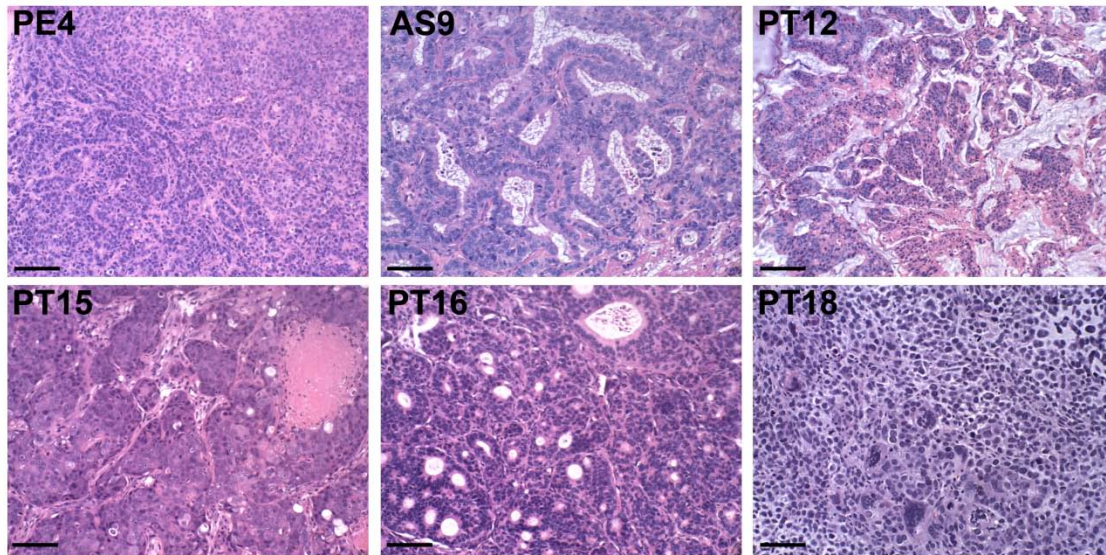


Supplemental Figures 1-5
Breast Cancer Research and Treatment

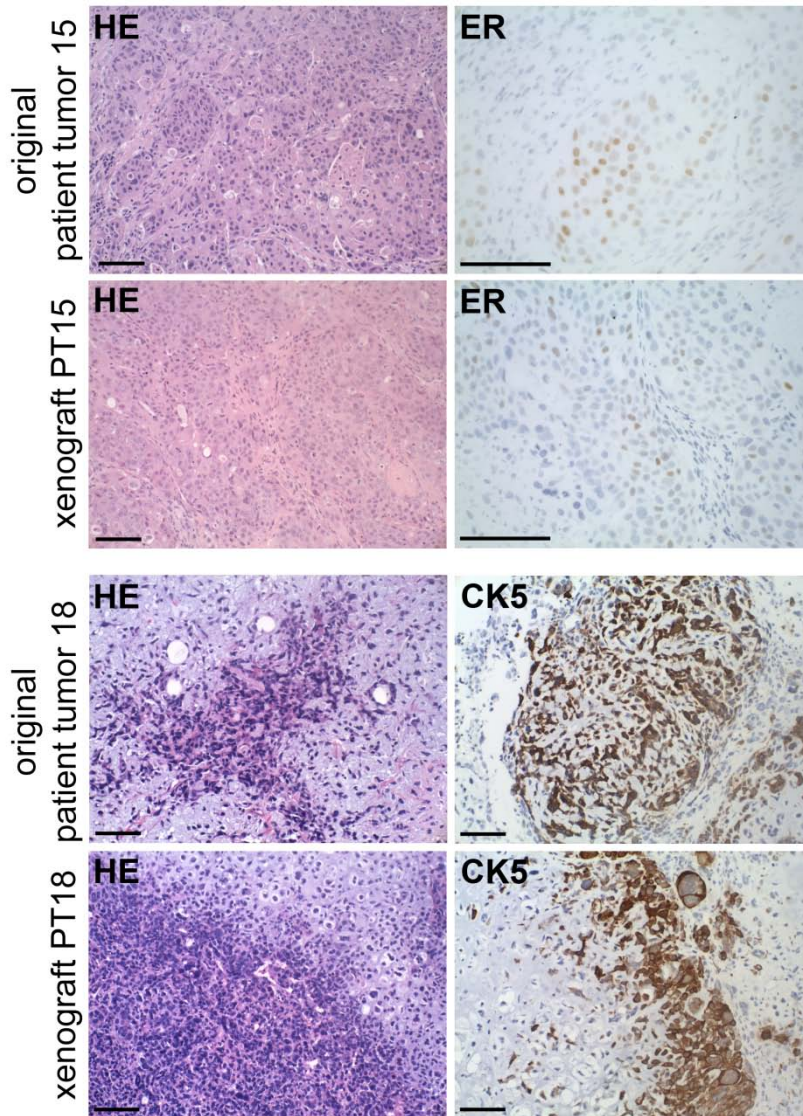
**Patient-derived luminal subtype breast cancer xenografts contain common and unique estrogen
receptor dependent gene expression signatures**

Peter Kabos, Chunling Li, Jessica Finlay-Schultz, J. Chuck Harrell, Enos Kline, Christina Finlayson,
Joshua Wisell, Christopher A. Manuel, Susan M. Edgerton, Anthony Elias, and Carol A. Sartorius

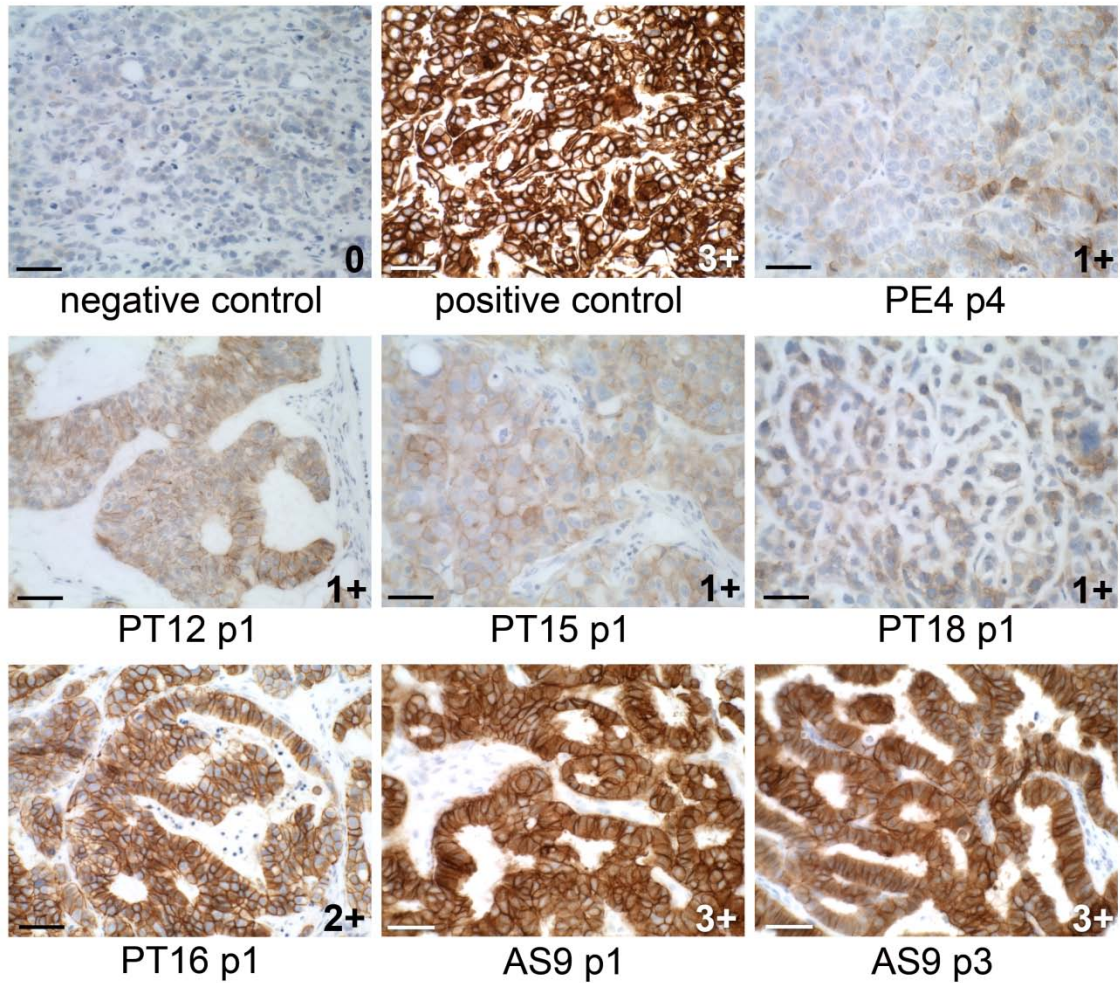
Corresponding author: Carol Sartorius, University of Colorado Denver Anschutz Medical Center,
12801 E 17th Ave MS8104, Aurora, CO 80045. Phone: 303-724-3937; Fax: 303-724-3712; E-mail:
Carol.Sartorius@ucdenver.edu



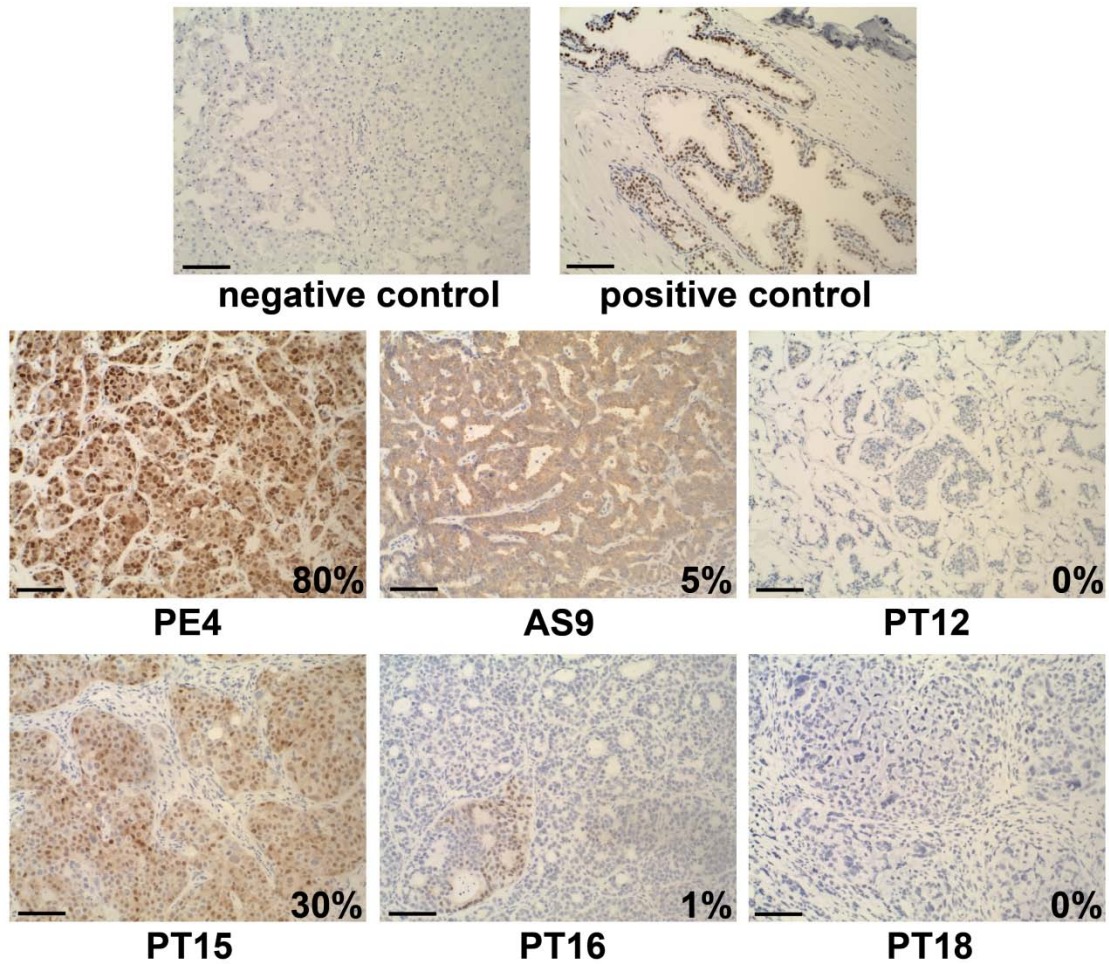
Supplemental Figure 1. Hematoxylin and eosin stain of xenograft tumors. Sections of six breast tumor xenografts at passages 1-2 were stained by H&E and photographed at 20x magnification. Scale bars, 100 μ M.



Supplemental Figure 2. Patient-derived xenograft tumors morphologically resemble the tumor of origin. For select cases where sufficient material was available (PT15 and PT18), a portion of the original patient tumor was processed into paraffin blocks. Sections (5 μ M) were cut, and stained by H&E and IHC (ER for PT15, CK5 for PT18) side by side with the corresponding xenografts (PT15 and PT18) at passages 1. Scale bars, 100 μ M.



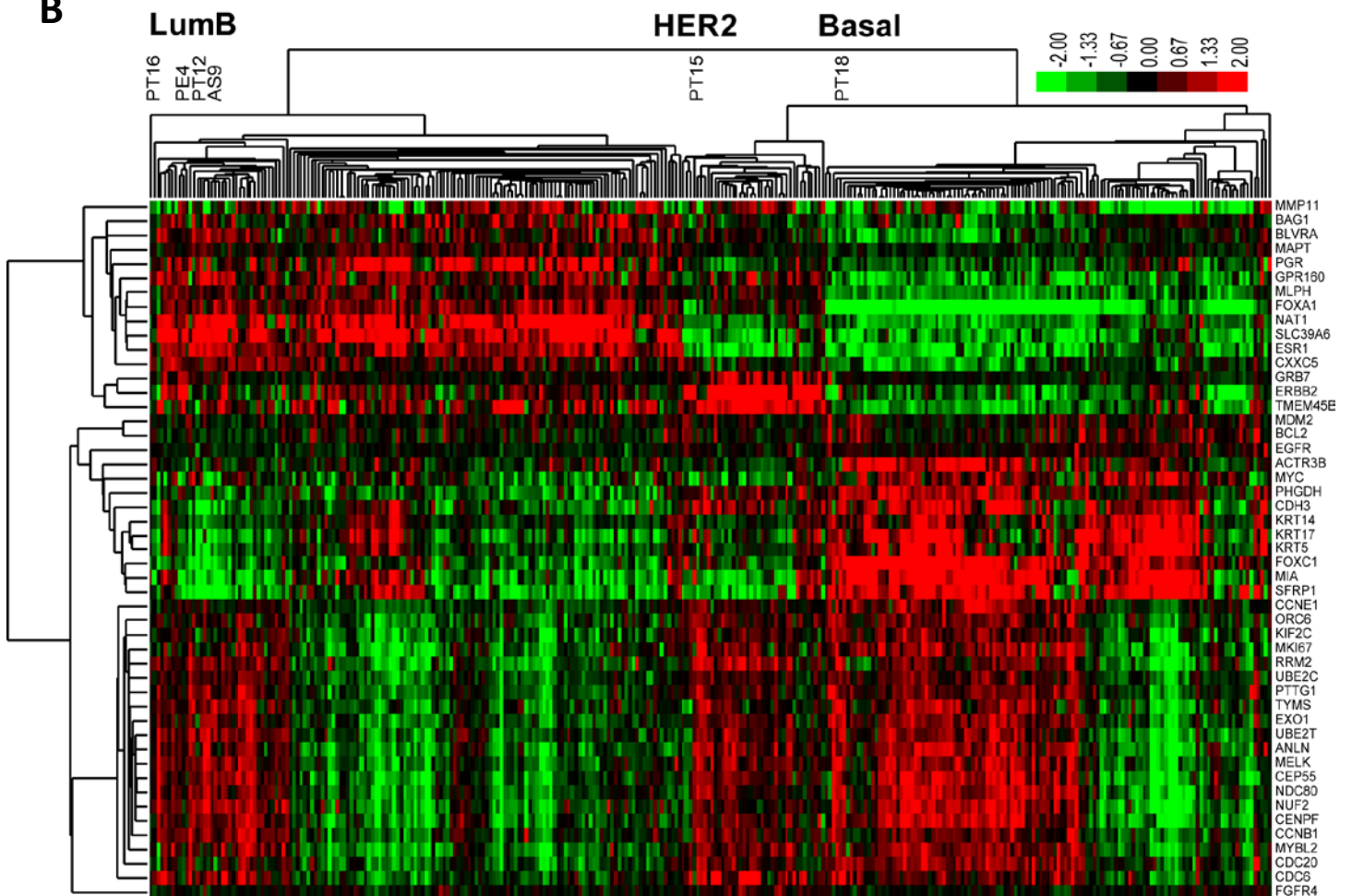
Supplemental Figure 3. HER2 expression in xenograft tumors. Sections (5 μ M) of tumors at passages 1-3 were stained by IHC for HER2. Sections of MCF7 and BT474 xenograft tumors were used as negative and positive controls, respectively. Staining intensities (1-3+) were scored via the Ventana Vias Imaging system, and are indicated on each photograph (1-3+). Scale bars, 100 μ M.



Supplemental Figure 4. AR expression in xenograft tumors. Sections (5 μM) of tumors at passages 1-2 were immunostained for AR. Positive and negative controls were normal prostate and tonsil, respectively. Percentages of AR+ cells were scored by a trained pathologist and are indicated on each photograph. For AS9, there was frequent cytoplasmic staining and the percentage reflects nuclear AR. Scale bars, 100 μM.

A

Tumor xenograft	Molecular subtype	Differentiation score
PE4	Luminal B	0.11560883
AS9	Luminal B	0.231244405
PT12	Luminal B	0.275798176
PT15	Her2	0.196650968
PT16	Luminal B	0.137181298
PT18	Basal	-0.148936882

B

Supplemental Figure 5. Molecular subtypes of patient derived breast tumor xenografts. A 50 gene predictor developed by Parker et al (34) was used to align by cluster analysis the six xenograft tumor samples to intrinsic subtypes Luminal A (LumA), Luminal B (LumB), Basal-like, HER2-enriched, and normal-like. **A.** Tabular annotation of Molecular subtype and Differentiation score (a relative measure of ER levels (35)) of each tumor. **B.**

