

## Supplemental Table S2

cell line	variant	predicted impact	sensitivity (rank)		
			olaparib	talazoparib	niraparib
A673	<b>TP53</b>	pathogenic	34	31	32
	<b>ERCC2</b>	benign/likely benign			
CADOES1	<b>SLX4</b>	pathogenic	42	13	
	<b>APC</b>	likely benign			
SKPNDW	<b>FANCM</b>	pathogenic			48
	<b>TP53</b>	likely pathogenic			
RDES	<b>TP53</b>	pathogenic			
MHES1	<b>TP53</b>	likely pathogenic	41		22
ES1	<b>TP53</b>	pathogenic	23	23	
ES3	<b>TP53</b>	likely pathogenic			
ES5	<b>PTCH2</b>	likely benign			
	<b>TP53</b>	pathogenic			
ES6	<b>TP53</b>	likely pathogenic			
ES7	<b>POLE</b>	likely benign	21	18	6
	<b>FKBP3</b>	VUS			
	<b>FANCM</b>	pathogenic			
	<b>ERCC4</b>	benign/likely benign			
	<b>TP53</b>	likely pathogenic			
ES8	<b>TP53</b>	pathogenic	10	5	8
EW16	<b>TP53</b>	likely pathogenic			
EW22	<b>TP53</b>	pathogenic	14	8	10
EW24	<b>APC</b>	benign			
	<b>TP53</b>	likely pathogenic			

**benign/likely benign**  
**variant of unknown significance**  
**pathogenic/likely pathogenic**

### Supplemental Table S2.

**Prevalence of somatic DNA damage repair gene variants in Ewing cell lines included in original studies of PARP inhibition.** Cancer cell line encyclopedia (CCLE) data was queried for somatic mutations in DNA damage repair gene mutations in the 14 Ewing sarcoma cell lines listed. The predicted/known impacts of the somatic mutations and sensitivity rank (sensitivity to a compound as compared to all other cells lines in the CCLE) to the PARP inhibitors olaparib, talazoparib and niraparib are also noted.