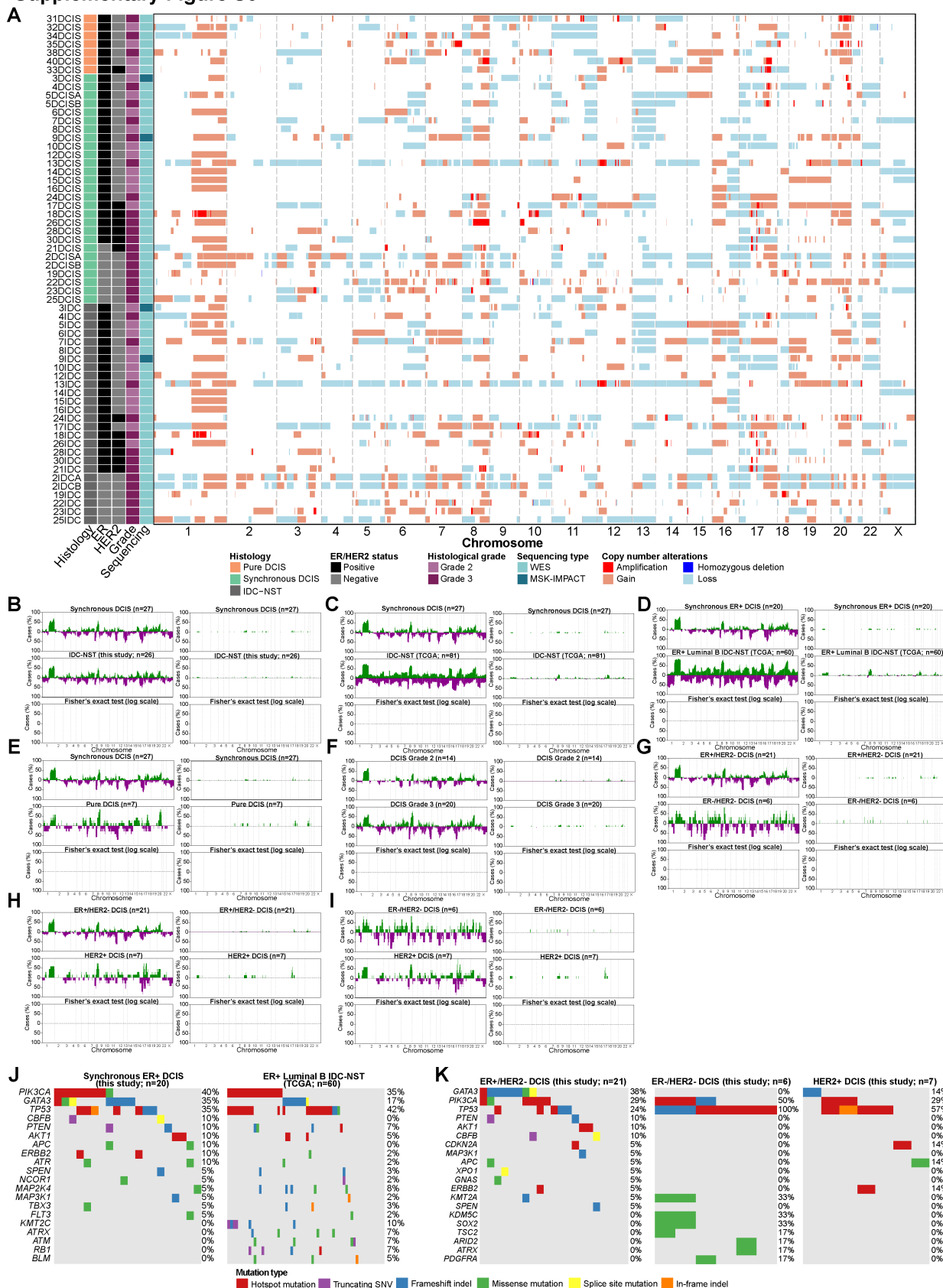


Supplementary Figure S3



Supplementary Figure S3. Copy number profiles of ductal carcinomas *in situ* (DCIS) and invasive ductal carcinomas of no special type (IDC-NST), and frequency of most commonly mutated genes in DCIS, compared to luminal B IDC-NSTs, and according to ER/HER2 status

(A) Heatmap illustrating copy number alterations in pure DCIS (n=7), and in synchronously diagnosed DCIS (n=27) and IDC-NSTs (n=26). Clinicopathologic characteristics are shown in phenobars (left). (B-I) Frequency plots and Fisher's exact test corrected for multiple testing comparing copy number gains and losses (left) and amplifications and homozygous deletions (right) in (B) synchronous DCIS (n=27) and IDC-NSTs from this study (n=26), (C) synchronous DCIS (n=27) and IDC-NSTs from TCGA matched to DCIS from this study by age, menopausal status and ER/HER2 status at a 3:1 ratio (n=81), (D) synchronous ER-positive DCIS from this study (n=20) and ER-positive luminal B IDC-NSTs from TCGA matched to the synchronous ER-positive DCIS from this study by age, menopausal status and HER2 status (n=60), (E) synchronous DCIS (n=27) and pure DCIS (n=7) from this study, (F) grade 2 DCIS (n=14) and grade 3 DCIS (n=20) from this study, (G) ER-positive/HER2-negative DCIS (n=21) and ER-negative/HER2-negative DCIS (n=6) from this study, (H) ER-positive/HER2-negative DCIS (n=21) and HER2-positive DCIS (n=7) from this study, and (I) ER-negative/HER2-negative DCIS (n=6) and HER2-positive DCIS (n=7) from this study. The frequency of gains/amplifications (green bars) or losses/homozygous deletions (purple bars) for each gene is plotted on the y-axis according to genomic position (x-axis). Inverse Log_{10} values of the Fisher's exact test P values are plotted according to genomic location (lower panels). (J-K) Comparison of the most frequently mutated cancer genes of the MSK-IMPACT panel identified in (J) synchronous ER-positive DCIS from this study (n=20) and in ER-positive luminal B IDC-NSTs from TCGA (n=60) matched to the synchronous ER-positive DCIS from this study by age, menopausal status and HER2 status at a 3:1 ratio, and in (K) ER-positive/HER2-negative DCIS from this study (n=21), ER-negative/HER2-negative DCIS (n=6) and HER2-positive DCIS (n=7) from this study. Cases are shown in columns and genes in rows. Fisher's exact test. ER, estrogen receptor; DCIS, ductal carcinoma *in situ*; IDC-NST, invasive ductal carcinoma of no special type; indel, insertion and deletion; SNV, single nucleotide variant; WES, whole-exome sequencing.