

# Expanding Breast Cancer Care for Women Veterans: Genetic Testing and New Therapies



Sarah Colonna, MD, MSCI, and Sita Bushan, MD

Since 2000, the number of women veterans using VA healthcare services has tripled, heightening focus on breast cancer care.<sup>1</sup> Breast cancer accounts for 30% of cancers in this group, making it the most prevalent cancer diagnosis.<sup>1</sup>

The Making Advances in Mammography and Medical Options for Veterans Act of 2022 (MAMMO Act) mandated that the VA conduct a study on the availability of and access to germline genetic testing for veterans diagnosed with breast cancer.<sup>1,2</sup> A recent study aimed to gain insight into how many veteran women with breast cancer were offered germline genetic testing through the VHA.

In 2025, the FDA broadened targeted breast cancer treatment with approvals of fam-trastuzumab

deruxtecan-nxki across multiple human epidermal growth factor receptor 2 (HER2) settings, datopotamab deruxtecan-dlnk as the first trophoblast cell-surface antigen 2-targeted antibody-drug conjugate, and imlunestran for estrogen receptor-positive, estrogen receptor 1-mutated disease with companion diagnostics. Fam-trastuzumab deruxtecan-nxki also received FDA Breakthrough Therapy Designation for post-neoadjuvant high-risk HER2-positive early breast cancer based on the DESTINY-Breast05 trial.<sup>3-7</sup>

These findings highlight critical progress in breast cancer care for women veterans — from improved access to genetic testing under the MAMMO Act to new FDA-approved targeted therapies that expand treatment options and personalize care.

## Germline Genetic Testing in Veterans With Breast Cancer<sup>1,2,8</sup>



**Despite advances** that make germline genetic testing more accessible and actionable, its uptake in clinical practice remains limited. A recent study (n = 200) implemented a natural language processing (NLP)-assisted review of electronic health records to identify documentation of germline genetic testing offers, referrals, or results for patients with breast cancer in the VHA.

The VHA recommends offering germline testing to all veterans with breast cancer.



59%

medical records reviewed

94.5%

seen by oncology

62.4%

offered/received genetic testing



### Why it matters



- 5%-10% of breast cancers are hereditary
- Lifetime risk
  - *BRCA1* → 44%-78%
  - *BRCA2* → 31%-56%
- Identifying pathogenic variants can guide early screening and prevention




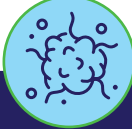
### Implication

- Improve adherence to testing
- Embeds workflows in VA process



The VA Clinical Cancer Genetics Service and Comprehensive Genetics Service provide cancer risk assessment, hereditary germline genetic counseling, and genetic testing for veterans, while supporting clinicians with testing pathways and result interpretation.

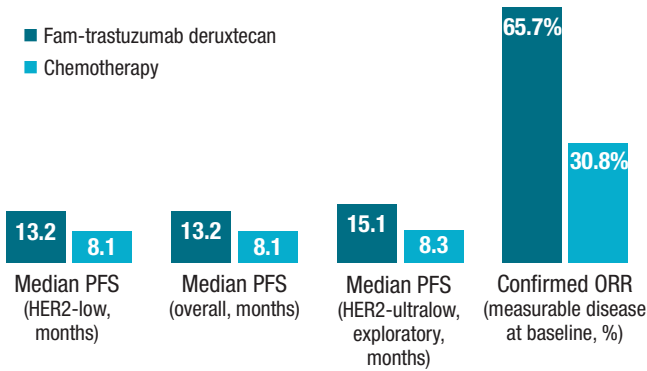
Recent FDA Approvals/Expansions for Breast Cancer Treatments<sup>3-7</sup>

Drug 	Indication 	Approval Date/Type 	Details 
Fam-trastuzumab deruxtecan-nxki	Unresectable/metastatic HR+ HER2-low/-ultralow BC after endocrine therapy progression	Jan-Mar 2025/Expanded	ADC targeting HER2; expands options for HR+ cases
Datopotamab deruxtecan-dlnk	HR+/HER2-negative, unresectable/metastatic BC after prior endocrine therapy and chemotherapy	Jan-Mar 2025/New	TROP2-targeting ADC; offers new therapy for pretreated advanced disease
Imlunestrant	ER+, HER2-negative, <i>ESR1</i> -mutated advanced/metastatic BC which has progressed after ≥ 1 line of endocrine therapy	Sep 2025/New	Oral SERD/antagonist; provides a new, all-oral option
Fam-trastuzumab deruxtecan-nxki + pertuzumab  AND  PATHWAY anti-HER2/neu (4B5) rabbit monoclonal primary antibody and HER2 dual ISH DNA probe cocktail	First-line treatment; unresectable or metastatic HER2+ (IHC 3+ or ISH+) BC	Dec 2025/Simultaneously approved	Companion diagnostic devices to identify patients eligible for therapy with this combination
Fam-trastuzumab deruxtecan-nxki	High risk early HER2+ disease with residual invasive BC after neoadjuvant therapy	Dec 2025/Breakthrough Therapy Designation	ADC targeting HER2 expressing cells

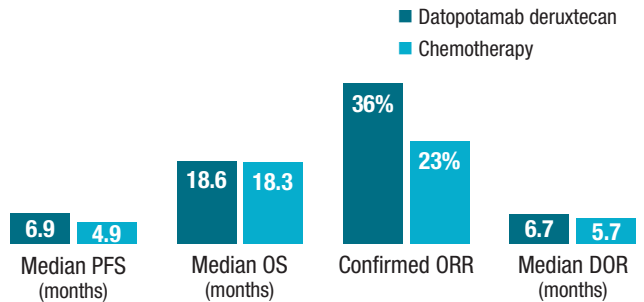
ADC, antibody-drug conjugate; BC, breast cancer; ER+, estrogen receptor–positive; ESR1, estrogen receptor 1; HER2, human epidermal growth factor receptor 2; HR, hormone receptor; ICH 3+, immunohistochemistry high, uniform overexpression of the HER2; ISH+, in situ hybridization positive; SERD, selective estrogen receptor degrader; TROP2, trophoblast cell-surface antigen 2

Recent FDA Approvals/Expansions for Breast Cancer Treatment: Cont.<sup>3-7</sup>

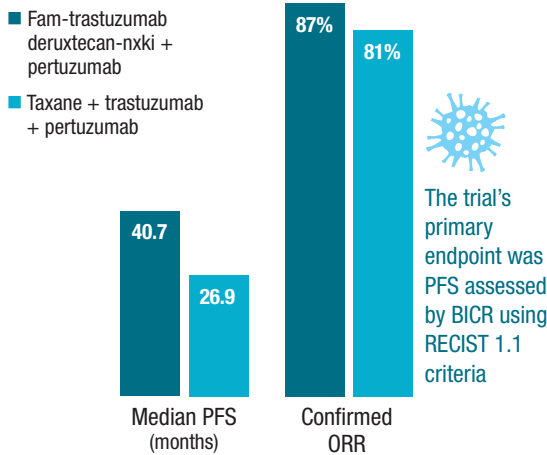
**DESTINY-Breast06:**  
HR+/HER2-low or -ultralow BC



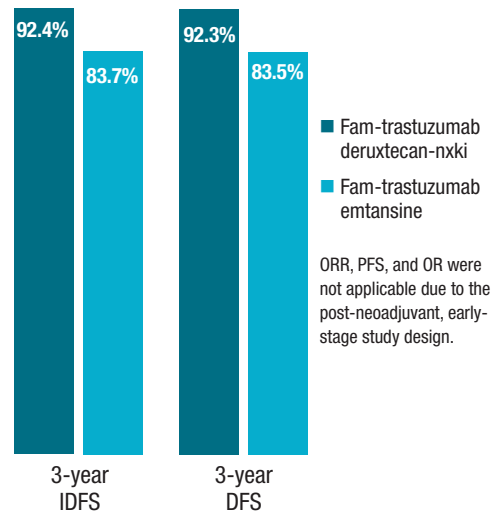
**TROPION-Breast01:**  
HR+/HER2- BC



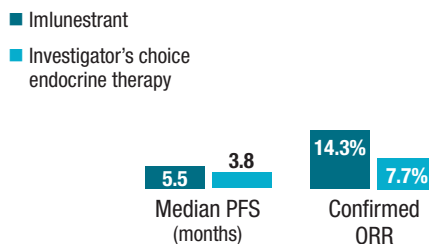
**DESTINY-Breast09:**  
Unresectable/metastatic  
HER2+ (IHC 3+ or ISH+) BC



**DESTINY-Breast05:**  
Post neoadjuvant HER2+  
early BC



**EMBER-3:**  
ER+, HER2-, *ESR1*-mutated  
advanced/metastatic BC



BICR; blinded independent central review; DFS, disease-free survival; DOR, duration of response; ESR1, estrogen receptor 1; IDFS invasive disease-free survival; ORR, overall response rate; OS, overall survival; PFS, progression-free survival; RECIST; response evaluation criteria in solid tumors