Patient ID	Tissue biopsy	Liquid biopsy
Pt-19	**Skin biopsy- Month 54 (Stage IV)**	**Plasma - Month 54 (Stage IV)**
	**ErbB2 c.2689C>T; p. R897W (56%) Loss/T3 PIK3CA c.3140A>G; p.H1047R (48%) Gain/T2C ESR1 c.1613A>G; p. D538G (22%) Gain/T1B	**ErbB2 c.2689C>T; p. R897W (52%) Loss/T3
Pt-20	**Skin chest biopsy - Month 8 (Stage IV)**	**Plasma- Month 8 (Stage IV)**
	TP53 c.796G>A; p. G266R (48%) Loss/T2C MRE11 c.1532delA; p. N511fs*13 (2.1%) Loss/T2C RB1 c.131_132insTT; p. V45fs*21 (43%) Loss/T3	TP53 c.796G>A; p. G266R (48%) Loss/T2C AR c.170T>A; p. L57Q (4.06%) Loss/T3 RB1 c.131_132insTT; p. V45fs*21 (50%) Loss/T3
Pt-21	**Cells pleural fluid - Month 9 (Stage IV)**	**Plasma- Month 3 (Stage IV)**
	Not pathogenic or likely path variants detected	MAP2K4 c.400C>T; p. R134W (26%) Gain/T3 PMS2 c.89A>C; p. Q30P (2%) Loss/T2C MSH6 c.3261delC; p. F1088fs*2 (2%) Loss/T2C
Pt-22	**Cells pleural fluid- Month 29 (Stage IV)**	**Serum- Month 29 (Stage IV)**
	TP53 c.818G>A; p. R273H (30%) T2C NCOR1 c.842+1G>A (12%) Loss/T3 PTEN c.955_958delACTT; p. T319* (9.83%) Loss/T2C PTEN c.843_858delAGGACCAGAGGAAACC p.G282fs*4 (8.1%) Loss/T2C	TP53 c.818G>A; p. R273H (2%) T2C
Pt-23	**Cells pleural fluid- Month 6 (Stage IV)**	**Serum - Month 6 (Stage IV)**
	BRCA1 c.5123C>T; p. A1708V (49%) Loss/T1A TP53 c.637C>T; p. R213(12%) Loss/T2C	*BRCA1 c.5123C>T; p. A1708V (54%) Loss/T1A TP53 c.637C>T; p. R213*(11%) Loss/T2C
Pt-24	**Breast biopsy- Month 5 (Stage IIIC)**	**Plasma- Month 9 (Stage IIIC)**
	**ATM c.6095G>A; p. R2032K (53%) Loss/T2C **APC c.3386T>C; p. L1129S (48%) Loss/T3 PIK3CA c.3140A>G; p.H1047R (4.8%) Gain/T1A	**ATM c.6095G>A; p. R2032K (51%) T2C **APC c.3386T>C; p. L1129S (51%) Loss/T3
Pt-25	**Skin biopsy- Month 19 (Stage III)**	**Serum- Month 19 (Stage III)**
	*CHEK2 c.573+1G>A Splicing (50%) Loss/T2C TP53 c.286dupT; p. S96fs*53 (4.88%) Loss/T2C	*CHEK2 c.573+1G>A (46%) Splicing Loss/T2C

Pt-26	**Breast biopsy-Month 1 (Stage IIIB)**	**Serum (cfDNA2)- Month 1 (Stage IIIB)**
	MSH6 c.3261delC; p. F1088fs*2 (2.28%) Loss/T2C	**MSH6 c.3261delC; p. F1088fs*2 (3.09%) Loss/T2C**
Pt- 27		**Plasma- Month 1 (Stage IIIC)**
	No tissue available	**MSH6 c.3261delC; p. F1088fs*2 (2.27%) Loss/T2C**

Table S2. Germline and somatic variants in ER+ Her2- IBC. Clinically relevant germline and somatic variants are shown. Pathogenic (in red), likely-pathogenic (in blue) or variants of uncertain significance (in black). **Confirmed germline variants. *Putative germline variants. Variants were also classified according to their actionability: T1A/T1B indicates strong clinical significance; T2C indicates potential clinical significance and FDA-approved therapies for different tumor types or investigational therapies (off-label treatments); T3 indicates biomarker is of uncertain clinical significance. Stage of the disease at the time of sample collection is indicated in each case. For each variant, allele fraction (AF) is indicated in parenthesis.