Sentinel lymph node biopsy is the standard application for evaluating the axilla in patients with breast cancer. The Z0011 trial conducted by The American College of Surgeons Oncology Group (ACOSOG) revealed that axillary dissection may be redundant in selected patients with positive sentinel node. This raises questions regarding the application of this result to ultrasound positive patients. Sentinel lymph node biopsy and axillary lymph node clearance in the presence of sentinel lymph node metastasis was performed on all the breast cancer patients. Axillary ultrasound reports were reviewed retrospectively and the results compared with surgical pathology results. The sensitivity and specificity of axillary ultrasound for detecting axillary lymph node disease was 69.2% and 98%, respectively, with a negative predictive value of 86.4% and positive predictive value of 94.7%. Given the high sensitivity and specificity, and high positive predictive value and negative predictive value demonstrated in the present study, axillary ultrasound represents a potential alternative to sentinel lymph node biopsy for staging of the axilla in early breast cancer.

Subsequent trials (SOUND) comparing axillary ultrasound alone with sentinel lymph node biopsy in early breast cancer patients will provide additional information about the subject.
The sensitivity and specificity of AUS for detecting ALN disease was thus 69.2% and 98%, respectively, with an NPV of 86.4% and PPV of 94.7%, as shown in Table 2. There were no statistically significant differences between the FN, FP, TN, and TP groups in the characteristics of tumours and patients.

**Table 2 Sensitivity, specificity, PPV, and NPV of USG scan**

<table>
<thead>
<tr>
<th></th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>PPV</th>
<th>NPV</th>
<th>Overall accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>R de Freitas et al.</td>
<td>56%</td>
<td>89%</td>
<td>92%</td>
<td>49%</td>
<td>67%</td>
</tr>
<tr>
<td>Yang W Tet al.</td>
<td>84%</td>
<td>97%</td>
<td>94.9%</td>
<td>90.7%</td>
<td>92%</td>
</tr>
<tr>
<td>Strauss et al.</td>
<td>90%</td>
<td>91%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jean N Bruneton et al.</td>
<td>72.7%</td>
<td>97.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YS Rajesh et al.</td>
<td>74%</td>
<td>89%</td>
<td>81%</td>
<td>84%</td>
<td>83%</td>
</tr>
<tr>
<td>Current study</td>
<td>69.2%</td>
<td>98%</td>
<td>94.7%</td>
<td>86.4%</td>
<td>88.46%</td>
</tr>
</tbody>
</table>

**CONCLUSION**

New application perspectives to axillary management have resulted in debates on the appropriate extent of preoperative axillary imaging evaluation. Our study demonstrates that AUS offers very good performance for identifying ALN disease in women with clinical T1–T2, N0 breast cancer.

Ultrasound and pathology results were compared in our study in a homogeneous group.

The patients included were clinically T1–T2, N0 breast cancer patients admitted to our center. Our aim was to demonstrate the effectiveness of ultrasonography as a noninvasive method during this narrow window.

The majority of previous studies have revealed that, in the case of non-palpable axillary lymph nodes, a US scan has a lower sensitivity with lower PPV and specificity. On the other hand, in the case of palpable axillary lymph nodes, a US scan had higher sensitivity, specificity, PPV, and NPV.

We found an AUS sensitivity for detecting ALN disease as high as previous studies although all patients had non-palpable lymph nodes preoperatively. Given continuous developments in radiological methods and experience, we predict that success rates for detecting axillary metastasis will increase.

Axillary US should therefore be performed by an experienced radiologist with advanced equipment—which may be one of the reasons for our good results. In the current study, we routinely performed axillary ultrasound in clinically node-negative patients.

If the presence of axillary metastases is certain, axillary dissection is still performed at many centers, including ours.

The sensitivity of AUS for detecting pathologically significant disease in our study was 69.2%, which is as high as the results of studies comparing AUS with percutaneous sampling to pathology. Numerous studies have shown the role of US in preoperative assessment of the axilla (Table 3). Sensitivity rates varied between 56 and 90% while specificity varied between 70 and 97%.

We obtained high sensitivity (69.2%), specificity (98%), PPV (94.7%), and NPV (86.4%), similar to studies evaluating AUS with FNA. It is preferable in the post-AOSOG Z0011 era that percutaneous sampling is no longer routinely recommended because it is of questionable relevance.

**REFERENCES**


