A

Sample ID	Pathological diagnosis	Grade	ER	PR	Her2	AJCC stage
HT1	Invasive ductal carcinoma	HG-9	Neg	Neg	Neg	T2N1micMx
HT3	Invasive lobular carcinoma, pleomorphic type	n/a	Pos	Pos	Neg	T1bN0Mx
HT17	Invasive ductal carcinoma	HG-9	Neg	Neg	Neg	T4bN0Mx
HT24	Invasive ductal carcinoma	HG-8	Pos	Pos	Neg	T1cN0(i+)Mx
HT30	Invasive ductal carcinoma	HG-9	Pos	<2%	Neg	T2N0Mx
HT33	Invasive ductal carcinoma	HG-9	Pos	Neg	Neg	T2N0Mx
HT34	Invasive ductal carcinoma	HG-9	Neg	Neg	Neg	T1cN0Mx
HT39	Invasive ductal carcinoma	HG-9	Neg	Neg	Neg	T4dNxMx

B

Sample ID	Latency (months)	Passage in mice	In vivo invasion to FBS/EGF	Spontaneous lung metastasis
HT1	9	yes	yes (+)	yes
HT3	4	no	n/a	n/a
HT17	2	yes	yes (+++)	yes
HT24	5	no	n/a	n/a
HT30	6	yes	yes (+)	yes
HT33	3	yes	no	no
HT34	4	no	n/a	n/a
HT39	3	yes	yes (+++)	yes

Additional File 7:

Establishing a panel of patient-derived primary breast tumors in mice.

A. Pathological characteristics of the patient tumors that successfully grew a tumor in mice in first passage.

B. Propagation and metastatic properties of the patient-derived xenografts.

Latency: Time from surgery until tumor reaches approximately 1cm in diameter (number of months).

Passage in mice: Whether the sample had the capacity to re-grow tumors in subsequent mice after growth in the first mouse implanted (yes/no).

Invasion: *In vivo* invasion assay in response to EGF (or FBS as a general chemotactic signal) and whether cells migrate significantly to chemotactic gradients over no gradient control (yes/no, if yes +:<150 cells per microneedle, ++: 150-300 cells per microneedle, +++: >300 cells per microneedle).

Lung metastasis: Measurement of spontaneous lung metastasis in the mice bearing orthotopic tumors, presence or absence (yes/ no).

n/a: not applicable, measurement was not possible or not significant, because tumor grew only in the one initial implanted mouse and did not successfully propagate to other mice.