

S2 Table. Probability formula of having multiple risk alleles, assuming the Hardy-Weinberg's law.

SNP X and SNP Y are representative. p^2 - major allele in homozygosity probability; $2pq$ - heterozygosity probability; q^2 - minor allele in homozygosity probability.

		SNP Y		
		p^2	$2pq$	q^2
SNP X	p^2	prob. 0 alleles	prob. 1 allele	prob. 2 alleles
	$2pq$	prob. 1 allele	prob. 2 alleles	prob. 3 alleles
	q^2	prob. 2 alleles	prob. 3 alleles	prob. 4 alleles