

Category: Epidemiology

The relative frequency of axillary node metastases on quadrant location of lesion for women diagnosed with invasive breast cancer in Queensland.

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Aims

In recent years, the concept of sentinel lymph node biopsy has seen a paradigm shift in axilla management. It is current practice to offer axillary dissection to breast cancer patients with tumours greater than 3 cm even if clinically and radiologically node negative. Our study assessed whether axillary lymph node involvement was associated with quadrant location in breast cancer patients after controlling for tumour size and grade.

Methods

This population based, retrospective study examined females in Queensland who underwent surgery for invasive ductal breast carcinoma between the years 2002-2012 (n=9152).

Data was obtained from the Queensland Oncology Repository (QOR), a state wide cancer patient database that links cancer diagnosis data with death data from the registry of births, death and marriages (RBDM) and treatment data from public and private hospitals.

Negative binomial regression was used to determine the effect of tumour quadrant on the likelihood of having node positive disease after adjusting for tumour size and nuclear grade.

Results

Breast cancer tumours were most commonly located in the upper outer quadrant (UOQ) of the breast (52%), followed by the upper inner quadrant (UIQ) (20%).

When compared to tumours located in the UOQ, tumours in the lower-inner quadrant* (LIQ) and upper inner quadrant** (UIQ) were less likely to be node positive (*RR 0.84, p=0.002; ** RR 0.68, p<0.001) while tumours located in the lower outer quadrant (LOQ) were more likely to be node positive (HR 1.08, p= 0.040).

Conclusions

Consideration may be given to axillary clearance in patients with outer quadrant tumours of less than 30mm size who are clinically and radiologically node negative.