

Table S2 Computed sample size, estimated power, and simulated power for Normal predictors with  $\{\beta_L, \beta_S\} = \{0.5, 1.5\}$ ,  $\{\beta_{l0}, \beta_{s0}\} = \{0, 1\}$ ,  $\sigma^2 = 1$ , Type I error  $\alpha = 0.05$ , and nominal power  $1 - \beta = 0.90$

$\mu_X$	$\sigma_X^2$	$N$	Simulated power	Exact approach		Approximate method	
				Estimated power	Error	Estimated power	Error
0	0.5	39	0.9064	0.9066	0.0002	0.7698	-0.1366
	1	31	0.9048	0.9083	0.0035	0.6542	-0.2506
	2	22	0.8988	0.9001	0.0013	0.4805	-0.4183
0.5	0.5	23	0.9049	0.9100	0.0051	0.8583	-0.0466
	1	20	0.9026	0.9016	-0.0010	0.7931	-0.1095
	2	17	0.9101	0.9076	-0.0025	0.7053	-0.2048
1	0.5	15	0.8964	0.9020	0.0056	0.8768	-0.0196
	1	15	0.9210	0.9215	0.0005	0.8768	-0.0442
	2	13	0.9066	0.9062	-0.0004	0.8059	-0.1007