3–5% (Relative Risk Reduction 16–23%) less deaths in the trial group at 6 years. There were the same percentages of DCIS in the two groups.

**Conclusion:** 1. The use of a predictive model for outcomes is justified and prediction can now be made to 20 years. 2. There is no significant advantage to annual screening over the standard 3 year interval in the NHSBSP and shortening of the screening interval would be extremely expensive.

## O-93. Does the survival of interval cancers vary according to subtype and time since previous mammogram?

Porter G, Burrell HC, Chakrabarti J, Evans AJ. *Nottingham City Hospital*

Interval cancers have been shown to have prognostic features similar to symptomatic tumours. We hypothesised that tumours arising between screens (true interval) would have a worse prognosis than tumours missed (false negative) as they may represent a faster growing group of tumours. Similarly we hypothesised that interval cancers presenting within a year of a negative screen may represent a more aggressive sub-group with a worse survival.

The study group consisted of 332 interval cancers arising after screening Mammograms between 1988 and 1/1/1998. Breast cancer specific survival was analysed according to sub-group and time since screening mammogram. 7 year survival rates ranged between 68% for false negative and 86% for occult interval cancers (true 71%). There was no statistically significant difference in interval cancer survival by sub-group. Interval cancers presenting in years 1, 2 and 3 had 7 year survival rates of 81%, 71% and 66% respectively. These were not significantly different.

Interval cancer survival is the same irrespective of sub-group and time between screening and symptomatic presentation.

## O-94. Impact of 11-gauge vacuum assisted biopsy (Mammotome) on accuracy of preoperative diagnosis of ductal carcinoma in situ (DCIS)

Barkeji MM, Pain SJ, Shaw M. *Norfolk & Norwich University Hospitals*

**Objective:** Since the introduction of mammographic breast screening, DCIS has accounted for a significant proportion of breast cancer practice. Lesions are normally impalpable, with diagnosis being made by image guided core biopsy. Following traditional 14-gauge core biopsy, final histology after surgical excision has demonstrated invasive disease in 25–40% of cases, necessitating a second operation to clear the axilla. 11-gauge vacuum-assisted biopsy system (mammotome) allows a larger biopsy specimen to be taken, hopefully reducing the proportion of understaged cases. The aim of this study was to assess the impact of introducing mammotome biopsy on the accuracy of pre-operative diagnosis of DCIS.

**Methods:** Computerised records were interrogated from November 2000 (when mammotome biopsy was introduced in our institution) to October 2003. All cases of biopsy-proven DCIS were reviewed, and final surgical histology determined.

**Results:** A total of 728 core biopsies were prospectively recorded during this 3 years period. The mammographic indications for the biopsies are micro calcification 672, distortion 26 and mass for the remaining 30.

| | Total | 14g | 11g |
|---|---|---|---|
| Biopsy cores | 728 | 203 | 525 |
| DCIS on core | 137 | 45 | 92 |
| Invasive disease: final histology | 33 (24.1%) | 17 (37%) | 18 (19.6%) |

**Conclusion:** Introduction of 11-gauge vacuum assisted core biopsy improved the accuracy of pre-operative diagnosis of DCIS. However, in 19.6% of cases final surgical histology revealed invasive carcinoma, necessitating a second surgical procedure for clearance of the axilla.

## O-95. Outcome of screen-detected breast lesions with an indeterminate (B3) core biopsy

Alvi A, Ravichandran D, Pittam MP, Wright D. *Luton & Dunstable Hospital*

**Aim:** To study the outcome of screen-detected lesions of the breast where the initial core biopsy (CB) has been reported as "benign but of uncertain malignant potential" (B3).

**Methods:** All patients who underwent assessment for a screen-detected abnormality over a 5-year period in a breast-screening centre were reviewed. Those patients in whom the initial CB was reported as B3 were studied in detail.

**Results:** From April 1999 to March 2004, 162659 patients were screened, 6896 were recalled for assessment, 3031 underwent CB and 164 (5.4%) of these were reported as B3. Most lesions were microcalcifications ($n = 105$). Ultrasound (US) was done in 125 patients. Appearances were normal in 57, benign in 22, uncertain in 31 and suspicious in 15. No clinical abnormality was present in 71%. FNAC was done in all but one & results were as follows; C1 = 28, C2 = 85, C3 = 29, C4 = 19, and C5 = 2. Excision biopsy was done in 145 (88%) patients and the final histology showed malignancy in 48 (33%); invasive in 25 & DCIS in 23.

**Conclusion:** A third of screen-detected breast lesions with B3 CB are carcinomas and these lesions should undergo further sampling by excision biopsy or by other means such as vacuum assisted devices. Concurrent FNAC and US may help to identify a proportion of those patients with malignant disease.

## O-96. Variations in detection rates of benign screen-detected radial scars/complex sclerosing lesions

Watkins RM, Johnson F, Castell P, Harker D, Parnham DM. *Southwest Region Breast Screening QA Reference Centre, Bristol*

Radial scars or complex sclerosing lesions (RS/CSL) usually present mammographically as a stellate distortion, often with a lucent centre. Appearances may be subtle and definitive pre-operative diagnosis, even using core biopsy, difficult. Associated malignancy may be present in 30% of screen-detected cases. Such pathology may be difficult to diagnose pre-operatively and excision biopsy is often required.