

AB023. 11. Axillary complete pathological response to neo-adjuvant chemotherapy in breast cancer, can we predict it?

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Background: The recommended surgical procedure for the involved lymph nodes (LNs) in breast cancer is axillary nodes dissection (AND), even after pathological complete response (PCR) to neo-adjuvant chemotherapy (NACT). Many trials are studying the benefit of re-staging the axilla post NACT with targeted nodes dissection (TAD) with the assumption that they can represent the whole axillary response, and if they show PCR then those patients can avoid the potentially morbid AND. The TAD technique is showing promising results but still there are significant false negative rates (FNR). In this study our aim is to identify

common imaging and/or histopathology characteristics in patients who showed PCR in the axilla. This subgroup if found with predictable axillary PCR can be a target for TAD in future studies with possibly less FNR.

Methods: Retrospective data collected from all patients with axillary metastasis underwent NACT in our institution between 2009 and 2017. Pre and post-surgery imaging and final histopathology characteristics were compared to the axillary response to NACT. Analysis done using R. Citation: R Core Team (in 2018).

Results: We found statistically significant association between PCR in the axilla and HER2+ cancers ($P=0.012$), absent lympho-vascular invasion (LVI) ($P<0.001$), and complete main tumour response to NACT ($P<0.001$). Relation of axillary response to ER, PR, and MRI were statistically insignificant ($P=0.120$, 0.249 , and 0.310).

Conclusions: It is possible to find a subgroup with predictable PCR showing common characteristics like LVI negative, HER2 positive, and main tumour PCR. Findings can help in further prospective studies.

Keywords: Breast cancer; neo-adjuvant; complete response; chemotherapy; prediction; axilla; lymph nodes (LNs)

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