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Title:

"Predictive and prognostic value of total tumor load in sentinel lymph nodes in breast cancer patients after neoadjuvant treatment using one-step nucleic acid amplification: the NEOVATTL study"

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Online Resource 1

Supplementary Methods

Data collection

Data collected before neoadjuvant treatment: tumor stage, histologic subtype, estrogen receptor (ER) and progesterone receptor (PR) status, HER2 status, Ki67 proliferation index score, and sentinel lymph node biopsy (SLNB).

Neoadjuvant systemic therapy (NST) data collected: type of drugs and treatment scheme.

Data from breast and axilla surgery: type of surgery (conservative/radical), total tumor load (TTL), total number of removed SLN and non-SLN, the number of positive and negative SLN and non-SLN.

Data on pathologic tumor features after NST collected: tumor size, histologic grade and subtype, presence of lymphovascular invasion, hormone receptor status, HER2 status and Ki67, tumor stage, and response to treatment using Miller-Payne score.

Adjuvant therapy data collected: treatments (chemotherapy, hormonal treatments, and radiotherapy) and follow-up (outcome: alive, distant metastases, local relapse, regional relapse, recurrence).

Derivation of DFS prognostic score

To estimate 5-year disease-free survival, a prognostic scoring system was developed, as follows:

- If (TTL <25,000 copies/µL and Ki67 ≤20%) or (Miller-Payne grade = 5), then Score=1;
- If (TTL ≥25,000 copies/µL or Ki67 >20%) and (Miller-Payne grade = 3 or 4), then Score=2;

- If (TTL≥25,000 copies/µL or Ki67 >20%) and (Miller-Payne grade = 1 or 2), then Score=3;
- If TTL ≥ 25,000 copies/µL and Ki67 >20%, then Score=4.

If the patient meets the criteria for more than one score, then highest value score is chosen.