

**Table S8.** *BRCA2* classification results of lumB *BRCA2* ( $n = 16$ ) and lumB sporadic ( $n = 48$ ) tumors obtained using leave-one-out cross-validation. See Materials and methods section for more details. Mutations are all known pathogenic mutation described using HGVS nomenclature.

SampleID	Group	Age	Prediction	WHO	Grade	Mutation	Functional effects
A013	<i>BRCA2</i>	28	Sporadic	IDC	3	<i>BRCA2</i> c.2830A>T, Exon11, p.(Lys944*)	NS
A109	<i>BRCA2</i>	31	<i>BRCA2</i>	IDC	2	<i>BRCA2</i> c.1310_1313delAAGA, Exon10, p.(Lys437Ilefs*22)	FS
A010	<i>BRCA2</i>	34	<i>BRCA2</i>	IDC	2	<i>BRCA2</i> c.2808_2811delACAA, Exon11, p.(Ala938Profs*21)	FS
A150	<i>BRCA2</i>	36	<i>BRCA2</i>	IDC	2	<i>BRCA2</i> c.6486_6489delACAA, Exon11, p.(Lys2162Asnfs*5)	FS
A095	<i>BRCA2</i>	37	<i>BRCA2</i>	IDC	3	<i>BRCA2</i> c.6490_6492delinsGACT, Exon11, p.(Gln2164Aspfs*12)	FS
A019	<i>BRCA2</i>	38	<i>BRCA2</i>	IDC	3	<i>BRCA2</i> c.6373delA, Exon11, p.(Thr2125Profs*12)	FS
A004	<i>BRCA2</i>	41	<i>BRCA2</i>	IDC	2	<i>BRCA2</i> c.2830A>T, Exon11, p.(Lys944*)	NS
A102	<i>BRCA2</i>	42	<i>BRCA2</i>	IDC	2	<i>BRCA2</i> c.7617+1G>A, Splice mut, Exon15 skipping	Exon skipping
A111	<i>BRCA2</i>	42	Sporadic	IDC	1	<i>BRCA2</i> c.1310_1313delAAGA, Exon10, p.(Lys437Ilefs*22)	FS
A117	<i>BRCA2</i>	45	<i>BRCA2</i>	IDC	2	<i>BRCA2</i> c.6601delT, Exon11, p.(Ser2201Leufs*5)	FS
A108	<i>BRCA2</i>	45	<i>BRCA2</i>	IDC	2	<i>BRCA2</i> c.6486_6489delACAA, Exon11, p.(Lys2162Asnfs*5)	FS
A003	<i>BRCA2</i>	48	<i>BRCA2</i>	IDC	2	<i>BRCA2</i> c.2830A>T, Exon11, p.(Lys944*)	NS
A106	<i>BRCA2</i>	60	<i>BRCA2</i>	IDC	3	<i>BRCA2</i> c.9015delA, Exon23, p.(Arg3005Serfs*23)	FS
A173	<i>BRCA2</i>	63	<i>BRCA2</i>	NA	NA	<i>BRCA2</i> c.8575delC, Exon20, p.(Gln2859Lysfs*4)	FS
A163	<i>BRCA2</i>	66	<i>BRCA2</i>	IDC	3	<i>BRCA2</i> c.3530_3533delACAG, Exon11, p.(Asp1177Alafs*19)	FS
A115	<i>BRCA2</i>	72	<i>BRCA2</i>	IDC	3	<i>BRCA2</i> c.2808_2811delACAA, Exon11, p.(Ala938Profs*21)	FS
K058	Sporadic	36	Sporadic	IDC	3	-	-
K046	Sporadic	43	Sporadic	IDC	3	-	-
K083	Sporadic	43	<i>BRCA2</i>	IDC	3	-	-
K079	Sporadic	43	Sporadic	IDC	3	-	-
K011	Sporadic	44	<i>BRCA2</i>	IDC	3	-	-
K123	Sporadic	44	Sporadic	IDC	2	-	-
K088	Sporadic	47	Sporadic	IDC	2	-	-
K074	Sporadic	48	Sporadic	ILC	2	-	-
K021	Sporadic	49	Sporadic	IDC	2	-	-
K056	Sporadic	50	Sporadic	IDC	1	-	-
K113	Sporadic	50	Sporadic	IDC	1	-	-
K114	Sporadic	50	Sporadic	IDC	2	-	-
K057	Sporadic	51	Sporadic	IDC	2	-	-
K064	Sporadic	51	Sporadic	IDC	2	-	-
K089	Sporadic	53	Sporadic	IDC	2	-	-
K055	Sporadic	54	Sporadic	Medullary	NA	-	-
K052	Sporadic	58	Sporadic	IDC	3	-	-
K148	Sporadic	60	Sporadic	IDC	3	-	-
K082	Sporadic	60	Sporadic	IDC	2	-	-
K155	Sporadic	61	Sporadic	IDC	2	-	-
K043	Sporadic	63	Sporadic	IDC	2	-	-
K031	Sporadic	64	Sporadic	IDC	2	-	-
K086	Sporadic	64	Sporadic	IDC	2	-	-
K108	Sporadic	64	Sporadic	ILC	NA	-	-
K147	Sporadic	65	Sporadic	IDC	2	-	-
K179	Sporadic	66	Sporadic	IDC	2	-	-
K013	Sporadic	69	Sporadic	Other	NA	-	-
K175	Sporadic	71	Sporadic	IDC	3	-	-
K120	Sporadic	72	Sporadic	IDC	2	-	-
K151	Sporadic	72	Sporadic	IDC	2	-	-
K142	Sporadic	74	Sporadic	NA	NA	-	-
K091	Sporadic	74	<i>BRCA2</i>	IDC	3	-	-
K003	Sporadic	75	Sporadic	IDC	2	-	-
K150	Sporadic	75	Sporadic	IDC	2	-	-
K062	Sporadic	75	<i>BRCA2</i>	IDC	2	-	-
K133	Sporadic	76	Sporadic	Other	NA	-	-
K027	Sporadic	77	Sporadic	IDC	2	-	-
K019	Sporadic	78	Sporadic	IDC	2	-	-
K128	Sporadic	81	<i>BRCA2</i>	IDC	2	-	-
K054	Sporadic	82	Sporadic	IDC	3	-	-
K171	Sporadic	83	Sporadic	IDC	1	-	-
K165	Sporadic	85	Sporadic	IDC	1	-	-
K038	Sporadic	85	Sporadic	IDC	2	-	-
K101	Sporadic	85	Sporadic	ILC	NA	-	-
K080	Sporadic	86	Sporadic	Tubular	NA	-	-
K066	Sporadic	87	Sporadic	Mucinous	NA	-	-
K154	Sporadic	88	Sporadic	IDC	3	-	-
K045	Sporadic	89	Sporadic	IDC	2	-	-

Abbreviations: FS, frameshift mutation; NS, nonsense mutation