

AB031. The histopathological and molecular features of breast carcinoma with high-grade tumour budding

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Background: Tumour budding (TB) is an adverse histological feature in many cancers. It is thought to represent epithelial-to-mesenchymal transition, a key step in the metastatic process. The role of TB in breast carcinoma (BC) remains unclear.

Methods: A systematic search was performed to identify studies that compared features of BC based on the presence or absence of high-grade TB. Dichotomous variables were pooled as odds ratios (OR) using the Cochran-Mantel-Haenszel method. Quality assessment of the included studies

was performed using the Newcastle-Ottawa scale (NOS).

Results: Seven studies with a total of 1040 patients (high grade TB n= 519, 49.9%; low grade TB n=521, 50.1%) were included. A moderate- to high-risk of bias was noted. The median NOS was 7 (range, 6–8). High-grade TB was significantly associated with lymph node involvement (OR 2.28, 95% CI: 1.74 to 2.98, P<0.001) and lymphovascular invasion (OR 3.08, 95% CI: 2.13 to 4.47, P<0.001). With regards to molecular subtypes, there was an increased likelihood of high-grade TB in oestrogen- (OR 1.66, 95% CI: 1.21 to 2.29, P=0.002) and progesterone-receptor positive (OR 1.68, 95% CI: 1.10 to 2.59, P=0.02) tumours. In contrast triple negative breast cancer had a reduced incidence of high-grade TB (OR 0.46, 95% CI: 0.30 to 0.72, P=0.0006).

Conclusions: High-grade TB is enriched in hormone-positive BC and is associated with known adverse prognostic variables. TB may offer new insights into the metastatic processes of luminal BC.

Keywords: Breast; budding; carcinoma; tumour

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