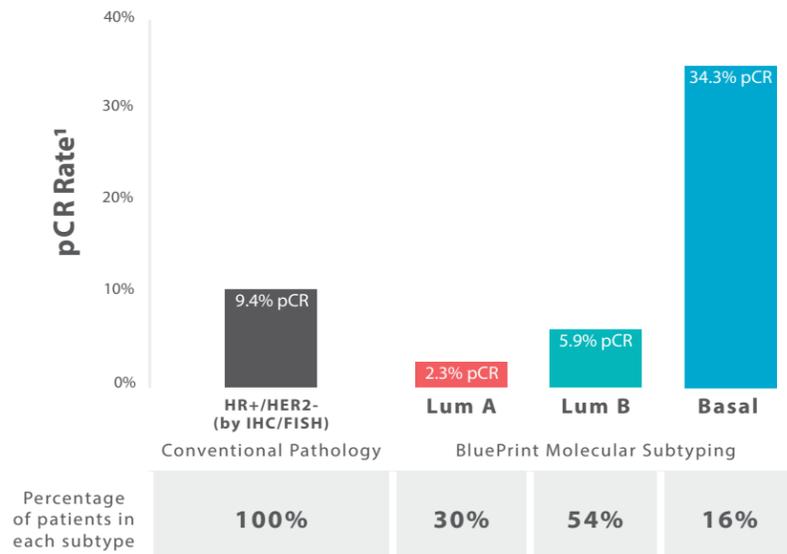


Blueprint, the 80-gene molecular subtyping assay, goes beyond the cell surface to evaluate the underlying biology of a tumor and what is driving its growth.



## Informs treatment planning in the pre-operative setting

### Standard Pathologic Subtyping vs. Blueprint Molecular Subtyping<sup>1</sup>



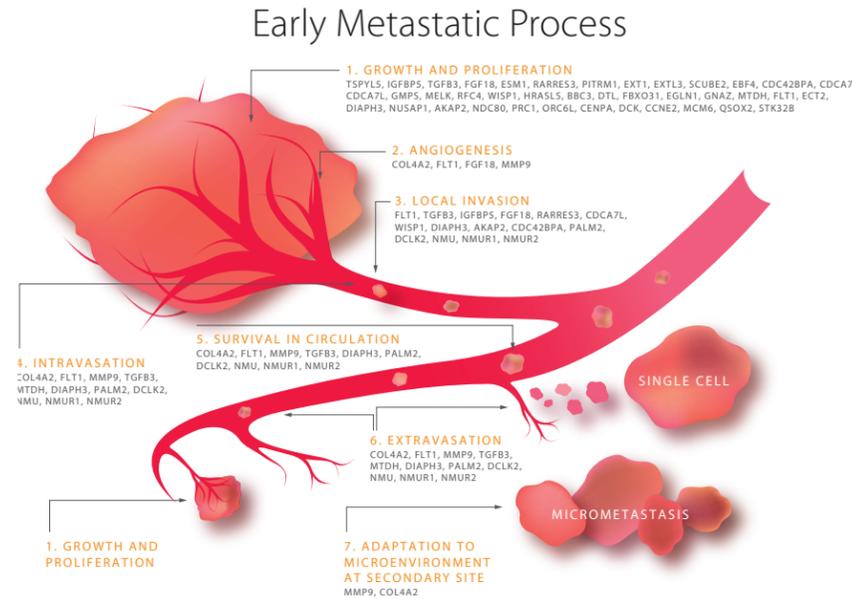
- Further subdivides pathologically luminal tumors (HR+) into low risk Luminal A and high risk Luminal B subtypes.
- Reclassifies as many as 1 in 5 patients' pathologically HR+ tumors into high risk Basal-Type tumors.<sup>1-3</sup>

- As expected, pCR rates in high risk Basal-Type patients correlate with long-term outcomes.<sup>4</sup>
- The subtyping information that Blueprint provides enables physicians to better tailor pre-operative treatment and the timing of surgery to individual patients.<sup>4</sup>

Blueprint Subtyping	pCR Rate (%)	5-Year DMFS by Response		
Luminal A-Type	9/172 (5%)	pCR	100%	p= N.S.
		no pCR	91%	
Luminal B-Type	27/355 (8%)	pCR	82%	p= N.S.
		no pCR	75%	
HER2-Type	102/174 (59%)	pCR	90%	p= N.S.
		no pCR	83%	
Basal-Type	136/371 (37%)	pCR	94%	p<0.001
		no pCR	58%	

<sup>1</sup> Groenendijk, et al. npj Breast Cancer 5, 15 (2019); <sup>2</sup> Whitworth, P, et al. Ann Surg Oncol (2017) 24: 669-675; <sup>3</sup> van 't Veer L, et al. 30th EORTC-NCI-AACR Symposium, November 13-16, 2018; <sup>4</sup> Data on file

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.<sup>1</sup>

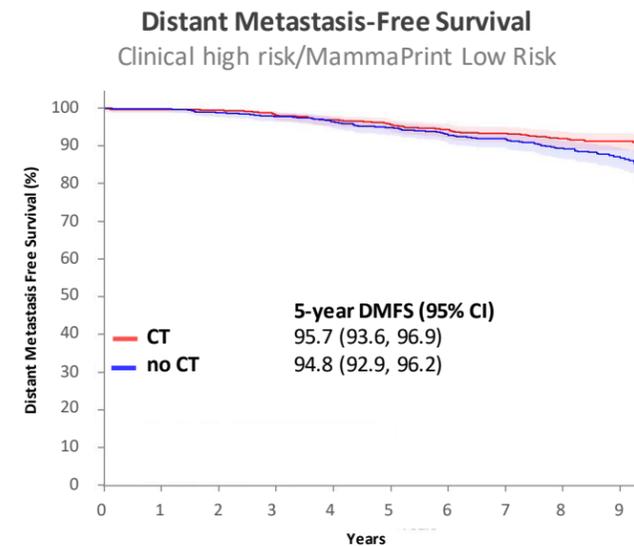


- Interrogates genes involved in every step of the metastatic cascade.
- Results are independent of and complementary to standard IHC/FISH testing.



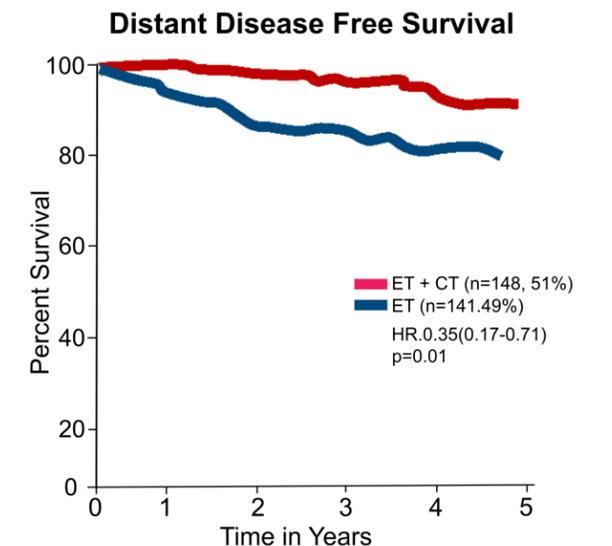
## Provides insight into the benefit of post-operative treatment

### Adjuvant Chemotherapy Planning<sup>2</sup>



MammaPrint Low Risk patients may safely forego adjuvant chemotherapy.

### Chemotherapy Prediction<sup>3</sup>



MammaPrint High Risk patients have significantly better outcomes with chemotherapy.

<sup>1</sup> 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. <sup>2</sup> Cardoso, F, et al. N Engl J Med 2016;375:717-29; <sup>3</sup> Knauer, M, et al. Breast Cancer Res Treat. 2010 Apr;120(3):655-61.