

Supplementary Table 1: List of exclusion

	Case	Control	Total
Total samples sent for targeted sequencing	8,205	8,227	16,432
Male breast cancer	2	0	2
Relatives of proband	12	0	12
Duplicates	25	28	53
Withdrawn or unavailable consent	8	0	8
Incomplete or inconsistent data	3	26	29
Failed sequencing QC	315	245	560
Final number of samples included	7,840	7,928	15,768