

Researchers discuss HER2-low and HER2-zero in breast cancer

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Micrograph showing a lymph node invaded by ductal breast carcinoma, with extension of the tumor beyond the lymph node. Credit: Nephron/Wikipedia

A new editorial paper titled "HER2-low and HER2-zero in breast cancer between prognosis, prediction and entity" has been [published](#) in *Oncotarget*.

In this new editorial, researchers Marcus Schmidt, Hans-Anton Lehr, and Katrin Almstedt from the University Medical Center of Johannes Gutenberg University discuss HER2 in [breast cancer](#). HER2 is a well-established prognostic and predictive factor in breast cancer, which is associated with a [poor prognosis](#) but also offers the chance of improved survival when treated with targeted therapies based on the monoclonal antibody trastuzumab, both in advanced (hazard ratio (HR) 0.82, 95% confidence interval (CI) 0.71 to 0.94, P = 0.004) and in early (HR 0.66, 95% CI 0.57 to 0.77, P

The American Society of Clinical Oncology (ASCO)/College of American Pathologists (CAP) defines HER2-positivity as either 3+ by immunohistochemistry (IHC) or 2+ with [amplification](#) by in situ hybridization (ISH). Yet, the vast majority of breast tumors are considered HER2- negative (IHC 0 or 1+ or 2+ without amplification) by these criteria, and it has until recently been accepted that HER2-negative tumors do not benefit from trastuzumab based therapy.

"Now, results of randomized [trials](#) with trastuzumab-based antibody-drug conjugates (ADCs) such as trastuzumab deruxtecan (T-DXd) have fundamentally challenged this long-held view," state the researchers.

More information: Marcus Schmidt et al, HER2-low and HER2-zero in breast cancer between prognosis, prediction and entity, *Oncotarget* (2024). [DOI: 10.18632/oncotarget.28598](https://doi.org/10.18632/oncotarget.28598)

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