

Figure S3: Expression levels of top transcription regulators in major epithelial subclusters (mature luminal/LHS, luminal progenitors/LASP and basal/BM **cells**). Transcription regulators described by Kumar et al in their Extended Figure 1 (see reference below) were evaluated in our data set and only those that showed difference is expression are shown. KLF5 (luminal progenitor/luminal secretory), XBP1 (mature luminal/luminal hormonal), MAFF (basal), SOX9, (luminal progenitor/luminal secretory), RUNX1 (mature luminal/luminal hormonal) showed variability in expression between BRCA1/2 mutant carriers compared to noncarriers with highest difference in XBP1 expression.

*Kumar T, Nee K, Wei R, et al. A spatially resolved single-cell genomic atlas of the adult human breast. Nature 2023; 620:181-191.