

Supplementary Table S2. Interpretation of VUS variants using ACMG rules and semiquantitative rules by Sherlock.

n.	Patient ID	Gene	Variant	ACMG interpretation	Sherlock interpretation
1	674/19	ATM	c.7475T>G (p.Leu2492Arg)	PM2, PP3, BP6: <i>VUS</i>	1B, 2P: <i>uncertain significance</i>
2	348/20	ATM	c.3356C>T (p.Ala1119Val)	PM2: <i>VUS</i>	2,5P: <i>uncertain significance</i>
3	704/20	ATM	c.7316T>C (p.Val2439Ala)	PM2: <i>VUS</i>	1,5P,1B: <i>uncertain significance</i>
4	87/21	PALB2	c.37G>A (p.Glu13Lys)	PM2: <i>VUS</i>	3P: <i>uncertain significance</i>
5	133/21	CHEK2	c.911T>C (p.Met304Thr)	PM2, PP3: <i>VUS</i>	3P: <i>uncertain significance</i>
6	150/21	BRCA1	c.1344C>G (p.His448Gln)	PM2, BP4: <i>VUS</i>	2P,1B: <i>uncertain significance</i>
7	182/21	BRCA1	c.5312C>A (p.Pro1771His)	PM1, PM2, PP3: <i>VUS</i>	3P: <i>uncertain significance</i>
8	262/21	MSH6	c.2941A>G (p.Ile981Val)	PM2, BP4: <i>VUS</i>	2P,1B: <i>uncertain significance</i>
9	282/21	CHEK2	1312G>T (p.Asp438Tyr)	PS3, PM2, BS3: <i>VUS</i>	2P,1B: <i>uncertain significance</i>
		MLH1	c.678-4A>G	PM2, BP4: <i>VUS</i>	1P,1B: <i>uncertain significance</i> 2P: <i>uncertain significance</i>
		MSH6	c.998C>T (p.Thr333Ile)	PM2: <i>VUS</i>	
10	310/21	PALB2	c.563C>G (p.Ala188Gly)	PM2, BP4: <i>VUS</i>	2P,1B: <i>uncertain significance</i>
11	344/21	CHEK2	c.1312G>T (p.Asp438Tyr)	PS3, PM2, BS3: <i>VUS</i>	2P,1B: <i>uncertain significance</i>
12	465/21	ATM	c.2954A>G (p.Asp985Gly)	PM2: <i>VUS</i>	2,5P: <i>uncertain significance</i>
13	489/21	MSH6	c.1311_1312delinsGC(p.437_438delinsGlnLeu)	PM2, PP3: <i>VUS</i>	2P: <i>uncertain significance</i>
14	620/21	CHEK2	c.787G>C (p.Glu263Gln)	PM2: <i>VUS</i>	2P: <i>uncertain significance</i>
15	665/21	CHEK2	c.1160C>T (p.Thr387Ile)	PM2, PP3: <i>VUS</i>	2,5P: <i>uncertain significance</i>
16	760/21	PMS2	c.328G>T(p.Ala110Ser)	PM2, PP3: <i>VUS</i>	2,5P: <i>uncertain significance</i>
17	761/21	PMS2	c.328G>T(p.Ala110Ser)	PM2, PP3: <i>VUS</i>	2,5P: <i>uncertain significance</i>
18	979/21	CHEK2	c.-4C>T	BP4, BP7, PM2: LB	3B: <i>uncertain significance</i>
19	1006/21	MLH1	c.2130C>G (p.Asn710Lys)	PM2, BP4: <i>VUS</i>	1,5P,1B: <i>uncertain significance</i>
		ATM	c.7316T>C (p.Val2439Ala)	PM2: <i>VUS</i>	1,5P: <i>uncertain significance</i>
20	68/22	ATM	c.8734A>G (p.Arg2912Gly)	PP5, PM2, PP3: <i>VUS</i>	3P,1B: <i>uncertain significance</i>
21	156/22	BRCA1	c.1250A>G (p.Asn417Ser)	PM2, BP4: <i>VUS</i>	2P,1B: <i>uncertain significance</i>

Detailed sherlock criteria used for the classification are described in reference [46].