Provider Overview

Endocrine Activity Index®

The Endocrine Activity Index (EAI) can **provide both prognostic and predictive information for patients with Stage I-III breast cancer.**

What is the Endocrine Activity Index?

EAI is a novel genomic test for women with stage I-III HR+/HER2- breast cancer

EAI is a gene expression profiling test that measures endocrine activity in tumors. It is the only test to comprehensively analyze the estrogen and progesterone related hormone signaling pathway, providing both prognostic and predictive information which can be used to tailor treatment for your patient.

Developed by Dr. Fraser Symmans at MD Anderson Cancer Center, EAI is known as $SET_{ER/PR}$ and EAI_{RR} is known as $SET_{2/3}$ in research publications.

PROGNOSTIC - ENDOCRINE ACTIVITY INDEX RECURRENCE RISK (EAI_{RR})

EAI_{RR} has been validated as a prognostic biomarker in samples from 8 clinical trials including >6,200 patients (level IB evidence).[1-8]

Stage II-III breast cancer patients with an EAI_{RR} ≥2.10 have been shown to have better 5-year outcomes compared to patients with lower EAI_{RR} scores.

	SWOG8814 - 5y DFS		PACS01 DRFI	
EAI_{RR} Result	Tamoxifen Only	Tamoxifen & Chemo	5-yr	8-yr
High	91.4%	89.5%	95.6%	91.2%
Low	71.2%	68.0%	71.7%	64.4%

EAI_{RR} & Oncotype DX® (Recurrence Score)		
Results	5-yr DFS[3]	7-yr DFS[6]
EAI_{RR} High & RS Low	96.7%	94.5%
EAI_{RR} High & RS High	79.2%	80.5%
EAI_{RR} Low & RS Low	80.5%	77.3%
EAI_{RR} Low & RS High	52.7%	85.5%

EAI has been shown to be both independent and to add significant prognostic information to other breast cancer GEPs,[1,3-4,6] including the 21-gene breast cancer Recurrence Score (RS).[3,6]

EAI_{RR} High = ≥2.10, EAI_{RR} Low = <2.10, RS High = ≥26, RS Low = ≤25; DFS = Disease Free Survival; DRFI = Disease Recurrence Free Interval

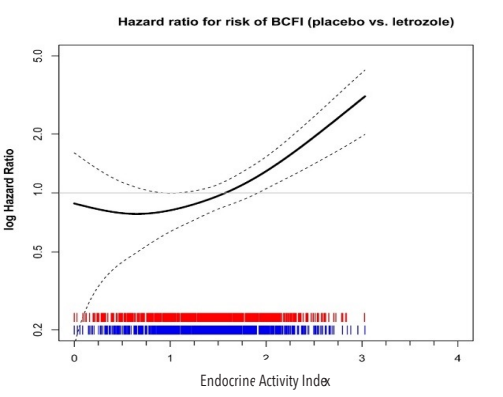
delphi-diagnostics.com | medicalaffairs@delphi-diagnostics.com

© 2026 Delphi Diagnostics, Inc. All rights reserved. Delphi Diagnostics, Endocrine Activity Index, and EAI are registered trademarks of Delphi Diagnostics in the US and other jurisdictions.

delphi diagnostics®

PREDICTIVE - ENDOCRINE THERAPY

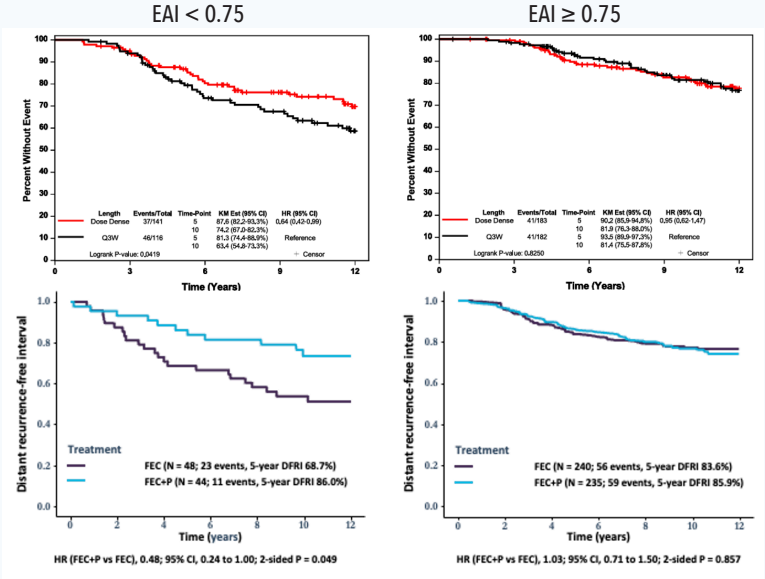
- EAI has been shown to predict DFS and breast cancer free interval (BCFI) benefit from adjuvant endocrine therapy.
- The PACS-01 trial showed that an EAI >1.50 was predictive of adjuvant endocrine therapy DFS benefit when comparing patients not receiving endocrine therapy vs those receiving Tamoxifen.[6]
- In the NSABP B-42, tumors with EAI >1.50 demonstrated significant BCFI benefit from extending endocrine therapy beyond 5 years (HR 0.53; ~7% absolute 10-year recurrence reduction)[10], whereas tumors with an EAI ≤1.50 showed no statistically significant benefit (HR 0.82; p>0.05). **Increasing values of EAI were associated with greater relative benefit from extended letrozole therapy.**



PREDICTIVE - TAXANE THERAPY

Patients with very low levels of endocrine activity, determined by the Endocrine Activity Index (EAI), demonstrated a significant survival advantage when treated with **dose-intense paditaxel-based chemotherapy** in two prospective-retrospective studies.

CALGB 9741 showed that EAI <0.75 was associated with superior disease-free survival (DFS) and overall survival (OS) when compared to non-dose-dense regimens.[5] The GEICAM/9906 trial confirmed that patients with EAI <0.75 had superior distant recurrence-free interval (DRFI) receiving weekly paclitaxel compared to patients receiving an anthracycline-based treatment without paclitaxel.[7] Results were not affected by menopausal status.



REFERENCES

1. Du L, et al. Ann Oncol. 2021;32(5):642-51. DOI: 10.1016/j.annonc.2021.02.011
2. Suman VJ, et al. Clin Cancer Res. 2022;28(15):3287-3295. DOI: 10.1158/1078-0432.CCR-22-0068
3. Speers CW, et al. J Clin Oncol. 2023;41(10):1841-1848. DOI: 10.1200/JCO.22.01499.
4. Metzger Filho O, et al. J Clin Oncol 42, 2024 (suppl 16; abstr 538) DOI: 10.1200/JCO.2024.42.16_suppl.538
5. Metzger Filho O, et al. J Clin Oncol. 2025 Apr;43(10):1229-1239. DOI: 10.1200/JCO-24-01875. PMID: 39746162.
6. Penault-Llorca F, et al. Eur J Cancer (2025). DOI: 10.1016/j.ejca.2025.116152
7. Martin M, et al. Clin Cancer Res (2026) OF1-OF10. DOI: 10.1158/1078-0432.CCR-26-0177
8. Mazo Canola M, et al. Clin Cancer Res (2026) 32 (4_Supplement): PS3-09-21. DOI: 10.1158/1557-3265.SABCS25-PS3-09-21
9. Penault-Llorca F, et al. Breast. 2026 Aug 7;89:104894. DOI: 10.1016/j.breast.2026.104894
10. Mamounas EP, et al. Clin Cancer Res (2026) 32 (4_Supplement): GS3-05. DOI: 10.1158/1557-3265.SABCS25-GS3-05

delphi-diagnostics.com | medicalaffairs@delphi-diagnostics.com

© 2026 Delphi Diagnostics, Inc. All rights reserved. Delphi Diagnostics, Endocrine Activity Index, and EAI are registered trademarks of Delphi Diagnostics in the US and other jurisdictions.

delphi diagnostics®