Number of nodes in sentinel lymph node biopsy for breast cancer: are surgeons still biased?

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Introduction

- Sentinel Lymph Node Biopsy (SLNB) is the standard of care for axillary staging in clinically node-negative breast cancer
- Typically 2-4 lymph nodes (LN) are harvested, removing >4 nodes does not reduce false negative rates and risks increased morbidity²
- Studies have shown higher numbers of LNs harvested at SLNB in certain high-risk patients³,⁴
- The purpose of this study was to assess variables that may bias surgeons during SLNB

Methods

- Retrospective database review of patients receiving SLNB for primary treatment of breast cancer at Mount St. Joseph Hospital from Jan 2012 to Mar 2016
- Exclusion criteria: clinically positive LNs, inflammatory breast cancer, prophylactic mastectomy, recurrent breast cancer
- Statistical analysis was performed in Excel (Microsoft Corp.), using non-parametric t-test

Results

- Overall mean SLN was 2.53 and total LN was 3.07
- Significantly more nodes were removed in certain high-risk groups: younger patients, invasive vs. DCIS, larger tumours, higher grade, ER negative tumours
- May reflect surgeon bias towards certain high-risk patient and tumour characteristics, in an attempt to ensure accurate LN staging
- Similar to previous studies⁴ however magnitude is less³
- Averages were still within accepted range of 2-4 LNs, which may reflect growing comfort with SLNB

Discussion

- At SLNB at our institution, there were significantly more LNs removed in certain higher risk patient groups
- Assess for differences between node positivity in higher-risk groups
- Correlate outcome data to determine if surgeon bias has effect on further axillary surgery, morbidity, survival

Future Directions

- Assess for differences between node positivity in higher-risk groups
- Correlate outcome data to determine if surgeon bias has effect on further axillary surgery, morbidity, survival

Conclusion

- At SLNB at our institution, there were significantly more LNs removed in certain higher risk patient groups

References


The Authors have no relevant disclosures of financial interest

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Table 1: Clinical, Pathological and Treatment Characteristics n = 1603

<table>
<thead>
<tr>
<th>Patient</th>
<th>Average Age</th>
<th>&lt; 40</th>
<th>&gt; 40</th>
<th>Female</th>
<th>Treatment</th>
<th>Neoadjuvant</th>
<th>65 (4.1%)</th>
<th>Lumpectomy</th>
<th>Mastectomy</th>
<th>Pathology</th>
<th>DCIS</th>
<th>179 (11.2%)</th>
<th>Invasive</th>
<th>1426 (89.8%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>IDC</td>
<td>1278 (89.3%)</td>
<td>ILD</td>
<td>108 (7.5%)</td>
<td>Other</td>
<td>40 (2.9%)</td>
<td>Size</td>
<td>T1</td>
<td>993 (61.9%)</td>
<td>T2</td>
<td>438 (27.3%)</td>
<td>T3</td>
<td>39 (1.8%)</td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>1</td>
<td>280 (17.5%)</td>
<td>II</td>
<td>492 (30.7%)</td>
<td>III</td>
<td>342 (21.3%)</td>
<td>Receptors</td>
<td>ER+</td>
<td>1143 (71.3%)</td>
<td>HER2+</td>
<td>177 (11.0%)</td>
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