OncoStem
CanAssist Breast
predicts risk of recurrence

How does proteomics-based prognostic testing compare to genomic tests and online clinical risk prediction tools in early breast cancer patients?

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Objective

Comparative analysis of prognostic tests is important to evaluate the performance of different prognostic tests in a population and assess how a new test performs in relation to established, validated ones. We have compared CanAssist Breast (CAB) with Nottingham prognostic index (NPI), PREDICT, Oncotype DX (ODX), and MammaPrint (MP), and here we showcase the results of those comparative studies.

Background

- ~70% of HR+/HER2- early breast cancer (EBC) patients have a low risk of recurrence, highlighting the importance of accurate prognostication to guide chemotherapy decisions.
- Online tools NPI, PREDICT, etc, are often used as they are quick and free. However, the use of proteomic and genomic prognostic tests like CAB, ODX, MP, etc, is increasing.
- CanAssist Breast (CAB) is the first AI-driven immunohistochemistry-based prognostic test that analyses key tumour biomarkers to predict breast cancer recurrence risk, helping oncologists identify “low-risk” or “high-risk” patients, guiding treatment decisions.
- CAB is validated in global studies and in the real world, used by ~10,000 patients to date in the Indian subcontinent, UAE, Turkey, Iran, and Saudi Arabia to plan optimum treatment.

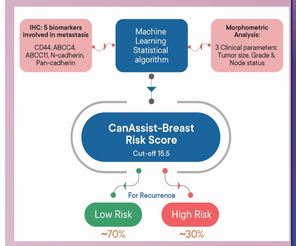


Figure 1: CanAssist Breast Test (CAB) risk prediction.

Methodology

- A patient cohort of 1474 from Europe, India and the US was used to compare CAB with NPI and PREDICT.
- Risk stratification was assessed across three prognostic tests: NPI categorized patients into good (GPG-NPI index ≤3.4), moderate (MPG 3.41–5.4), and poor (PPG >5.4) groups; PREDICT defined low risk as <2% chemotherapy benefit and high risk as ≥2%; and CAB used a cut-off score of 15.5 to classify patients as low (≤15.5) or high risk (>15.5) categories. Agreement between CAB and NPI/PREDICT risk groups was evaluated by kappa coefficient.
- Comparison of risk stratification by CAB with ODX and MP was done with 109 (US and India) and 43 (EU) patients, respectively, in a retrospective setting, and prospectively with a total of 116 Turkish patients- 58 patients in each group. Accuracy/negative predictive value was calculated using MedCalc. Concordance of CAB with ODX or MP was calculated using the overall percentage agreement.

Results

Comparison of CanAssist Breast with online tools

Retrospective cohort (n=1474)

Figure 2: Risk Proportions of CanAssist Breast, NPI, and PREDICT

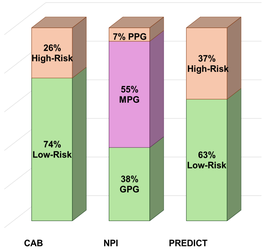
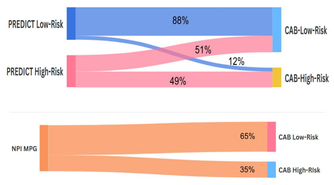


Figure 3: Re-stratification of PREDICT risk groups and NPI-MPG by CanAssist Breast.



Prospective Cohort from 2016-Nov 2025 (n=9074)

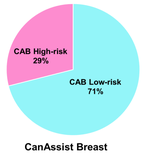
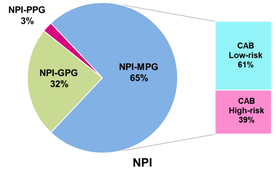


Figure 4: CanAssist Breast Risk Stratification

Figure 5: NPI Risk Stratification and Re-stratification of NPI-MPG by CanAssist Breast



Comparison of CanAssist Breast with genomic tests

Retrospective study cohort

Table 1: Concordance of CanAssist Breast with ODX

Concordance	ODX vs CAB	ODX-Tx vs CAB
Low-risk	82.4%	82.7%
High-risk	14.3%	9.1%
Overall concordance	76.0%	75.2%

Table 2: Performance of CanAssist Breast and ODX

NPV	Total cohort	Endocrine Therapy alone	Node negative
CAB	93.4%	93.6%	93.8%
ODX	91.8%	90.8%	92.8%

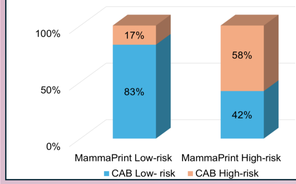


Figure 6: Concordance of CanAssist Breast with MP

Prospective study cohort

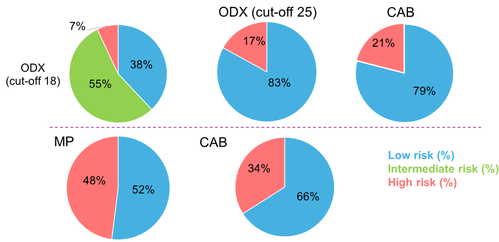


Figure 7: Risk Proportions of CanAssist Breast, ODX and MP

Figure 8: Concordance of low-risk patients across CanAssist Breast and ODX

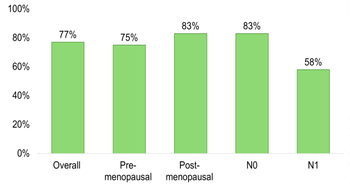


Figure 9: Concordance of low-risk patients across CanAssist Breast and MP

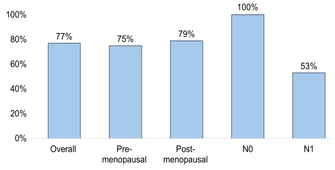


Figure 10: Five-year survival analysis of real world prospective CanAssist Breast data 2016-2020 (n=252)

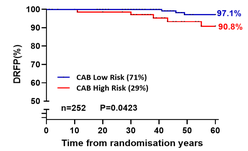




Figure 11: Real-world reach of CanAssist Breast

Conclusions

- **CAB is useful for EBC patients** and especially **valuable for NPI-MPG** and **PREDICT high-risk** groups to support accurate chemotherapy decisions.
- CAB shows **83% concordance with ODX and MP in low-risk categories** and **93% accuracy with ODX**.
- In a first-ever prospective comparison of the CAB with ODX and MP, CAB demonstrated **concordance of >75% in the low-risk categories.**
- Real-world data of **CAB shows an excellent 5-year survival of 97% in the CAB low-risk patients**. Backed by the data, CAB emerges as an excellent, cost-effective, and quick alternative.

References

1. CanAssist Breast provides additional insightful prognostic information in retrospective, pooled secondary analysis in clinically low/high-risk patients with HR+/HER2-EBC. ***Clinical Breast Cancer*** **(2025)**.
2. Real-world data of CanAssist Breast-first immunohistochemistry and AI-based prognostic test." ***Scientific reports*** **(2025)**.
3. Comparison of breast cancer prognostic tests CanAssist Breast and Oncotype DX. ***Cancer Medicine*** **(2020).**
4. A retrospective validation of CanAssist Breast in European early-stage breast cancer patient cohort**. *The Breast (2022).***
5. Ten-year distant-recurrence risk prediction in breast cancer by CanAssist Breast (CAB) in Dutch sub-cohort of the randomized TEAM trial." **Breast Cancer Research 25.1 (2023): 40.**

Acknowledgements

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