

Predictive value of immunohistochemical 4 plus clinical treatment score in determining risk of loco regional recurrence in early breast cancer

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Introduction: Combined score obtained using Immunohistochemical (IHC) 4 (based on oestrogen and progesterone receptor status, Her2 status and Ki-67 score) plus Clinical Treatment Score (based on nodal status, tumour size, grade and age) is a very promising clinicopathological tool predicting risk of distant recurrence. This study explores the role of the combined score in predicting risk of loco-regional recurrence (LRR) in women who had breast conservation surgery without radiotherapy.

Methods: Patients were selected from the ACT and SENSW BCTG database over a 13 year period. Tumour blocks were retrieved to perform IHC testing on those that were incomplete. Clinical scores were obtained from the database and combined scores were calculated using the appropriate formulae.

Results: Cox regression indicated a significant association between the combined score and the risk of LRR ($p=0.03$). When the cut-off points as in the original study by Cuzick et al, were applied to the LRR outcome, the incidence of LRR was zero, 20 % and 33.3 % in the low, intermediate and high risk groups respectively ($p=0.007$).

Conclusions: This is the first study of its kind. The combined score may be used to identify women at negligible risk of LRR in whom adjuvant radiotherapy can be omitted.