**SUPPLEMENTARY FIGURE LEGENDS**

**Supplementary Figure S1:** Prognostic significance of ATM, BRCA1 and XRCC1 in breast cancers negative for CD8+ TILs. Kaplan-Meier survival curves are shown here.

**Supplementary Figure S2:** Prognostic significance of polβ (A &B), ERCC1 (C&D), RECQL4 (E&F), RECQL5 (G &H), BLM (I & J), PARP1 (K & L), FEN1 ( M & N), TOPO2A (O & P), Ku70/Ku80 (Q & R), Chk2 (S & T), WRN (U & V) and DNA-PKcs (W & X) in CD8+ TILs positive and CD8+ TILs negative breast cancers respectively. Kaplan-Meier survival curves are shown here.

**Supplementary Figure S3:** Correlation between CD8 counts and ATM (A), BRCA1 (B) and XRCC1 (C).

**Supplementary Figure S4:** Prognostic significance of ATM, BRCA1 and XRCC1 in FOXP3+ or FOXP3 negative breast cancers. Kaplan-Meier survival curves are shown here.

**Supplementary Figure S5:** Prognostic significance of ATM, BRCA1 in PD-L1+ (tumour cells), PD-L1+ (TILs) or PD-1+ (TILs) is shown here. Kaplan-Meier survival curves are shown here.

**Supplementary Figure S6:** Prognostic significance of ATM, BRCA1 and XRCC1 in PD-L1 negative (tumour cells), PD-L1 negative (TILs) and PD-1 negative (TILs) breast cancers. Kaplan-Meier survival curves are shown here.

**Supplementary Figure S7:** Prognostic significance of CD8+ TILs in ER+ breast cancer [whole cohort (A), received no endocrine therapy (B) and received endocrine therapy (C)] is shown here.

**Supplementary Figure S8:** Prognostic significance of BRCA1 (A), XRCC1 (B) or ATM (C) in CD8+ TILs positive ER+ breast cancer. Kaplan-Meier survival curves are shown here.

**Supplementary Figure S9:** Prognostic significance of XRCC1 in CD8+/CD8- (A), PD-1+/PD-1- (B), FOXP3+/FOXP3- (C) and PD-L1+/PD-L1- (D) ER+ breast cancer that received no endocrine therapy.

**Supplementary Figure S10: A.** Prognostic significance of XRCC1 in PD-1+/PD-1- HER2 + breast cancers. **B.** Prognostic significance of BRCA1 in FOXP3+/FOXP3- HER2 + breast cancers. Kaplan-Meier survival curves are shown here.

**Supplementary Figure S11:** Prognostic significance of CD8+ TILs in ER- breast cancer [whole cohort (A), received no chemotherapy (B) and received chemotherapy (C)] is shown here. Kaplan-Meier survival curves are shown here.

**Supplementary Figure S12:**.Prognostic significance of BRCA1 in PD-L1+/PD-L1- ER- breast cancers that received no chemotherapy. Kaplan-Meier survival curves are shown here.