

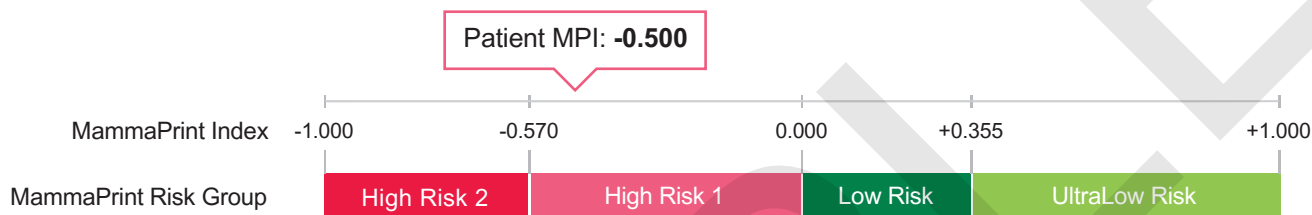
MammaPrint® and Blueprint® Explanation of Results

Specimen File ID: NGS23-000332I1P1C1S1_S19_L00041_

15Jan2025-NGS23-000332I1P1C1S1_S19_L00041_15Jan2025

GENOMIC TESTING RESULTS

MammaPrint Risk Group	High Risk 1	MammaPrint Index	-0.500	Blueprint Molecular Subtype	Luminal B
-----------------------	--------------------	------------------	---------------	-----------------------------	------------------



CLINICAL IMPLICATIONS

This explanation of results assumes the patient's tumor is hormone-receptor positive. Clinical implications are based on observed outcomes from clinical research studies depicted below and further referenced on page 3. Results should be taken in the context of all other relevant clinico-pathological factors and standard practice of medicine.

Neoadjuvant Chemotherapy Planning	Adjuvant Chemotherapy Planning	Adjuvant Endocrine Therapy Planning
Probability of pCR with Neoadjuvant Chemotherapy	Expected Chemotherapy Benefit	Standard Endocrine Therapy Benefit
6%	Yes	Yes
NBRST ^A	MINDACT ^D	STO-3 ^C
	5-Year Distant Risk of Recurrence High Risk 1	Absolute Benefit from Extended Endocrine Therapy
	With ET alone	No
	10%	NSABP B-42 ^E
	(6%-15%)*	
	With ET & CT	
	4%	
	(3%-6%)*	
	Absolute Chemotherapy Benefit	
	6%	
	(3%-8%)*	
	FLEX ^B	

*Indicates lower and upper bound observed within the MammaPrint Risk Group

CT: Chemotherapy | ET: Endocrine Therapy (TAM or AI) | MPI: MammaPrint Index | pCR: Pathologic Complete Response

Note: This summary is provided for general informational purposes. It is not part of any official diagnostic report. Please refer to the MammaPrint and Blueprint Technical Report and Instructions for Use for comments, assay information, and references.

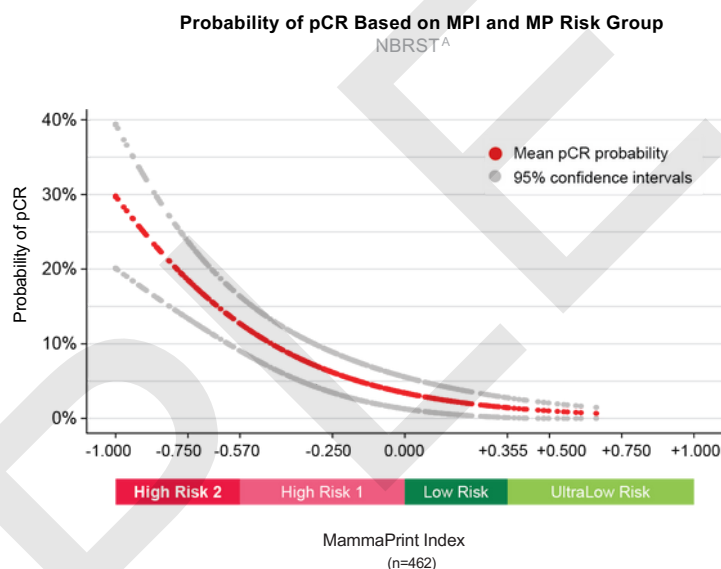
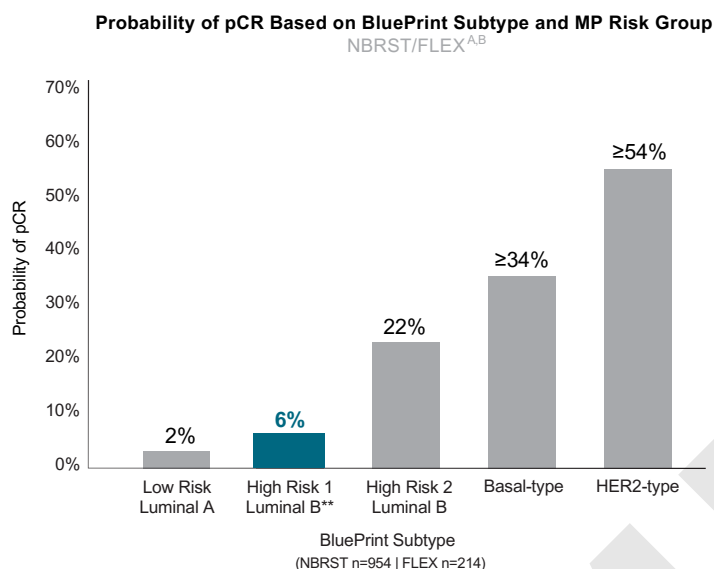
MammaPrint® and Blueprint® Explanation of Results

Specimen File ID: NGS23-000332I1P1C1S1_S19_L00041_

15Jan2025-NGS23-000332I1P1C1S1_S19_L00041_15Jan2025

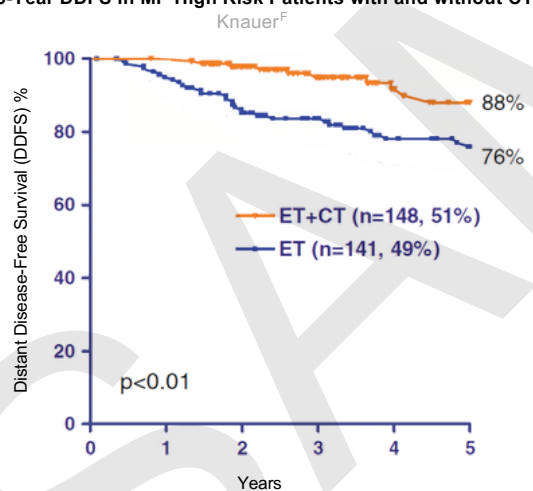


NEOADJUVANT CHEMOTHERAPY PLANNING DATA*



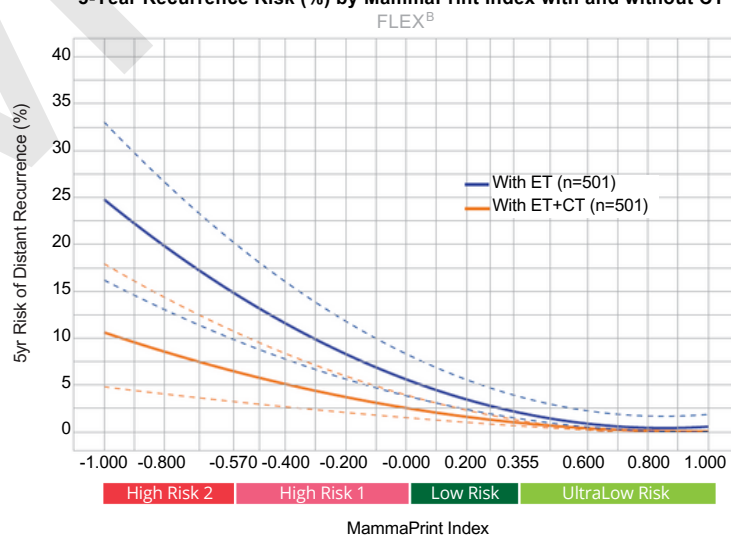
ADJUVANT CHEMOTHERAPY PLANNING DATA*

5-Year DDFS in MP High Risk Patients with and without CT



Predicted benefit of chemotherapy included both clinically high risk and clinically low risk patients at 5 years

5-Year Recurrence Risk (%) by MammaPrint Index with and without CT



*Clinical implications are based on observed outcomes from clinical research studies depicted above and further referenced on page 3. Results should be taken in the context of all other relevant clinico-pathological factors and standard practice of medicine.

**A pathologically ER+/HER2+ patient with a Luminal B-Type result has a 16% probability of pCR with neoadjuvant chemotherapy.

ET: Endocrine Therapy | CT: Chemotherapy | MP: MammaPrint | MPI: MammaPrint Index | pCR: Pathologic Complete Response

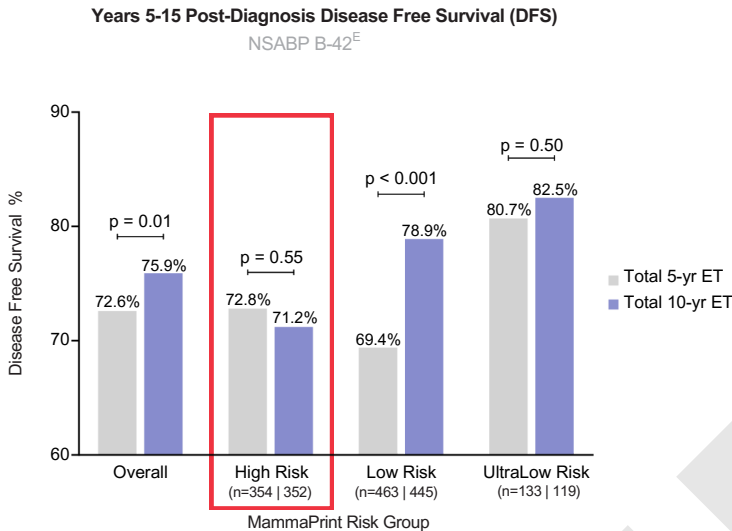
Note: This summary is provided for general informational purposes. It is not part of any official diagnostic report. Please refer to the MammaPrint and BluePrint Technical Report and Instructions for Use for comments, assay information, and references.

MammaPrint® and Blueprint® Explanation of Results

Specimen File ID: NGS23-000332I1P1C1S1_S19_L00041_

15Jan2025-NGS23-000332I1P1C1S1_S19_L00041_15Jan2025

ADJUVANT ENDOCRINE THERAPY (ET) PLANNING DATA*



*Clinical implications are based on observed outcomes from clinical research studies depicted above and further referenced below. Data supporting adjuvant endocrine therapy planning were generated from studies composed of predominantly hormone-receptor positive, post-menopausal women (>50 years old). Menopausal status at 5 years post-diagnosis can be used to determine the application of data for adjuvant endocrine therapy planning. Results should be taken in the context of all other relevant clinico-pathological factors and standard practice of medicine.

CLINICAL STUDY AND TRIAL REFERENCES

- A. NBRST:** A prospective study that included 1,069 patients with histologically proven early stage breast cancer (ESBC), aged 18–90 years, who were scheduled to receive neoadjuvant therapy. Patients were enrolled from 40 US institutions and received both MammaPrint and Blueprint genomic testing. Treatment was at the discretion of the physician adhering to NCCN-approved or other peer-reviewed, established regimens. Intrinsic preoperative chemosensitivity and long-term outcomes were precisely determined by MammaPrint and Blueprint regardless of patient age, supporting the utility of these assays to inform treatment and surgical decisions in ESBC.^{1,4}
- B. FLEX (NCT03053193):** An ongoing prospective, observational trial that has enrolled >17,000 patients with ESBC who were tested with MammaPrint as standard of care, with or without Blueprint, and consented to clinically annotated full transcriptome data collection (data locked August 2024).⁵⁻⁸
- C. STO-3:** The prospective Stockholm tamoxifen trial included 1,780 lymph node-negative, HR+, post-menopausal patients with tumors smaller than or equal to 3 cm in diameter, randomized to 2 (65%) to 5 (35%) years of adjuvant tamoxifen vs no adjuvant treatment. MammaPrint was retrospectively assessed on a translational cohort of 652 patients; 313 had received tamoxifen (2–5 years) and 339 had not received adjuvant systemic therapy.^{9,10}
- D. MINDACT:** A phase 3, prospective, randomized clinical trial that enrolled 6,693 patients at 112 academic and community hospitals in 9 European countries. Patients were eligible to enroll if they were women aged 18–70 years with histologically confirmed unilateral primary non-metastatic (M0) invasive breast cancer (clinical stage T1 or T2 or operable T3) with 0–3 positive axillary lymph nodes. For hormone-positive women ≤ 50 years, there was a 2.6% benefit in 5-year distant metastasis free survival for women who received chemotherapy (CT) vs those that received endocrine therapy (ET) alone. Although this difference is possibly due to CT-induced ovarian function suppression, it should be part of informed, shared decision making.^{11,12}
- E. NSABP B-42:** A prospective adjuvant extended endocrine therapy (EET) trial which included 3,966 post-menopausal women with stage I–IIIA HR+ breast cancer, who were disease-free after 5 years of ET. Patients were randomized to receive either an additional 5 years of letrozole (EET) or placebo. MammaPrint was retrospectively analyzed on a translational cohort of 1,866 patients; 916 patients received EET and 950 patients received placebo.¹³
- F. Knauer:** A retrospective study that included 541 patients with stage pT1–3, N0–1 invasive breast cancer with known adjuvant treatment status. 252 (47%) and 289 (53%) were classified as MammaPrint Low Risk and High Risk, respectively. A 12% absolute reduction in recurrence risk (50% relative risk reduction) was observed in 5-year distant disease-free survival among MammaPrint High Risk patients who were treated with ET and CT versus those who were treated with ET alone, which was statistically significant.¹⁴

References:

- Whitworth P et al. Ann Surg Oncol. 2017 Mar;24(3):669-675. | 2. Whitworth P et al. JCO Precis Oncol. 2022 Apr;6(1):e2100463. | 3. Whitworth P et al. Ann Surg Oncol. 2022 Apr 4;29(7):4141-4152. | 4. Whitworth P et al. JCO Precis Oncol. 2022 Sep;6:e2200197. | 5. O'Shaughnessy J et al. 2021. ASCO. Abstract #563. | 6. O'Shaughnessy J et al. 2023. SABCS. Abstract PO5-15-04. | 7. Audeh MW et al. 2024. MBCC. Poster #29. | 8. Brufsky A et al. 2024. SABCS. P2-08-12. | 9. van 't Veer L et al. Breast Cancer Res Treat. 2017;166(2):593-601. | 10. Esserman LJ et al. JAMA Oncol. 2017;3(11):1503-1510. | 11. Piccart M et al. Lancet Oncol. 2021;22(4):476-488. | 12. Lopes-Cardozo J et al. J Clin Oncol. 2022;40(12):1335-1345. | 13. Rastogi P et al. J Clin Oncol. 2024;00:1-9. | 14. Knauer M et al. Breast Cancer Res Treat. 2010;120(3):655-61.

Agendia Explanation of Results Disclaimer:

The summary pages are provided for general informational purposes only. Please refer to the MammaPrint and Blueprint Technical Report and Instructions for Use for comments, assay information, and references. This information (without limitation, advice and recommendations) and services are neither medical nor health care advice for any individual problem nor a substitute for advice and services from a qualified health care provider familiar with the patient's medical history. All publication information can be found at www.agendia.com.