	-0.1322 (0.0070)	0.7660 (0.0134)	0.0671 (0.0024)	1000
Gompertz	0.5905	0.0437	0.2066 (0.0084)	-0.1595 (0.0118)	0.7557 (0.0245)	0.0680 (0.0041)	307
RP (3)	0.6169	0.0476	0.2221 (0.0050)	-0.1331 (0.0070)	0.7671 (0.0134)	0.0670 (0.0024)	996
RP (5)	0.6166	0.0475	0.2218 (0.0050)	-0.1334 (0.0070)	0.7670 (0.0134)	0.0669 (0.0024)	1000
RP (9)	0.6156	0.0474	0.2213 (0.0050)	-0.1344 (0.0070)	0.7675 (0.0134)	0.0670 (0.0024)	998
RP (P)	0.6164	0.0475	0.2220 (0.0050)	-0.1336 (0.0070)	0.7663 (0.0134)	0.0671 (0.0024)	997
FP (W)	0.6178	0.0477	0.2229 (0.0050)	-0.1322 (0.0070)	0.7660 (0.0134)	0.0671 (0.0024)	1000
FP (k=10)	0.6180	0.0481	0.2227 (0.0050)	-0.1320 (0.0070)	0.7670 (0.0134)	0.0669 (0.0024)	1000
FP (k=10000)	0.6169	0.0475	0.2222 (0.0050)	-0.1331 (0.0070)	0.7680 (0.0133)	0.0670 (0.0024)	1000
Model frailty: Normal							
Cox	0.7617	0.0784	0.2910 (0.0065)	0.0117 (0.0092)	0.8430 (0.0115)	0.0847 (0.0042)	1000
Exp	0.7098	0.0784	0.2701 (0.0060)	-0.0402 (0.0085)	0.8478 (0.0114)	0.0745 (0.0033)	999
Weibull	0.7116	0.0790	0.2716 (0.0061)	-0.0384 (0.0086)	0.8509 (0.0113)	0.0751 (0.0033)	999
Gompertz	0.6869	0.0742	0.2687 (0.0112)	-0.0631 (0.0158)	0.8229 (0.0225)	0.0759 (0.0063)	288
RP (3)	0.7101	0.0787	0.2702 (0.0060)	-0.0399 (0.0085)	0.8470 (0.0114)	0.0745 (0.0033)	1000
RP (5)	0.7104	0.0787	0.2700 (0.0060)	-0.0396 (0.0085)	0.8460 (0.0114)	0.0744 (0.0033)	1000
RP (9)	0.7108	0.0789	0.2704 (0.0060)	-0.0392 (0.0086)	0.8470 (0.0114)	0.0746 (0.0033)	1000
RP (P)	0.7109	0.0788	0.2707 (0.0061)	-0.0391 (0.0086)	0.8490 (0.0113)	0.0747 (0.0033)	1000
FP (W)	1.8078	0.6789	1.3631 (0.0435)	1.0578 (0.0615)	0.7699 (0.0190)	2.9733 (0.2777)	491
FP (k=10)	0.8179	0.1102	0.3844 (0.0091)	0.0679 (0.0129)	0.8835 (0.0108)	0.1522 (0.0194)	884
FP (k=10000)	0.7760	0.0924	0.2913 (0.0068)	0.0260 (0.0096)	0.9040 (0.0097)	0.0854 (0.0051)	927

Table 347: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6026	0.0434	0.2258 (0.0051)	-0.1474 (0.0073)	0.7067 (0.0147)	0.0727 (0.0026)	965
Exp	0.7498	0.0690	0.2971 (0.0066)	-0.0002 (0.0094)	0.8530 (0.0112)	0.0882 (0.0052)	1000
Weibull	0.6070	0.0465	0.2256 (0.0050)	-0.1430 (0.0071)	0.7460 (0.0138)	0.0713 (0.0026)	1000
Gompertz	0.7460	0.0681	0.2869 (0.0113)	-0.0040 (0.0160)	0.8634 (0.0191)	0.0821 (0.0073)	322
RP (3)	0.6031	0.0459	0.2235 (0.0050)	-0.1469 (0.0071)	0.7410 (0.0139)	0.0715 (0.0025)	996
RP (5)	0.6027	0.0458	0.2218 (0.0050)	-0.1473 (0.0070)	0.7430 (0.0138)	0.0709 (0.0025)	996
RP (9)	0.6023	0.0457	0.2210 (0.0049)	-0.1477 (0.0070)	0.7445 (0.0138)	0.0706 (0.0025)	998
RP (P)	0.6041	0.0461	0.2236 (0.0050)	-0.1459 (0.0071)	0.7417 (0.0138)	0.0712 (0.0025)	999
FP (W)	0.6070	0.0465	0.2256 (0.0050)	-0.1430 (0.0071)	0.7460 (0.0138)	0.0713 (0.0026)	1000
FP (k=10)	0.7099	0.0906	0.3285 (0.0074)	-0.0401 (0.0104)	0.8228 (0.0121)	0.1094 (0.0086)	999
FP (k=10000)	0.7129	0.0715	0.3580 (0.0080)	-0.0371 (0.0114)	0.8097 (0.0125)	0.1294 (0.0193)	993
Model frailty: Normal							
Cox	0.7431	0.0763	0.2904 (0.0065)	-0.0069 (0.0092)	0.8340 (0.0118)	0.0843 (0.0045)	1000
Exp	0.8503	0.1136	0.3382 (0.0076)	0.1003 (0.0107)	0.9280 (0.0082)	0.1243 (0.0076)	1000
Weibull	0.6948	0.0760	0.2704 (0.0061)	-0.0552 (0.0086)	0.8418 (0.0115)	0.0761 (0.0036)	999
Gompertz	0.8431	0.1134	0.3505 (0.0125)	0.0931 (0.0176)	0.9093 (0.0144)	0.1312 (0.0105)	397
RP (3)	0.6920	0.0755	0.2697 (0.0060)	-0.0580 (0.0085)	0.8370 (0.0117)	0.0760 (0.0036)	1000
RP (5)	0.6922	0.0755	0.2696 (0.0060)	-0.0578 (0.0085)	0.8400 (0.0116)	0.0759 (0.0036)	1000
RP (9)	0.6923	0.0755	0.2698 (0.0060)	-0.0577 (0.0085)	0.8370 (0.0117)	0.0760 (0.0036)	1000
RP (P)	0.6926	0.0756	0.2698 (0.0060)	-0.0574 (0.0085)	0.8400 (0.0116)	0.0760 (0.0036)	1000
FP (W)	1.8290	0.7877	1.5910 (0.0469)	1.0790 (0.0663)	0.7448 (0.0182)	3.6910 (0.3712)	576
FP (k=10)	0.8283	0.1197	0.4444 (0.0105)	0.0783 (0.0149)	0.8656 (0.0114)	0.2034 (0.0283)	893
FP (k=10000)	0.7875	0.0960	0.3017 (0.0070)	0.0375 (0.0099)	0.9059 (0.0095)	0.0923 (0.0063)	935

Table 348: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6006	0.0418	0.2268 (0.0052)	-0.1494 (0.0074)	0.6860 (0.0151)	0.0737 (0.0027)	946
Exp	0.4687	0.0290	0.1838 (0.0041)	-0.2813 (0.0058)	0.4770 (0.0158)	0.1128 (0.0029)	1000
Weibull	0.5738	0.0423	0.2261 (0.0051)	-0.1762 (0.0071)	0.6730 (0.0148)	0.0821 (0.0030)	1000
Gompertz	0.4774	0.0291	0.1542 (0.0050)	-0.2726 (0.0071)	0.5167 (0.0229)	0.0980 (0.0034)	478
RP (3)	0.6051	0.0461	0.2248 (0.0050)	-0.1449 (0.0071)	0.7407 (0.0139)	0.0715 (0.0027)	999
RP (5)	0.6060	0.0462	0.2244 (0.0050)	-0.1440 (0.0071)	0.7410 (0.0139)	0.0710 (0.0027)	1000
RP (9)	0.6053	0.0461	0.2242 (0.0050)	-0.1447 (0.0071)	0.7392 (0.0139)	0.0712 (0.0027)	997
RP (P)	0.6032	0.0459	0.2249 (0.0050)	-0.1468 (0.0071)	0.7365 (0.0139)	0.0721 (0.0027)	998
FP (W)	0.5738	0.0423	0.2261 (0.0051)	-0.1762 (0.0071)	0.6730 (0.0148)	0.0821 (0.0030)	1000
FP (k=10)	0.6075	0.0467	0.2255 (0.0050)	-0.1425 (0.0071)	0.7460 (0.0138)	0.0711 (0.0027)	1000
FP (k=10000)	0.6055	0.0461	0.2240 (0.0050)	-0.1445 (0.0071)	0.7369 (0.0140)	0.0710 (0.0027)	996
Model frailty: Normal							
Cox	0.7479	0.0787	0.2892 (0.0065)	-0.0021 (0.0091)	0.8310 (0.0119)	0.0836 (0.0042)	1000
Exp	0.5260	0.0438	0.2135 (0.0048)	-0.2240 (0.0068)	0.5980 (0.0155)	0.0957 (0.0028)	1000
Weibull	0.6438	0.0651	0.2541 (0.0057)	-0.1062 (0.0080)	0.7858 (0.0130)	0.0758 (0.0030)	999
Gompertz	0.5223	0.0415	0.1770 (0.0073)	-0.2277 (0.0103)	0.6801 (0.0271)	0.0831 (0.0042)	297
RP (3)	0.6958	0.0756	0.2698 (0.0060)	-0.0542 (0.0085)	0.8330 (0.0118)	0.0757 (0.0034)	1000
RP (5)	0.6978	0.0761	0.2698 (0.0060)	-0.0522 (0.0085)	0.8350 (0.0117)	0.0754 (0.0034)	1000
RP (9)	0.6987	0.0763	0.2704 (0.0060)	-0.0513 (0.0086)	0.8340 (0.0118)	0.0757 (0.0034)	1000
RP (P)	0.6929	0.0751	0.2690 (0.0060)	-0.0571 (0.0085)	0.8300 (0.0119)	0.0756 (0.0034)	1000
FP (W)	1.4506	0.4284	1.0618 (0.0389)	0.7006 (0.0549)	0.8182 (0.0199)	1.6153 (0.2004)	374
FP (k=10)	0.8003	0.1027	0.3539 (0.0086)	0.0503 (0.0122)	0.8794 (0.0112)	0.1276 (0.0129)	846
FP (k=10000)	0.8355	0.1097	0.3488 (0.0083)	0.0855 (0.0118)	0.8964 (0.0103)	0.1288 (0.0091)	878

Table 349: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6131	0.0438	0.2337 (0.0054)	-0.1369 (0.0076)	0.7309 (0.0144)	0.0733 (0.0049)	944
Exp	0.3629	0.0176	0.1246 (0.0028)	-0.3871 (0.0039)	0.2160 (0.0130)	0.1654 (0.0028)	1000
Weibull	0.6474	0.0514	0.2207 (0.0049)	-0.1026 (0.0070)	0.8220 (0.0121)	0.0592 (0.0035)	1000
Gompertz	0.5133	0.0324	0.1298 (0.0030)	-0.2367 (0.0042)	0.6995 (0.0148)	0.0729 (0.0021)	965
RP (3)	0.6182	0.0479	0.2299 (0.0052)	-0.1318 (0.0074)	0.7813 (0.0133)	0.0702 (0.0045)	965
RP (5)	0.6169	0.0477	0.2292 (0.0051)	-0.1331 (0.0073)	0.7798 (0.0131)	0.0702 (0.0047)	999
RP (9)	0.6155	0.0475	0.2287 (0.0051)	-0.1345 (0.0072)	0.7745 (0.0132)	0.0703 (0.0047)	998
RP (P)	0.6165	0.0476	0.2282 (0.0051)	-0.1335 (0.0072)	0.7806 (0.0131)	0.0699 (0.0045)	998
FP (W)	0.6473	0.0513	0.2207 (0.0049)	-0.1027 (0.0070)	0.8220 (0.0121)	0.0592 (0.0035)	1000
FP (k=10)	0.7592	0.0953	0.3313 (0.0074)	0.0092 (0.0105)	0.8749 (0.0105)	0.1097 (0.0083)	999
FP (k=10000)	29.1014	112.0990	9.0576 (0.2027)	28.3514 (0.2866)	0.0050 (0.0022)	885.7611 (20.8330)	999
Model frailty: Normal							
Cox	0.7547	0.0859	0.2818 (0.0063)	0.0047 (0.0089)	0.8640 (0.0108)	0.0794 (0.0042)	1000
Exp	0.4230	0.0283	0.1650 (0.0037)	-0.3270 (0.0052)	0.4024 (0.0155)	0.1341 (0.0029)	999
Weibull	0.7635	0.0899	0.2820 (0.0063)	0.0135 (0.0089)	0.9119 (0.0090)	0.0796 (0.0047)	999
Gompertz	0.5948	0.0518	0.1607 (0.0038)	-0.1552 (0.0053)	0.8322 (0.0124)	0.0499 (0.0020)	912
RP (3)	0.7065	0.0776	0.2675 (0.0060)	-0.0435 (0.0085)	0.8640 (0.0108)	0.0734 (0.0041)	1000
RP (5)	0.7063	0.0776	0.2678 (0.0060)	-0.0437 (0.0085)	0.8640 (0.0108)	0.0735 (0.0042)	1000
RP (9)	0.7066	0.0777	0.2685 (0.0060)	-0.0434 (0.0085)	0.8610 (0.0109)	0.0739 (0.0042)	1000
RP (P)	0.7069	0.0777	0.2678 (0.0060)	-0.0431 (0.0085)	0.8660 (0.0108)	0.0735 (0.0042)	1000
FP (W)	1.6830	0.5542	1.1534 (0.0432)	0.9330 (0.0610)	0.7793 (0.0219)	2.1969 (0.2241)	358
FP (k=10)	0.8102	0.1069	0.3746 (0.0092)	0.0602 (0.0130)	0.8983 (0.0105)	0.1438 (0.0180)	826
FP (k=10000)	1.1960	0.2298	0.5388 (0.0130)	0.4460 (0.0184)	0.9605 (0.0066)	0.4888 (0.0348)	860

Table 350: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 0.75, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.6174	0.0453	0.2316 (0.0053)	-0.1326 (0.0075)	0.7280 (0.0145)	0.0712 (0.0037)	945
Exp	0.6803	0.0569	0.2520 (0.0056)	-0.0697 (0.0080)	0.8340 (0.0118)	0.0683 (0.0054)	1000
Weibull	0.6188	0.0478	0.2229 (0.0050)	-0.1312 (0.0070)	0.7700 (0.0133)	0.0668 (0.0038)	1000
Gompertz	0.6848	0.0570	0.2338 (0.0107)	-0.0652 (0.0150)	0.8347 (0.0239)	0.0587 (0.0049)	242
RP (3)	0.6165	0.0477	0.2268 (0.0051)	-0.1335 (0.0072)	0.7631 (0.0135)	0.0692 (0.0038)	992
RP (5)	0.6189	0.0480	0.2274 (0.0051)	-0.1311 (0.0072)	0.7648 (0.0134)	0.0688 (0.0037)	999
RP (9)	0.6193	0.0481	0.2276 (0.0051)	-0.1307 (0.0072)	0.7670 (0.0134)	0.0688 (0.0036)	1000
RP (P)	0.6189	0.0480	0.2277 (0.0051)	-0.1311 (0.0072)	0.7661 (0.0134)	0.0690 (0.0036)	996
FP (W)	0.6188	0.0478	0.2229 (0.0050)	-0.1312 (0.0070)	0.7710 (0.0133)	0.0668 (0.0038)	1000
FP (k=10)	0.6395	0.0557	0.2541 (0.0057)	-0.1105 (0.0080)	0.7840 (0.0130)	0.0767 (0.0076)	1000
FP (k=10000)	0.6146	0.0473	0.2233 (0.0050)	-0.1354 (0.0071)	0.7628 (0.0135)	0.0681 (0.0025)	999
Model frailty: Normal							
Cox	0.7674	0.0848	0.2903 (0.0065)	0.0174 (0.0092)	0.8510 (0.0113)	0.0845 (0.0043)	1000
Exp	0.7911	0.0971	0.2989 (0.0067)	0.0411 (0.0095)	0.9059 (0.0092)	0.0910 (0.0050)	999
Weibull	0.7216	0.0811	0.2721 (0.0061)	-0.0284 (0.0086)	0.8627 (0.0109)	0.0748 (0.0036)	998
Gompertz	0.7862	0.0969	0.3056 (0.0105)	0.0362 (0.0148)	0.8918 (0.0151)	0.0945 (0.0078)	425
RP (3)	0.7151	0.0799	0.2713 (0.0061)	-0.0349 (0.0086)	0.8509 (0.0113)	0.0747 (0.0035)	999
RP (5)	0.7153	0.0799	0.2712 (0.0061)	-0.0347 (0.0086)	0.8519 (0.0112)	0.0747 (0.0035)	999
RP (9)	0.7155	0.0800	0.2714 (0.0061)	-0.0345 (0.0086)	0.8519 (0.0112)	0.0748 (0.0035)	999
RP (P)	0.7156	0.0800	0.2714 (0.0061)	-0.0344 (0.0086)	0.8519 (0.0112)	0.0748 (0.0035)	999
FP (W)	1.9134	0.8253	1.5802 (0.0493)	1.1634 (0.0696)	0.7359 (0.0194)	3.8457 (0.3686)	515
FP (k=10)	0.8635	0.1320	0.4813 (0.0114)	0.1135 (0.0161)	0.8789 (0.0109)	0.2443 (0.0334)	892
FP (k=10000)	0.7684	0.0912	0.2922 (0.0068)	0.0184 (0.0096)	0.8955 (0.0100)	0.0856 (0.0050)	928

Table 351: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.1801	0.1498	0.3863 (0.0087)	-0.0699 (0.0123)	0.8627 (0.0110)	0.1539 (0.0072)	983
Exp	1.1806	0.1572	0.3888 (0.0087)	-0.0694 (0.0123)	0.8760 (0.0104)	0.1558 (0.0073)	1000
Weibull	1.1812	0.1576	0.3897 (0.0087)	-0.0688 (0.0123)	0.8770 (0.0104)	0.1564 (0.0073)	1000
Gompertz	1.1904	0.1611	0.4043 (0.0127)	-0.0596 (0.0179)	0.8686 (0.0150)	0.1667 (0.0115)	510
RP (3)	1.1796	0.1574	0.3913 (0.0089)	-0.0704 (0.0126)	0.8755 (0.0106)	0.1579 (0.0075)	964
RP (5)	1.1461	0.1501	0.3933 (0.0095)	-0.1039 (0.0134)	0.8573 (0.0119)	0.1653 (0.0080)	862
RP (9)	1.1219	0.1433	0.3754 (0.0093)	-0.1281 (0.0132)	0.8501 (0.0126)	0.1571 (0.0077)	807
RP (P)	1.1777	0.1567	0.3889 (0.0088)	-0.0723 (0.0124)	0.8770 (0.0105)	0.1563 (0.0073)	984
FP (W)	1.1812	0.1576	0.3897 (0.0087)	-0.0688 (0.0123)	0.8770 (0.0104)	0.1564 (0.0073)	1000
FP (k=10)	1.1891	0.1624	0.3947 (0.0088)	-0.0609 (0.0125)	0.8790 (0.0103)	0.1594 (0.0075)	1000
FP (k=10000)	1.1823	0.1580	0.3903 (0.0087)	-0.0677 (0.0123)	0.8770 (0.0104)	0.1568 (0.0073)	1000
Model frailty: Normal							
Cox	2.0774	1.3516	0.9345 (0.0209)	0.8274 (0.0296)	0.9320 (0.0080)	1.5570 (0.0863)	1000
Exp	2.0118	0.7607	0.9812 (0.0220)	0.7618 (0.0311)	0.9549 (0.0066)	1.5422 (0.1008)	998
Weibull	2.0154	0.7601	0.9841 (0.0220)	0.7654 (0.0311)	0.9570 (0.0064)	1.5534 (0.1011)	1000
Gompertz	2.0191	0.7784	1.0075 (0.0496)	0.7691 (0.0700)	0.9469 (0.0156)	1.6016 (0.2305)	207
RP (3)	2.0167	0.7662	0.9891 (0.0221)	0.7667 (0.0313)	0.9570 (0.0064)	1.5652 (0.1030)	999
RP (5)	2.0173	0.7663	0.9887 (0.0221)	0.7673 (0.0313)	0.9580 (0.0063)	1.5652 (0.1027)	1000
RP (9)	2.0177	0.7664	0.9883 (0.0221)	0.7677 (0.0313)	0.9560 (0.0065)	1.5650 (0.1027)	1000
RP (P)	2.0165	0.7663	0.9906 (0.0222)	0.7665 (0.0313)	0.9570 (0.0064)	1.5678 (0.1029)	1000
FP (W)	4.4152	3.8111	2.9148 (0.0889)	3.1652 (0.1257)	0.6301 (0.0208)	18.4989 (1.3456)	538
FP (k=10)	2.3035	0.9535	1.2202 (0.0291)	1.0535 (0.0412)	0.9271 (0.0088)	2.5971 (0.1829)	878
FP (k=10000)	2.0675	0.7422	0.9669 (0.0225)	0.8175 (0.0317)	0.9569 (0.0067)	1.6023 (0.0950)	928

Table 352: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.1800	0.1537	0.4019 (0.0090)	-0.0700 (0.0128)	0.8470 (0.0115)	0.1662 (0.0076)	987
Exp	1.3190	0.1929	0.4402 (0.0098)	0.0690 (0.0139)	0.9170 (0.0087)	0.1984 (0.0106)	1000
Weibull	1.1825	0.1598	0.4056 (0.0091)	-0.0675 (0.0128)	0.8600 (0.0110)	0.1689 (0.0077)	1000
Gompertz	1.3275	0.1975	0.4674 (0.0155)	0.0775 (0.0219)	0.9033 (0.0139)	0.2240 (0.0172)	455
RP (3)	1.1776	0.1588	0.4051 (0.0092)	-0.0724 (0.0129)	0.8552 (0.0112)	0.1692 (0.0078)	981
RP (5)	1.1698	0.1570	0.4074 (0.0095)	-0.0802 (0.0134)	0.8447 (0.0119)	0.1722 (0.0080)	921
RP (9)	1.1370	0.1484	0.3925 (0.0094)	-0.1130 (0.0132)	0.8383 (0.0124)	0.1667 (0.0078)	878
RP (P)	1.1766	0.1584	0.4046 (0.0091)	-0.0734 (0.0129)	0.8550 (0.0112)	0.1690 (0.0078)	986
FP (W)	1.1825	0.1598	0.4056 (0.0091)	-0.0675 (0.0128)	0.8590 (0.0110)	0.1689 (0.0077)	1000
FP (k=10)	1.3218	0.2424	0.4933 (0.0110)	0.0718 (0.0156)	0.9080 (0.0091)	0.2482 (0.0151)	1000
FP (k=10000)	1.6856	0.4438	1.0634 (0.0239)	0.4356 (0.0337)	0.8692 (0.0107)	1.3193 (0.1341)	994
Model frailty: Normal							
Cox	2.0308	1.1006	0.9418 (0.0211)	0.7808 (0.0298)	0.9360 (0.0077)	1.4958 (0.0890)	1000
Exp	2.1823	0.8749	1.0341 (0.0231)	0.9323 (0.0327)	0.9730 (0.0051)	1.9375 (0.1120)	999
Weibull	1.9736	0.7356	0.9676 (0.0217)	0.7236 (0.0306)	0.9590 (0.0063)	1.4590 (0.0905)	999
Gompertz	2.2389	0.9194	1.0334 (0.0351)	0.9889 (0.0495)	0.9816 (0.0064)	2.0433 (0.1672)	435
RP (3)	1.9718	0.7378	0.9701 (0.0217)	0.7218 (0.0307)	0.9590 (0.0063)	1.4613 (0.0912)	1000
RP (5)	1.9720	0.7381	0.9703 (0.0217)	0.7220 (0.0307)	0.9600 (0.0062)	1.4618 (0.0912)	1000
RP (9)	1.9722	0.7381	0.9700 (0.0217)	0.7222 (0.0307)	0.9600 (0.0062)	1.4615 (0.0911)	1000
RP (P)	1.9730	0.7388	0.9707 (0.0217)	0.7230 (0.0307)	0.9600 (0.0062)	1.4641 (0.0913)	1000
FP (W)	4.3289	3.9359	3.1464 (0.0897)	3.0789 (0.1268)	0.6867 (0.0187)	19.3635 (1.5704)	616
FP (k=10)	2.3278	0.9900	1.2419 (0.0293)	1.0778 (0.0414)	0.9244 (0.0088)	2.7023 (0.1894)	899
FP (k=10000)	2.0774	0.7713	1.0118 (0.0236)	0.8274 (0.0333)	0.9610 (0.0064)	1.7071 (0.1073)	922

Table 353: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.1810	0.1468	0.3953 (0.0089)	-0.0690 (0.0126)	0.8436 (0.0116)	0.1609 (0.0073)	978
Exp	1.0022	0.1179	0.3662 (0.0082)	-0.2478 (0.0116)	0.7250 (0.0141)	0.1954 (0.0068)	1000
Weibull	1.1277	0.1443	0.3885 (0.0087)	-0.1223 (0.0123)	0.8320 (0.0118)	0.1657 (0.0069)	1000
Gompertz	0.9827	0.1143	0.3658 (0.0140)	-0.2673 (0.0198)	0.7038 (0.0247)	0.2048 (0.0116)	341
RP (3)	1.1754	0.1550	0.3970 (0.0090)	-0.0746 (0.0127)	0.8704 (0.0108)	0.1630 (0.0074)	972
RP (5)	1.1458	0.1474	0.3803 (0.0088)	-0.1042 (0.0125)	0.8645 (0.0112)	0.1553 (0.0074)	930
RP (9)	1.1270	0.1446	0.4026 (0.0103)	-0.1230 (0.0145)	0.8370 (0.0133)	0.1770 (0.0082)	767
RP (P)	1.1595	0.1515	0.3967 (0.0092)	-0.0905 (0.0130)	0.8603 (0.0113)	0.1654 (0.0076)	938
FP (W)	1.1276	0.1443	0.3885 (0.0087)	-0.1224 (0.0123)	0.8320 (0.0118)	0.1657 (0.0069)	1000
FP (k=10)	1.1888	0.1603	0.4021 (0.0090)	-0.0612 (0.0127)	0.8760 (0.0104)	0.1652 (0.0076)	1000
FP (k=10000)	1.1832	0.1570	0.4007 (0.0090)	-0.0668 (0.0127)	0.8730 (0.0105)	0.1649 (0.0075)	1000
Model frailty: Normal							
Cox	2.1210	1.6616	1.0107 (0.0226)	0.8710 (0.0320)	0.9280 (0.0082)	1.7791 (0.1010)	1000
Exp	1.7307	0.5858	0.9592 (0.0215)	0.4807 (0.0303)	0.9059 (0.0092)	1.1502 (0.0831)	999
Weibull	1.9374	0.7123	1.0196 (0.0228)	0.6874 (0.0323)	0.9379 (0.0076)	1.5110 (0.1017)	999
Gompertz	1.6517	0.5268	0.8930 (0.0250)	0.4017 (0.0353)	0.8905 (0.0124)	0.9576 (0.0800)	639
RP (3)	2.0440	0.7834	1.0624 (0.0239)	0.7940 (0.0338)	0.9443 (0.0073)	1.7579 (0.1163)	988
RP (5)	2.0599	0.7940	1.0674 (0.0239)	0.8099 (0.0338)	0.9450 (0.0072)	1.7941 (0.1164)	1000
RP (9)	2.0617	0.7953	1.0680 (0.0239)	0.8117 (0.0338)	0.9460 (0.0071)	1.7984 (0.1168)	1000
RP (P)	2.0383	0.7761	1.0540 (0.0236)	0.7883 (0.0333)	0.9439 (0.0073)	1.7312 (0.1117)	999
FP (W)	3.6670	2.5112	2.2927 (0.0781)	2.4170 (0.1103)	0.6806 (0.0224)	11.0862 (0.8562)	432
FP (k=10)	2.2473	0.8988	1.2072 (0.0292)	0.9973 (0.0413)	0.9252 (0.0090)	2.4501 (0.1907)	856
FP (k=10000)	2.1110	0.7624	1.0053 (0.0241)	0.8610 (0.0341)	0.9482 (0.0075)	1.7508 (0.1103)	869

Table 354: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.1729	0.1465	0.3856 (0.0087)	-0.0771 (0.0123)	0.8391 (0.0117)	0.1545 (0.0072)	982
Exp	0.9098	0.1001	0.3436 (0.0077)	-0.3402 (0.0109)	0.6500 (0.0151)	0.2337 (0.0075)	1000
Weibull	1.2264	0.1664	0.3985 (0.0089)	-0.0236 (0.0126)	0.8900 (0.0099)	0.1592 (0.0078)	1000
Gompertz	0.9198	0.0995	0.3028 (0.0085)	-0.3302 (0.0121)	0.6720 (0.0187)	0.2006 (0.0075)	628
RP (3)	1.1632	0.1530	0.4060 (0.0101)	-0.0868 (0.0143)	0.8354 (0.0131)	0.1722 (0.0086)	802
RP (5)	1.1367	0.1457	0.3804 (0.0089)	-0.1133 (0.0126)	0.8410 (0.0121)	0.1574 (0.0074)	912
RP (9)	1.1209	0.1424	0.3883 (0.0098)	-0.1291 (0.0139)	0.8184 (0.0138)	0.1672 (0.0082)	782
RP (P)	1.1622	0.1515	0.3866 (0.0088)	-0.0878 (0.0125)	0.8490 (0.0116)	0.1570 (0.0072)	960
FP (W)	1.2270	0.1665	0.3982 (0.0089)	-0.0230 (0.0126)	0.8909 (0.0099)	0.1589 (0.0078)	999
FP (k=10)	1.2980	0.2115	0.4392 (0.0098)	0.0480 (0.0139)	0.9130 (0.0089)	0.1950 (0.0104)	1000
FP (k=10000)	19.2095	47.9729	6.3776 (0.1427)	17.9595 (0.2017)	0.0020 (0.0014)	363.1755 (7.9963)	1000
Model frailty: Normal							
Cox	2.0900	1.5341	0.9837 (0.0220)	0.8400 (0.0311)	0.9479 (0.0070)	1.6724 (0.0934)	999
Exp	1.6043	0.5166	0.9153 (0.0205)	0.3543 (0.0289)	0.8580 (0.0110)	0.9625 (0.0703)	1000
Weibull	2.1539	0.8571	1.0945 (0.0245)	0.9039 (0.0346)	0.9540 (0.0066)	2.0138 (0.1263)	1000
Gompertz	1.5572	0.4765	0.8359 (0.0369)	0.3072 (0.0520)	0.9070 (0.0181)	0.7904 (0.1115)	258
RP (3)	2.0320	0.7752	1.0485 (0.0235)	0.7820 (0.0332)	0.9470 (0.0071)	1.7097 (0.1112)	1000
RP (5)	2.0352	0.7781	1.0512 (0.0235)	0.7852 (0.0332)	0.9460 (0.0071)	1.7206 (0.1119)	1000
RP (9)	2.0361	0.7789	1.0523 (0.0236)	0.7861 (0.0333)	0.9469 (0.0071)	1.7242 (0.1121)	999
RP (P)	2.0385	0.7807	1.0535 (0.0236)	0.7885 (0.0333)	0.9470 (0.0071)	1.7305 (0.1126)	1000
FP (W)	4.2389	3.3438	2.5922 (0.0977)	2.9889 (0.1380)	0.6317 (0.0257)	15.6339 (1.4537)	353
FP (k=10)	2.2560	0.8968	1.1696 (0.0285)	1.0060 (0.0403)	0.9239 (0.0091)	2.3784 (0.1574)	841
FP (k=10000)	2.3398	0.9063	1.0269 (0.0250)	1.0898 (0.0353)	0.9575 (0.0069)	2.2409 (0.1257)	847

Table 355: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Gamma distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	1.1704	0.1490	0.3947 (0.0089)	-0.0796 (0.0126)	0.8355 (0.0118)	0.1620 (0.0072)	985
Exp	1.2402	0.1726	0.4112 (0.0092)	-0.0098 (0.0130)	0.8950 (0.0097)	0.1690 (0.0081)	1000
Weibull	1.1789	0.1583	0.3974 (0.0089)	-0.0711 (0.0126)	0.8670 (0.0107)	0.1628 (0.0072)	1000
Gompertz	1.2290	0.1684	0.3938 (0.0182)	-0.0210 (0.0257)	0.8851 (0.0208)	0.1548 (0.0136)	235
RP (3)	1.1640	0.1552	0.3990 (0.0091)	-0.0860 (0.0129)	0.8574 (0.0113)	0.1664 (0.0075)	961
RP (5)	1.1592	0.1537	0.3948 (0.0091)	-0.0908 (0.0129)	0.8533 (0.0116)	0.1639 (0.0073)	934
RP (9)	1.1236	0.1451	0.3859 (0.0093)	-0.1264 (0.0131)	0.8406 (0.0124)	0.1647 (0.0073)	866
RP (P)	1.1667	0.1557	0.3980 (0.0090)	-0.0833 (0.0127)	0.8589 (0.0111)	0.1652 (0.0073)	985
FP (W)	1.1788	0.1583	0.3974 (0.0089)	-0.0712 (0.0126)	0.8670 (0.0107)	0.1628 (0.0072)	1000
FP (k=10)	1.2112	0.1806	0.4269 (0.0095)	-0.0388 (0.0135)	0.8770 (0.0104)	0.1835 (0.0091)	1000
FP (k=10000)	1.1720	0.1573	0.3997 (0.0089)	-0.0780 (0.0126)	0.8620 (0.0109)	0.1657 (0.0073)	1000
Model frailty: Normal							
Cox	2.0317	1.2296	0.9323 (0.0209)	0.7817 (0.0295)	0.9289 (0.0081)	1.4792 (0.0816)	999
Exp	2.1000	0.8246	1.0145 (0.0227)	0.8500 (0.0321)	0.9620 (0.0061)	1.7507 (0.1023)	999
Weibull	2.0052	0.7657	0.9863 (0.0221)	0.7552 (0.0312)	0.9520 (0.0068)	1.5422 (0.0931)	999
Gompertz	2.0799	0.7847	0.9548 (0.0435)	0.8299 (0.0614)	0.9752 (0.0100)	1.5968 (0.1686)	242
RP (3)	1.9853	0.7541	0.9855 (0.0221)	0.7353 (0.0312)	0.9510 (0.0068)	1.5109 (0.0927)	999
RP (5)	1.9831	0.7519	0.9830 (0.0220)	0.7331 (0.0311)	0.9510 (0.0068)	1.5027 (0.0921)	1000
RP (9)	1.9809	0.7516	0.9840 (0.0220)	0.7309 (0.0311)	0.9510 (0.0068)	1.5015 (0.0921)	1000
RP (P)	1.9851	0.7534	0.9840 (0.0220)	0.7351 (0.0311)	0.9510 (0.0068)	1.5077 (0.0924)	1000
FP (W)	4.3613	3.8170	2.9742 (0.0882)	3.1113 (0.1247)	0.6257 (0.0203)	18.5107 (1.3678)	569
FP (k=10)	2.2890	0.9489	1.2190 (0.0289)	1.0390 (0.0409)	0.9167 (0.0093)	2.5638 (0.1622)	888
FP (k=10000)	2.0326	0.7343	0.9908 (0.0229)	0.7826 (0.0324)	0.9488 (0.0072)	1.5931 (0.0933)	938

Table 356: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows an Exponential distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.9523	0.0981	0.3470 (0.0079)	-0.2977 (0.0112)	0.6691 (0.0151)	0.2089 (0.0070)	967
Exp	0.9518	0.1049	0.3512 (0.0079)	-0.2982 (0.0111)	0.6910 (0.0146)	0.2122 (0.0070)	1000
Weibull	0.9542	0.1057	0.3526 (0.0079)	-0.2958 (0.0111)	0.6900 (0.0146)	0.2117 (0.0070)	1000
Gompertz	0.9331	0.1010	0.3361 (0.0110)	-0.3169 (0.0155)	0.6802 (0.0215)	0.2132 (0.0096)	469
RP (3)	0.9528	0.1055	0.3518 (0.0079)	-0.2972 (0.0112)	0.6901 (0.0147)	0.2120 (0.0070)	994
RP (5)	0.9464	0.1041	0.3467 (0.0078)	-0.3036 (0.0110)	0.6869 (0.0147)	0.2123 (0.0070)	990
RP (9)	0.9477	0.1045	0.3502 (0.0079)	-0.3023 (0.0112)	0.6843 (0.0148)	0.2139 (0.0070)	982
RP (P)	0.9524	0.1053	0.3505 (0.0079)	-0.2976 (0.0111)	0.6908 (0.0146)	0.2113 (0.0069)	996
FP (W)	0.9541	0.1057	0.3526 (0.0079)	-0.2959 (0.0111)	0.6890 (0.0146)	0.2117 (0.0070)	1000
FP (k=10)	0.9546	0.1067	0.3521 (0.0079)	-0.2954 (0.0111)	0.6940 (0.0146)	0.2111 (0.0070)	1000
FP (k=10000)	0.9373	0.1014	0.3280 (0.0074)	-0.3127 (0.0105)	0.6860 (0.0148)	0.2052 (0.0065)	984
Model frailty: Normal							
Cox	1.2255	0.3377	0.4806 (0.0108)	-0.0245 (0.0152)	0.8405 (0.0116)	0.2313 (0.0122)	997
Exp	1.1578	0.2090	0.4500 (0.0101)	-0.0922 (0.0142)	0.8427 (0.0115)	0.2108 (0.0100)	998
Weibull	1.1627	0.2115	0.4536 (0.0101)	-0.0873 (0.0143)	0.8390 (0.0116)	0.2131 (0.0102)	1000
Gompertz	1.1583	0.2123	0.4692 (0.0157)	-0.0917 (0.0221)	0.8222 (0.0180)	0.2281 (0.0163)	450
RP (3)	1.1594	0.2105	0.4516 (0.0101)	-0.0906 (0.0143)	0.8400 (0.0116)	0.2120 (0.0101)	1000
RP (5)	1.1594	0.2105	0.4512 (0.0101)	-0.0906 (0.0143)	0.8390 (0.0116)	0.2116 (0.0100)	1000
RP (9)	1.1583	0.2098	0.4484 (0.0100)	-0.0917 (0.0142)	0.8400 (0.0116)	0.2092 (0.0099)	1000
RP (P)	1.1611	0.2111	0.4522 (0.0101)	-0.0889 (0.0143)	0.8400 (0.0116)	0.2122 (0.0101)	1000
FP (W)	2.2661	0.9473	1.3835 (0.0465)	1.0161 (0.0657)	0.8581 (0.0166)	2.9422 (0.2937)	444
FP (k=10)	1.2945	0.2785	0.6232 (0.0154)	0.0445 (0.0217)	0.8641 (0.0119)	0.3898 (0.0494)	824
FP (k=10000)	1.2027	0.2241	0.4638 (0.0110)	-0.0473 (0.0156)	0.8713 (0.0112)	0.2171 (0.0129)	886

Table 357: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.9486	0.0969	0.3444 (0.0078)	-0.3014 (0.0110)	0.6591 (0.0152)	0.2093 (0.0069)	974
Exp	1.1813	0.1570	0.4638 (0.0104)	-0.0687 (0.0147)	0.8320 (0.0118)	0.2196 (0.0111)	1000
Weibull	0.9543	0.1059	0.3526 (0.0079)	-0.2957 (0.0112)	0.6950 (0.0146)	0.2116 (0.0069)	1000
Gompertz	1.1575	0.1494	0.4181 (0.0145)	-0.0925 (0.0205)	0.8365 (0.0181)	0.1829 (0.0151)	416
RP (3)	0.9474	0.1045	0.3496 (0.0079)	-0.3026 (0.0111)	0.6889 (0.0147)	0.2136 (0.0070)	990
RP (5)	0.9437	0.1036	0.3447 (0.0078)	-0.3063 (0.0110)	0.6886 (0.0147)	0.2125 (0.0068)	989
RP (9)	0.9449	0.1039	0.3464 (0.0078)	-0.3051 (0.0110)	0.6895 (0.0147)	0.2130 (0.0069)	992
RP (P)	0.9480	0.1045	0.3478 (0.0078)	-0.3020 (0.0110)	0.6915 (0.0146)	0.2120 (0.0069)	995
FP (W)	0.9543	0.1058	0.3526 (0.0079)	-0.2957 (0.0112)	0.6950 (0.0146)	0.2116 (0.0069)	1000
FP (k=10)	1.2554	0.3275	0.6864 (0.0154)	0.0054 (0.0217)	0.8136 (0.0123)	0.4708 (0.0393)	998
FP (k=10000)	1.1165	0.1547	0.4974 (0.0113)	-0.1335 (0.0159)	0.7957 (0.0129)	0.2650 (0.0309)	974
Model frailty: Normal							
Cox	1.2453	0.3377	0.4842 (0.0108)	-0.0047 (0.0153)	0.8388 (0.0116)	0.2343 (0.0124)	999
Exp	1.4439	0.3273	0.5786 (0.0130)	0.1939 (0.0183)	0.9218 (0.0085)	0.3720 (0.0227)	997
Weibull	1.1783	0.2184	0.4627 (0.0104)	-0.0717 (0.0146)	0.8430 (0.0115)	0.2191 (0.0105)	1000
Gompertz	1.4302	0.3152	0.5299 (0.0242)	0.1802 (0.0341)	0.9212 (0.0174)	0.3121 (0.0318)	241
RP (3)	1.1666	0.2135	0.4514 (0.0101)	-0.0834 (0.0143)	0.8397 (0.0116)	0.2105 (0.0096)	998
RP (5)	1.1667	0.2135	0.4512 (0.0101)	-0.0833 (0.0143)	0.8397 (0.0116)	0.2103 (0.0096)	998
RP (9)	1.1670	0.2137	0.4514 (0.0101)	-0.0830 (0.0143)	0.8377 (0.0117)	0.2104 (0.0096)	998
RP (P)	1.1662	0.2133	0.4505 (0.0101)	-0.0838 (0.0143)	0.8395 (0.0116)	0.2098 (0.0096)	997
FP (W)	2.6874	1.4583	1.8983 (0.0581)	1.4374 (0.0821)	0.8015 (0.0173)	5.6628 (0.5027)	534
FP (k=10)	1.3432	0.2996	0.6366 (0.0154)	0.0932 (0.0217)	0.8741 (0.0113)	0.4135 (0.0420)	858
FP (k=10000)	1.2654	0.2484	0.4834 (0.0115)	0.0154 (0.0162)	0.8830 (0.0108)	0.2337 (0.0129)	889

Table 358: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Gompertz distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.9593	0.0958	0.3368 (0.0077)	-0.2907 (0.0109)	0.6625 (0.0153)	0.1978 (0.0066)	957
Exp	0.7703	0.0717	0.2925 (0.0065)	-0.4797 (0.0093)	0.4410 (0.0157)	0.3155 (0.0077)	1000
Weibull	0.9260	0.1007	0.3552 (0.0079)	-0.3240 (0.0112)	0.6360 (0.0152)	0.2311 (0.0071)	1000
Gompertz	0.7293	0.0647	0.2691 (0.0079)	-0.5207 (0.0112)	0.3735 (0.0201)	0.3434 (0.0097)	581
RP (3)	0.9579	0.1057	0.3401 (0.0076)	-0.2921 (0.0108)	0.6974 (0.0145)	0.2009 (0.0065)	998
RP (5)	0.9583	0.1057	0.3390 (0.0076)	-0.2917 (0.0107)	0.6970 (0.0145)	0.1999 (0.0064)	1000
RP (9)	0.9569	0.1056	0.3401 (0.0077)	-0.2931 (0.0108)	0.6968 (0.0146)	0.2015 (0.0065)	986
RP (P)	0.9566	0.1055	0.3406 (0.0076)	-0.2934 (0.0108)	0.6934 (0.0146)	0.2020 (0.0065)	998
FP (W)	0.9259	0.1007	0.3552 (0.0079)	-0.3241 (0.0112)	0.6360 (0.0152)	0.2311 (0.0071)	1000
FP (k=10)	0.9632	0.1078	0.3434 (0.0077)	-0.2868 (0.0109)	0.7040 (0.0144)	0.2000 (0.0065)	1000
FP (k=10000)	0.9189	0.0966	0.2952 (0.0068)	-0.3311 (0.0097)	0.6813 (0.0153)	0.1967 (0.0064)	932
Model frailty: Normal							
Cox	1.2634	0.3583	0.4986 (0.0112)	0.0134 (0.0158)	0.8589 (0.0110)	0.2485 (0.0221)	999
Exp	0.9117	0.1300	0.3621 (0.0081)	-0.3383 (0.0115)	0.6630 (0.0149)	0.2454 (0.0082)	1000
Weibull	1.0961	0.1868	0.4229 (0.0095)	-0.1539 (0.0134)	0.8150 (0.0123)	0.2023 (0.0101)	1000
Gompertz	0.8865	0.1236	0.3516 (0.0104)	-0.3635 (0.0147)	0.6151 (0.0204)	0.2555 (0.0096)	569
RP (3)	1.1731	0.2129	0.4437 (0.0099)	-0.0769 (0.0140)	0.8600 (0.0110)	0.2026 (0.0113)	1000
RP (5)	1.1755	0.2138	0.4444 (0.0099)	-0.0745 (0.0141)	0.8620 (0.0109)	0.2028 (0.0113)	1000
RP (9)	1.1768	0.2142	0.4444 (0.0099)	-0.0732 (0.0141)	0.8640 (0.0108)	0.2027 (0.0113)	1000
RP (P)	1.1700	0.2119	0.4436 (0.0099)	-0.0800 (0.0140)	0.8570 (0.0111)	0.2030 (0.0113)	1000
FP (W)	1.8543	0.6032	1.0255 (0.0398)	0.6043 (0.0562)	0.9279 (0.0142)	1.4138 (0.1637)	333
FP (k=10)	1.2766	0.2524	0.5005 (0.0124)	0.0266 (0.0176)	0.8877 (0.0111)	0.2509 (0.0164)	810
FP (k=10000)	1.2897	0.2535	0.4781 (0.0118)	0.0397 (0.0167)	0.9028 (0.0103)	0.2299 (0.0142)	823

Table 359: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (1) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.9596	0.0962	0.3535 (0.0081)	-0.2904 (0.0115)	0.6449 (0.0155)	0.2092 (0.0073)	949
Exp	0.5604	0.0392	0.1868 (0.0042)	-0.6896 (0.0059)	0.1450 (0.0111)	0.5104 (0.0075)	1000
Weibull	0.9801	0.1091	0.3284 (0.0073)	-0.2699 (0.0104)	0.7380 (0.0139)	0.1806 (0.0061)	1000
Gompertz	0.6294	0.0469	0.1521 (0.0038)	-0.6206 (0.0053)	0.1728 (0.0132)	0.4082 (0.0060)	816
RP (3)	0.9641	0.1076	0.3536 (0.0080)	-0.2859 (0.0114)	0.6880 (0.0149)	0.2067 (0.0071)	968
RP (5)	0.9558	0.1061	0.3552 (0.0080)	-0.2942 (0.0112)	0.6760 (0.0148)	0.2126 (0.0071)	997
RP (9)	0.9526	0.1056	0.3560 (0.0080)	-0.2974 (0.0114)	0.6701 (0.0150)	0.2151 (0.0072)	982
RP (P)	0.9515	0.1052	0.3521 (0.0079)	-0.2985 (0.0112)	0.6707 (0.0150)	0.2130 (0.0071)	987
FP (W)	0.9800	0.1091	0.3284 (0.0073)	-0.2700 (0.0104)	0.7380 (0.0139)	0.1806 (0.0061)	1000
FP (k=10)	1.3078	0.2823	0.6737 (0.0151)	0.0578 (0.0213)	0.8500 (0.0113)	0.4568 (0.0452)	1000
FP (k=10000)	37.1355	206.0134	16.1014 (0.3609)	35.8855 (0.5102)	0.0201 (0.0044)	1546.7644 (54.0101)	996
Model frailty: Normal							
Cox	1.2448	0.3828	0.4812 (0.0108)	-0.0052 (0.0152)	0.8458 (0.0114)	0.2314 (0.0132)	999
Exp	0.7026	0.0781	0.2797 (0.0063)	-0.5474 (0.0089)	0.3938 (0.0155)	0.3778 (0.0082)	998
Weibull	1.2480	0.2401	0.4683 (0.0105)	-0.0020 (0.0148)	0.8940 (0.0097)	0.2191 (0.0132)	1000
Gompertz	0.7704	0.0878	0.2197 (0.0057)	-0.4796 (0.0080)	0.5093 (0.0183)	0.2782 (0.0063)	750
RP (3)	1.1707	0.2135	0.4526 (0.0101)	-0.0793 (0.0143)	0.8490 (0.0113)	0.2109 (0.0119)	1000
RP (5)	1.1711	0.2138	0.4538 (0.0102)	-0.0789 (0.0144)	0.8490 (0.0113)	0.2120 (0.0121)	1000
RP (9)	1.1721	0.2142	0.4544 (0.0102)	-0.0779 (0.0144)	0.8470 (0.0114)	0.2123 (0.0121)	1000
RP (P)	1.1715	0.2138	0.4531 (0.0101)	-0.0785 (0.0143)	0.8470 (0.0114)	0.2112 (0.0120)	1000
FP (W)	2.0444	0.7155	1.1319 (0.0461)	0.7944 (0.0651)	0.9073 (0.0167)	1.9082 (0.2157)	302
FP (k=10)	1.2857	0.2616	0.5415 (0.0136)	0.0357 (0.0192)	0.8773 (0.0116)	0.2942 (0.0292)	799
FP (k=10000)	1.6697	0.4258	0.6293 (0.0158)	0.4197 (0.0223)	0.9634 (0.0067)	0.5716 (0.0370)	793

Table 360: Simulation results for frailty variance, scenario with 15 clusters of 250 individuals each. The true frailty follows a Normal distribution with a variance of 1.25, and the true baseline hazard follows follows a Weibull-Weibull (2) distribution. Values in red are values where 95% confidence intervals for bias and coverage based on Monte Carlo standard errors did not include the value 0 or 95%, respectively.

Mod. baseline	Avg. Estimate	Avg. SE	Emp. SE	Bias	Coverage	MSE	N. Converged
Model frailty: Gamma							
Cox	0.9670	0.1005	0.3525 (0.0080)	-0.2830 (0.0113)	0.6828 (0.0149)	0.2042 (0.0071)	971
Exp	1.0599	0.1279	0.3991 (0.0089)	-0.1901 (0.0126)	0.7690 (0.0133)	0.1952 (0.0085)	1000
Weibull	0.9595	0.1065	0.3488 (0.0078)	-0.2905 (0.0110)	0.7040 (0.0144)	0.2059 (0.0070)	1000
Gompertz	1.0366	0.1215	0.3607 (0.0120)	-0.2134 (0.0169)	0.7604 (0.0200)	0.1754 (0.0095)	455
RP (3)	0.9653	0.1084	0.3619 (0.0082)	-0.2847 (0.0116)	0.7036 (0.0146)	0.2119 (0.0074)	975
RP (5)	0.9647	0.1079	0.3556 (0.0080)	-0.2853 (0.0113)	0.7075 (0.0144)	0.2077 (0.0071)	995
RP (9)	0.9636	0.1076	0.3545 (0.0080)	-0.2864 (0.0113)	0.7053 (0.0145)	0.2076 (0.0071)	991
RP (P)	0.9654	0.1080	0.3557 (0.0080)	-0.2846 (0.0113)	0.7075 (0.0144)	0.2074 (0.0071)	995
FP (W)	0.9595	0.1065	0.3488 (0.0078)	-0.2905 (0.0110)	0.7050 (0.0144)	0.2059 (0.0070)	1000
FP (k=10)	1.0223	0.1372	0.4121 (0.0092)	-0.2277 (0.0130)	0.7380 (0.0139)	0.2216 (0.0089)	1000
FP (k=10000)	0.9553	0.1056	0.3454 (0.0078)	-0.2947 (0.0110)	0.6991 (0.0146)	0.2060 (0.0067)	987
Model frailty: Normal							
Cox	1.2549	0.3708	0.4853 (0.0109)	0.0049 (0.0154)	0.8458 (0.0114)	0.2353 (0.0129)	999
Exp	1.3043	0.2639	0.4991 (0.0112)	0.0543 (0.0158)	0.8919 (0.0098)	0.2518 (0.0138)	999
Weibull	1.1837	0.2178	0.4494 (0.0101)	-0.0663 (0.0142)	0.8579 (0.0110)	0.2061 (0.0096)	999
Gompertz	1.3167	0.2679	0.4940 (0.0167)	0.0667 (0.0236)	0.8833 (0.0154)	0.2479 (0.0181)	437
RP (3)	1.1832	0.2188	0.4558 (0.0102)	-0.0668 (0.0144)	0.8570 (0.0111)	0.2120 (0.0099)	1000
RP (5)	1.1821	0.2183	0.4548 (0.0102)	-0.0679 (0.0144)	0.8559 (0.0111)	0.2112 (0.0100)	999
RP (9)	1.1823	0.2184	0.4548 (0.0102)	-0.0677 (0.0144)	0.8539 (0.0112)	0.2112 (0.0100)	999
RP (P)	1.1800	0.2175	0.4536 (0.0102)	-0.0700 (0.0144)	0.8557 (0.0111)	0.2104 (0.0100)	998
FP (W)	2.5206	1.2396	1.6951 (0.0561)	1.2706 (0.0793)	0.8206 (0.0179)	4.4814 (0.4285)	457
FP (k=10)	1.3346	0.2944	0.6254 (0.0155)	0.0846 (0.0218)	0.8793 (0.0114)	0.3978 (0.0490)	820
FP (k=10000)	1.2031	0.2230	0.4491 (0.0106)	-0.0469 (0.0150)	0.8685 (0.0113)	0.2037 (0.0118)	897