Background
• The Z-11 trial found that omission of axillary clearance even after finding one or two positive sentinel nodes, does not affect local control, despite 23% of patients having residual disease. However, every patient in this trial received whole breast external beam radiotherapy (EBRT).
• Prevalent deduction inadvertent non-therapeutic irradiation of the lower axilla with tangential fields of whole breast radiotherapy might be essential to treat the minimal residual axillary disease. Therefore, patients receiving partial breast radiotherapy (PBI) or IORT or TARGIT may not be suitable for the sentinel node biopsy and may need axillary clearance if 1 or 2 positive sentinel nodes are found.
• The TARGIT-A trial compared conventional fractionated external beam radiotherapy (EBRT), with the risk adapted approach using single dose targeted intraoperative radiotherapy (TARGIT); if if high risk factors are found subsequently, protocol recommended EBRT in addition to TARGIT (in 15-20% of cases).

Results
• 91% of patients had sentinel node biopsy, of which 90% had <10 nodes removed if that was negative.
• Generally good prognosis patients, but
  • 1347 patients were less than 61 years old
  • 502 patients had nodes involved with cancer
  • Total 9491 women-years of follow up

Number of patients | Median Follow up
--- | ---
1222 | 5 years
2020 | 4 years
3451 | 2 years 5 months

No EBRT given (TARGIT alone)
Total 1613 patients
Axillary recurrence 5 patients
5-year risk 0.68% (95% CI 0.28-1.6)

EBRT given
Total 1762 patients
Axillary recurrence 6 patients
5-year risk 0.82% (95% CI 0.34-2.02)

Conclusion
• Of the 11 axillary recurrences, 10 had negative sentinel node biopsy (1 had axillary clearance)
• EBRT did not make a difference to this risk of axillary recurrence.
• Therefore, a falsely negative sentinel node biopsy is not compensated by the inadvertent irradiation of the axilla by standard EBRT.
• The results were similar if we only included patients with 1 or 2 positive nodes: EBRT given (1/255) vs. EBRT not given (0/127).

References