

SHE COUNTS ON YOUR
BREAST CANCER EXPERTISE
AT THE MOST VULNERABLE
TIME OF HER LIFE.

The comprehensive
genomic assay experts trust.
Incorporated in guidelines:

NCCN^{®1*}

ASCO^{®2*}

ESMO³

ST. GALLEN
CONSENSUS⁴

NICE
DIAGNOSTIC
GUIDANCE⁵

oncotype DX[®]
Breast Cancer Assay

FROM THE MOMENT SHE IS DIAGNOSED, YOUR PATIENT COUNTS
ON YOU TO RECOMMEND THE BEST COURSE OF ACTION.
YOU CAN COUNT ON **THE ONCOTYPE DX® BREAST CANCER ASSAY**.

OVER A DECADE OF CONFIDENCE

The Oncotype DX Breast Cancer Assay provides a genomic-based, comprehensive and individualized risk assessment that helps refine treatment decisions:

- Rigorously validated in multiple studies⁶⁻¹¹
- Analyzes tumor biology through the expression of 21 genes across key biological pathways^{6,7}

DELIVERS CRITICAL GENOMIC INFORMATION NO OTHER ASSAY PROVIDES, ENABLING YOU TO:

- Predict the benefit of adjuvant chemotherapy and endocrine therapy^{7,9,12}
- Base your treatment decisions on a clear picture of individual tumor biology
- Refine the estimate of individual risk as a personalized Recurrence Score® result on a continuum of 0–100^{6,7}
- Quantitatively assess the risk of distant recurrence in years 5–15 (late recurrence)¹³



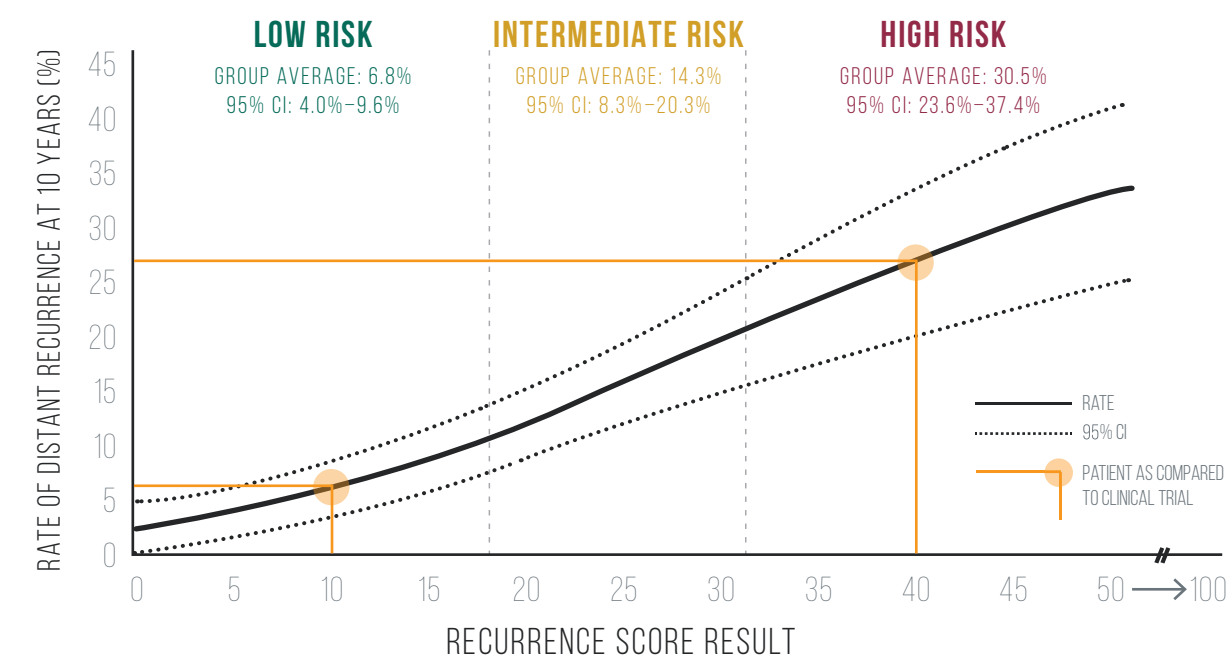
FOR EARLY-STAGE, ER-POSITIVE, HER2-NEGATIVE, NODE-NEGATIVE, AND (1–3) NODE-POSITIVE PATIENTS WITH INVASIVE BREAST CANCER

By testing every eligible patient after surgery but **before** you discuss her treatment plan, you make recommendations with increased insight and confidence.

oncotype DX
Breast Cancer Assay

Incorporated in
NCCN[®] 1*, ASCO[®] 2*, and ESMO³
GUIDELINES, ST. GALLEN
CONSENSUS,⁴ and NICE
DIAGNOSTIC GUIDANCE.⁵

THE RECURRENCE SCORE® RESULT PROVIDES AN INDIVIDUAL PICTURE OF THE PATIENT'S UNIQUE TUMOR BIOLOGY IN NODE-NEGATIVE PATIENTS^{6,7,10,12}



LOW RECURRENCE SCORE DISEASE=

- INDOLENT
- HORMONE-THERAPY SENSITIVE
- LITTLE TO NO CHEMOTHERAPY BENEFIT

HIGH RECURRENCE SCORE DISEASE=

- AGGRESSIVE
- LESS SENSITIVE TO HORMONE THERAPY
- LARGE CHEMOTHERAPY BENEFIT

FROM A LEADING GLOBAL GENOMICS COMPANY, AN ASSAY TRUSTED BY EXPERTS

VALIDATED

in multiple studies with consistent results; the only multigene breast cancer assay with Level 1B (randomized trial) evidence for risk of distant recurrence and prediction of chemotherapy benefit^{6,7,9,11}

PROVEN

in clinical evidence and utility studies with over 9,000 breast cancer patients¹⁴⁻¹⁶

STANDARD OF CARE

that has been incorporated into major clinical practice guidelines (NCCN[®] 1*, ASCO[®], 2*, and ESMO³), St. Gallen Consensus,⁴ and diagnostic guidance (NICE⁵)

CHANGED TREATMENT

decisions in more than 30% of patients in 14 independent studies across 10 countries (range 24%–51%)¹⁷⁻³⁰

BENEFITED 440,000+

breast cancer patients worldwide³¹

PROGNOSTIC

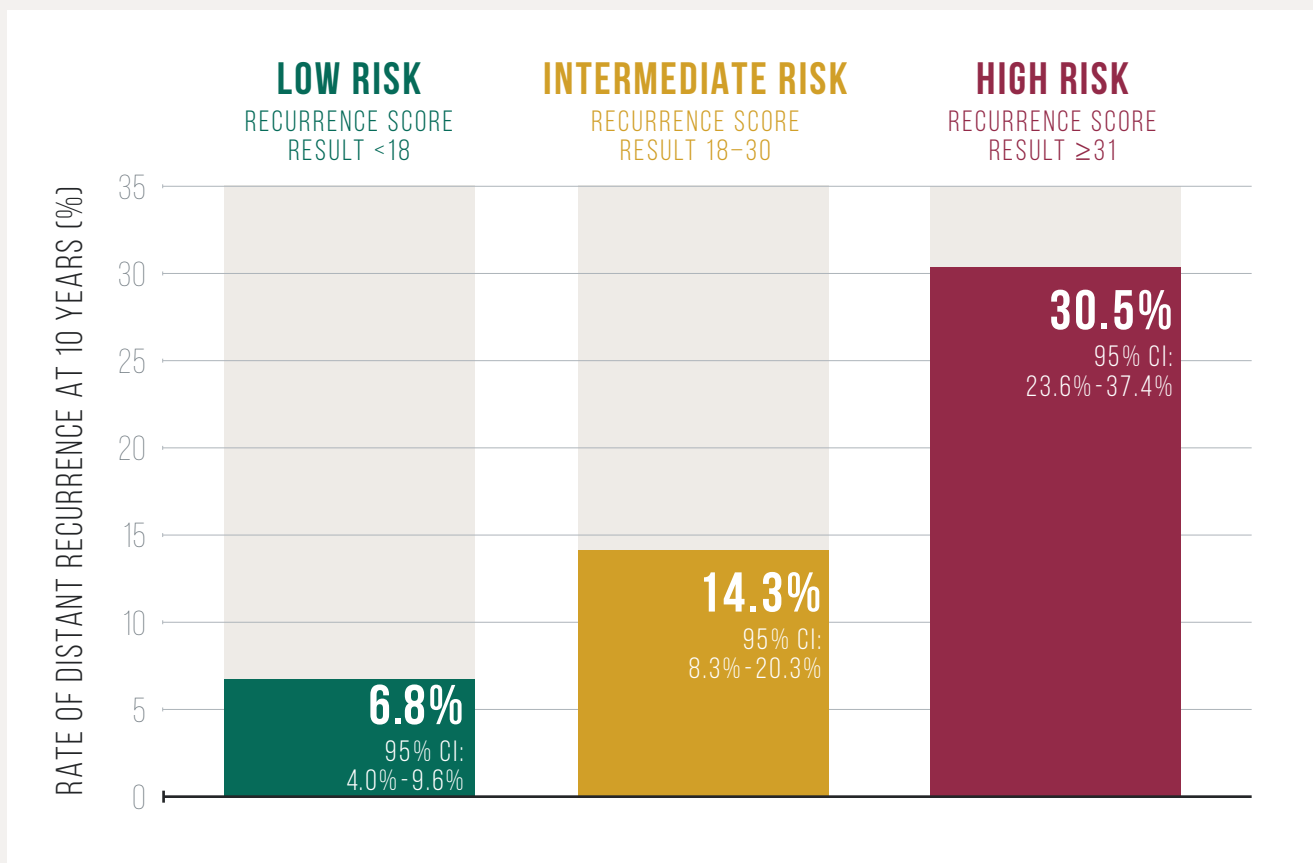
NODE
[-]

Prognostic: The ability to predict the clinical outcome.

THE RECURRENCE SCORE® RESULT PROVIDES AN IMPROVED ESTIMATE OF RISK OF RECURRENCE

NSABP B-14 Study

10-year rate of distant recurrence was significantly lower for patients with low Recurrence Score results compared to high results⁶



↓ LOW RECURRENCE SCORE RESULT = **LOWER RATE** OF DISTANT RECURRENCE⁶

↑ HIGH RECURRENCE SCORE RESULT = **HIGHER RATE** OF DISTANT RECURRENCE⁶

PREDICTIVE

NODE
[-]

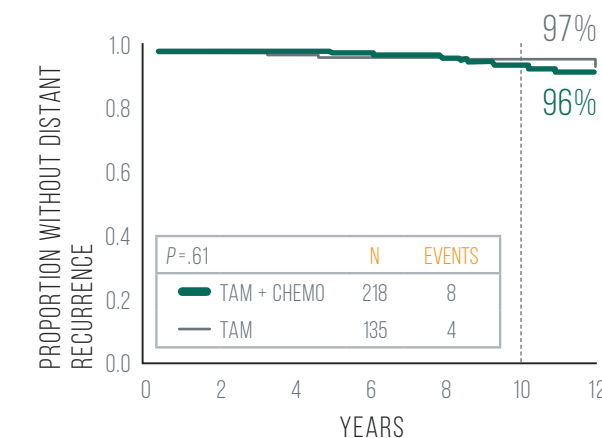
Predictive: The ability to predict the response to a specific treatment (benefit).

THE RECURRENCE SCORE® RESULT PREDICTS THE MAGNITUDE OF CHEMOTHERAPY BENEFIT FOR NODE-NEGATIVE PATIENTS

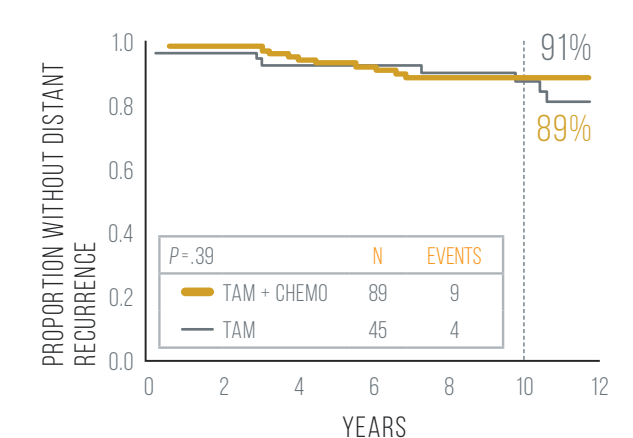
NSABP B-20 Study

Low Recurrence Score result predicted little to no benefit from chemotherapy⁷

LOW RECURRENCE SCORE RESULT (<18) LITTLE TO NO CHEMOTHERAPY BENEFIT



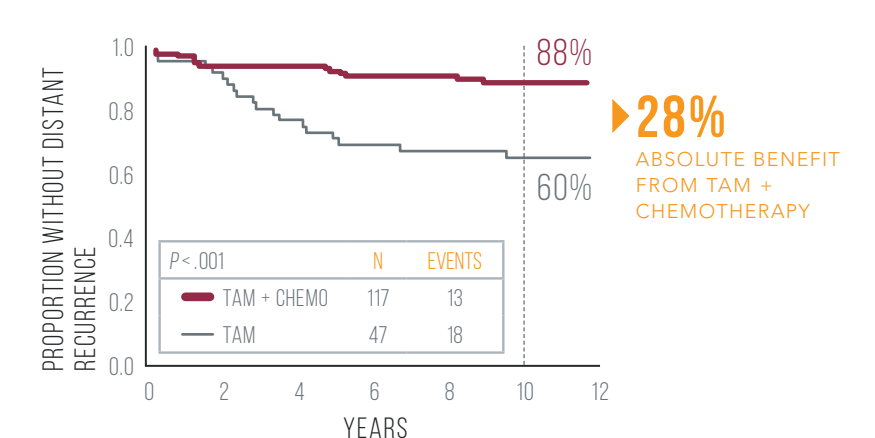
INTERMEDIATE RECURRENCE SCORE RESULT (18-30) NO SUBSTANTIAL CHEMOTHERAPY BENEFIT



NSABP B-20 Study

High Recurrence Score result predicted large benefit from chemotherapy⁷

HIGH RECURRENCE SCORE RESULT (≥31) LARGE CHEMOTHERAPY BENEFIT



The Recurrence Score result is associated with the magnitude of chemotherapy benefit for node-negative patients.⁷

PROGNOSTIC

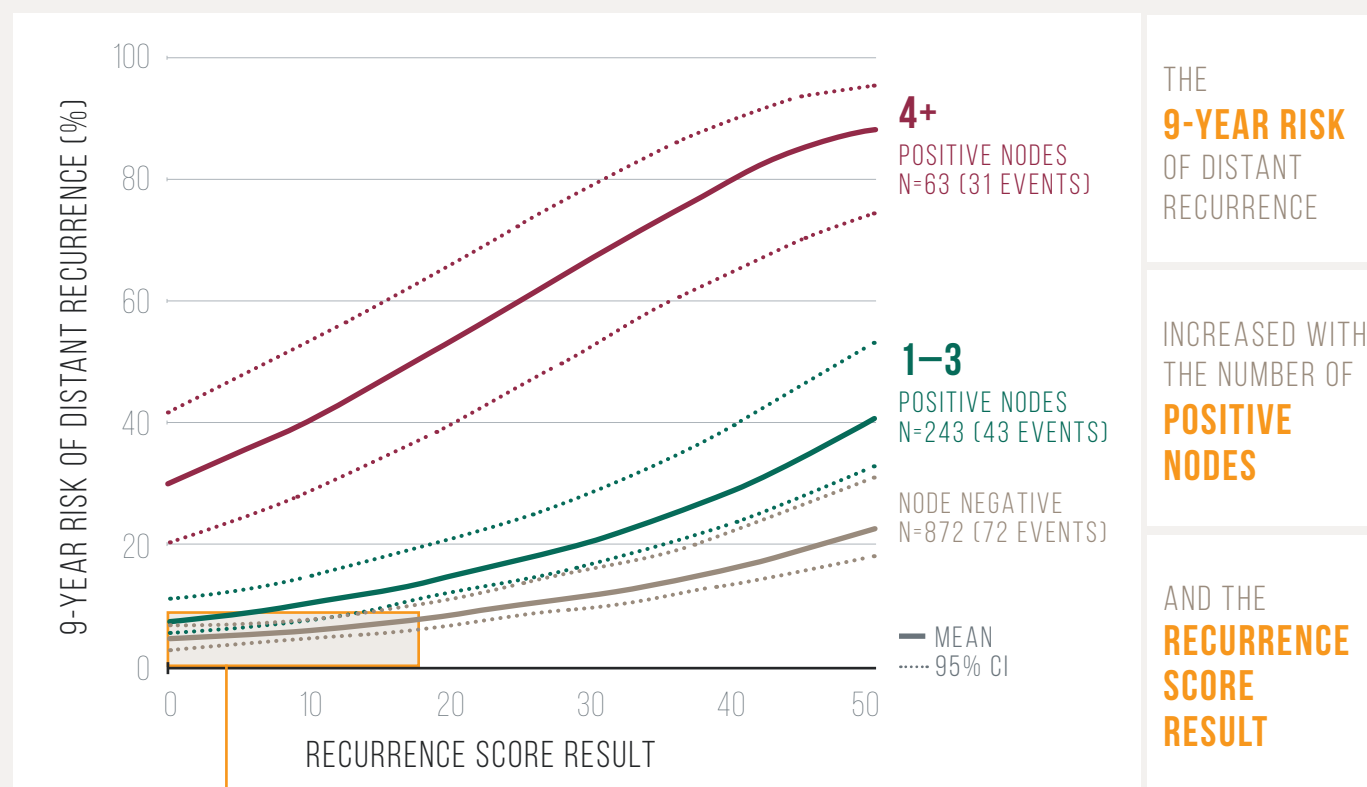
NODE
(+)

Prognostic: The ability to predict the clinical outcome.

THE RECURRENCE SCORE® RESULT PROVIDES AN IMPROVED ESTIMATE OF RISK OF RECURRENCE

TransATAC Study

Rate of distant recurrence increases with the number of positive nodes for all the Recurrence Score values¹¹



LOW RECURRENCE SCORE RESULT= THE 9-YEAR RISK OF DISTANT RECURRENCE FOR **NODE-NEGATIVE** PATIENTS AND THOSE WITH **1-3 POSITIVE NODES** WAS **SIMILAR**

↓ LOW RECURRENCE SCORE RESULT= **LOWER RATE** OF DISTANT RECURRENCE¹¹

↑ HIGH RECURRENCE SCORE RESULT= **HIGHER RATE** OF DISTANT RECURRENCE¹¹

The Recurrence Score result provides important prognostic information about the estimated risk of distant recurrence for node-positive patients.¹¹

PREDICTIVE

NODE
(+)

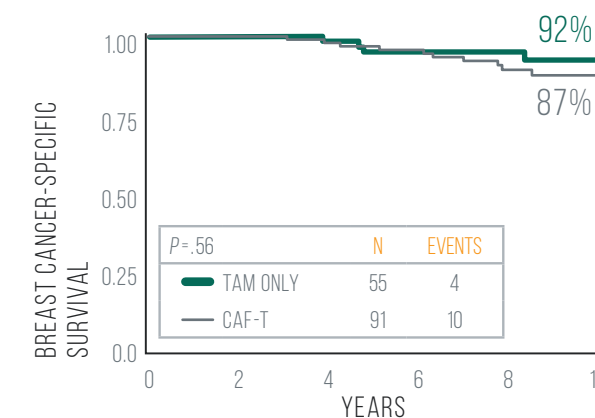
Predictive: The ability to predict the response to a specific treatment (benefit).

THE RECURRENCE SCORE® RESULT PREDICTS THE MAGNITUDE OF CHEMOTHERAPY BENEFIT FOR NODE-POSITIVE PATIENTS

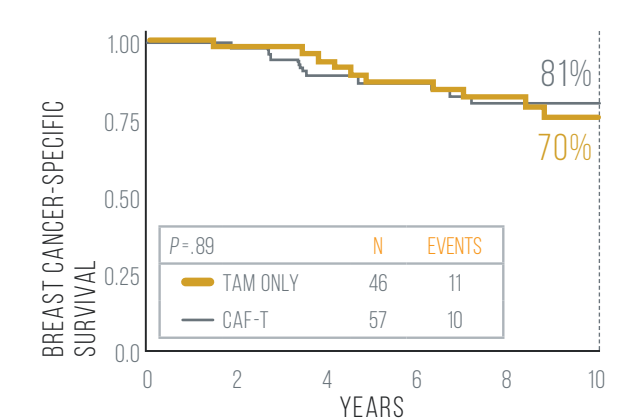
SWOG 8814 Study

Low Recurrence Score result predicted little to no benefit from chemotherapy⁹

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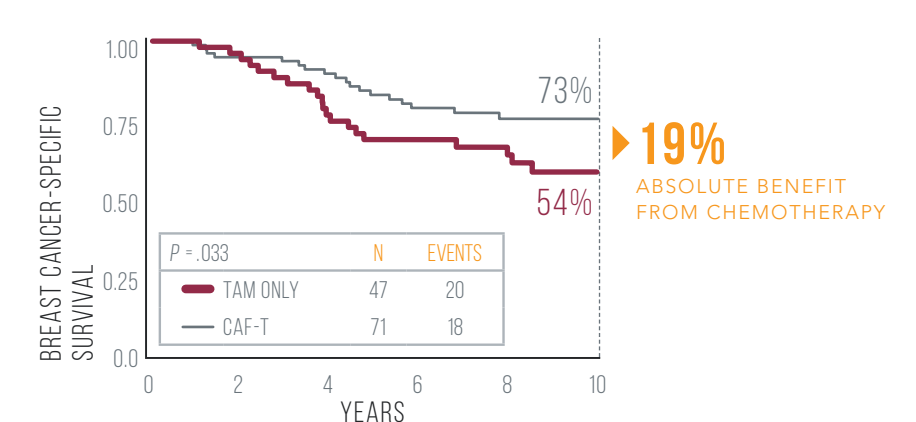
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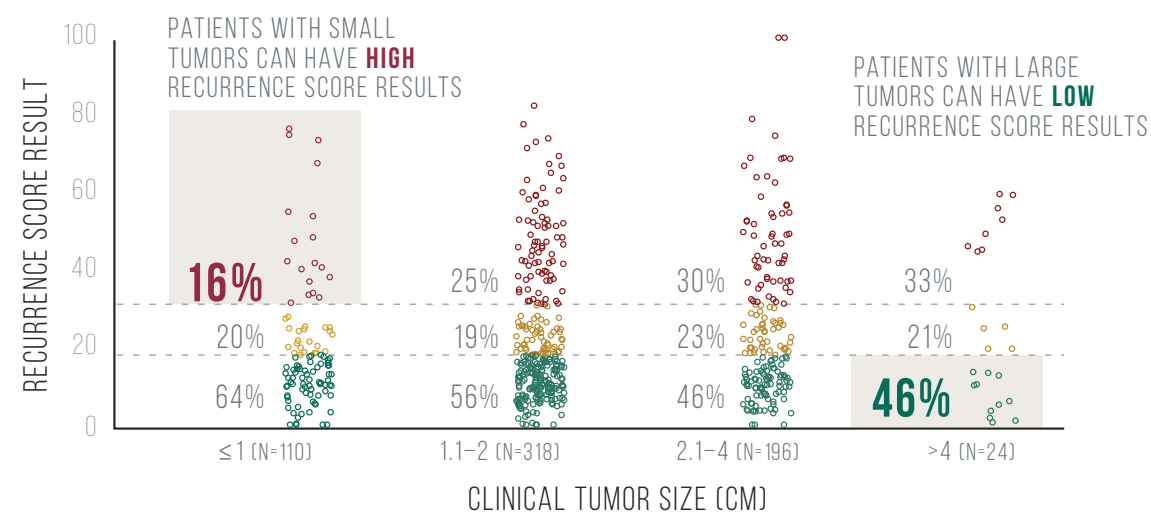
CLINICAL FACTORS

THE ONCOTYPE DX® BREAST CANCER ASSAY PROVIDES INFORMATION BEYOND CLINICAL AND PATHOLOGIC FACTORS

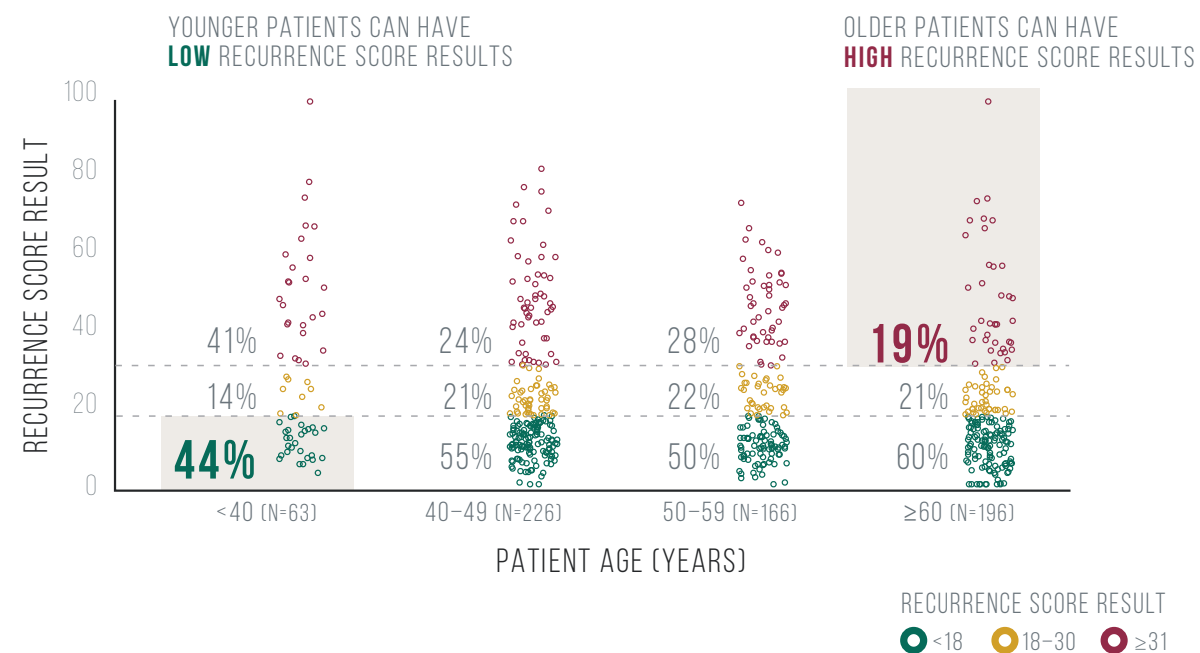
Traditional clinical and pathologic factors cannot predict the Recurrence Score® result

The Recurrence Score result reflects the individual biology of ER-positive patients; traditional factors (tumor size and grade, patient age) do not. This insight enables physicians to assess risk based on a patient's specific underlying disease.⁷

Tumor size does not reveal the whole picture of the tumor biology⁷



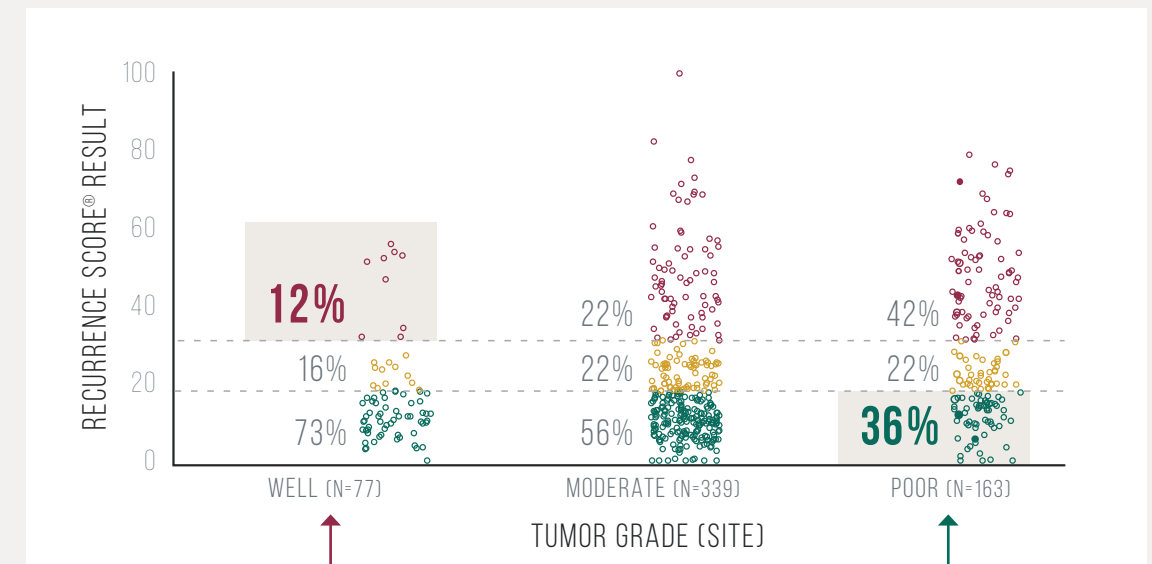
Patient age does not reveal the whole picture of the tumor biology⁷



CLINICAL FACTORS

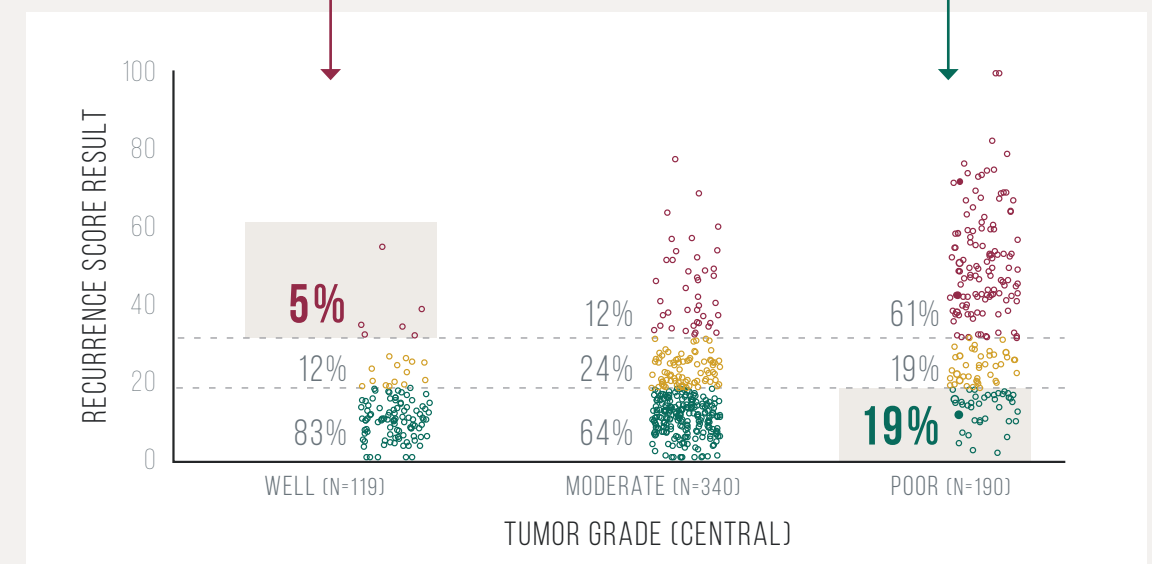
Tumor grade does not reveal the whole picture of the tumor biology⁷

GRADING BY PATHOLOGIST AT LOCAL HOSPITAL



PATIENTS WITH LOW-GRADE TUMORS CAN HAVE **HIGH** RECURRENCE SCORE RESULTS

PATIENTS WITH HIGH-GRADE TUMORS CAN HAVE **LOW** RECURRENCE SCORE RESULTS



GRADING BY PATHOLOGIST AT CENTRAL LAB

RECURRENCE SCORE RESULT
 ● <18 ● 18-30 ● ≥31

CLINICAL FACTORS

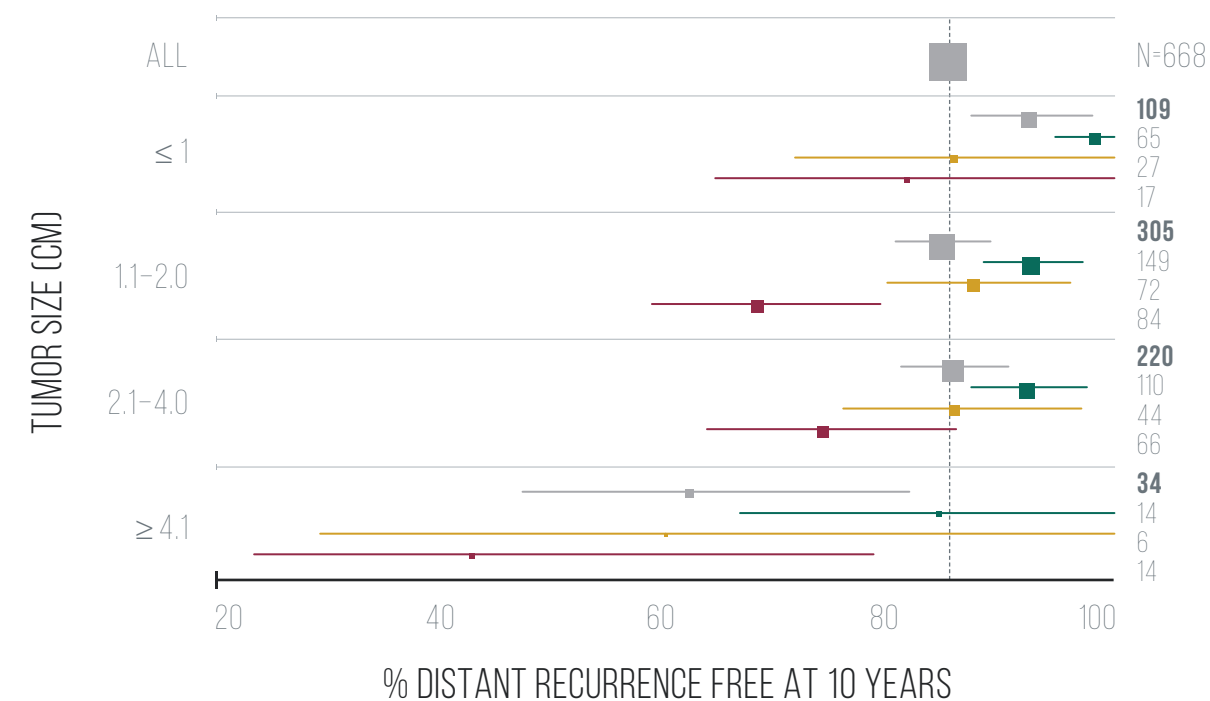
Prognostic: The ability to predict the clinical outcome.

THE RECURRENCE SCORE® RESULT PROVIDES AN IMPROVED ESTIMATE OF RISK OF RECURRENCE

The Recurrence Score result provides important prognostic information about the estimated risk of distant recurrence for node-negative patients⁶

While tumor size, patient age, and tumor grade are modest prognosticators of distant recurrence, the Recurrence Score result provides strong and consistent information beyond traditional clinical and pathologic features in all patient subgroups.⁶

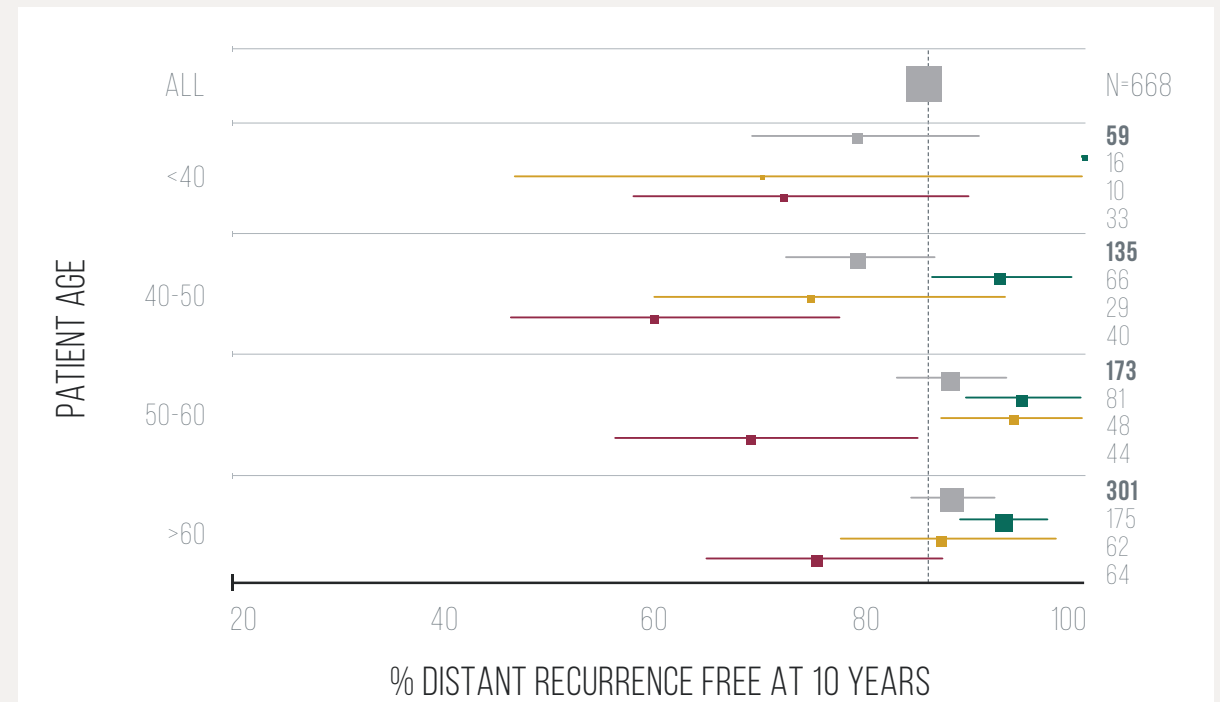
Risk of distant recurrence across tumor size⁶



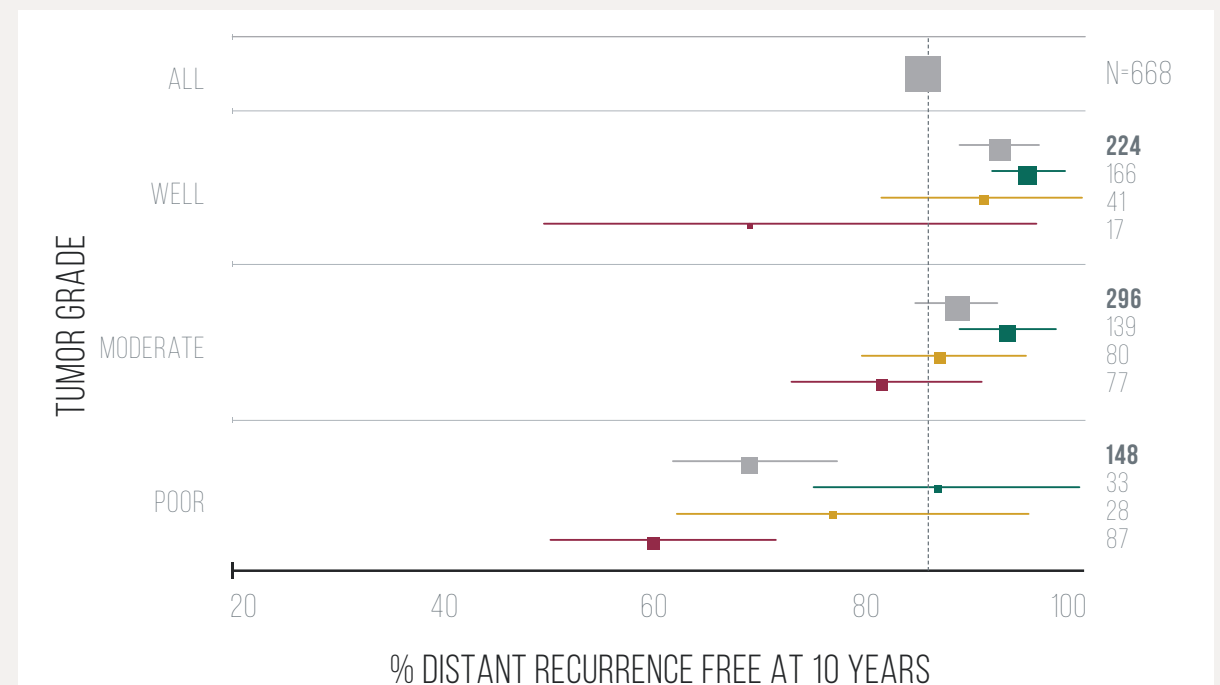
ALL PATIENTS
LOW RISK
(RECURRENCE SCORE RESULT <18)
INTERMEDIATE RISK
(RECURRENCE SCORE RESULT 18-30)
HIGH RISK
(RECURRENCE SCORE RESULT ≥31)

CLINICAL FACTORS

Risk of distant recurrence across patient age⁶



Risk of distant recurrence across tumor grade⁶



ALL PATIENTS
LOW RISK
(RECURRENCE SCORE® RESULT <18)
INTERMEDIATE RISK
(RECURRENCE SCORE RESULT 18-30)
HIGH RISK
(RECURRENCE SCORE RESULT ≥31)

21-GENE PANEL

IDENTIFIED THROUGH A RIGOROUS AND RATIONAL SELECTION PROCESS DESCRIBED BY THE NATIONAL CANCER INSTITUTE

- Identified optimal gene panel through candidate gene approach
- 250 cancer-related genes were chosen based on scientific data
- Candidate genes were tested in 3 independent studies with 447 breast cancer patients³²⁻³⁴

16 CANCER GENES

- Linked to critical molecular pathways in cancer
- Selected genes strongly associated with risk of breast cancer recurrence (prognosis)
- Selected genes strongly associated with chemotherapy benefit (prediction)
- Accuracy for single gene scores enhanced by measuring gene groups (e.g., GRB7/HER2 group)

PROLIFERATION	INVASION	HER2
Ki-67 STK15 SURVIVIN CYCLIN B1 MYBL2	STROMELYSIN 3 CATHEPSIN L2	GRB7 HER2
ESTROGEN	OTHER	
ER2 PR Bcl-2 SCUBE2	GSTM1 CD68 BAG1	

5 REFERENCE GENES

- Normalize gene expression
- Provide quality control regarding inter-sample variability

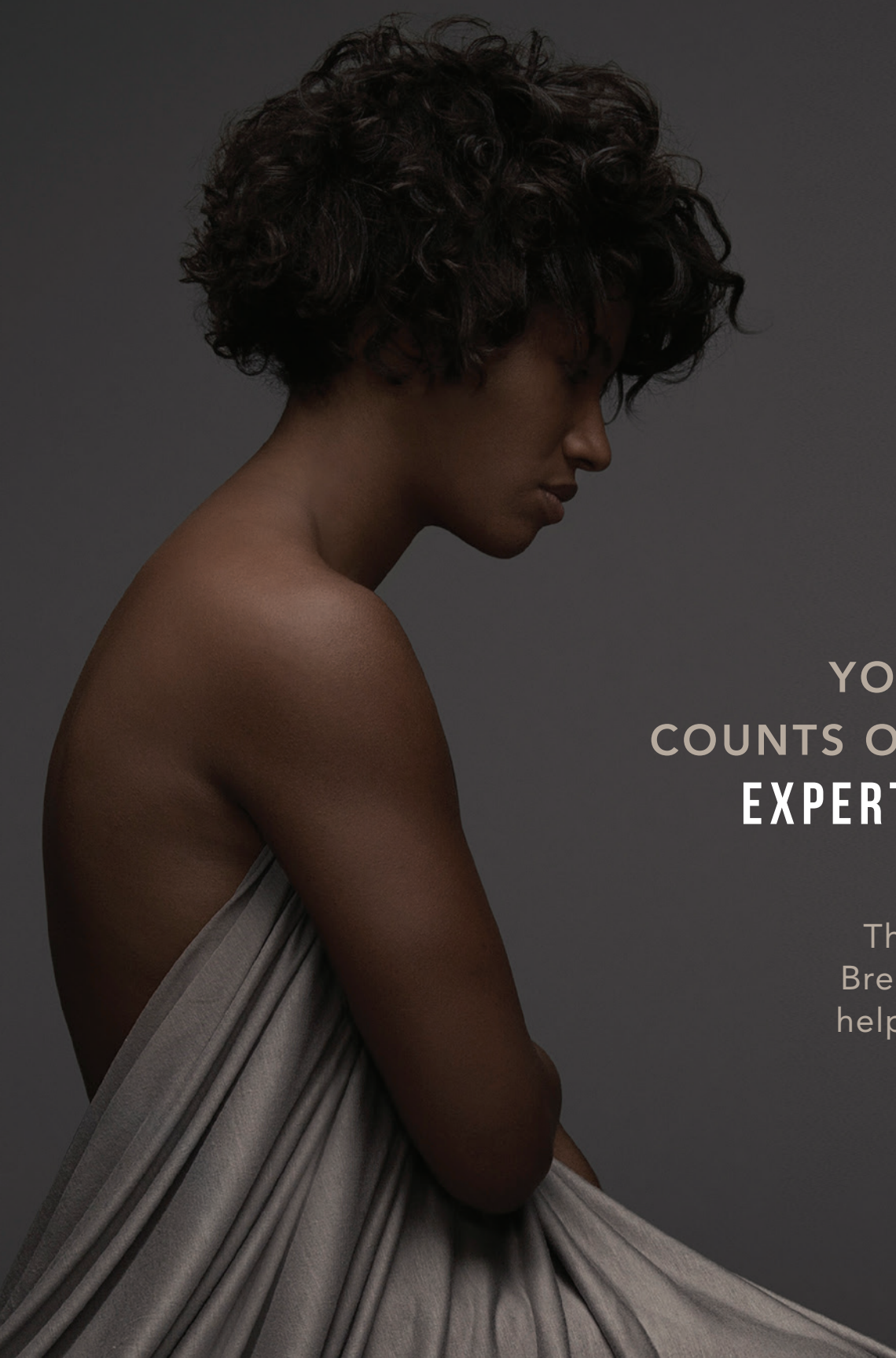
REFERENCE

BETA-ACTIN
GAPDH
RPLP0
GUS
TFRC

Recurrence Score® result = + 0.47 x HER2 group score – 0.34 x Estrogen group score + 1.04 x Proliferation group score + 0.10 x Invasion group score + 0.05 x CD68 – 0.08 x GSTM1 – 0.07 x BAG1⁶

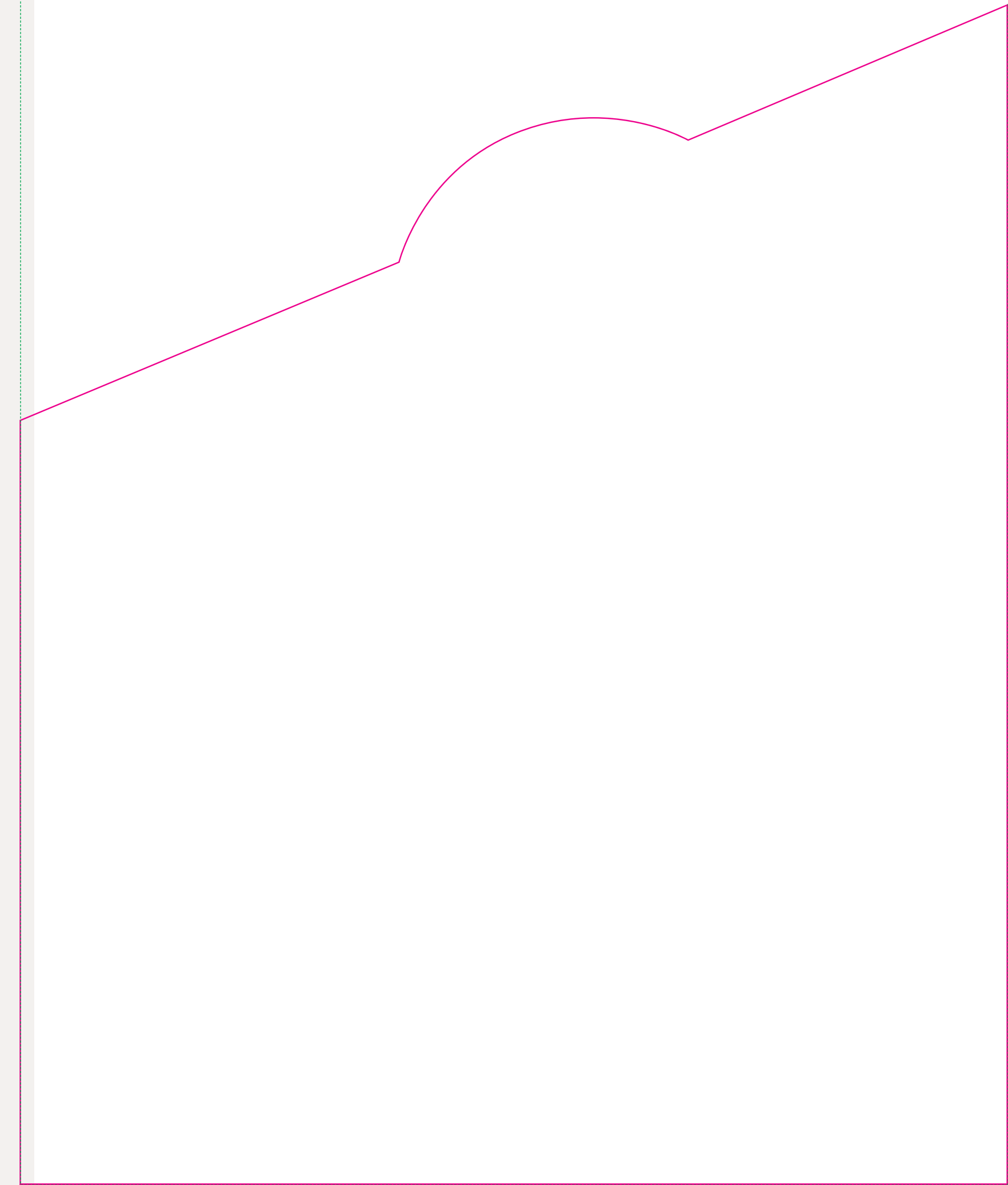
RT-PCR has a wide 65,000-fold dynamic range of expression for the 16 cancer-related genes,³⁵ which allows for quantitative measurements.

The Oncotype DX® assay was optimized to minimize variability and ensure reproducibility.



YOUR PATIENT
COUNTS ON YOU FOR
EXPERT GUIDANCE.

The Oncotype DX®
Breast Cancer Assay
helps you provide it.



oncotype DX[®]
Breast Cancer Assay

COMPREHENSIVE REIMBURSEMENT SUPPORT HELPS KEEP YOU FOCUSED ON YOUR PATIENTS

THE ONCOTYPE DX[®] BREAST CANCER ASSAY IS:

100% covered by Medicare and by
95% of private insurance companies.

GAP Our internal experts available through the Genomic Access Program (GAP) can help ease the reimbursement process for you and your patients.

EARLY
STAGE

ER
(+)

HER2
(-)

NODE
(-)

NODE
(+)

THE ONCOTYPE DX[®] BREAST CANCER ASSAY: PREDICTIVE AND PROGNOSTIC RESULTS YOU CAN COUNT ON

By testing every eligible patient after surgery, but **before** you discuss her treatment plan, you can make recommendations with increased insight and confidence.

VALIDATED in multiple randomized studies (Level 1B evidence)
PROVEN to be predictive and prognostic
STANDARD OF CARE that has been incorporated in diagnostic guidance and in major clinical practice guidelines
OVER 10 YEARS of global leadership in genomic testing

ORDER

FOR EVERY ELIGIBLE
ER(+), HER2(-)
PATIENT.

+1 (866) ONCOTYPE
(866-662-6897)

Data on the association of the Recurrence Score[®] result with risk of locoregional recurrence (LRR) and the risk of distant recurrence in years 5–15 (late recurrence) are available upon request. Please contact your Regional Oncogenomic Liaison to learn more.

References

1. National Comprehensive Cancer Network[®]. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines)[®]: Breast Cancer. Version 3.2014. www.nccn.org. Accessed November 6, 2014. 2. Harris et al. *J Clin Oncol*. 2007;25:5287-5312. 3. Senkus et al. *Ann Oncol*. 2013;24(suppl 6):vi7-vi23. 4. Goldhirsch et al. *Ann Oncol*. 2011;22:1736-1747. 5. National Institute for Health and Care Excellence (NICE). NICE diagnostics guidance 10. https://www.nice.org.uk/guidance/DG10. Accessed September 8, 2014. 6. Paik et al. *N Engl J Med*. 2004;351:2817-2826. 7. Paik et al. *J Clin Oncol*. 2006;24:3726-3734. 8. Toi et al. *Cancer*. 2010;116:3112-3118. 9. Albain et al. *Lancet Oncol*. 2010;11:55-65. 10. Habel et al. *Breast Cancer Res*. 2006;8:R25-R39. 11. Dowsett et al. *J Clin Oncol*. 2010;28:1829-1834. 12. Kim et al. *J Clin Oncol*. 2011;29(31):4160-4167. 13. Wolmark et al. ASCO 2014, Abstract 11024. 14. Burk et al. EBCC 2014. 15. Levine et al. ASCO 2014. 16. Vacirca et al. ASCO 2013. 17. Geffen et al. *Ann Oncol*. 2011;22(11):2381-2386. 18. Albanell et al. *Ann Oncol*. 2012;23(3):625-631. 19. Davidson et al. *Eur J Cancer*. 2013;49(11):2469-2475. 20. Gligorov et al. ASCO 2012, Abstract 568. 21. Eiermann et al. *Ann Oncol*. 2013;24(3):618-624. 22. de Boer et al. *Med J Aust*. 2013;199(3):205-208. 23. Holt et al. *Br J Cancer*. 2013;108(11):2250-2258. 24. Yamauchi et al. European Society for Medical Oncology Congress 2011, Abstract E16-1313. 25. Bargallo et al. European Society for Medical Oncology Congress 2012. 26. Oratz et al. *J Oncol Pract*. 2011;7(2):94-99. 27. Liang et al. San Antonio Breast Cancer Symposium 2007. 28. Kiang et al. *Value Health*. 2010;13(4):381-387. 29. Lo et al. *J Clin Oncol*. 2010;28(10):1671-1676. 30. Oratz et al. *J Oncol Pract*. 2007;3(4):182-186. 31. Data on file, Genomic Health, Inc. 32. Paik et al. San Antonio Breast Cancer Symposium 2003, Abstract 16. 33. Cobleigh et al. *Clin Cancer Res*. 2005;11(24, part 1):8623-8631. 34. Esteban et al. ASCO 2003, Abstract 3416. 35. Cronin et al. *Am J Pathol*. 2004;164(1):35-42.

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With over 440,000 patients tested worldwide, the Oncotype DX portfolio—assays for breast, DCIS, colon, and prostate—is a world leader in applying genomic science that can fundamentally change decisions about treatment.

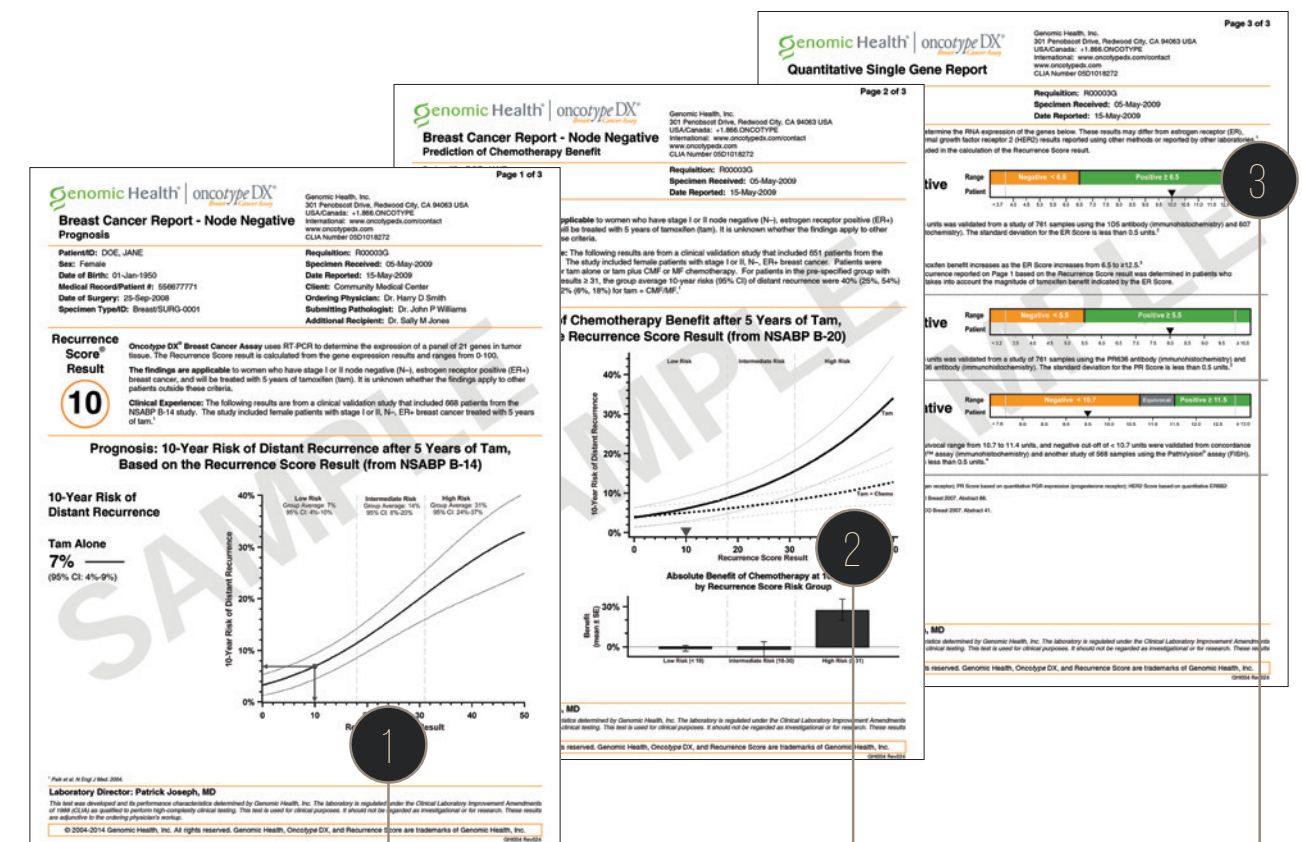
oncotype DX[®]
breast | colon | prostate

PATIENT
REPORTS

THE COMPREHENSIVE ONCOTYPE DX[®] BREAST CANCER ASSAY REPORT LEADS TO MORE INFORMED PATIENT DISCUSSIONS

Your patient may be making the most important decision of her life — and she is counting on your guidance. Only the Oncotype DX Breast Cancer Assay provides information about her unique tumor biology, to help guide her individual decision.

The clear, easy-to-read format of the breast cancer report helps you share that information — a critical tool that enhances the conversation as you determine her treatment plan together.



QUANTITATIVE RISK
OF RECURRENCE,
INDIVIDUALIZED TO
YOUR PATIENT

THE MAGNITUDE
OF CHEMOTHERAPY
BENEFIT INCREASES
AS THE RECURRENCE
SCORE[®] RESULT
INCREASES

THE MAGNITUDE
OF HORMONAL
THERAPY BENEFIT
CORRELATES
TO THE ER SCORE