

Online Supplementary Table 1: Mutational frequencies of NOTCH and HR genes in the OAK/POPLAR (atezolizumab or docetaxel) and MSKCC studies.

GENE	OAK/POPLAR (N=853)		MSKCC PFS (N=240)		MSKCC OS (N=350)	
	WT N (%)	Mut N (%)	WT N (%)	Mut N (%)	WT N (%)	Mut N (%)
<i>NOTCH1</i>	801 (93.9)	52 (6.1)	227 (94.6)	13 (5.4)	336 (96.0)	14 (4.0)
<i>NOTCH2</i>	799 (93.7)	54 (6.3)	232 (96.7)	8 (3.3)	339 (96.9)	11 (3.1)
<i>NOTCH3</i>	803 (94.1)	50 (5.9)	231 (96.2)	9 (3.8)	339 (96.9)	11 (3.1)
<i>ATM</i>	760 (89.1)	93 (10.9)	221 (92.1)	19 (7.9)	327 (93.4)	23 (6.6)
<i>ATR</i>	799 (93.7)	54 (6.3)	232 (96.7)	8 (3.3)	338 (96.6)	12 (3.4)
<i>BRCA1</i>	814 (95.4)	39 (4.6)	233 (97.1)	7 (2.9)	339 (96.9)	11 (3.1)
<i>BRCA2</i>	809 (94.8)	44 (5.2)	231 (96.2)	9 (3.8)	335 (95.7)	15 (4.3)
<i>CHEK1</i>	846 (99.2)	7 (0.8)	239 (99.7)	1 (0.3)	349 (99.7)	1 (0.3)
<i>CHEK2</i>	792 (92.8)	61 (7.2)	237 (98.7)	3 (1.3)	347 (99.1)	3 (0.9)
<i>FANCA</i>	827 (97.0)	26 (3.0)	234 (97.5)	6 (2.5)	344 (98.3)	6 (1.7)
<i>FANCC</i>	850 (99.6)	3 (0.4)	237 (98.7)	3 (1.3)	346 (98.9)	4 (1.1)
<i>FANCG</i>	849 (99.5)	4 (0.5)	NP	NP	NP	NP
<i>MRE11</i>	836 (98.0)	17 (2.0)	236 (98.3)	4 (1.7)	343 (98.0)	7 (2.0)
<i>MUTYH</i>	851 (99.8)	2 (0.2)	235 (97.9)	5 (2.1)	346 (98.9)	4 (1.1)
<i>PALB2</i>	826 (96.8)	27 (3.2)	236 (98.3)	4 (1.7)	342 (97.7)	8 (2.3)
<i>POLD1</i>	819 (96.0)	34 (4.0)	180 (97.8)*	4 (2.2)*	280 (98.9)†	3 (1.1)†
<i>POLE</i>	807 (94.6)	46 (5.4)	229 (95.0)	11 (5.0)	334 (95.4)	16 (4.6)
<i>RAD21</i>	NP	NP	183 (99.5)*	1 (0.5)*	281 (99.3)†	2 (0.7)†
<i>RAD50</i>	829 (97.2)	24 (2.8)	238 (99.2)	2 (0.8)	348 (99.4)	2 (0.6)
<i>RAD51</i>	836 (98.0)	17 (2.0)	239 (99.6)	1 (0.4)	349 (99.7)	1 (0.3)
<i>RAD51B</i>	NP	NP	238 (99.2)	2 (0.8)	346 (98.9)	4 (1.1)
<i>RAD51C</i>	843 (98.8)	10 (1.2)	239 (99.6)	1 (0.4)	349 (99.7)	1 (0.3)
<i>RAD51D</i>	NP	NP	239 (99.6)	1 (0.4)	349 (99.7)	1 (0.3)
<i>RAD51L1</i>	846 (99.2)	7 (0.8)	NP	NP	NP	NP
<i>RAD51L3</i>	846 (99.2)	7 (0.8)	NP	NP	NP	NP
<i>RAD52</i>	849 (99.5)	4 (0.5)	240 (100)	0	350 (100)	0
<i>RAD54L</i>	842 (98.7)	11 (1.3)	239 (99.6)	1 (0.4)	349 (99.7)	1 (0.3)
<i>XRCC2</i>	851 (99.8)	2 (0.2)	184 (100)	0	100 (283)	0
<i>XRCC3</i>	850 (99.6)	3 (0.4)	NP	NP	NP	NP

* Profiled in 184/240 samples, † Profiled in 283/350 samples, NP: not profiled.