

Supplemental Materials – Tables

Supplemental Table 1: Intrinsic subtype definitions by immunohistochemistry.

Antibody	Dilution and Incubation Time	Antigen Retrieval Methods	Definition of positive stain on invasive breast cancer cells
ER: SP 1 (ThermoFisher Scientific, Fremont, CA)	1:50 dilution for 32 min with heat	Mild CC1 on Ventana BenchMark	> 1%
PR: 1E2 (Ventana, Tuscon, AZ)	Pre-diluted for 8 min with heat	Std CC1 on Ventana DiscoveryXT	> 1%
HER 2: SP 3 (ThermoFisher Scientific, Fremont, CA)	1:500 dilution for 32 min with heat	Mild CC1 on Ventana BenchMark	IHC 3+, or if IHC is 2+, then FISH HER2/CEP17 > 2.0
Ki67: SP 6 (Neomarkers)	1:200 dilution for 32 min with heat	Mild CC1 on Ventana BenchMark	IHC >13%
EGFR: DAKO PharmDX kit	Pre-diluted for 30 min	Proteinase K for 5 min	any staining above background
CK 5/6: D5/16B4 (Zymed)	1:100 dilution for 32 min with heat	Mild CC1 on Ventana BenchMark	any staining above background

Luminal A = (ER or PR) positive AND HER2 negative AND Ki67 \leq 13%

Luminal B = (ER or PR) positive AND (HER2 positive or Ki67 >13%)

(pure) HER2+ = ER negative AND PR negative AND HER2 positive

Core Basal = ER, PR AND HER 2 negative AND (CK5/6 or EGFR) positive

Supplemental Table 2: C-Index for Risk-of-Relapse (ROR) Scores

ROR Score	Definition of scores	C-index (95% CI)	
		DFS	OS
ROR-S	Subtype Only	57.9% (53.6-63.0%)	62.5% (57.6-67.8%)
ROR-P	Subtype with Proliferation Signature Index	55.9% (50.5-60.0%)	60.0% (54.7-65.0%)
ROR-T	Subtype with Tumour Size	59.8% (54.8-64.2%)	63.1% (57.9-68.2%)
ROR-PT	Subtype with Both Proliferation Signature Index and Tumour Size	57.6% (52.5-62.1%)	61.1% (55.8-66.3%)