The uncharted role of HER2 mutant alleles in breast cancer

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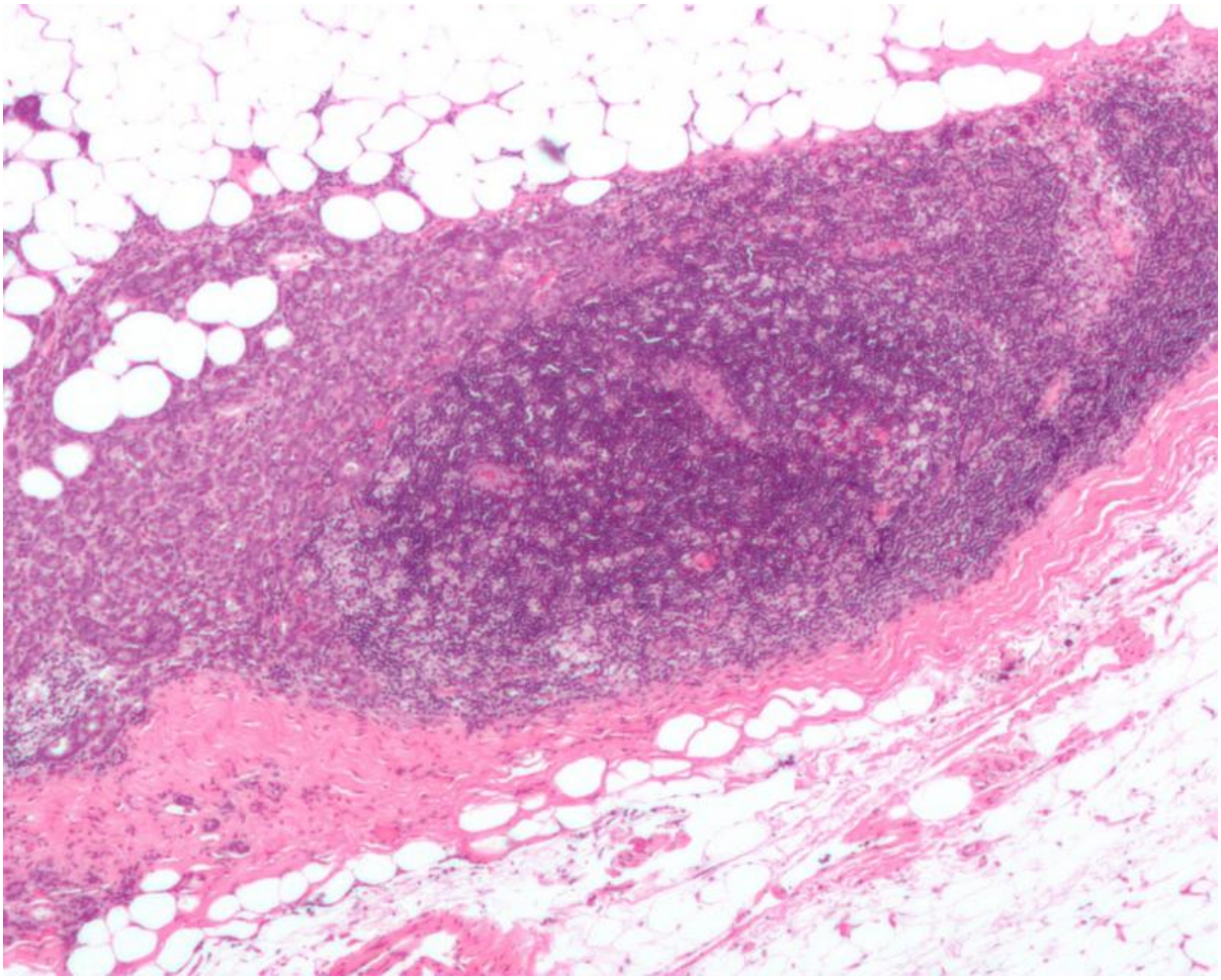

Micrograph showing a lymph node invaded by ductal breast carcinoma, with extension of the tumour beyond the lymph node. Credit: Nephron/Wikipedia

A new editorial paper titled "The uncharted role of HER2 mutant alleles in breast cancer has been published in *Oncotarget*.

Somatic HER2 mutations are a novel class of therapeutic targets across different cancer types. Treatment with the tyrosine kinase inhibitor (TKI) neratinib as a single agent continues to be evaluated in HER2-mutant metastatic disease. However, responses are heterogeneous, with frequent early progression.

In this new editorial, researchers Rashi Kalra, Bora Lim, Matthew J. Ellis, and Shyam M. Kavuri from Baylor College of Medicine discuss the under-explored effects of individual HER2 mutant alleles on therapeutic response, a role for HER2 mutation in metastatic propensity, and differences in patient outcomes in ER+ invasive lobular carcinoma (ILC) versus invasive ductal carcinoma (IDC). The preclinical efficacy of additional agents is also discussed, particularly the pan-HER inhibitor poziotinib.

"In summary, preclinical findings described above support clinical investigation of poziotinib in a subset of ER + mBC harboring HER2 somatic mutations and suggest further studies to evaluate poziotinib as a therapeutic agent in additional tumor types," the researchers write.

More information: Rashi Kalra et al, The uncharted role of HER2 mutant alleles in breast cancer, *Oncotarget* (2023). DOI: 10.18632/oncotarget.28489