Supplementary Information.

Secondary *BRCA1* mutations in *BRCA1*-mutated ovarian carcinomas with platinum resistance.

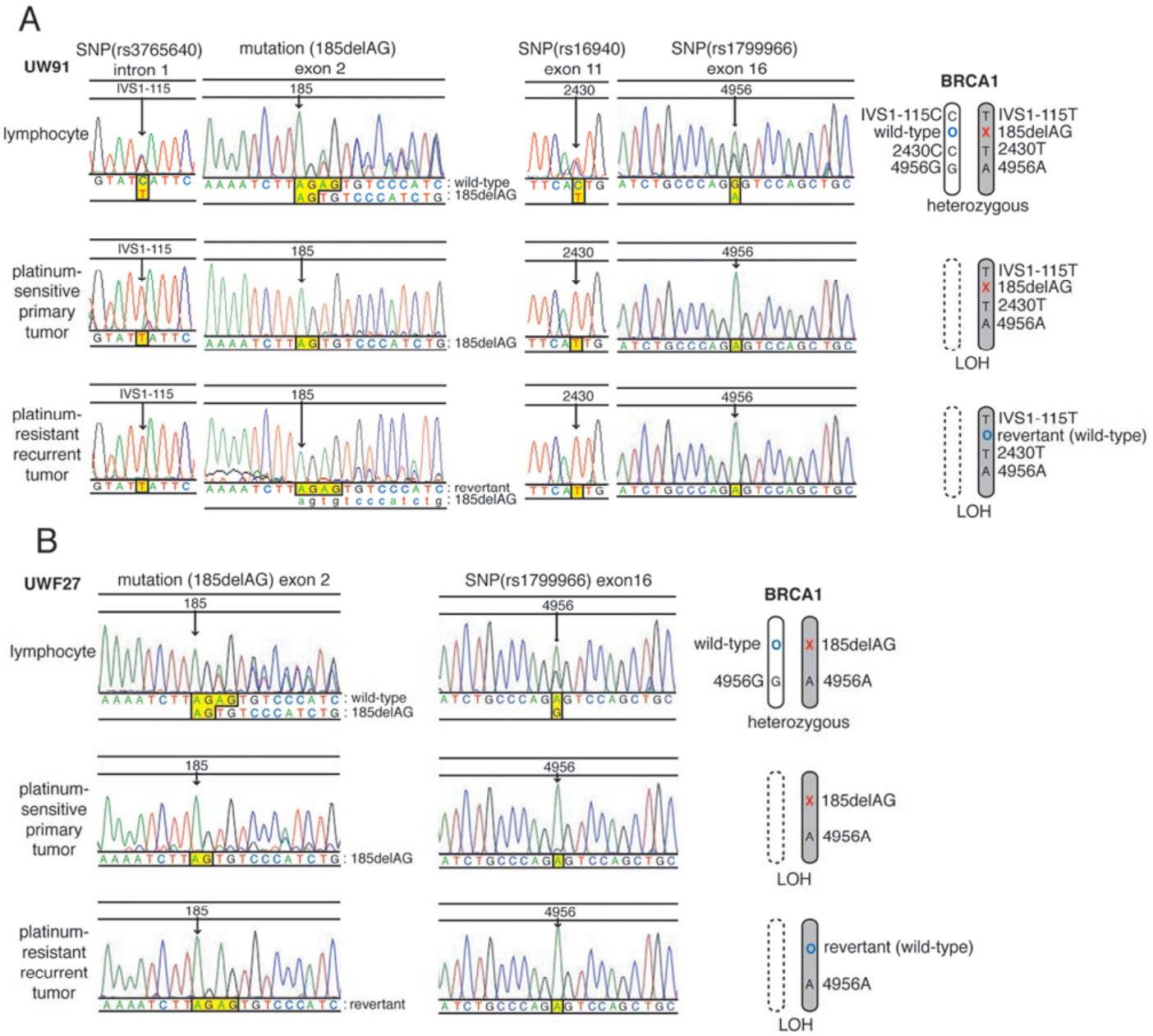
Elizabeth M. Swisher, Wataru Sakai, Beth Y. Karlan, Kaitlyn Wurz, Nicole Urban, Toshiyasu Taniguchi

Legends for Supplemental Figures.

Supplemental Figure 1. Analysis of intragenic single nucleotide polymorphisms of *BRCA1* in 2 ovarian cancer cases with genetic reversion of *BRCA1* mutation.
A. DNA sequences of *BRCA1* in peripheral blood lymphocytes and the primary and recurrent tumors from a patient (UW91) with *BRCA1*-mutated ovarian cancer. In the lymphocytes, heterozygous single nucleotide polymorphisms (SNPs) of the *BRCA1* locus (IVS1-115C/T, 2430C/T, and 4956G/A) were detected, in addition to a heterozygous mutation (185delAG). In the primary tumor, a hemizygous mutation (185delAG) was detected and loss of heterozygosity (LOH) of the SNPs was confirmed. In the microdissected recurrent tumor, wild-type sequence was detected at the site of 185delAG, and LOH of the SNPs was again confirmed. Importantly, the haplotype of these SNPs in the recurrent tumor (IVS1-115T, 2430T and 4956A) is identical to that in the primary tumor (IVS1-115T, 2430T and 4956A). This indicates that the recurrent tumor had acquired wild-type *BRCA1* by genetic reversion (back mutation to wild-type). A speculative model of *BRCA1* alleles in samples from this patient is also depicted.

B. DNA sequences of *BRCA1* in peripheral blood lymphocytes and the primary and recurrent tumors from a patient (UWF27) with *BRCA1*-mutated ovarian cancer.
In the lymphocytes, a heterozygous SNP of the *BRCA1* locus (4956G/A) was detected, in addition to a heterozygous mutation (185delAG). In the primary tumor, a hemizygous mutation (185delAG) was detected and loss of heterozygosity (LOH) of the SNP was confirmed. In the microdissected recurrent tumor, wild-type sequence was detected at the site of 185delAG, and LOH of the SNP was confirmed. Importantly, the SNP in the recurrent tumor (4956A) is identical to that in the primary tumor (4956A). This indicates that the recurrent tumor had acquired wild-type *BRCA1* by genetic reversion (back mutation to wild-type). A speculative model of *BRCA1* alleles in samples from this patient is also depicted.

Swisher, et al.
Supplemental Figure 1



Supplemental Table 1
Primers used for *BRCA1* sequencing and PCR.

#	Primer	Seq 5' to 3'
1	B1F101-159	TCTTTAAAAATAAAGGACGTTGTCA
2	B1.2.F	AAGGACGTTGTCATTAGTTCTT
3	B1F101-65	ATGAAGTTGTCATTTTATAAACCTTTT
4	B1R199+72	GGTCAATTCTGTTCATTTGCAT
5	B1.2.R	CATGTCTTTTCTTCCCTAGTATG
6	B1R199+143	TTCAGTTAAGAAAATCAGCAATTACA
7	B1F200-206	GCTCACTGAAGGTAAGGATCG
8	B1R253+190	TTACCAGGAACTATGATTACAACCAA
9	B1.11F. F	GCACCTGGTTCTTTTACTAAGTGTT
10	B1F2494	GGAAGGCAAAAACAGAACCA
11	B1R2743	GGATTTGAAAACGGAGCAAA
12	B1R2921	CTGACCAACCACAGGAAAGC
13	B1.11F. R	CCTGGATTTGAAAACGGAGC
14	B1F2997	GGCAACGAAACTGGACTCAT
15	B1R3361	TTCAATTTTGGCCCTCTGTT
16	B1F3524	GCCTATGGGAAGTAGTCATGC
17	B1F3653	CAAAAGCGTCCAGAAAGGAG
18	B1R.IVS11+33	ACTGGGGCAAACACAAAAAC
19	B1F.IVS15-47	TTCAACATTCATCGTTGTGTAAA
20	B1R.IVS16+1	CAAATTCTTCTGGGGTCAGG