

**Power calculations for Linear Response (Y) vs Continuous Predictor (X)**

**Entries are partial correlations detectable with specified power**

**Statistical significance threshold (alpha) per test**

	<b>Sample</b>		<b>1 test</b>	<b>10</b>	<b>100</b>	<b>1000</b>	<b>10K</b>	<b>100K</b>	<b>1M</b>
<b>Power</b>	<b>Percent</b>	<b>N</b>	<b>5.00E-02</b>	<b>5.00E-03</b>	<b>5.00E-04</b>	<b>5.00E-05</b>	<b>5.00E-06</b>	<b>5.00E-07</b>	<b>5.00E-08</b>
0.8	100	1185	0.082	0.106	0.126	0.142	0.157	0.170	0.182
0.8	75	889	0.094	0.123	0.145	0.164	0.181	0.196	0.210
0.8	50	593	0.116	0.150	0.178	0.201	0.221	0.239	0.256
0.8	25	296	0.165	0.213	0.251	0.283	0.311	0.335	0.357
0.9	100	1185	0.094	0.119	0.138	0.155	0.169	0.182	0.194
0.9	75	889	0.109	0.137	0.160	0.178	0.195	0.210	0.224
0.9	50	593	0.134	0.168	0.195	0.218	0.238	0.256	0.273
0.9	25	296	0.190	0.238	0.276	0.307	0.334	0.358	0.380

Power calculations for Binary Response (Y=0,1) vs Continuous Predictor (X)										
Entries are Odds Ratios per 1 SD(X) detectable with specified power										
Statistical significance threshold (alpha) per test										
	Sample		Response	1 test	10	100	1000	10K	100K	1M
Power	Percent	N	Probability	5.00E-02	5.00E-03	5.00E-04	5.00E-05	5.00E-06	5.00E-07	5.00E-08
0.8	100	1185	0.1	1.37	1.50	1.62	1.73	1.83	1.93	2.02
0.8	100	1185	0.2	1.26	1.36	1.44	1.51	1.57	1.64	1.70
0.8	100	1185	0.3	1.23	1.31	1.37	1.43	1.49	1.54	1.59
0.8	75	889	0.1	1.44	1.60	1.75	1.88	2.01	2.13	2.25
0.8	75	889	0.2	1.31	1.42	1.52	1.61	1.69	1.77	1.84
0.8	75	889	0.3	1.27	1.36	1.44	1.51	1.58	1.64	1.70
0.8	50	593	0.1	1.56	1.78	1.98	2.17	2.35	2.53	2.70
0.8	50	593	0.2	1.39	1.54	1.67	1.79	1.90	2.01	2.11
0.8	50	593	0.3	1.34	1.46	1.56	1.66	1.75	1.84	1.92
0.8	25	296	0.1	1.87	2.26	2.63	2.99	3.35	3.71	4.08
0.8	25	296	0.2	1.60	1.84	2.06	2.27	2.48	2.68	2.87
0.8	25	296	0.3	1.51	1.71	1.88	2.05	2.21	2.36	2.51
0.9	100	1185	0.1	1.44	1.58	1.70	1.82	1.92	2.02	2.12
0.9	100	1185	0.2	1.31	1.41	1.49	1.56	1.63	1.70	1.76
0.9	100	1185	0.3	1.27	1.35	1.42	1.48	1.53	1.59	1.64
0.9	75	889	0.1	1.52	1.70	1.85	1.99	2.13	2.26	2.39
0.9	75	889	0.2	1.37	1.49	1.59	1.68	1.76	1.84	1.92
0.9	75	889	0.3	1.32	1.41	1.50	1.57	1.64	1.70	1.77
0.9	50	593	0.1	1.67	1.91	2.12	2.33	2.52	2.71	2.90
0.9	50	593	0.2	1.47	1.62	1.76	1.88	2.00	2.11	2.22
0.9	50	593	0.3	1.40	1.53	1.64	1.74	1.83	1.92	2.01
0.9	25	296	0.1	2.06	2.50	2.90	3.30	3.70	4.10	4.51
0.9	25	296	0.2	1.72	1.99	2.22	2.45	2.67	2.88	3.09
0.9	25	296	0.3	1.61	1.82	2.01	2.18	2.35	2.52	2.68

Assumes that 25% of Var(X) is explained by covariates.

Reference: Hsieh, Block and Larson, Stat Med, 1998.

		Power calculations for (Event, time to event) vs Continuous Predictor (X)									
		Entries are Hazards Ratios per 1 SD(X) detectable with specified power									
		Statistical significance threshold (alpha) per test									
	Sample		Event	Expected	1 test	10	100	1000	10K	100K	1M
Power	Percent	N	Probability	Events (d)	5.00E-02	5.00E-03	5.00E-04	5.00E-05	5.00E-06	5.00E-07	5.00E-08
0.8	100	1185	0.04	47	1.60	1.84	2.06	2.27	2.48	2.68	2.87
0.8	100	1185	0.07	83	1.43	1.59	1.73	1.86	1.98	2.10	2.22
0.8	100	1185	0.10	119	1.35	1.47	1.58	1.68	1.77	1.86	1.95
0.8	75	889	0.04	36	1.72	2.03	2.31	2.58	2.85	3.12	3.38
0.8	75	889	0.07	62	1.51	1.71	1.88	2.05	2.21	2.36	2.51
0.8	75	889	0.10	89	1.41	1.56	1.70	1.82	1.94	2.05	2.16
0.8	50	593	0.04	24	1.94	2.38	2.79	3.19	3.61	4.02	4.45
0.8	50	593	0.07	41	1.65	1.92	2.17	2.41	2.64	2.86	3.09
0.8	50	593	0.10	59	1.52	1.73	1.91	2.08	2.25	2.41	2.57
0.8	25	296	0.04	12	2.56	3.40	4.26	5.17	6.13	7.16	8.26
0.8	25	296	0.07	21	2.03	2.52	2.99	3.46	3.94	4.43	4.93
0.8	25	296	0.10	30	1.81	2.17	2.50	2.83	3.15	3.47	3.80
0.9	100	1185	0.04	47	1.72	1.99	2.22	2.45	2.67	2.88	3.09
0.9	100	1185	0.07	83	1.51	1.68	1.83	1.97	2.10	2.22	2.35
0.9	100	1185	0.10	119	1.41	1.54	1.66	1.76	1.86	1.95	2.04
0.9	75	889	0.04	36	1.87	2.21	2.52	2.81	3.10	3.39	3.68
0.9	75	889	0.07	62	1.61	1.82	2.01	2.18	2.35	2.52	2.68
0.9	75	889	0.10	89	1.49	1.65	1.79	1.92	2.05	2.17	2.28
0.9	50	593	0.04	24	2.16	2.64	3.09	3.55	4.00	4.46	4.94
0.9	50	593	0.07	41	1.79	2.08	2.35	2.60	2.85	3.10	3.34
0.9	50	593	0.10	59	1.63	1.85	2.04	2.23	2.40	2.58	2.75
0.9	25	296	0.04	12	2.97	3.94	4.94	5.99	7.11	8.30	9.57
0.9	25	296	0.07	21	2.27	2.82	3.35	3.87	4.40	4.95	5.51
0.9	25	296	0.10	30	1.99	2.38	2.75	3.10	3.46	3.81	4.17

Assumes that 25% of Var(X) is explained by covariates.  
Reference: Hsieh and Lavori, Controlled Clinical Trials, 2000.

**Power calculations for Linear Response (Y) vs Continuous Predictor (X)**

**Entries are partial correlations detectable with specified power**

**Statistical significance threshold (alpha) per test**

	<b>Sample</b>		<b>1 test</b>	<b>10</b>	<b>100</b>	<b>1000</b>	<b>10K</b>	<b>100K</b>	<b>1M</b>
<b>Power</b>	<b>Percent</b>	<b>N</b>	<b>5.00E-02</b>	<b>5.00E-03</b>	<b>5.00E-04</b>	<b>5.00E-05</b>	<b>5.00E-06</b>	<b>5.00E-07</b>	<b>5.00E-08</b>
0.8	100	1185	0.082	0.106	0.126	0.142	0.157	0.170	0.182
0.8	75	889	0.094	0.123	0.145	0.164	0.181	0.196	0.210
0.8	50	593	0.116	0.150	0.178	0.201	0.221	0.239	0.256
0.8	25	296	0.165	0.213	0.251	0.283	0.311	0.335	0.357
0.9	100	1185	0.094	0.119	0.138	0.155	0.169	0.182	0.194
0.9	75	889	0.109	0.137	0.160	0.178	0.195	0.210	0.224
0.9	50	593	0.134	0.168	0.195	0.218	0.238	0.256	0.273
0.9	25	296	0.190	0.238	0.276	0.307	0.334	0.358	0.380

Power calculations for Binary Response (Y=0,1) vs Continuous Predictor (X)										
Entries are Odds Ratios per 1 SD(X) detectable with specified power										
Statistical significance threshold (alpha) per test										
	Sample		Response	1 test	10	100	1000	10K	100K	1M
Power	Percent	N	Probability	5.00E-02	5.00E-03	5.00E-04	5.00E-05	5.00E-06	5.00E-07	5.00E-08
0.8	100	1185	0.1	1.37	1.50	1.62	1.73	1.83	1.93	2.02
0.8	100	1185	0.2	1.26	1.36	1.44	1.51	1.57	1.64	1.70
0.8	100	1185	0.3	1.23	1.31	1.37	1.43	1.49	1.54	1.59
0.8	75	889	0.1	1.44	1.60	1.75	1.88	2.01	2.13	2.25
0.8	75	889	0.2	1.31	1.42	1.52	1.61	1.69	1.77	1.84
0.8	75	889	0.3	1.27	1.36	1.44	1.51	1.58	1.64	1.70
0.8	50	593	0.1	1.56	1.78	1.98	2.17	2.35	2.53	2.70
0.8	50	593	0.2	1.39	1.54	1.67	1.79	1.90	2.01	2.11
0.8	50	593	0.3	1.34	1.46	1.56	1.66	1.75	1.84	1.92
0.8	25	296	0.1	1.87	2.26	2.63	2.99	3.35	3.71	4.08
0.8	25	296	0.2	1.60	1.84	2.06	2.27	2.48	2.68	2.87
0.8	25	296	0.3	1.51	1.71	1.88	2.05	2.21	2.36	2.51
0.9	100	1185	0.1	1.44	1.58	1.70	1.82	1.92	2.02	2.12
0.9	100	1185	0.2	1.31	1.41	1.49	1.56	1.63	1.70	1.76
0.9	100	1185	0.3	1.27	1.35	1.42	1.48	1.53	1.59	1.64
0.9	75	889	0.1	1.52	1.70	1.85	1.99	2.13	2.26	2.39
0.9	75	889	0.2	1.37	1.49	1.59	1.68	1.76	1.84	1.92
0.9	75	889	0.3	1.32	1.41	1.50	1.57	1.64	1.70	1.77
0.9	50	593	0.1	1.67	1.91	2.12	2.33	2.52	2.71	2.90
0.9	50	593	0.2	1.47	1.62	1.76	1.88	2.00	2.11	2.22
0.9	50	593	0.3	1.40	1.53	1.64	1.74	1.83	1.92	2.01
0.9	25	296	0.1	2.06	2.50	2.90	3.30	3.70	4.10	4.51
0.9	25	296	0.2	1.72	1.99	2.22	2.45	2.67	2.88	3.09
0.9	25	296	0.3	1.61	1.82	2.01	2.18	2.35	2.52	2.68

Assumes that 25% of Var(X) is explained by covariates.

Reference: Hsieh, Block and Larson, Stat Med, 1998.

		Power calculations for (Event, time to event) vs Continuous Predictor (X)									
		Entries are Hazards Ratios per 1 SD(X) detectable with specified power									
		Statistical significance threshold (alpha) per test									
Power	Sample Percent	N	Event Probability	Expected Events (d)	1 test	10	100	1000	10K	100K	1M
					5.00E-02	5.00E-03	5.00E-04	5.00E-05	5.00E-06	5.00E-07	5.00E-08
0.8	100	1185	0.04	47	1.60	1.84	2.06	2.27	2.48	2.68	2.87
0.8	100	1185	0.07	83	1.43	1.59	1.73	1.86	1.98	2.10	2.22
0.8	100	1185	0.10	119	1.35	1.47	1.58	1.68	1.77	1.86	1.95
0.8	75	889	0.04	36	1.72	2.03	2.31	2.58	2.85	3.12	3.38
0.8	75	889	0.07	62	1.51	1.71	1.88	2.05	2.21	2.36	2.51
0.8	75	889	0.10	89	1.41	1.56	1.70	1.82	1.94	2.05	2.16
0.8	50	593	0.04	24	1.94	2.38	2.79	3.19	3.61	4.02	4.45
0.8	50	593	0.07	41	1.65	1.92	2.17	2.41	2.64	2.86	3.09
0.8	50	593	0.10	59	1.52	1.73	1.91	2.08	2.25	2.41	2.57
0.8	25	296	0.04	12	2.56	3.40	4.26	5.17	6.13	7.16	8.26
0.8	25	296	0.07	21	2.03	2.52	2.99	3.46	3.94	4.43	4.93
0.8	25	296	0.10	30	1.81	2.17	2.50	2.83	3.15	3.47	3.80
0.9	100	1185	0.04	47	1.72	1.99	2.22	2.45	2.67	2.88	3.09
0.9	100	1185	0.07	83	1.51	1.68	1.83	1.97	2.10	2.22	2.35
0.9	100	1185	0.10	119	1.41	1.54	1.66	1.76	1.86	1.95	2.04
0.9	75	889	0.04	36	1.87	2.21	2.52	2.81	3.10	3.39	3.68
0.9	75	889	0.07	62	1.61	1.82	2.01	2.18	2.35	2.52	2.68
0.9	75	889	0.10	89	1.49	1.65	1.79	1.92	2.05	2.17	2.28
0.9	50	593	0.04	24	2.16	2.64	3.09	3.55	4.00	4.46	4.94
0.9	50	593	0.07	41	1.79	2.08	2.35	2.60	2.85	3.10	3.34
0.9	50	593	0.10	59	1.63	1.85	2.04	2.23	2.40	2.58	2.75
0.9	25	296	0.04	12	2.97	3.94	4.94	5.99	7.11	8.30	9.57
0.9	25	296	0.07	21	2.27	2.82	3.35	3.87	4.40	4.95	5.51
0.9	25	296	0.10	30	1.99	2.38	2.75	3.10	3.46	3.81	4.17

Assumes that 25% of Var(X) is explained by covariates.  
Reference: Hsieh and Lavori, Controlled Clinical Trials, 2000.