

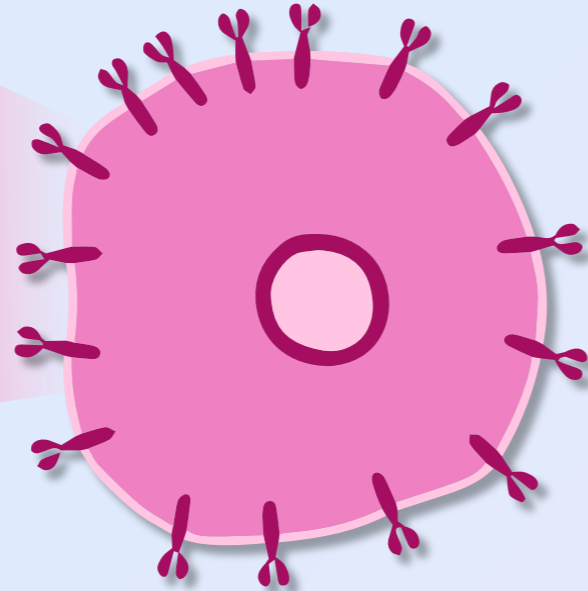


What Is HER2+ Breast Cancer?¹⁻³

A type of breast cancer that tests positive for a protein called human epidermal growth factor 2 (HER2).

Approximately
15 out of every 100
breast cancers are HER2+.

HER2+ means presence of gene mutation of *ERBB2*, causing overexpression of HER2, the protein encoded by this gene.



Future of HER2+ Breast Cancer

Selected ongoing clinical trials for HER2+ cancer:⁷⁻⁹



DESTINY-Breast11

A Phase III trial testing the efficacy and safety of trastuzumab deruxtecan as a neoadjuvant therapy in a neoadjuvant setting, in high-risk, HER2-positive early non-metastatic breast cancer.⁸



CompassHER2 RD

This Phase III trial is testing the efficacy of T-DM1, combined with tucatinib, in preventing breast cancer relapse in patients with high risk, HER2+ breast cancer.⁹



HER2Climb-02

A randomised, double-blind, placebo-controlled Phase III study to test the efficacy and safety of tucatinib and ado-trastuzumab emtansine (T-DM1) in patients with unresectable locally advanced or metastatic HER2+ breast cancer.⁷

Diagnosis, Treatment Options, and Prognosis²

Techniques used for HER2+ breast cancer diagnosis:²



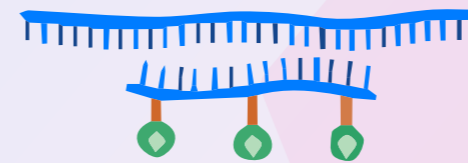
Mammogram

X-ray of the breast.



Immunohistochemistry (IHC test)

The IHC test gives a score of 0–3, where 0–1 is HER2-negative; 2 is a borderline diagnosis, and the amplification of the *ERBB2* gene by ISH or FISH needs to be performed for positivity confirmation; whilst 3 is HER2+.



Fluorescence in situ hybridisation (FISH)

It is a laboratory technique that uses fluorescent probes to identify extra copies of the *HER2* gene in breast cancer cells.

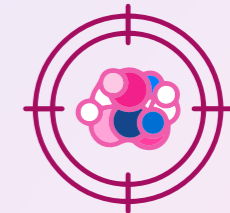
Current treatment options⁴⁻⁶

Patients will commonly receive a combination of the following:



Chemotherapy

Cytotoxicity of cancer cells.



Targeted therapy

Drugs that specifically interfere with the *ERBB2* signalling pathway. Types include monoclonal antibodies (e.g., trastuzumab, trastuzumab+pertuzumab), tyrosine kinase inhibitors (e.g., lapatinib), and antibody-drug conjugates (e.g., trastuzumab deruxtecan).



Endocrine therapy

Use medications that block oestrogen (e.g., tamoxifen), required for breast tumour growth. Endocrine therapy is administered to patients bearing tumours with hormone receptors.



Radiation therapy

Uses high-energy X-rays to slow or stop tumour.

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