

### Supplementary Figure Legends

**Figure S1.** SUM190 IBC cells exhibit mesenchymal/epithelial plasticity and are enriched in CSC-like cells by autocrine signaling. **A**, Immunoblot of mesenchymal and epithelial markers for SUM190 IBC cells grown in the absence or presence of its CM (30%). Representative results of three studies shown. **B**, Invasion assay of SUM190 cells treated as in **(A)**. Average of three independent biological repeats, mean  $\pm$  SEM; \*\*\* $P < 0.001$ . **C**, Representative flow cytometry data for SUM190 cell CSCs determined by CD44<sup>+</sup>/CD24<sup>-</sup> gating. **D**, Percentage of ALDH<sup>+</sup> CSCs in SUM190 cells grown in the absence or presence of SUM190 CM. Average of three independent biological repeats. Data are mean  $\pm$  SEM.

**Figure S2.** Promotion of IBC mesenchymal and CSC-like phenotypes by paracrine signaling. Immunoblot for EMT markers in **(A)** SUM190 and **(B)** IBC80 cells cultured alone (Non-CC) or co-cultured with THP-1 monocytes (CC) in transwells with a 0.4  $\mu$ m pore size membrane. Representative results of three independent studies. **C**, Invasion assay of SUM190 cells treated as above. Average of three independent biological repeats, mean  $\pm$  SEM; \*\*\* $P < 0.001$ .

**Figure S3.** Exogenous addition IL-8 and GRO cytokines promotes phosphorylation of STAT3 and EMT and CSC phenotypes in SUM149 IBC cells. **A**, Recombinant IL-8 (50 ng/ml) and GRO isoform proteins (100, 200, 300 ng/ml) were added to media of IBC SUM149 cells overnight and STAT3 Y705 pSTAT3 immunoblot studies carried out. Representative results of three independent studies shown. **B**, Representative immunoblot of three studies for STAT3 phosphorylation in SUM49 cells treated with 50 ng/ml IL-8 overnight. **C**, Representative immunoblot of three studies for EMT and CSC marker expression in SUM49 cells treated with 50 ng/ml IL-8 overnight.

**Figure S4.** IBC cells secrete factors that recruit monocytes and induce monocyte differentiation to M2-like polarized macrophages. **A**, Transwell migration of primary human monocytes to CM from IBC and non-IBC cell lines, mean  $\pm$  SEM from three studies; \* $P < 0.05$ , \*\*\*\* $P < 0.0001$ . **B**, Cytokine and chemokine array of the CM of SUM149 cells. Established monocyte chemo-attractants are highlighted in black and less-established chemo-attractants are in grey. **C**, Representative flow cytometric analysis from three studies of macrophage differentiation and M1/M2 polarization markers in THP-1 monocytes grown in the absence or presence of 30% CM from the indicated cell lines. **D**, Immunohistochemical staining of representative IBC tumor specimens (n = 45) and companion normal breast epithelium (n = 45) for the M2 macrophage marker CD163. Scale bar 50  $\mu$ m.