

Table S1. The panel of 91 breast cancer-related genes.

Gene							
AKT1	CCND1	ESR1	HNF1A	MAP2K4	NF2	PTPN11	TBX3
ALK	CCND2	EZH2	HRAS	MAP3K1	NFE2L2	RAF1	TERT
APC	CCND3	FBXW7	IDH1	MAPK1	NOTCH1	RB1	TP53
AR	CCNE1	FGFR1	IDH2	MAPK3	NPM1	RET	TSC1
ARAF	CDH1	FGFR2	IGF1R	MDM2	NRAS	RHEB	TSC2
ARID1A	CDK4	FGFR3	JAK2	MET	NTRK1	RHOA	VHL
ARID1B	CDK6	FOXA1	JAK3	MLH1	NTRK3	RIT1	ZNF21
ATM	CDKN2A	GATA3	KIT	MPL	PDGFRA	ROS1	
BRAF	CTNNB1	GNA11	KMT2C	MTOR	PIK3CA	SMAD4	
BRCA1	DDR2	GNAQ	KRAS	MYC	PIK3R1	SMO	
BRCA2	EGFR	GNAS	MAP2K1	NCOR1	PTCH1	SOS	
CBFB	ERBB2	GRB2	MAP2K2	NF1	PTEN	STK11	

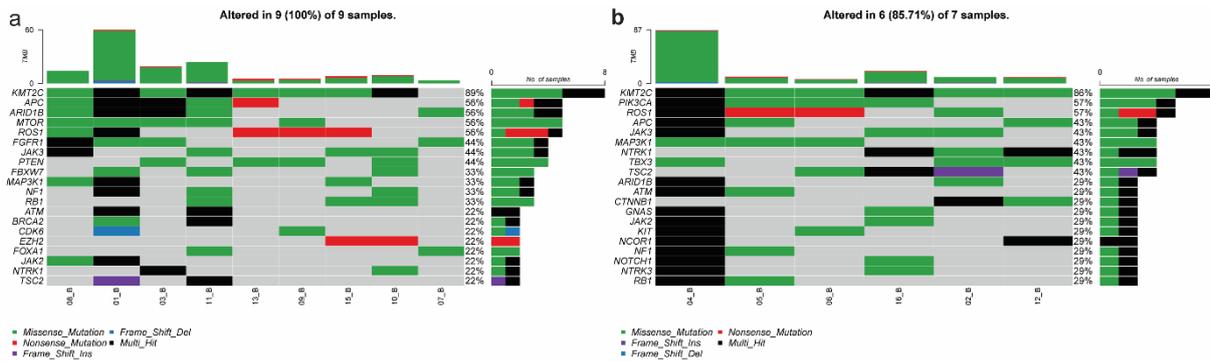


Figure S1. The top 20 most frequently mutated genes in blood samples collected at baseline for individual patients with IBC (a) or non-IBC (b). IBC: inflammatory breast cancer.

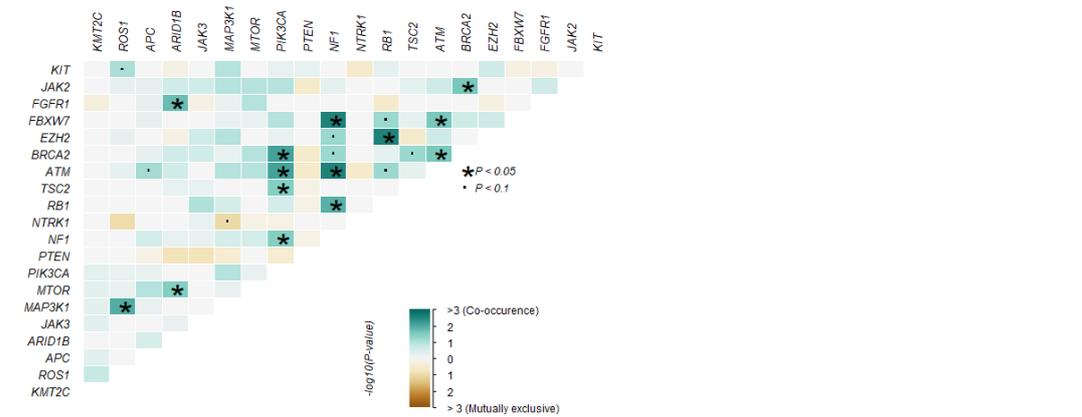


Figure S2. Co-occurrence and mutual exclusivity of mutated genes detected in baseline blood samples. Matrix depicting the degrees of co-occurrence (green scale) and mutual exclusivity (orange scale) of all possible pairwise combinations of any two mutated genes across a dataset of 20 analyzed genes.

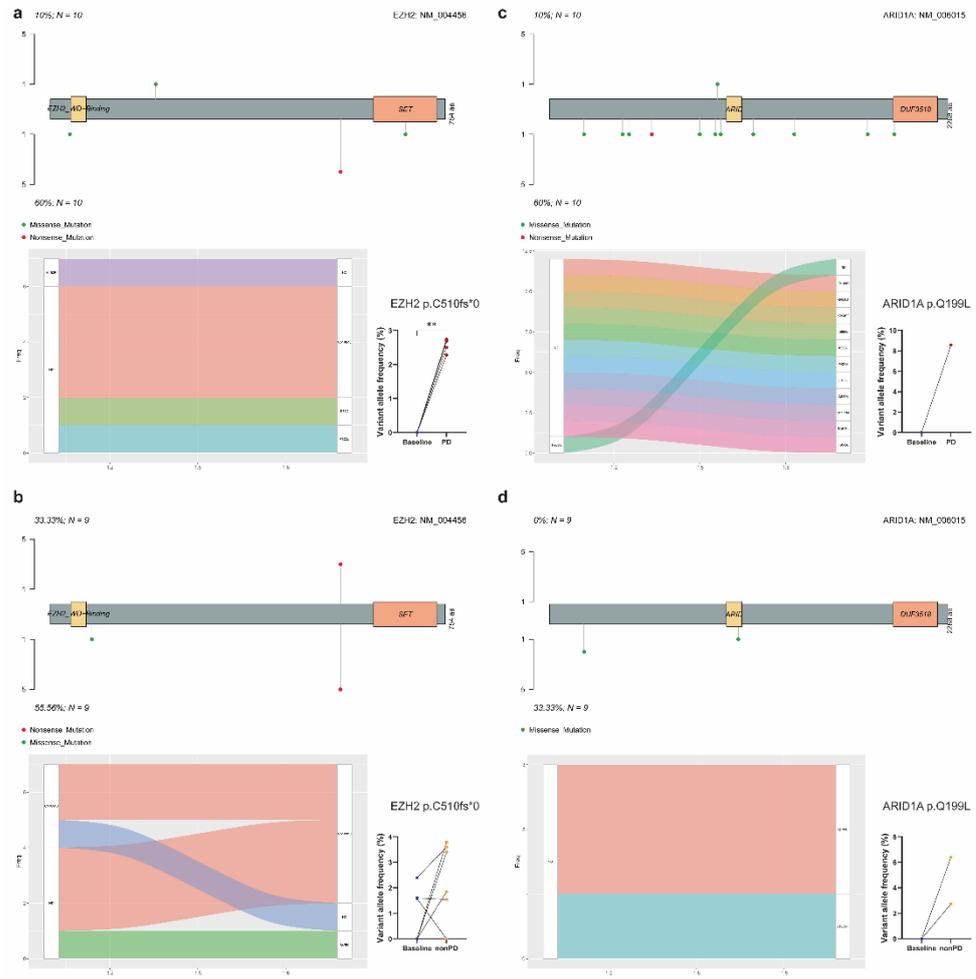


Figure S3. Changes in individual mutations in genes involved in epigenetic regulation and changes in variant allele frequency of a given mutation from baseline to follow-up as determined by analyzing paired samples. (a) and (b) show the changes in *EZH2* mutations in baseline-PD pairs or baseline-nonPD pairs. (c) and (d) show the changes in *ARID1A* mutations in baseline-PD pairs or baseline-nonPD pairs. PD: progressive disease; ND: not detected. ** represents $P < 0.01$.

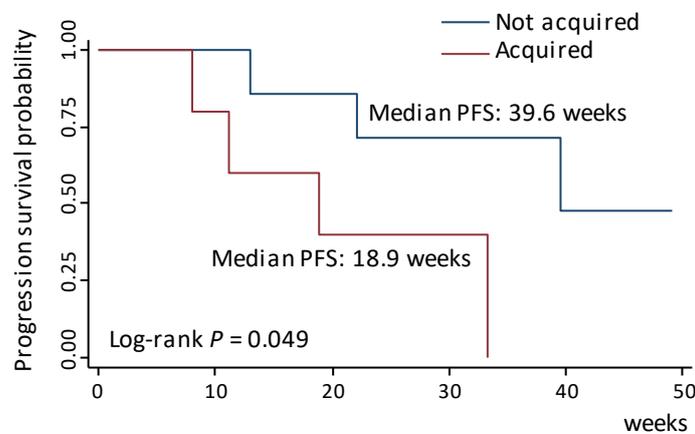


Figure S4. Kaplan-Meier curve showing survival difference between patients who acquired or did not acquire *CCNE1* mutations. PD status was determined by the first imaging test after treatment initiation. PD: progressive disease.

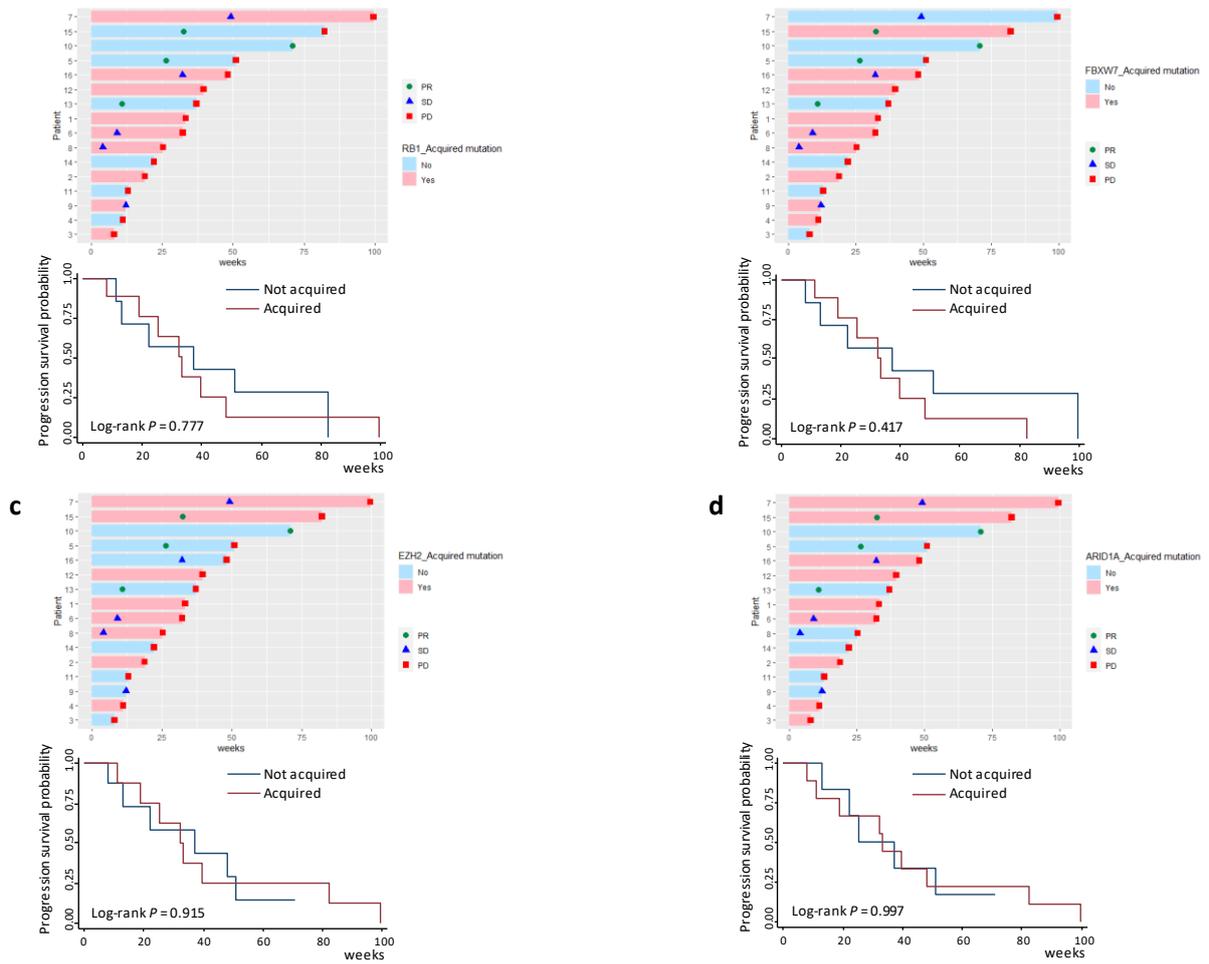


Figure S5. RECIST responses during follow-up for individual patients and survival difference between patients who acquired or did not acquire mutations in genes *RB1* (a), *FBXW7* (b), *EZH2* (c), and *ARID1A* (d). RECIST: the Response Evaluation Criteria in Solid Tumors; PD: progressive disease; PR: partial response; SD: stable disease.