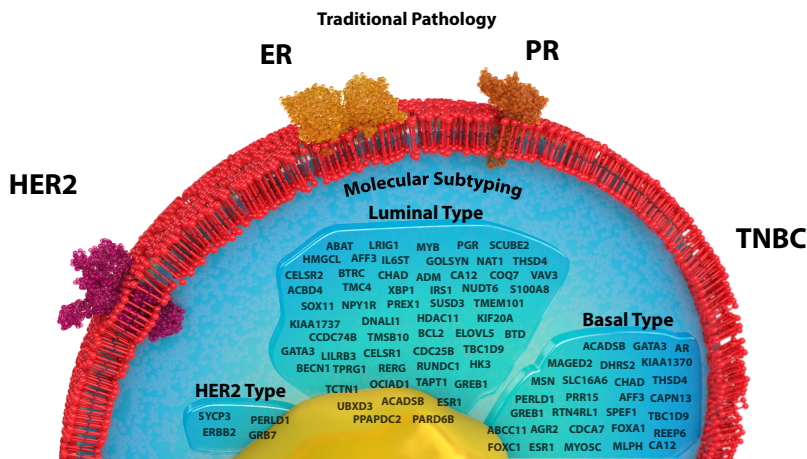


BluePrint® Functional Molecular Subtyping

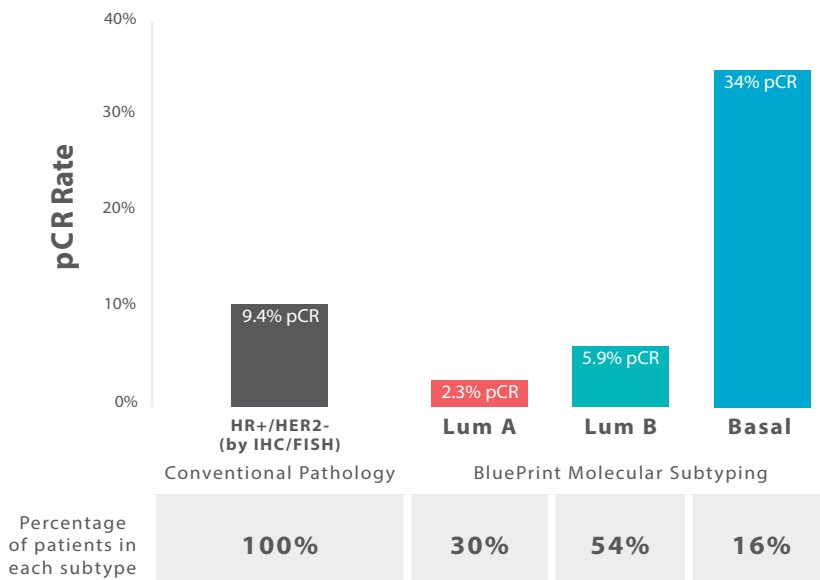


BluePrint, the 80-gene molecular subtyping assay, goes beyond the cell surface to evaluate the underlying biology of a tumor and what is driving its growth.



Informs treatment planning in the pre-operative setting

Standard Pathologic Subtyping vs. BluePrint Molecular Subtyping¹



- Further subdivides pathologically luminal tumors (HR+) into low risk Luminal A and high risk Luminal B subtypes.
- Reclassifies as many as 1 in 5 patients' pathologically HR+ tumors into high risk Basal-Type tumors.¹⁻³

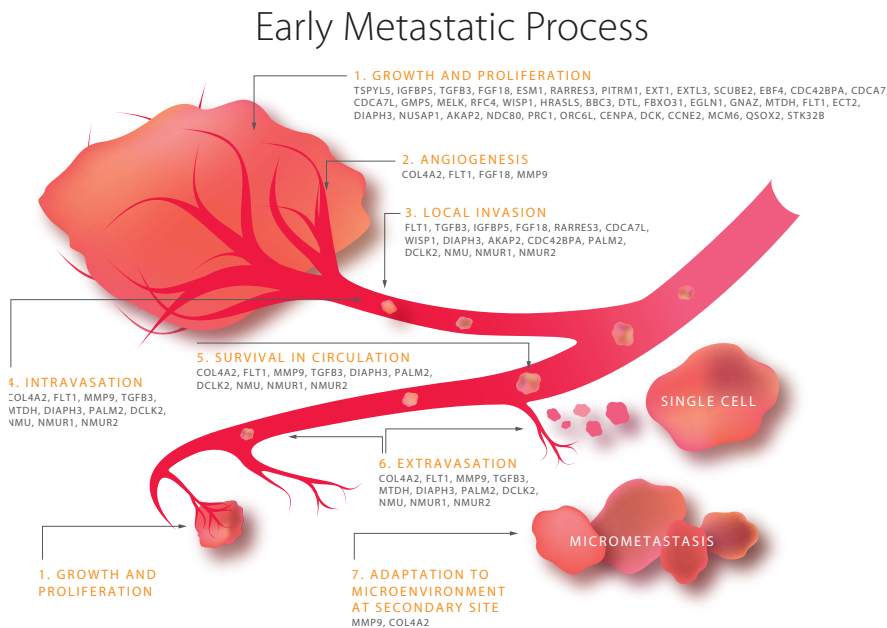
- High risk Luminal B-Type patients experience worse outcomes than Luminal A-Type patients.⁴
- As expected, pCR rates in HER2-Type and Basal-Type patients correlate with long-term outcomes.⁴

BluePrint Subtyping	pCR Rate (%)	5-Year DMFS by Response		
Luminal A-Type	5/90 (6%)	pCR	75%	p= N.S.
		no pCR	94%	
Luminal B-Type	16/154 (10%)	pCR	85%	p= N.S.
		no pCR	72%	
HER2-Type	33/70 (47%)	pCR	91%	p= 0.019
		no pCR	64%	
Basal-Type	45/123 (37%)	pCR	91%	p<0.001
		no pCR	54%	

¹ Groenendijk, et al. npj Breast Cancer 5, 15 (2019); ² Whitworth, P., et al. Ann Surg Oncol (2017) 24: 669–675; ³ van't Veer L, et al. 30th EORTC-NCI-AACR Symposium, November 13-16, 2018; ⁴ Glück, S, et al., Breast Cancer Res Treat. 2013 Jun;139(3):759-67.

MammaPrint® Risk of Recurrence Testing

MammaPrint, the 70-gene breast cancer recurrence assay, is the first FDA-cleared and CE-marked risk-of-recurrence test backed by peer-reviewed, prospective outcome data and included in major treatment guidelines.¹

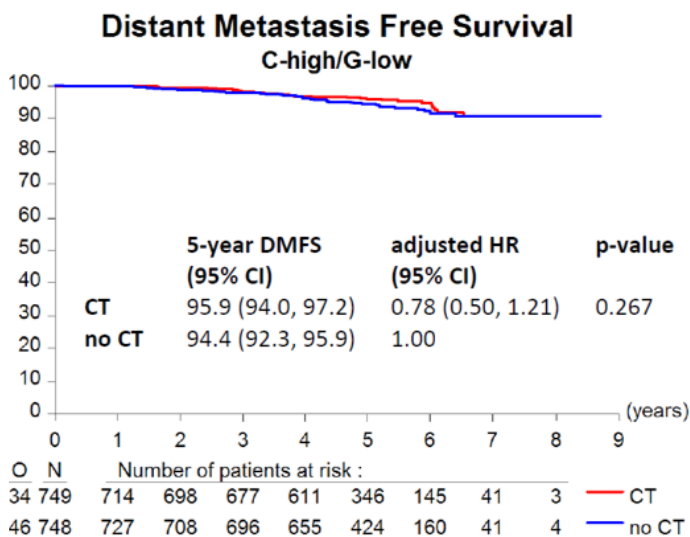


- Interrogates genes involved in every step of the metastatic cascade.
- Results are independent of and complementary to standard IHC/FISH testing.



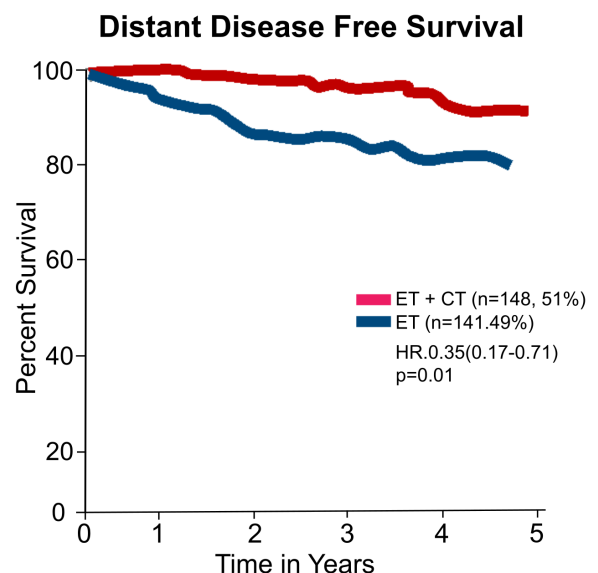
Provides insight into the benefit of post-operative treatment

Prospective, Randomized MINDACT Trial²



MammaPrint Low Risk patients may safely forego adjuvant chemotherapy.

Chemotherapy Prediction³



MammaPrint High Risk patients have significantly better outcomes with chemotherapy.

¹ In 2007, MammaPrint became the first IVDMA to gain 510(k) clearance from the FDA. In 2018, The MammaPrint and Blueprint Kit attained the CE mark.
² Cardoso, F., et al. N Engl J Med 2016;375:717-29; ³ Knauer, M., et al. Breast Cancer Res Treat. 2010 Apr;120(3):655-61.