

TABLE S1 AGAIG, SD=0, ME=0, Estimated betas

		Linreg	MSS	LRSOE	MiniPred	Mini+alg
Sensitivity						
	Mean (95% CI)	94.4% (93.5%, 95.2%)	94.7% (93.8%, 95.5%)	97.8% (97.2%, 98.3%)	100% (99.9%, 100%)	100% (99.9%, 100%)
Efficiency						
	Mean (95% CI)	74% (73.6%, 74.4%)	69.9% (69.5%, 70.3%)	71.2% (70.8%, 71.6%)	83.3% (83%, 83.6%)	60.3% (59.9%, 60.7%)
	Median (Q1, Q3)	74% (72%, 76%)	71% (67%, 73%)	71% (69%, 74%)	84% (82%, 85%)	61% (52%, 69%)
	Min, Max	67%, 79%	52%, 79%	58%, 79%	76%, 89%	28%, 86%
Rounds						
	Mean (95% CI)	3.1 (3, 3.1)	3.7 (3.6, 3.8)	2.3 (2.2, 2.3)	3 (2.9, 3.1)	9.9 (9.7, 10)
	Median (Q1, Q3)	3 (3, 4)	4 (3, 4)	2 (2, 3)	3 (3, 3)	10 (9, 11)
	Min, Max	2, 6	2, 7	2, 3	2, 5	3, 11

TABLE S2 AGAIG, SD=0, ME=0.025, Estimated betas

		Linreg	MSS	LRSOE	MiniPred	Mini+alg
Sensitivity						
	Mean (95% CI)	90.9% (89.8%, 91.9%)	90.6% (89.5%, 91.6%)	95.6% (94.8%, 96.3%)	97.5% (96.8%, 98%)	97.3% (96.7%, 97.9%)
Efficiency						
	Mean (95% CI)	73.4% (73%, 73.8%)	69.2% (68.7%, 69.6%)	70.8% (70.4%, 71.2%)	81.4% (81%, 81.7%)	60.2% (59.8%, 60.6%)
	Median (Q1, Q3)	74% (72%, 76%)	70% (66%, 74%)	71% (68%, 74%)	83% (80%, 85%)	60% (53%, 68%)
	Min, Max	46%, 79%	31%, 79%	58%, 79%	54%, 89%	24%, 86%
Rounds						
	Mean (95% CI)	3.3 (3.2, 3.4)	3.8 (3.7, 3.9)	2.4 (2.3, 2.4)	4.4 (4.1, 4.7)	10 (9.8, 10.1)
	Median (Q1, Q3)	3 (3, 4)	4 (3, 5)	2 (2, 3)	3 (3, 4)	11 (9, 11)
	Min, Max	2, 9	2, 11	2, 4	2, 11	3, 11

TABLE S3 AGAIG, SD=0, ME=0.05, Estimated betas

		Linreg	MSS	LRSOE	MiniPred	Mini+alg
Sensitivity						
	Mean (95% CI)	88.1% (86.9%, 89.2%)	87.1% (85.8%, 88.3%)	92.9% (91.9%, 93.8%)	94.6% (93.7%, 95.3%)	94.8% (94%, 95.6%)
Efficiency						
	Mean (95% CI)	72.9% (72.5%, 73.3%)	68.7% (68.3%, 69.1%)	70.7% (70.3%, 71.1%)	79.6% (79.2%, 80%)	59.5% (59.1%, 60%)
	Median (Q1, Q3)	74% (71%, 76%)	70% (65%, 73%)	71% (68%, 74%)	82% (76%, 85%)	60% (52%, 67%)
	Min, Max	39%, 80%	31%, 80%	51%, 80%	47%, 89%	24%, 86%
Rounds						
	Mean (95% CI)	3.6 (3.5, 3.7)	3.9 (3.8, 4.1)	2.4 (2.4, 2.5)	5.3 (4.9, 5.6)	10 (9.9, 10.2)
	Median (Q1, Q3)	3 (3, 4)	4 (3, 5)	2 (2, 3)	3 (3, 11)	11 (10, 11)
	Min, Max	1, 12	1, 11	1, 5	2, 11	3, 11

TABLE S4 AGAIG, SD=0, ME=0.075, Estimated betas

		Linreg	MSS	LRSOE	MiniPred	Mini+alg
Sensitivity						
	Mean (95% CI)	84.5% (83.2%, 85.8%)	83.4% (82%, 84.7%)	90.4% (89.3%, 91.4%)	91.8% (90.7%, 92.7%)	92.2% (91.2%, 93.1%)
Efficiency						
	Mean (95% CI)	72.7% (72.3%, 73.1%)	68.4% (68%, 68.8%)	70.6% (70.2%, 71%)	78.2% (77.8%, 78.5%)	59.1% (58.6%, 59.5%)
	Median (Q1, Q3)	73% (71%, 76%)	70% (65%, 74%)	71% (68%, 74%)	82% (74%, 85%)	60% (51%, 67%)
	Min, Max	39%, 80%	27%, 80%	51%, 80%	33%, 89%	21%, 86%
Rounds						
	Mean (95% CI)	3.7 (3.6, 3.8)	4 (3.8, 4.1)	2.4 (2.4, 2.5)	5.8 (5.4, 6.1)	10 (9.9, 10.2)
	Median (Q1, Q3)	3 (3, 4)	4 (3, 5)	2 (2, 3)	3 (3, 11)	11 (10, 11)
	Min, Max	1, 12	1, 13	1, 6	2, 11	3, 11

TABLE S5 AGAIG, SD=0, ME=0.1, Estimated betas

		Linreg	MSS	LRSOE	MiniPred	Mini+alg
Sensitivity	Mean (95% CI)	81.9% (80.4%, 83.2%)	80.7% (79.3%, 82.1%)	87.7% (86.5%, 88.9%)	89.1% (87.9%, 90.2%)	90% (88.9%, 91.1%)
	Efficiency					
Efficiency	Mean (95% CI)	72.4% (72%, 72.8%)	68.2% (67.8%, 68.6%)	70.4% (70%, 70.8%)	76.5% (76.1%, 76.9%)	58.3% (57.9%, 58.8%)
	Median (Q1, Q3)	73% (71%, 76%)	70% (65%, 74%)	71% (68%, 74%)	82% (72%, 85%)	60% (49.8%, 68%)
	Min, Max	39%, 80%	23%, 80%	48%, 80%	19%, 89%	14%, 88%
Rounds	Mean (95% CI)	3.8 (3.7, 4)	4 (3.9, 4.2)	2.5 (2.4, 2.5)	6.2 (5.9, 6.6)	10.1 (9.9, 10.2)
	Median (Q1, Q3)	3 (3, 5)	4 (3, 5)	2 (2, 3)	3 (2, 11)	11 (10, 11)
	Min, Max	1, 12	1, 13	1, 6	2, 11	3, 11

TABLE S6 AGAIG, SD=0, ME=0.125, Estimated betas

		Linreg	MSS	LRSOE	MiniPred	Mini+alg
Sensitivity	Mean (95% CI)	79.9% (78.4%, 81.3%)	78.7% (77.2%, 80.1%)	86.4% (85.1%, 87.6%)	87.3% (86%, 88.4%)	88.1% (86.9%, 89.2%)
	Efficiency					
Efficiency	Mean (95% CI)	72.1% (71.7%, 72.5%)	67.9% (67.5%, 68.3%)	70.2% (69.8%, 70.6%)	75.2% (74.8%, 75.5%)	57.9% (57.5%, 58.3%)
	Median (Q1, Q3)	73% (70%, 76%)	70% (64%, 74%)	71% (68%, 74%)	82% (68%, 85%)	60% (48%, 69%)
	Min, Max	39%, 80%	23%, 80%	41%, 80%	10%, 89%	8%, 88%
Rounds	Mean (95% CI)	4 (3.8, 4.1)	4 (3.9, 4.2)	2.5 (2.4, 2.6)	6.4 (6.1, 6.8)	10 (9.9, 10.2)
	Median (Q1, Q3)	4 (2, 5)	4 (3, 5)	2 (2, 3)	4 (2, 11)	11 (10, 11)
	Min, Max	1, 12	1, 13	1, 7	2, 11	3, 11

TABLE S7 AGAIG, SD=0, ME=0.15, Estimated betas

		Linreg	MSS	LRSOE	MiniPred	Mini+alg
Sensitivity						
	Mean (95% CI)	77.8% (76.3%, 79.3%)	76.6% (75%, 78.1%)	84.9% (83.6%, 86.2%)	85.8% (84.5%, 87%)	86.3% (85.1%, 87.5%)
Efficiency						
	Mean (95% CI)	71.7% (71.3%, 72.1%)	67.5% (67.1%, 67.9%)	69.9% (69.5%, 70.3%)	74% (73.6%, 74.4%)	57.6% (57.1%, 58%)
	Median (Q1, Q3)	73% (70%, 76%)	70% (64%, 74%)	71% (67%, 74%)	81% (67%, 85%)	60% (48%, 69%)
	Min, Max	25%, 80%	23%, 80%	29%, 80%	0%, 89%	0%, 88%
Rounds						
	Mean (95% CI)	4.1 (4, 4.3)	4.1 (3.9, 4.3)	2.5 (2.5, 2.6)	6.6 (6.3, 7)	10 (9.9, 10.2)
	Median (Q1, Q3)	4 (2, 5)	4 (3, 5)	2 (2, 3)	4 (2, 11)	11 (10, 11)
	Min, Max	1, 15	1, 13	1, 8	2, 11	3, 11

TABLE S8 AGAIG, SD=0, ME=0.175, Estimated betas

		Linreg	MSS	LRSOE	MiniPred	Mini+alg
Sensitivity						
	Mean (95% CI)	75.3% (73.7%, 76.8%)	74% (72.4%, 75.6%)	82.5% (81.1%, 83.8%)	83.8% (82.4%, 85.1%)	84.7% (83.4%, 86%)
Efficiency						
	Mean (95% CI)	71.5% (71.1%, 71.9%)	67.4% (67%, 67.8%)	69.8% (69.4%, 70.2%)	72.9% (72.6%, 73.3%)	57.2% (56.8%, 57.7%)
	Median (Q1, Q3)	73.5% (69%, 76%)	70% (63%, 74%)	71% (67%, 74%)	79% (65%, 85%)	59% (47%, 70%)
	Min, Max	25%, 80%	23%, 80%	29%, 80%	0%, 89%	0%, 88%
Rounds						
	Mean (95% CI)	4.3 (4, 4.5)	4.1 (3.9, 4.3)	2.6 (2.5, 2.7)	6.8 (6.5, 7.2)	10 (9.9, 10.2)
	Median (Q1, Q3)	4 (2, 6)	4 (3, 5)	2 (2, 3)	11 (2, 11)	11 (10, 11)
	Min, Max	1, 15	1, 13	1, 8	2, 11	3, 11

TABLE S9 AGAIG, SD=0, ME=0.2, Estimated betas

		Linreg	MSS	LRSOE	MiniPred	Mini+alg
Sensitivity	Mean (95% CI)	73.5% (71.9%, 75%)	71.9% (70.3%, 73.5%)	80.7% (79.2%, 82.1%)	82.2% (80.8%, 83.5%)	83.1% (81.7%, 84.4%)
	Efficiency					
Efficiency	Mean (95% CI)	71.3% (70.9%, 71.6%)	67.2% (66.8%, 67.6%)	69.6% (69.2%, 70%)	71.9% (71.5%, 72.3%)	56.9% (56.5%, 57.3%)
	Median (Q1, Q3)	74% (69%, 76%)	70% (63%, 74%)	71% (67%, 74%)	77% (65%, 85%)	59% (45%, 70%)
	Min, Max	24%, 80%	23%, 80%	29%, 80%	0%, 89%	0%, 88%
Rounds	Mean (95% CI)	4.4 (4.1, 4.6)	4.2 (4, 4.3)	2.6 (2.5, 2.7)	7 (6.7, 7.4)	10 (9.8, 10.1)
	Median (Q1, Q3)	4 (2, 6)	4 (3, 5)	2 (2, 3)	11 (2, 11)	11 (9, 11)
	Min, Max	1, 15	1, 13	1, 7	2, 11	2, 11

TABLE S10 AGAIG, SD=0, ME=0.225, Estimated betas

		Linreg	MSS	LRSOE	MiniPred	Mini+alg
Sensitivity	Mean (95% CI)	71.2% (69.6%, 72.8%)	70.2% (68.6%, 71.8%)	78.7% (77.2%, 80.2%)	80.7% (79.3%, 82.1%)	81.7% (80.3%, 83%)
	Efficiency					
Efficiency	Mean (95% CI)	71% (70.6%, 71.4%)	67.1% (66.7%, 67.5%)	69.3% (68.9%, 69.7%)	70.9% (70.5%, 71.3%)	56.7% (56.3%, 57.2%)
	Median (Q1, Q3)	73% (69%, 76%)	70% (62.8%, 74%)	71% (66.8%, 74%)	77% (63%, 86%)	59% (45%, 71%)
	Min, Max	24%, 80%	23%, 80%	29%, 80%	0%, 89%	0%, 88%
Rounds	Mean (95% CI)	4.5 (4.3, 4.7)	4.2 (4, 4.4)	2.7 (2.6, 2.7)	7.1 (6.7, 7.5)	9.9 (9.8, 10.1)
	Median (Q1, Q3)	4 (2, 6)	4 (3, 5)	2 (2, 3)	11 (2, 11)	11 (9, 11)
	Min, Max	1, 15	1, 13	1, 7	2, 11	2, 11

TABLE S11 AGAIG, SD=0, ME=0.25, Estimated betas

		Linreg	MSS	LRSOE	MiniPred	Mini+alg
Sensitivity	Mean (95% CI)	69.5% (67.9%, 71.1%)	68.5% (66.9%, 70.2%)	76.4% (74.8%, 77.9%)	79.2% (77.8%, 80.6%)	80.5% (79.1%, 81.9%)
	Efficiency					
Efficiency	Mean (95% CI)	70.8% (70.4%, 71.2%)	67% (66.5%, 67.4%)	69% (68.6%, 69.4%)	70.3% (69.9%, 70.7%)	56.7% (56.3%, 57.1%)
	Median (Q1, Q3)	73.5% (68%, 77%)	70% (63%, 74%)	71% (66%, 74%)	76% (59%, 86%)	60% (44%, 71%)
	Min, Max	22%, 80%	23%, 80%	25%, 80%	0%, 90%	0%, 90%
Rounds						
	Mean (95% CI)	4.6 (4.3, 4.8)	4.2 (4, 4.4)	2.7 (2.6, 2.8)	7.2 (6.8, 7.5)	9.9 (9.7, 10)
	Median (Q1, Q3)	4 (2, 6)	4 (3, 5)	2 (2, 3)	11 (2, 11)	11 (9, 11)
	Min, Max	1, 16	1, 14	1, 8	1, 11	1, 11

TABLE S12 AGAIG, SD=0, ME=0.5, Estimated betas

		Linreg	MSS	LRSOE	MiniPred	Mini+alg
Sensitivity	Mean (95% CI)	54% (52.2%, 55.8%)	53.2% (51.4%, 55%)	61.1% (59.3%, 62.8%)	69.1% (67.4%, 70.8%)	69.7% (68.1%, 71.4%)
	Efficiency					
Efficiency	Mean (95% CI)	70% (69.6%, 70.4%)	67.3% (66.9%, 67.7%)	68.3% (67.8%, 68.7%)	66.2% (65.8%, 66.6%)	56.3% (55.8%, 56.7%)
	Median (Q1, Q3)	75% (67%, 78%)	72% (62.8%, 75%)	71% (65%, 75%)	76% (49%, 87%)	60% (40%, 77%)
	Min, Max	7%, 80%	4%, 80%	7%, 80%	-10%, 90%	-10%, 90%
Rounds						
	Mean (95% CI)	4.8 (4.5, 5.1)	4.1 (3.9, 4.4)	2.8 (2.7, 3)	7.3 (6.9, 7.6)	9.4 (9.2, 9.7)
	Median (Q1, Q3)	4 (2, 7)	3 (2, 6)	2 (2, 3)	11 (2, 11)	11 (9, 11)
	Min, Max	1, 20	1, 17	1, 9	1, 11	1, 11

TABLE S13 AGAIG, SD=0, ME=0.75, Estimated betas

		Linreg	MSS	LRSOE	MiniPred	Mini+alg
Sensitivity						
	Mean (95% CI)	43.9% (42.1%, 45.6%)	43.6% (41.8%, 45.4%)	49.5% (47.8%, 51.3%)	62.1% (60.4%, 63.8%)	62.3% (60.6%, 64%)
Efficiency						
	Mean (95% CI)	69.6% (69.2%, 70%)	67.6% (67.2%, 68%)	68% (67.6%, 68.4%)	64% (63.5%, 64.4%)	55.9% (55.4%, 56.3%)
	Median (Q1, Q3)	76% (65%, 79%)	74% (62%, 78%)	72% (64%, 78%)	76% (45.8%, 88%)	61% (35.8%, 81%)
	Min, Max	-2%, 80%	-4%, 80%	-2%, 80%	-10%, 90%	-10%, 90%
Rounds						
	Mean (95% CI)	4.9 (4.5, 5.2)	4 (3.7, 4.3)	2.8 (2.6, 2.9)	7.1 (6.7, 7.5)	8.8 (8.5, 9.1)
	Median (Q1, Q3)	3 (2, 7)	3 (2, 6)	2 (2, 4)	11 (2, 11)	11 (7, 11)
	Min, Max	1, 24	1, 19	1, 10	1, 11	1, 11

