

Outcome: Disease
 Design: Unmatched case-control (1:0.85)
 Hypothesis: Gene only
 Desired power: 0.800000
 Significance: 0.050000, 2-sided
 Gene
 Mode of inheritance: Dominant
 Allele frequency: 0.0430 to 0.5000 by 0.1000
 Disease model Summary parameters
 P_0 0.003510 * k_P 0.003510
 R_G : 1.0000 (*indicates calculated value)

Parameter	Null	Full	Reduced
Gene	$\beta_G=0$	β_G	—

Frequency	R_G	N	
		Gene	k_P
0.043000	1.0000	Cannot calculate	0.003510
	1.5000	1152	0.003657
	2.0000	355	0.003803
	2.5000	188	0.003949
	3.0000	123	0.004095
	3.5000	91	0.004239
	4.0000	71	0.004384
	4.5000	59	0.004528
	5.0000	50	0.004671
	0.143000	1.0000	Cannot calculate
1.5000		492	0.003974
2.0000		162	0.004436
2.5000		90	0.004896
3.0000		62	0.005355
3.5000		48	0.005812
4.0000		39	0.006267
4.5000		33	0.006721
5.0000		29	0.007174
0.243000		1.0000	Cannot calculate
	1.5000	419	0.004255
	2.0000	144	0.004998
	2.5000	84	0.005738
	3.0000	60	0.006476
	3.5000	47	0.007211
	4.0000	39	0.007943
	4.5000	34	0.008673
	5.0000	30	0.009401
	0.343000	1.0000	Cannot calculate
1.5000		441	0.004502
2.0000		158	0.005491
2.5000		94	0.006476
3.0000		68	0.007458
3.5000		55	0.008437
4.0000		46	0.009412
4.5000		40	0.010383
5.0000		36	0.011352
0.443000		1.0000	Cannot calculate
	1.5000	529	0.004714

2.0000	195	0.005914
2.5000	119	0.007110
3.0000	88	0.008301
3.5000	71	0.009489
4.0000	60	0.010672
4.5000	53	0.011851
5.0000	48	0.013027

N is the number of cases required for the desired power

The required number of controls is $0.85 \times N$

Outcome: Disease
 Design: Unmatched case-control (1:0.85)
 Hypothesis: Gene only
 Desired power: 0.800000
 Significance: 0.050000, 2-sided
 Gene
 Mode of inheritance: Log-additive
 Allele frequency: 0.0430 to 0.5000 by 0.1000
 Disease model Summary parameters
 P_0 0.003510 $*k_P$ 0.003510
 R_G : 1.0000 (*indicates calculated value)

Parameter	Null	Full	Reduced
Gene	$\beta_G=0$	β_G	—

Frequency	R_G	N	
		Gene	k_P
0.043000	1.0000	Cannot calculate	0.003510
	1.5000	1060	0.003662
	2.0000	322	0.003816
	2.5000	169	0.003973
	3.0000	110	0.004132
	3.5000	80	0.004293
	4.0000	62	0.004457
	4.5000	51	0.004622
	5.0000	43	0.004789
	0.143000	1.0000	Cannot calculate
1.5000		373	0.004027
2.0000		118	0.004577
2.5000		64	0.005158
3.0000		43	0.005769
3.5000		33	0.006409
4.0000		26	0.007074
4.5000		22	0.007764
5.0000		19	0.008475
0.243000		1.0000	Cannot calculate
	1.5000	259	0.004409
	2.0000	85	0.005405
	2.5000	48	0.006495
	3.0000	33	0.007673
	3.5000	26	0.008934
	4.0000	21	0.010273
	4.5000	18	0.011683
	5.0000	16	0.013158
	0.343000	1.0000	Cannot calculate
1.5000		221	0.004809
2.0000		75	0.006303
2.5000		43	0.007984
3.0000		31	0.009843
3.5000		24	0.011870
4.0000		20	0.014054
4.5000		17	0.016380
5.0000		16	0.018837
0.443000		1.0000	Cannot calculate
	1.5000	210	0.005226

2.0000	73	0.007268
2.5000	43	0.009624
3.0000	31	0.012280
3.5000	25	0.015217
4.0000	21	0.018416
4.5000	18	0.021855
5.0000	16	0.025513

N is the number of cases required for the desired power

The required number of controls is $0.85 \times N$

Outcome: Disease
 Design: Unmatched case-control (1:0.85)
 Hypothesis: Gene only
 Desired power: 0.800000
 Significance: 0.050000, 2-sided
 Gene
 Mode of inheritance: Recessive
 Allele frequency: 0.0430 to 0.5000 by 0.1000
 Disease model Summary parameters
 P_0 0.003510 * k_P 0.003510
 R_G : 1.0000 (*indicates calculated value)

Parameter	Null	Full	Reduced
Gene	$\beta_G=0$	β_G	—

Frequency	R_G	N	
		Gene	k_P
0.043000	1.0000	Cannot calculate	0.003510
	1.5000	46338	0.003513
	2.0000	13815	0.003516
	2.5000	7105	0.003520
	3.0000	4529	0.003523
	3.5000	3236	0.003526
	4.0000	2479	0.003529
	4.5000	1990	0.003532
	5.0000	1653	0.003536
	0.143000	1.0000	Cannot calculate
1.5000		4306	0.003546
2.0000		1294	0.003581
2.5000		670	0.003617
3.0000		430	0.003652
3.5000		309	0.003687
4.0000		239	0.003722
4.5000		193	0.003757
5.0000		161	0.003792
0.243000		1.0000	Cannot calculate
	1.5000	1580	0.003613
	2.0000	482	0.003716
	2.5000	253	0.003818
	3.0000	165	0.003920
	3.5000	120	0.004022
	4.0000	94	0.004123
	4.5000	77	0.004224
	5.0000	65	0.004325
	0.343000	1.0000	Cannot calculate
1.5000		868	0.003715
2.0000		271	0.003920
2.5000		145	0.004124
3.0000		96	0.004327
3.5000		71	0.004530
4.0000		56	0.004732
4.5000		47	0.004933
5.0000		40	0.005133
0.443000		1.0000	Cannot calculate
	1.5000	591	0.003853

2.0000	190	0.004194
2.5000	104	0.004534
3.0000	70	0.004873
3.5000	53	0.005211
4.0000	43	0.005548
4.5000	36	0.005883
5.0000	31	0.006218

N is the number of cases required for the desired power

The required number of controls is $0.85 \times N$