

## Patterns of care for ductal carcinoma in situ of the breast in Queensland over a decade (2003-2012) (39333)

Samantha Barbour <sup>1</sup> , Julie Moore <sup>2</sup> , Nathan Dunn <sup>2</sup> , Rachel Effenev <sup>3</sup> , Hazel Harden <sup>2</sup> , Alexandra McCarthy <sup>4</sup> , Euan Walpole <sup>5</sup> , Margot Lehman <sup>1</sup>

1. Radiation Oncology Department Princess Alexandra Hospital, Queensland Health, Brisbane, Queensland, Australia
2. Queensland Cancer Control Analysis Team, Department of Health, Princess Alexandra Hospital, Brisbane, Queensland, Australia
3. Radiation Oncology Department Townsville Hospital, Queensland Health, Townsville, Queensland, Australia
4. PA Research Foundation, Brisbane, Queensland, Australia
5. Queensland Health, South Brisbane, QUEENSLAND, Australia

**Aims:** This study aimed to examine the patterns of care for ductal carcinoma in situ (DCIS) in Queensland, with particular reference to breast conserving surgery and the use of adjuvant radiation therapy (RT) and the clinicopathological factors which influenced the use of RT over a ten year period. The incidence of invasive breast cancer recurrence and factors predictive of invasive recurrence were also examined.

**Methods:** A retrospective review of the Queensland Oncology Repository (QOR) was undertaken to identify women diagnosed with DCIS (TisN0) and treated with BCS with or without adjuvant RT between 2003-2012. Invasive breast cancer recurrence was defined as any subsequent invasive cancer in the ipsilateral breast more than six months after the initial diagnosis and treatment of DCIS. Time to recurrence was determined by Kaplan Meier method. Median follow-up was 4.9 years.

**Results:** 3081 women were diagnosed with DCIS. 2098 (68%) had BCS and of those, 1100 had BCS alone and 998 received adjuvant RT. The most common age group having BCS was 50-59. The use of adjuvant RT increased from 25% in 2003 to 62% in 2012 ( $p < 0.001$ ). On multivariate analysis, factors associated with RT use included age  $\leq 70$ , higher socioeconomic status, larger tumour size, higher grade and surgical margins  $< 2\text{mm}$ . Invasive breast cancer recurrence at 5 years was 1.7% in adjuvant RT group versus 2.8% in the BCS alone group ( $p = 0.11$ ). Factors associated with an increased risk of invasive recurrence on multivariate analysis were younger age and surgical margins  $< 2\text{mm}$ .

**Conclusions:** The use of adjuvant RT in Queensland has significantly increased from 2003-2012. Selection of patients for RT was based on clinicopathological factors associated with higher recurrence risk. Although longer follow-up is required, the selective use of radiation therapy after BCS is associated with a low rate of invasive breast cancer recurrence at 5 years.