

Obs	id	clinic	status	time	prison	dose	time_yrs
1	1	1	1	428	0	50	1.17180
2	132	2	0	633	0	70	1.73306
3	2	1	1	275	1	55	0.75291
4	133	2	1	661	0	40	1.80972
5	3	1	1	262	0	55	0.71732

The LIFETEST Procedure

Summary of the Number of Censored and Uncensored Values					
Stratum	clinic	Total	Failed	Censored	Percent Censored
1	1	163	122	41	25.15
2	2	75	28	47	62.67
Total		238	150	88	36.97

The LIFETEST Procedure

Testing Homogeneity of Survival Curves for time_yrs over Strata

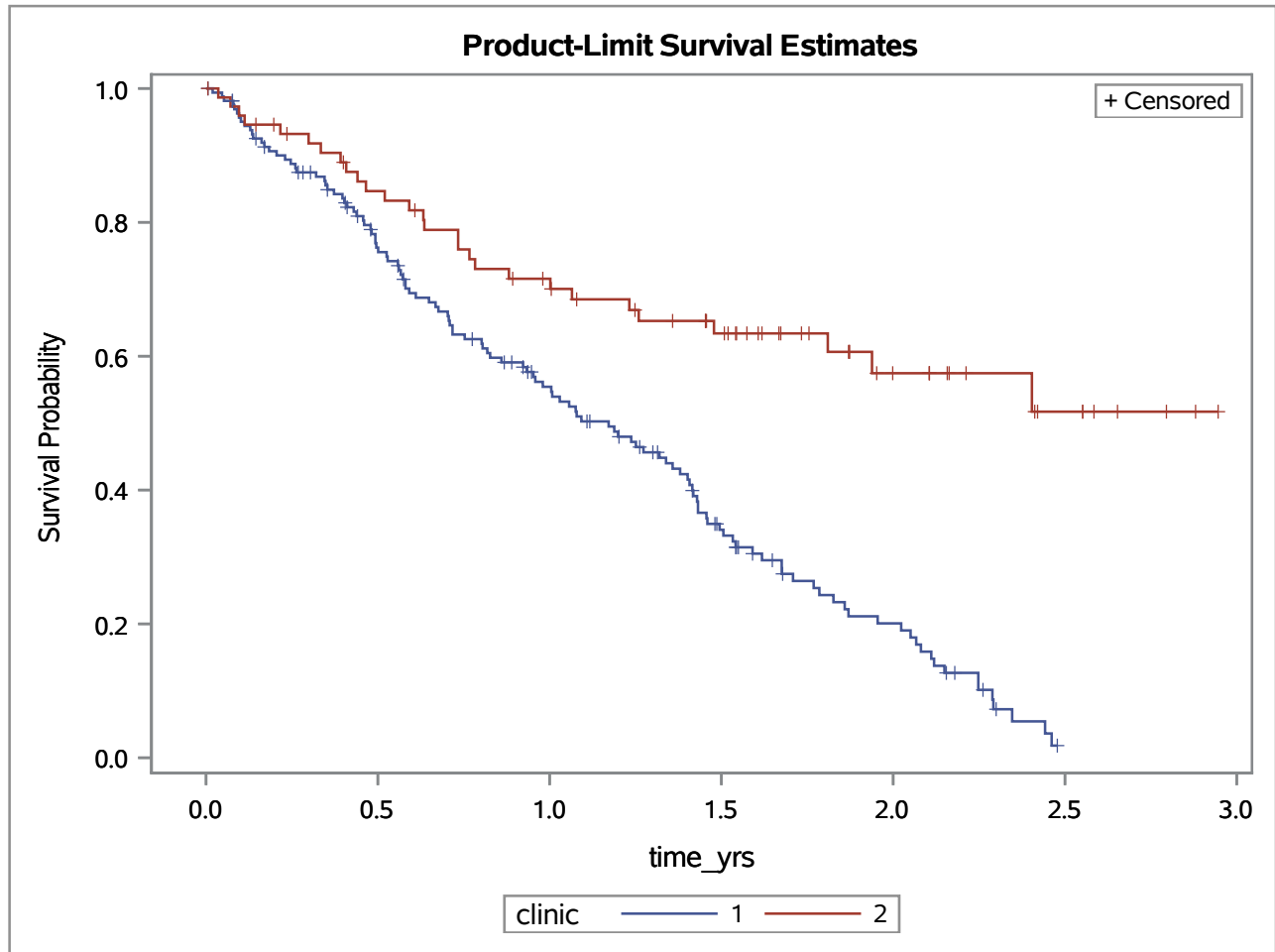
Rank Statistics		
clinic	Log-Rank	Wilcoxon
1	31.092	2929.0
2	-31.092	-2929.0

Covariance Matrix for the Log-Rank Statistics		
clinic	1	2
1	34.6579	-34.6579
2	-34.6579	34.6579

Covariance Matrix for the Wilcoxon Statistics		
clinic	1	2
1	737868	-737868
2	-737868	737868

Test of Equality over Strata			
Test	Chi-Square	DF	Pr > Chi-Square
Log-Rank	27.8927	1	<.0001
Wilcoxon	11.6268	1	0.0007
-2Log(LR)	26.0236	1	<.0001

The LIFETEST Procedure



The LIFETEST Procedure

Summary of the Number of Censored and Uncensored Values					
Stratum	prison	Total	Failed	Censored	Percent Censored
1	0	127	81	46	36.22
2	1	111	69	42	37.84
Total		238	150	88	36.97

The LIFETEST Procedure

Testing Homogeneity of Survival Curves for time_yrs over Strata

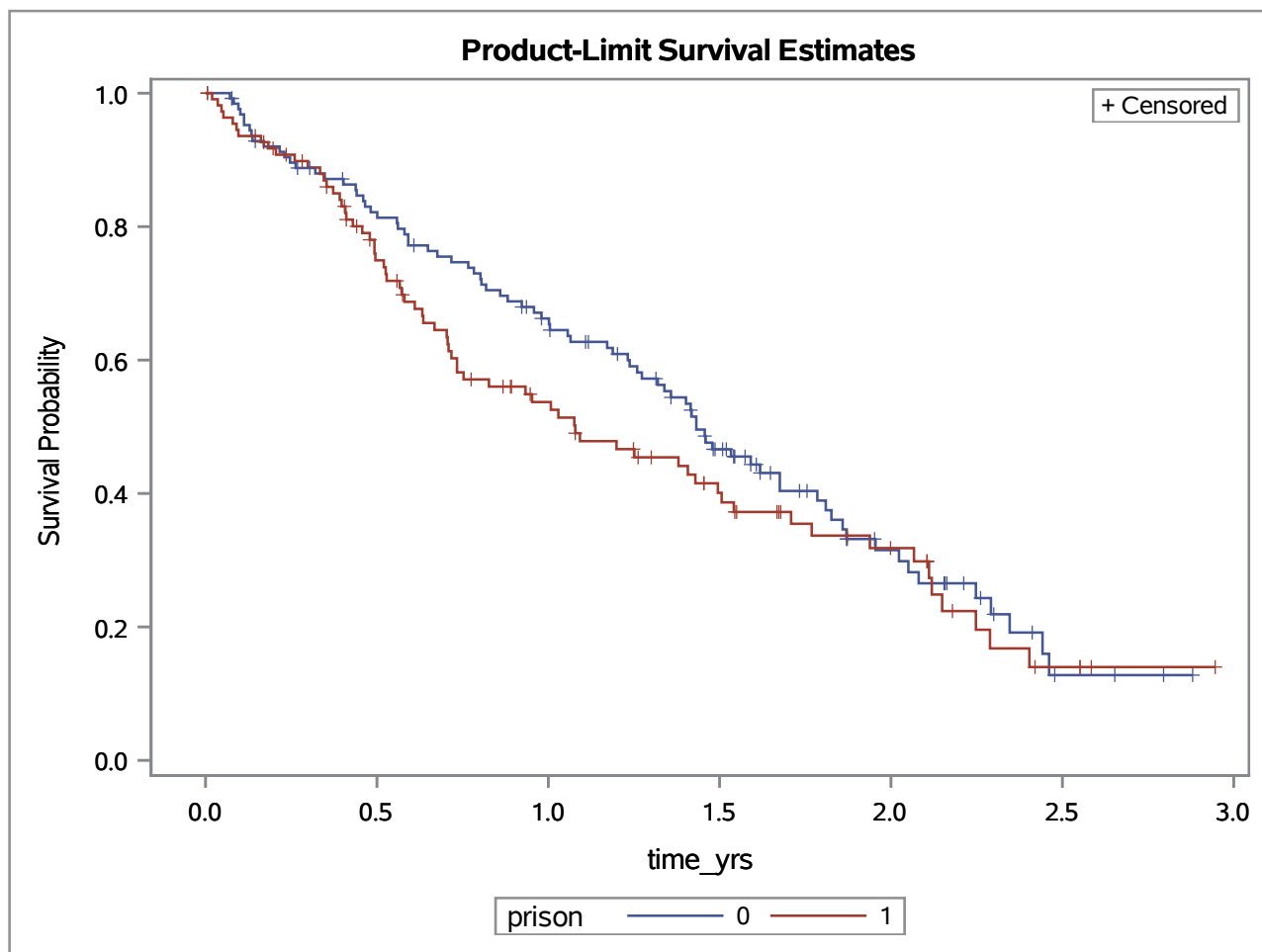
Rank Statistics		
prison	Log-Rank	Wilcoxon
0	-6.7504	-1434.0
1	6.7504	1434.0

Covariance Matrix for the Log-Rank Statistics		
prison	0	1
0	36.1791	-36.1791
1	-36.1791	36.1791

Covariance Matrix for the Wilcoxon Statistics		
prison	0	1
0	803374	-803374
1	-803374	803374

Test of Equality over Strata			
Test	Chi-Square	DF	Pr > Chi-Square
Log-Rank	1.2595	1	0.2617
Wilcoxon	2.5596	1	0.1096
-2Log(LR)	1.0666	1	0.3017

The LIFETEST Procedure



The LIFETEST Procedure

Summary of the Number of Censored and Uncensored Values					
Stratum	dose	Total	Failed	Censored	Percent Censored
1	<40	5	5	0	0.00
2	45	40	25	15	37.50
3	55	48	35	13	27.08
4	65	74	54	20	27.03
5	>=70	71	31	40	56.34
Total		238	150	88	36.97

The LIFETEST Procedure

Testing Homogeneity of Survival Curves for time_ys over Strata

Rank Statistics		
dose	Log-Rank	Wilcoxon
<40	2.703	338.0
45	10.506	2243.0
55	10.742	937.0
65	10.036	690.0
>=70	-33.985	-4208.0

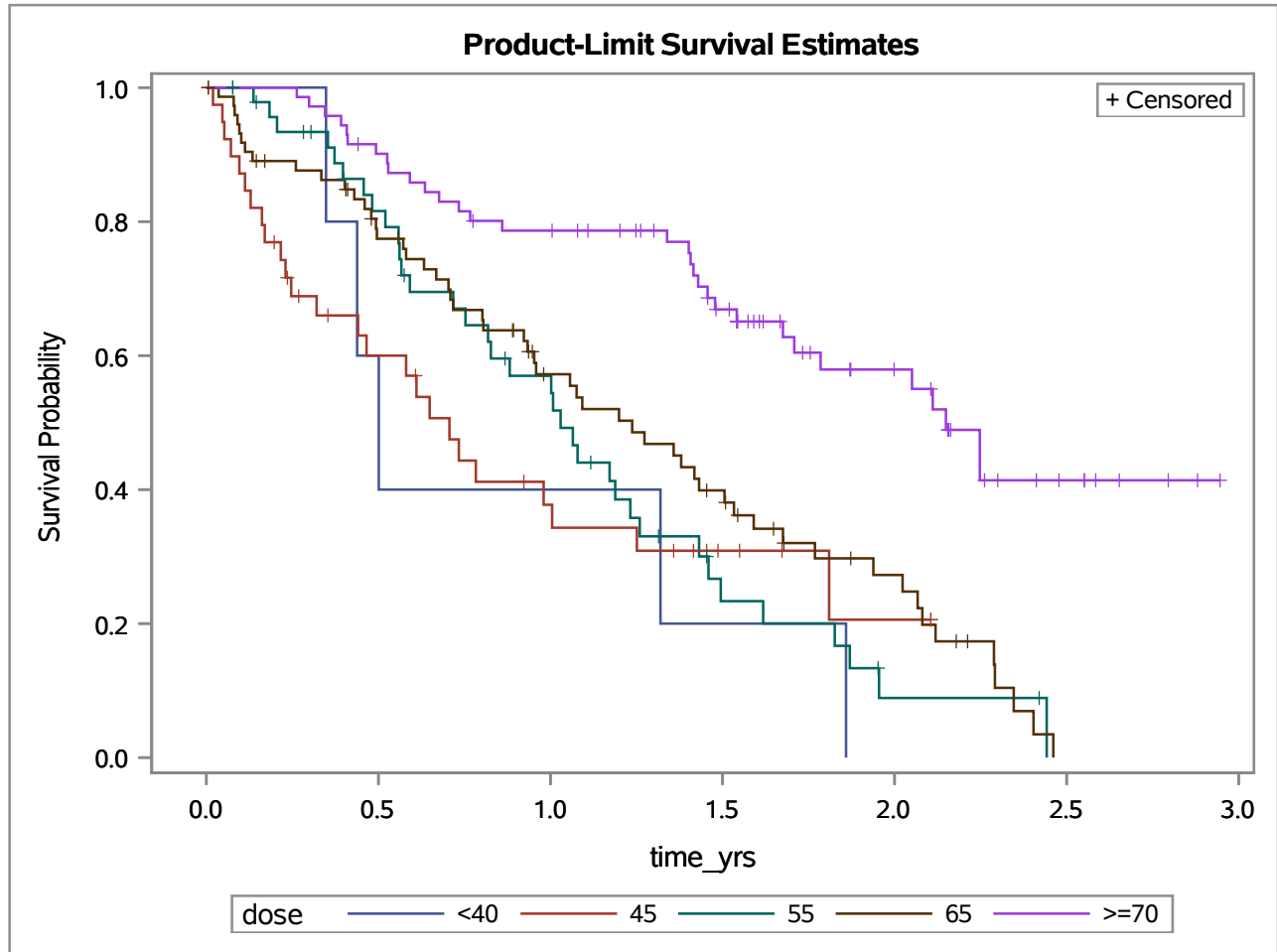
Covariance Matrix for the Log-Rank Statistics					
dose	<40	45	55	65	>=70
<40	2.2528	-0.2513	-0.4010	-0.6859	-0.9146
45	-0.2513	12.8609	-2.5441	-4.3485	-5.7169
55	-0.4010	-2.5441	20.0255	-7.2003	-9.8802
65	-0.6859	-4.3485	-7.2003	30.8965	-18.6618
>=70	-0.9146	-5.7169	-9.8802	-18.6618	35.1735

Covariance Matrix for the Wilcoxon Statistics					
dose	<40	45	55	65	>=70
<40	60725	-7793	-11939	-18848	-22144
45	-7793	351214	-77667	-122602	-143152
55	-11939	-77667	503823	-190109	-224109
65	-18848	-122602	-190109	695618	-364059
>=70	-22144	-143152	-224109	-364059	753463

Test of Equality over Strata			
Test	Chi-Square	DF	Pr > Chi-Square
Log-Rank	37.5522	4	<.0001
Wilcoxon	31.4088	4	<.0001
-2Log(LR)	30.4127	4	<.0001

Comparison of survival by dose groups

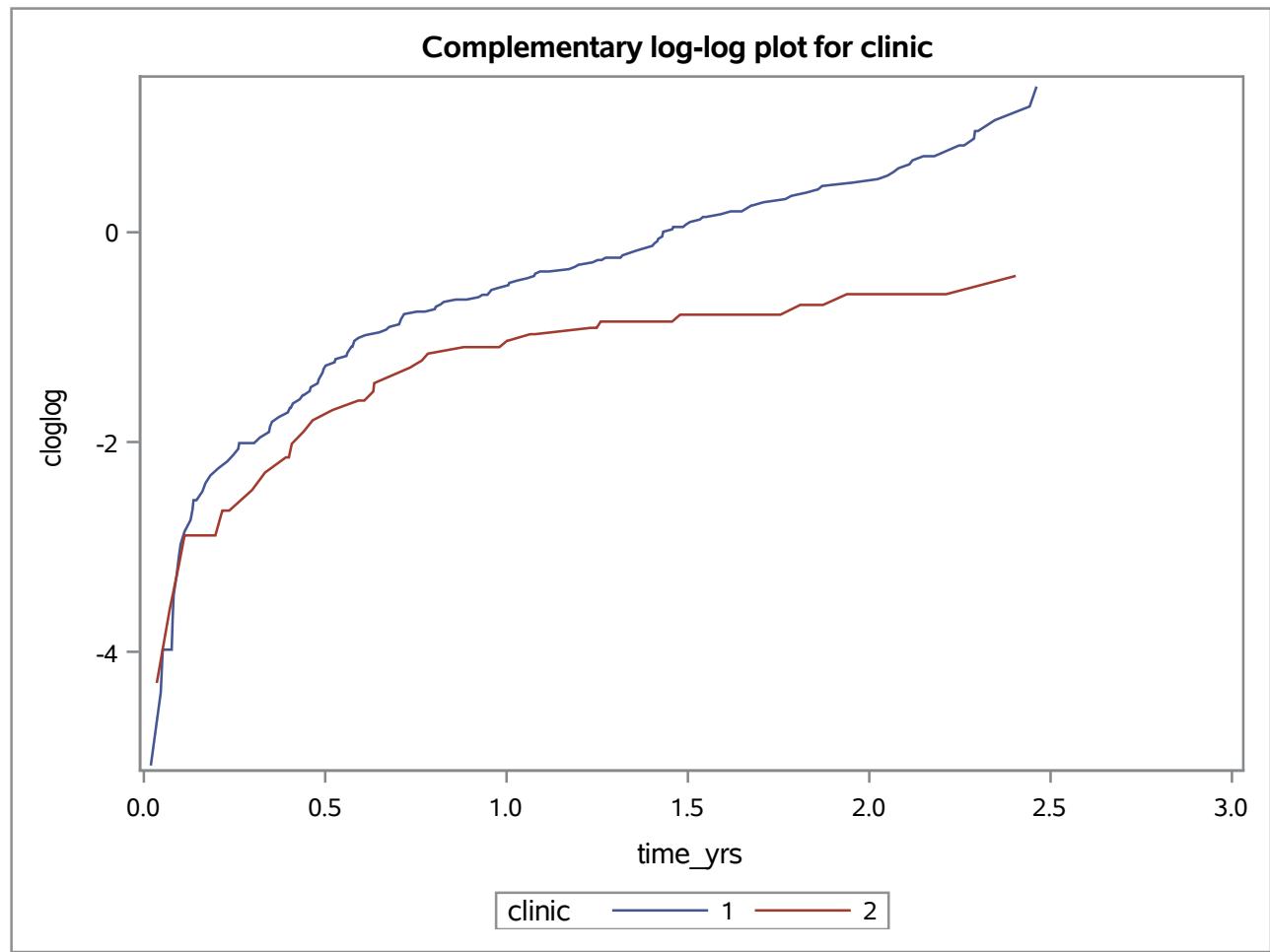
The LIFETEST Procedure

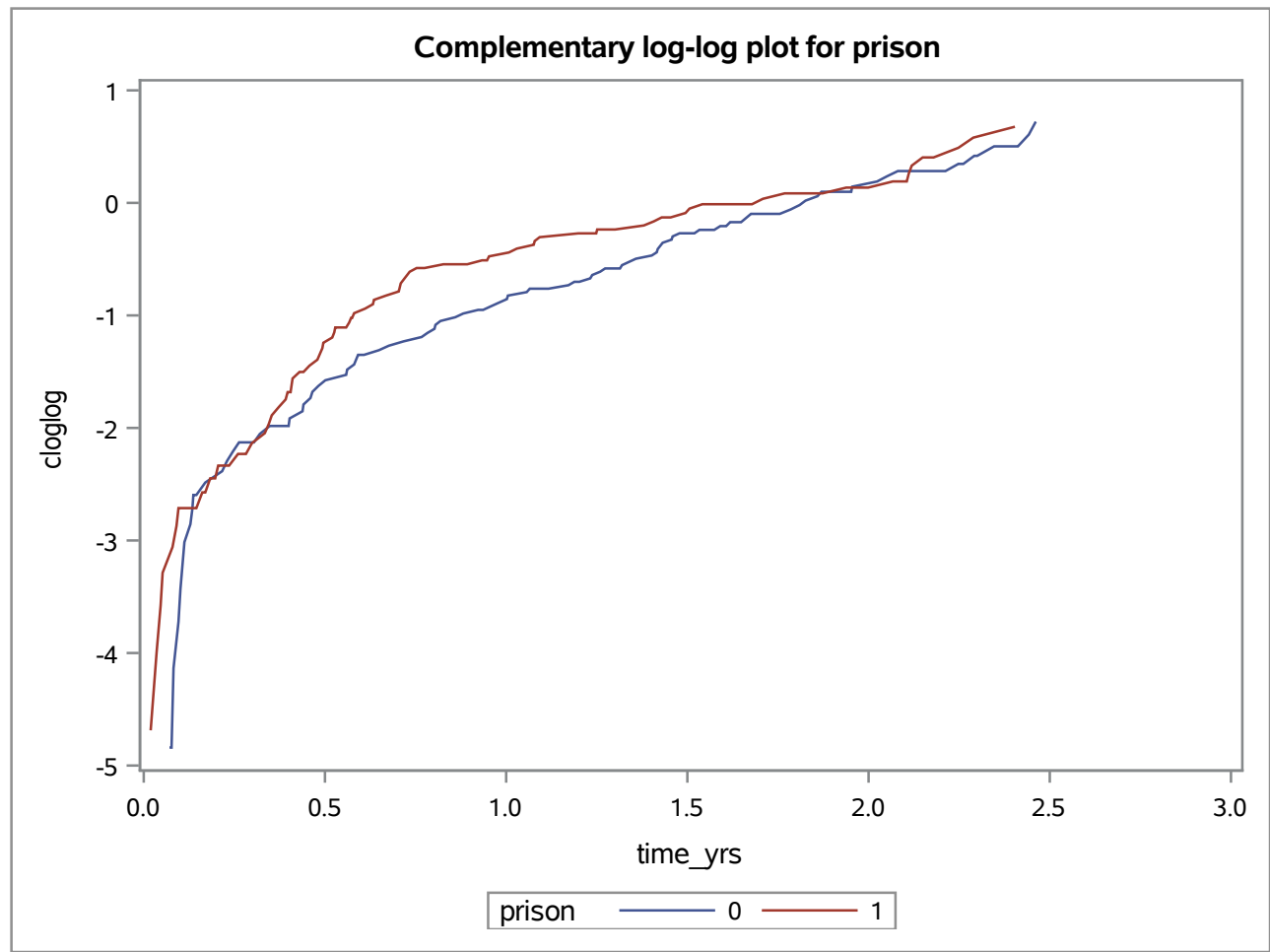


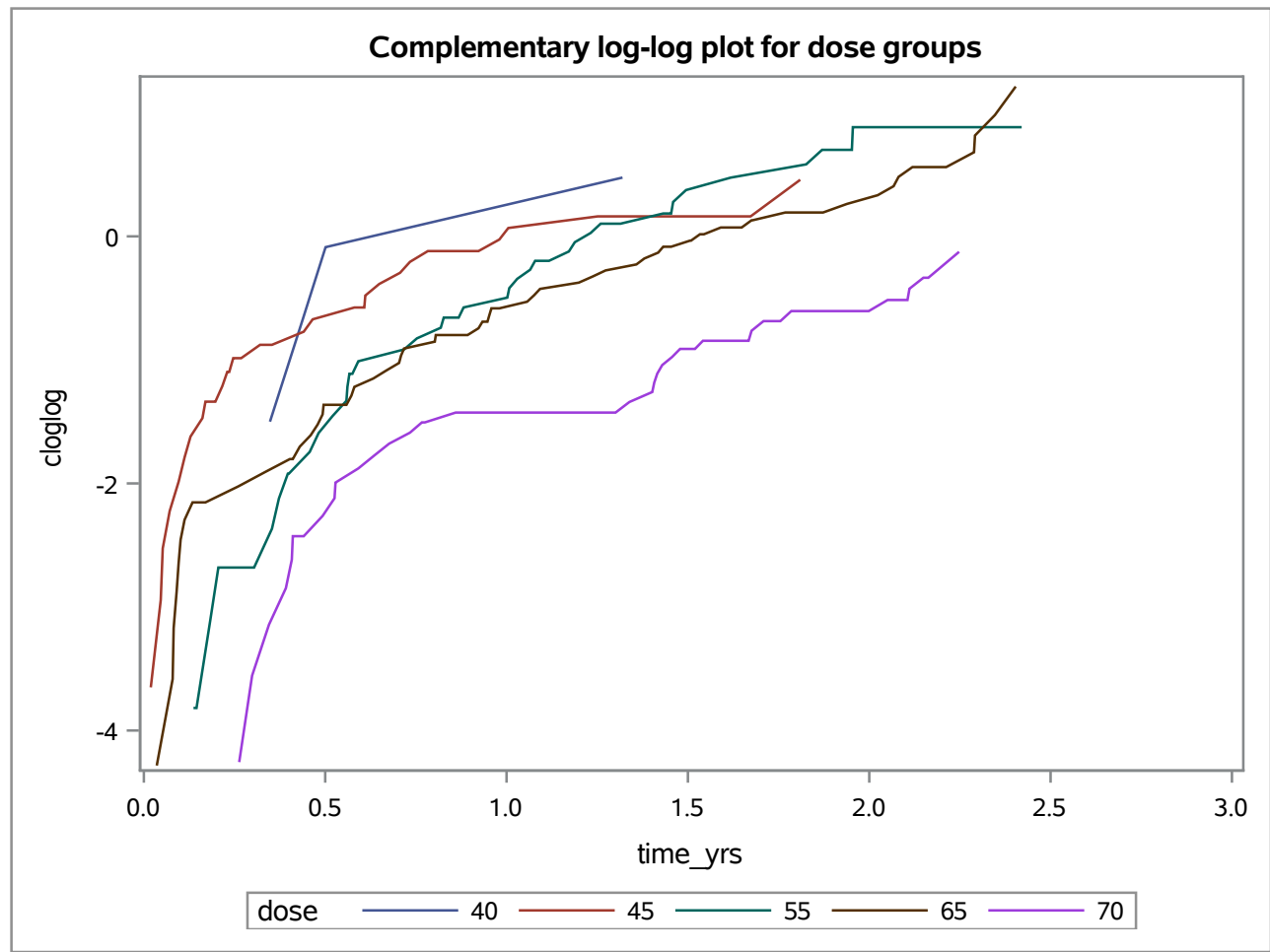
Kaplan-Meier values

Saturday, October 27, 2018 03:08:04 PM 11

Obs	dose	time_ys	_CENSOR_	SURVIVAL	SDF_LCL	SDF_UCL	STRATUM
1	40	0.00000	.	1.0	1.00000	1.00000	1
2	40	0.34771	0	0.8	0.20381	0.96918	1
3	40	0.43806	0	0.6	0.12573	0.88176	1
4	40	0.50103	0	0.4	0.05198	0.75282	1
5	40	1.31964	0	0.2	0.00837	0.58185	1







The PHREG Procedure

Model Information	
Data Set	SURVIVAL.HEROIN
Dependent Variable	time_yrs
Censoring Variable	status
Censoring Value(s)	0
Ties Handling	BRESLOW

Number of Observations Read	238
Number of Observations Used	238

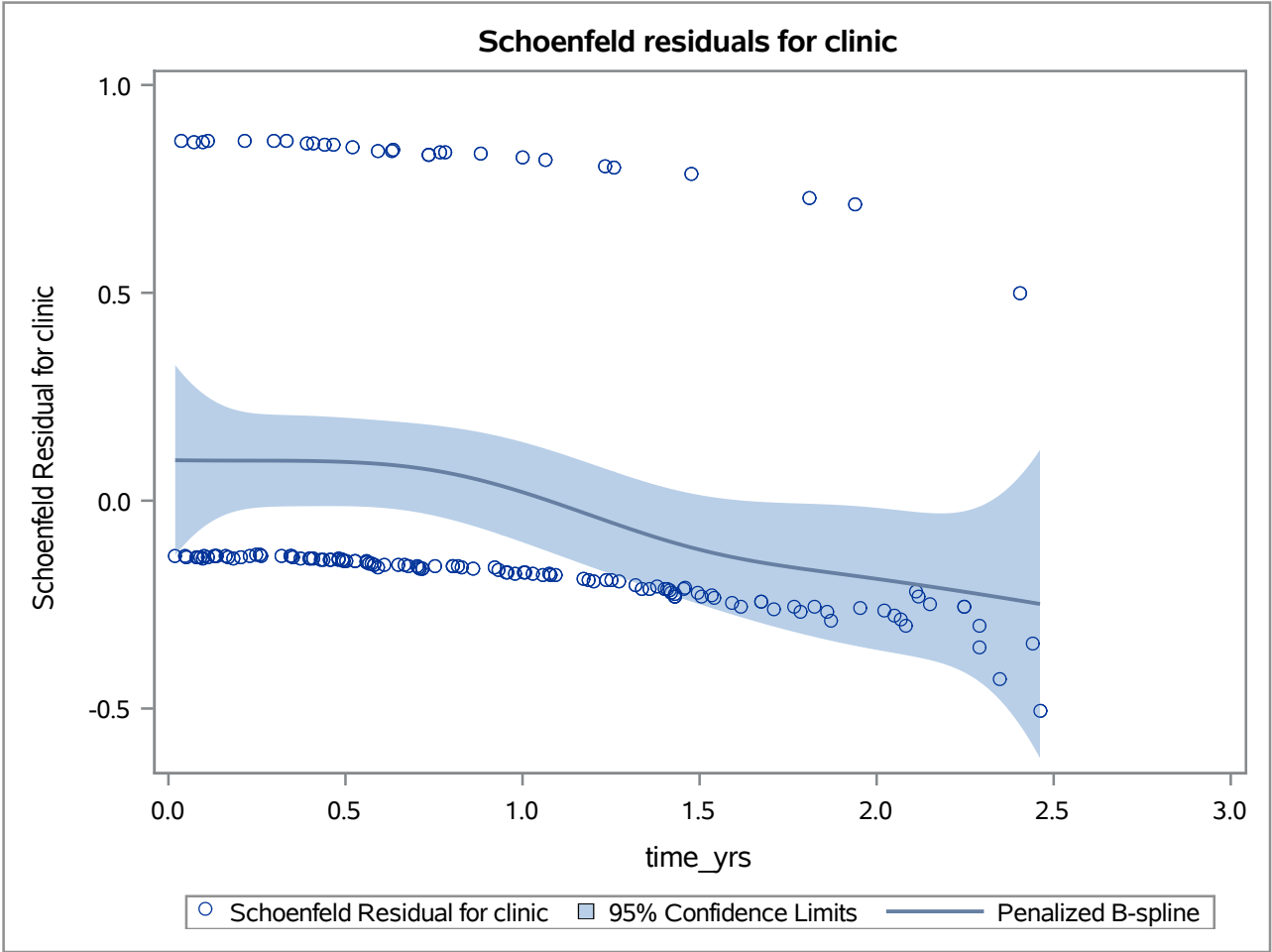
Summary of the Number of Event and Censored Values			
Total	Event	Censored	Percent Censored
238	150	88	36.97

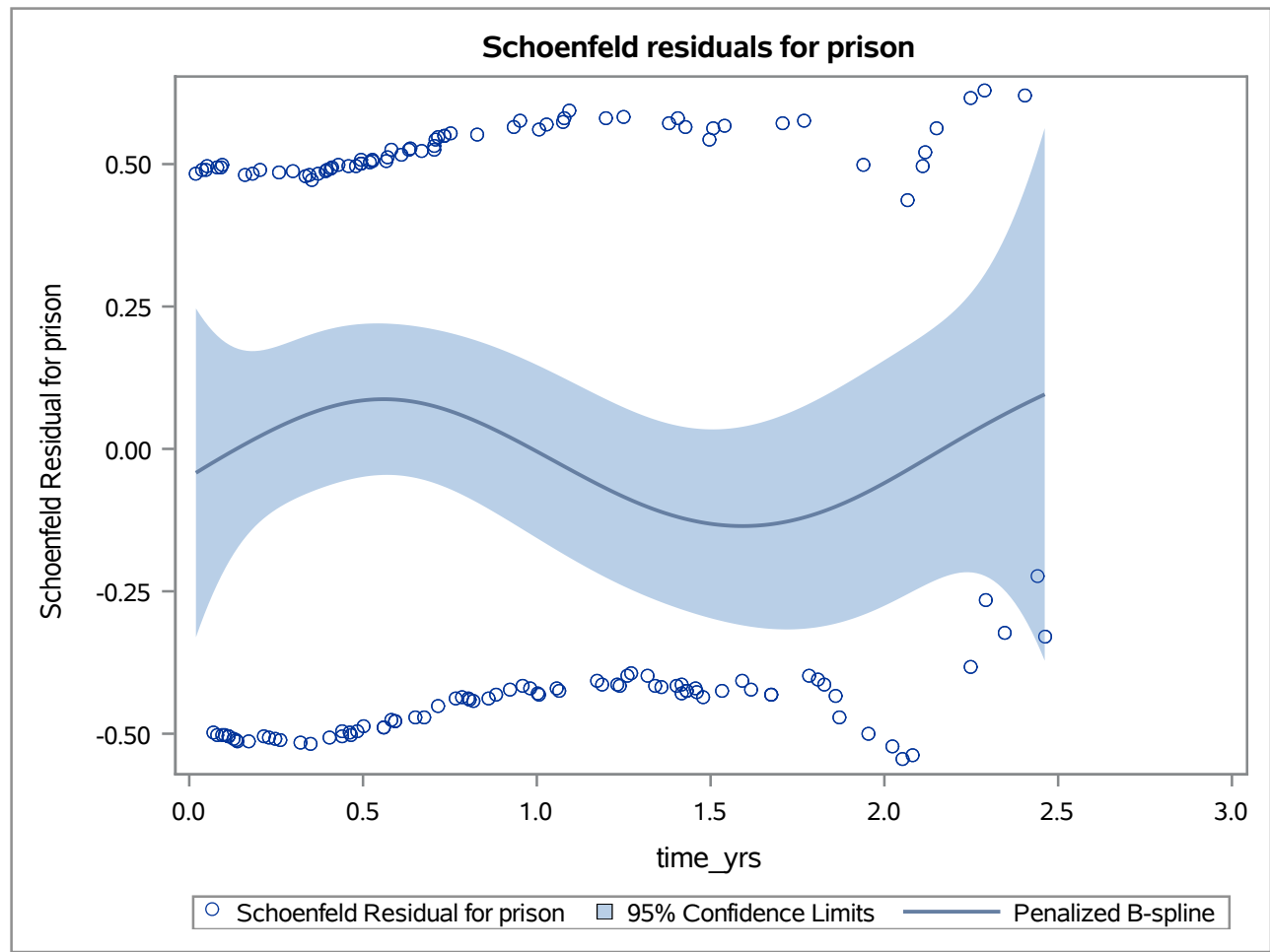
Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

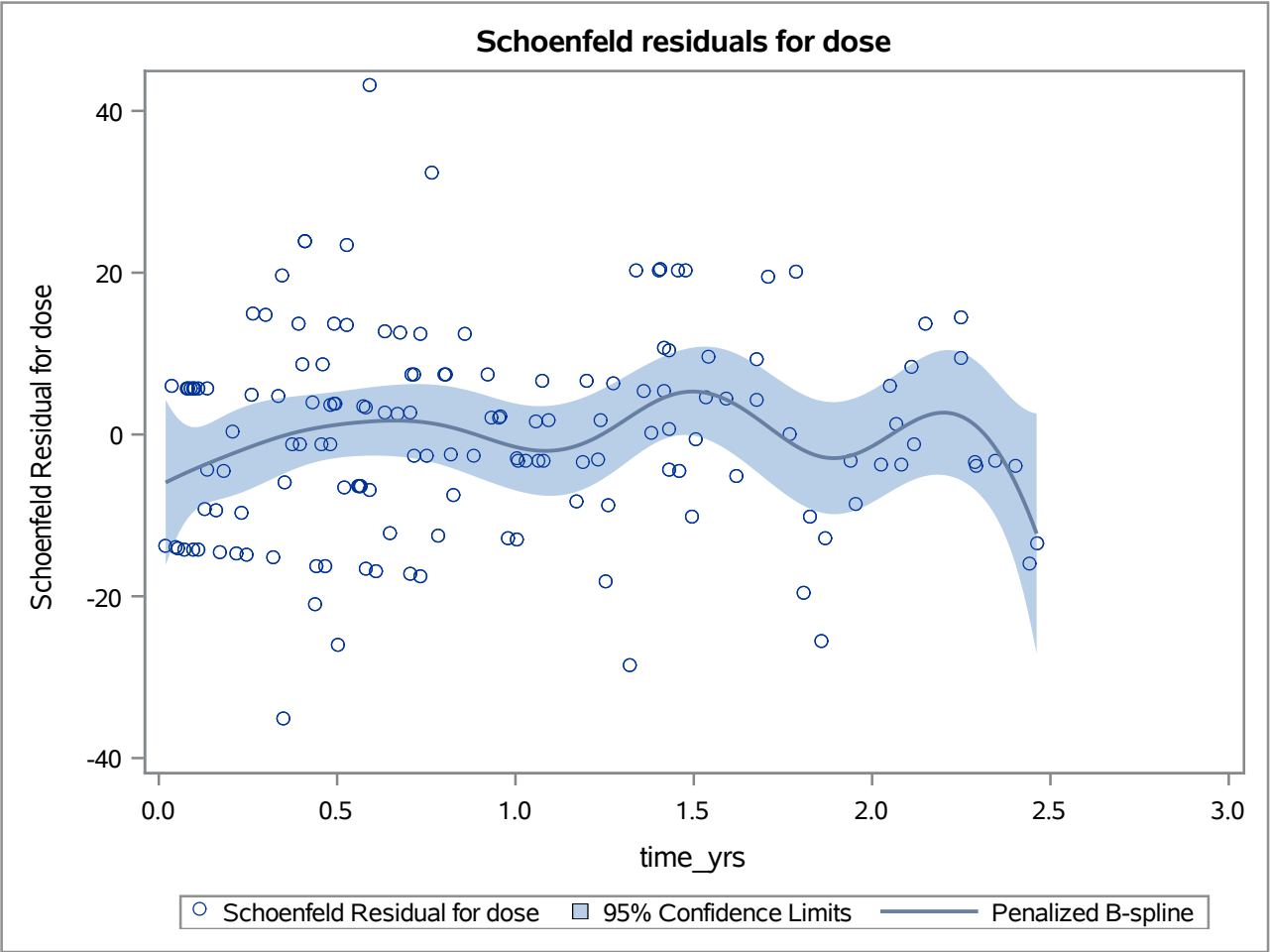
Model Fit Statistics		
Criterion	Without Covariates	With Covariates
-2 LOG L	1411.324	1346.805
AIC	1411.324	1352.805
SBC	1411.324	1361.837

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	64.5190	3	<.0001
Score	56.2730	3	<.0001
Wald	54.0906	3	<.0001

Analysis of Maximum Likelihood Estimates						
Parameter	DF	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq	Hazard Ratio
clinic	1	-1.00876	0.21486	22.0419	<.0001	0.365
prison	1	0.32650	0.16722	3.8123	0.0509	1.386
dose	1	-0.03540	0.00638	30.7844	<.0001	0.965







Obs	time_yrs	clinic	prison	status	dose
1	0.005476	1	0	.	60
2	0.005476	1	1	.	60
3	0.005476	2	0	.	60
4	0.005476	2	1	.	60
5	0.005476	1	0	.	60
6	0.005476	1	1	.	60
7	0.005476	2	0	.	60
8	0.005476	2	1	.	60
9	0.019165	1	0	.	60
10	0.019165	1	1	.	60

The PHREG Procedure

Model Information	
Data Set	WORK.AUGMENT
Dependent Variable	time_yrs
Censoring Variable	status
Censoring Value(s)	0
Ties Handling	BRESLOW

Number of Observations Read	1190
Number of Observations Used	238

Summary of the Number of Event and Censored Values					
Stratum	clinic	Total	Event	Censored	Percent Censored
1	1	163	122	41	25.15
2	2	75	28	47	62.67
Total		238	150	88	36.97

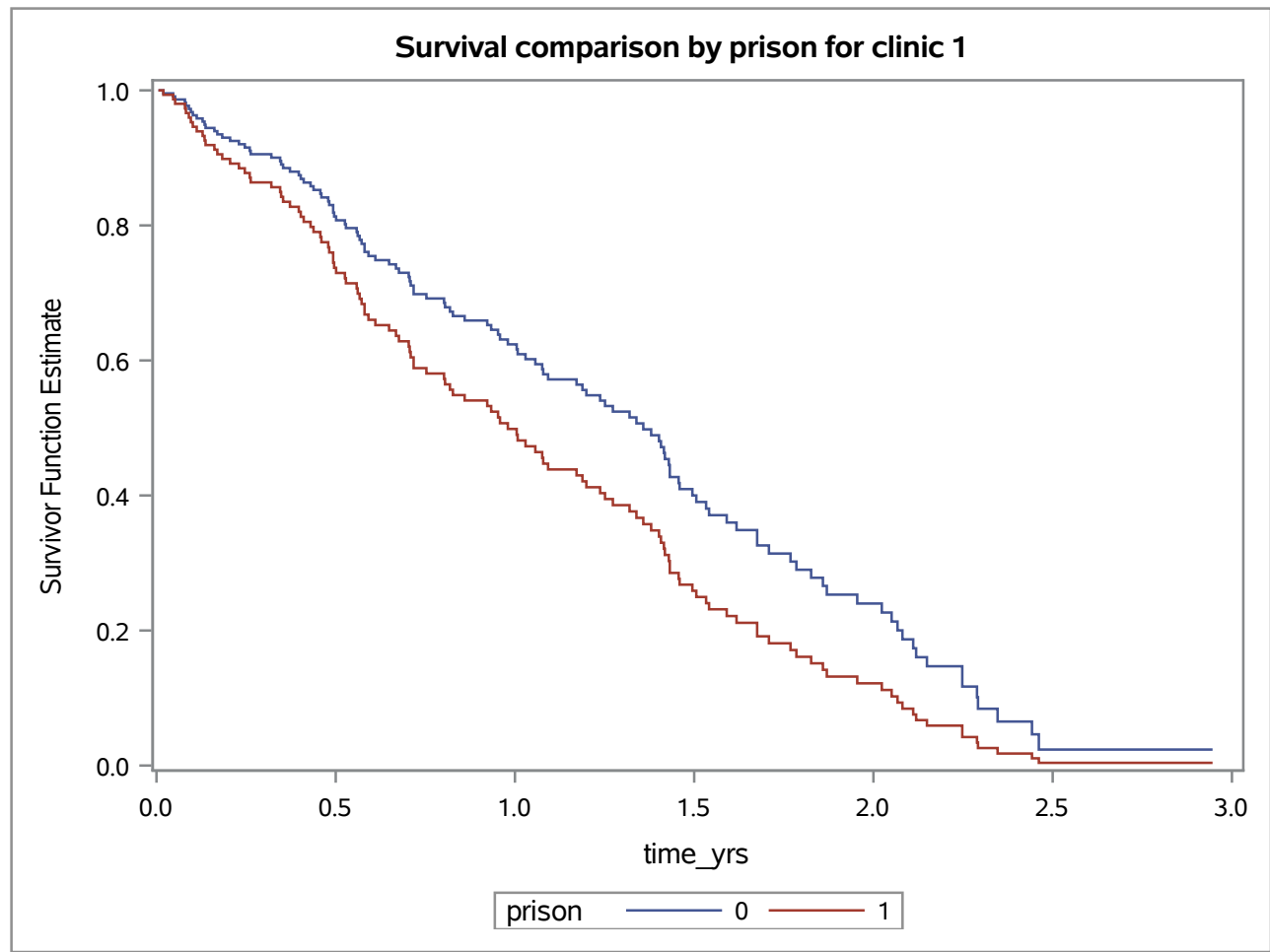
Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

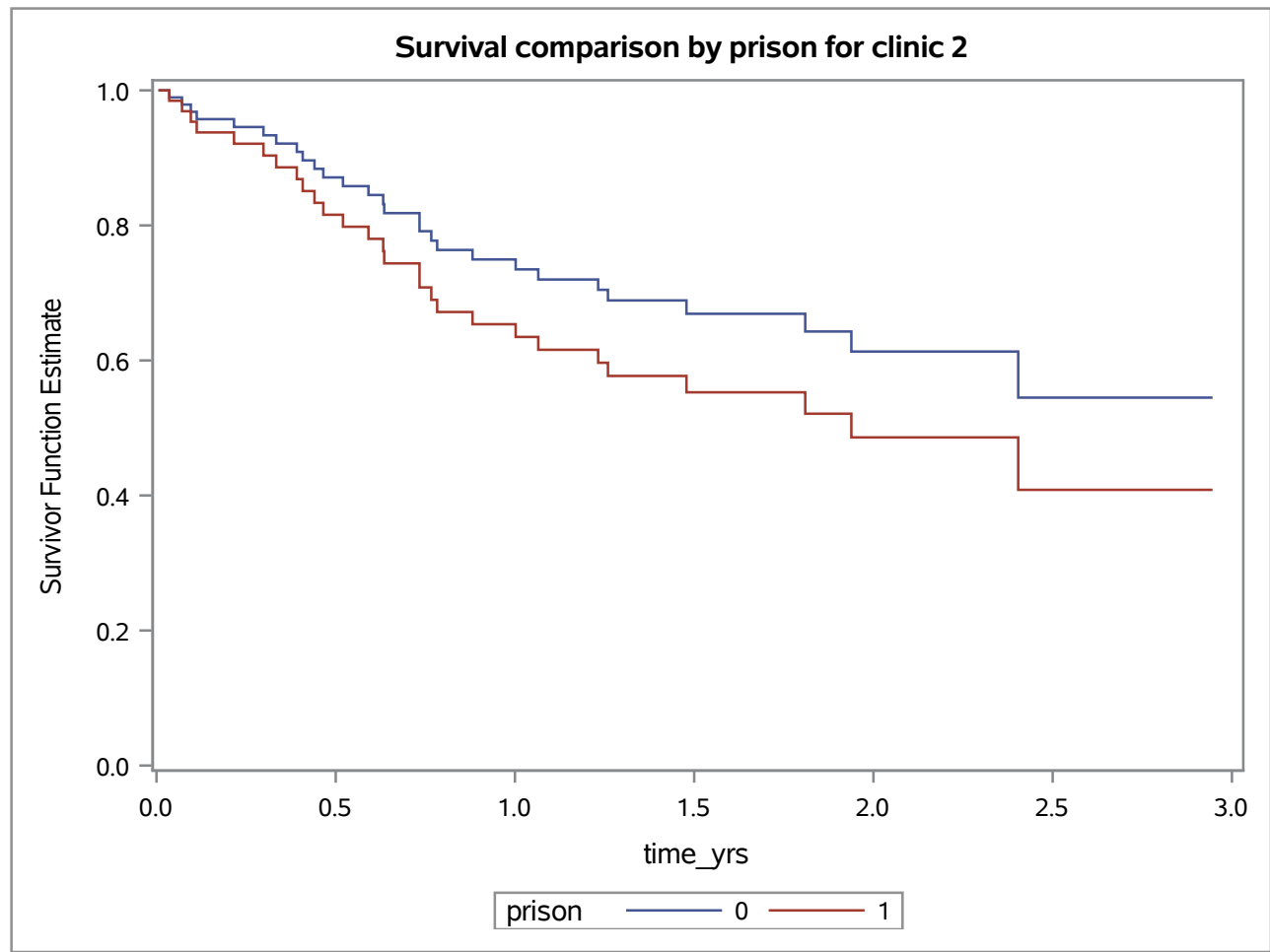
Model Fit Statistics		
Criterion	Without Covariates	With Covariates
-2 LOG L	1229.367	1195.428
AIC	1229.367	1199.428
SBC	1229.367	1205.449

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	33.9393	2	<.0001
Score	33.3628	2	<.0001
Wald	32.6858	2	<.0001

Analysis of Maximum Likelihood Estimates						
Parameter	DF	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq	Hazard Ratio
prison	1	0.38877	0.16892	5.2974	0.0214	1.475
dose	1	-0.03514	0.00647	29.5471	<.0001	0.965

Obs	time_yrs	clinic	prison	status	dose	id	time	s
1	.005475702	1	0	.	60	.	.	1
2	.005475702	1	1	.	60	.	.	1
3	.005475702	2	0	.	60	.	.	1
4	.005475702	2	1	.	60	.	.	1
5	.005475702	1	0	.	60	.	.	1





Survival comparison by prison for clinic 2

The PHREG Procedure

Model Information	
Data Set	SURVIVAL.HEROIN
Dependent Variable	time_yrs
Censoring Variable	status
Censoring Value(s)	0
Ties Handling	BRESLOW

Number of Observations Read	238
Number of Observations Used	238

Summary of the Number of Event and Censored Values			
Total	Event	Censored	Percent Censored
238	150	88	36.97

Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Without Covariates	With Covariates
-2 LOG L	1411.324	1335.283
AIC	1411.324	1343.283
SBC	1411.324	1355.326

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	76.0407	4	<.0001
Score	66.9784	4	<.0001
Wald	57.7290	4	<.0001

Analysis of Maximum Likelihood Estimates						
Parameter	DF	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq	Hazard Ratio
clinic	1	0.01829	0.34720	0.0028	0.9580	1.018
prison	1	0.38964	0.16887	5.3239	0.0210	1.476
dose	1	-0.03522	0.00644	29.8837	<.0001	0.965
clinic_by_time	1	-1.10141	0.34534	10.1718	0.0014	0.332

Obs	birth_dt	accept_dt	tx_date	fu_date	fustat	surgery	age	futime	wait_time
1	1937-01-10	1967-11-15		1968-01-03	1	0	30.8446	49	.
2	1916-03-02	1968-01-02		1968-01-07	1	0	51.8357	5	.
3	1913-09-19	1968-01-06	1968-01-06	1968-01-21	1	0	54.2971	15	0
4	1927-12-23	1968-03-28	1968-05-02	1968-05-05	1	0	40.2628	38	35
5	1947-07-28	1968-05-10		1968-05-27	1	0	20.7858	17	.
6	1913-11-08	1968-06-13		1968-06-15	1	0	54.5955	2	.
7	1917-08-29	1968-07-12	1968-08-31	1970-05-17	1	0	50.8693	674	50
8	1923-03-27	1968-08-01		1968-09-09	1	0	45.3498	39	.
9	1921-06-11	1968-08-09		1968-11-01	1	0	47.1622	84	.
10	1926-02-09	1968-08-11	1968-08-22	1968-10-07	1	0	42.5024	57	11

Obs	transplant	mismatch	hla_a2	mscore	reject
1	0	.	.	.	.
2	0	.	.	.	.
3	1	2	0	1.11	0
4	1	3	0	1.66	0
5	0	.	.	.	.
6	0	.	.	.	.
7	1	4	0	1.32	1
8	0	.	.	.	.
9	0	.	.	.	.
10	1	2	0	0.61	1

Obs	id	start	stop	event	transplant	age	year	surgery
1	1	0	49	1	0	-17.1554	0.12320	0
2	2	0	5	1	0	3.8357	0.25462	0
3	3	0	15	1	1	6.2971	0.26557	0
4	4	0	35	0	0	-7.7372	0.49008	0
5	4	35	38	1	1	-7.7372	0.49008	0
6	5	0	17	1	0	-27.2142	0.60780	0
7	6	0	2	1	0	6.5955	0.70089	0
8	7	0	50	0	0	2.8693	0.78029	0
9	7	50	674	1	1	2.8693	0.78029	0
10	8	0	39	1	0	-2.6502	0.83504	0

Obs	id	start	stop	event	transplant
1	1	0	49	1	0
2	2	0	5	1	0
3	3	0	15	1	1
4	4	0	35	0	0
5	4	35	38	1	1
6	5	0	17	1	0
7	6	0	2	1	0
8	7	0	50	0	0
9	7	50	674	1	1
10	8	0	39	1	0

The PHREG Procedure

Model Information	
Data Set	SURVIVAL.TRANSPLANT1
Dependent Variable	futime
Censoring Variable	fustat
Censoring Value(s)	0
Ties Handling	BRESLOW

Number of Observations Read	103
Number of Observations Used	103

Summary of the Number of Event and Censored Values			
Total	Event	Censored	Percent Censored
103	75	28	27.18

Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Without Covariates	With Covariates
-2 LOG L	596.651	551.188
AIC	596.651	557.188
SBC	596.651	564.141

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	45.4629	3	<.0001
Score	52.0469	3	<.0001
Wald	46.6680	3	<.0001

Analysis of Maximum Likelihood Estimates						
Parameter	DF	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq	Hazard Ratio
transplant	1	-1.70813	0.27860	37.5902	<.0001	0.181
age	1	0.05860	0.01505	15.1611	<.0001	1.060
surgery	1	-0.42130	0.37098	1.2896	0.2561	0.656

The PHREG Procedure

Model Information	
Data Set	SURVIVAL.TRANSPLANT1
Dependent Variable	futime
Censoring Variable	fustat
Censoring Value(s)	0
Ties Handling	BRESLOW

Number of Observations Read	103
Number of Observations Used	103

Summary of the Number of Event and Censored Values			
Total	Event	Censored	Percent Censored
103	75	28	27.18

Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Without Covariates	With Covariates
-2 LOG L	596.651	585.946
AIC	596.651	591.946
SBC	596.651	598.898

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	10.7056	3	0.0134
Score	9.9853	3	0.0187
Wald	9.6574	3	0.0217

Analysis of Maximum Likelihood Estimates						
Parameter	DF	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq	Hazard Ratio
transplant	1	-0.04744	0.30274	0.0246	0.8755	0.954
age	1	0.03108	0.01391	4.9886	0.0255	1.032
surgery	1	-0.76975	0.35961	4.5817	0.0323	0.463

Start/Stop version of time varying model

The PHREG Procedure

Model Information	
Data Set	SURVIVAL.TRANSPLANT2
Dependent Variable	start
Dependent Variable	stop
Censoring Variable	event
Censoring Value(s)	0
Ties Handling	BRESLOW

Number of Observations Read	170
Number of Observations Used	170

Summary of the Number of Event and Censored Values			
Total	Event	Censored	Percent Censored
170	75	95	55.88

Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Without Covariates	With Covariates
-2 LOG L	596.651	585.968
AIC	596.651	591.968
SBC	596.651	598.921

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	10.6827	3	0.0136
Score	9.9683	3	0.0188
Wald	9.6451	3	0.0218

Analysis of Maximum Likelihood Estimates						
Parameter	DF	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq	Hazard Ratio
transplant	1	0.01238	0.30815	0.0016	0.9680	1.012
age	1	0.03055	0.01390	4.8317	0.0279	1.031
surgery	1	-0.77154	0.35967	4.6016	0.0319	0.462