

Supplementary Figure Legends

Figure S1: Indirect immunofluorescence for tubulin in detached MDA-MB-157 cells. Top panels: Epifluorescence of Glu-tubulin staining showing localization within McTNs. Middle panels: Maximum intensity projections of MDA-MB-157 cells stained for alpha-tubulin (green) and Glu-tubulin (red). Lower panels: Movies of confocal z-stacks demonstrating that filamentous alpha-tubulin is retained in detached cells and Glu-tubulin localizes to a subset of cytoplasmic microtubules and within McTNs.

Figure S2: Phase contrast image of attached mesenchymal breast carcinoma MDA-MB-157.

Figure S4: Immunohistochemical analysis of low magnification of larger breast tumor sections showing heavy staining in both Glu and Twist (*a,b*). Higher magnification of inset region shows strong staining observed in cells that have separated from the tumor nest and invaded into the neighboring stroma (*b,c,e,f*; *black arrows*) but that staining within the tumor “nests” remains low for both Twist and Glu (*b,c,e,f*; *white arrowheads*).

Figure S3: Additional experimental trials of real-time electrical impedance measurements of cell attachment displaying that the HMLE Twist (—♦—) and Snail (—■—) lines attached at a significantly faster rate than the HMLE GFP vector ctrl (··▲··). The electrical impedance was captured every 5min for a duration of 75min. *Lines*, mean for 3 triplicate wells; *bars*, SD.

Figure S5: Microtentacles penetrate endothelial layers. **A:** HMLE cells transfected with GFP-Membrane (green) were suspended for 20min over a confluent layer of human bone marrow endothelial (HBME) cells stably transfected with mCherry (red). Confocal image data was used for surface rendering in Imaris 6.3 (Bitplane). While the vector control HMLE cells have a smooth surface, cells expressing Twist or Snail show numerous microtentacle projections from the cell surface (*TOP - No HBME*, *black arrows*). When the endothelial surface is included (*TOP*), it is evident that several of the microtentacles are below the endothelial layer (*) and can be seen penetrating endothelial cell junctions (*white arrowheads*). Bottom and side views of the confocal image stack show that microtentacles from the Twist and Snail cells penetrate through the endothelial layer (*white arrows*), while vector control cells do not.