

**DCIS, PgR:** PgR fell with A from a mean score of 4.8 (0.72) to 3.20 (0.83),  $p = 0.03$  and with L from 5.2 (0.76) to 3.46 (0.89),  $p = 0.038$ .

**HER2, A:** 3 invasive cancers and 4 DCIS were HER2+. The 3 invasive cancers and 3/4 DCIS had a reduction in cell proliferation with A.

**HER2, L:** 1 invasive and 1 DCIS was HER2+ both had a fall in cell proliferation with L.

**Conclusions:** DCIS has a similar rate of cell proliferation to invasive cancer. In DCIS, Letrozole significantly reduced proliferation and PgR expression; Anastrozole significantly reduced PGR expression but the fall in proliferation did not reach significance possibly due to the small sample size. Letrozole should be further evaluated in DCIS.

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Poster

# **The expression of Bcl2 and Bax in epithelial hyperplasia of usual type; relationship to outcome**

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Members of the bcl-2 family are key regulators of apoptosis. Bcl-2 is antiapoptotic whereas Bax promotes apoptotic cell death. The aim of this study was to identify the prognostic significance of apoptosis-regulating proteins in hyperplasia of usual type (HUT) with known outcome. We designed case-control study of benign breast biopsies received at the Royal Liverpool University Hospitals between 1979 to 1999. Cases ( $n = 120$ ), patients who had benign biopsies followed by breast cancer, were mixed with age and date of biopsy matched controls ( $n = 382$ ) that did not develop breast cancer. Lesions were examined blindly and classified into benign categories following the UKBSP guidelines. Foci of HUT and adjacent morphologically normal lobules were identified from cases and controls and stained with monoclonal antibodies for bcl-2 and Bax. The results were correlated with ER $\alpha$ , ER $\beta$  and Ki67 expression in the same cohort. The median percentage of bcl-2 expression in HUT foci from patients who progressed to breast carcinoma was 50 whereas that of controls was 17.5,  $P < 0.001$ . A trend towards higher bcl-2 expression in normal lobules from patient who progressed to breast cancer was seen. Bax was highly expressed in normal lobules from controls when compared with cases ( $P = 0.008$ ). Although the percentage of positive cells in HUT foci from cases was higher than controls (32.5 vs 17.5), this difference was not statistically significant. HUT from cases exhibited statistically significant higher levels of ER $\alpha$ , Ki67 with high ER/ER $\beta$  ratio. Our data show an early dysregulation of the levels of apoptosis-regulating proteins in normal and HUT foci of patients who progressed to breast cancer and suggest a characteristic immunohistochemical profile for a high-risk subset of hyperplasia of usual type.

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# **Trends in incidence and variation in treatment of ductal carcinoma in situ (DCIS) in the Southeast Netherlands (1984–2003)**

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**Background:** Detection rates of ductal carcinoma in situ (DCIS) have increased rapidly over the past decades, largely due to the increased use of mammography. New guidelines have been developed in order to minimize variation in treatment of DCIS.

**Methods:** In this retrospective population-based analysis, we used information from 8 hospitals in the Eindhoven Cancer Registry area, covering an area of 1 million inhabitants. In 1992, a breast cancer screening programme was introduced in this area and fully implemented in 1996, for women aged 50–69 years. Since 1999, women 70–75 years were also invited for breast cancer screening.

**Results:** In the period 1984–2003, 11,930 women were diagnosed with breast cancer, of whom 883 had DCIS (7.4%). Among women <50 years ( $n = 3116$ ), the % of DCIS increased from 4.0% in 1984 to 7.4% in 2003. Among women 50–69 years ( $n = 5683$ ), the % of DCIS increased from 1.6% in 1984 to 12.4% in 2003. Among women 70 years and older ( $n = 3132$ ), the % of DCIS increased from 2.0% in 1984 to 9.5% in 2003.

The % of women <50 years undergoing local excision (LE) decreased from 70% in '84-'89 to 40% in '96-'97 and then increased to 60% in 2002–2003. Adjuvant radiotherapy in this age group followed the same trend: 75% of women treated with LE got adjuvant radiotherapy in the latest period. Among women 50–69 years the % undergoing LE remained stable during the past decades and fluctuated around 30–40%. However, the % of women receiving radiotherapy after LE increased from 25% to 81%. Among

the oldest women with DCIS, the % treated with LE decreased from 70% in 1984–1989 to 30% in 1994–1995 and then increased to 70% in the latest period. The use of radiotherapy following LE in this age group showed the same trend, with 72% of women receiving radiotherapy 2002–2003.

Variation in treatment between the hospitals remained large during the study period. In 2000–2003 the % of women treated with LE and adjuvant radiotherapy varied between 31% and 64% in the 8 hospitals.

**Conclusions:** Between 1984 and 2003, the detection of DCIS increased rapidly in all age groups, with the most recent increase taking place among women 70–75 years, due to the introduction of breast cancer screening for this age group. The use of LE fluctuated strongly in the youngest and oldest age groups and remained fairly stable among those 50–69 years. Adjuvant radiotherapy increased in all age groups. Substantial differences in the treatment of DCIS were observed between the 8 hospitals.

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Poster

# **Sentinel node biopsy in patients with DCIS – when is it justified?**

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**Background:** Ductal carcinoma in situ (DCIS) becomes a more common finding recently among women with screen detected breast cancer. DCIS should not metastasise to the axillary lymph nodes. However, postoperative examination of breast specimens may reveal invasion in some cases, raising the question about the necessity and indications for sentinel node biopsy during initial surgery.

**Material and Methods:** In years 2004–2005 we performed sentinel node biopsy in 385 women patients treated for breast cancer. Fifty four of them had initial diagnosis of DCIS and were included in this study. The preoperative diagnosis of DCIS was based on mammography and fine needle, core or vacuum assisted (VAB) biopsy. Mammography showed microcalcifications (6–100 mm in diameter, BIRADS-4) in 55% cases, well defined tumor in 32% and spicular structure in the remaining 13%. The visualisation of sentinel nodes was performed using both technetium and methylene blue. Simple mastectomy was performed in 60%, and tumorectomy in the remaining 40% cases.

**Results:** Sentinel node metastases were found in 8/54 (14%) patients. All of them had subsequent axillary dissection, and further lymph node metastases were found in 1/8 case. Postoperative pathological examination of breast specimens revealed macro- or microinvasion in 7/8 cases; no invasion was found in the remaining 1. All 8 patients had similar preoperative mammography findings: large areas (40–64 mm) of microcalcifications (BIRADS-4). None of them had tumor or spicular structure shown by preoperative mammography. Preoperative biopsy revealed high grade (nG3) malignancy in 7/8 cases and medium (nG3) in the remaining 1.

**Conclusion:** Our results suggest that sentinel node biopsy in patients with preoperatively diagnosed DCIS is justified, especially when mammography reveals large areas of microcalcifications and when biopsy shows high or medium grade of malignancy. Apparently, in some cases the invasion may not be diagnosed preoperatively.

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# **Lobular neoplasia: does 11 Gauge core biopsy allow to avoid surgical excision? A study of 58 consecutive cases**

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**Purpose:** To review surgical histologic findings after diagnosis of lobular neoplasia (LN) by core needle biopsy (CNB).

**Methods and Materials:** 2235 consecutive CNB with 11-gauge needle have been performed in our institute. A group of 58 lesions with LN and followed by systematic surgical excision was studied. All cases of atypical ductal hyperplasia or intraductal carcinoma (DCIS) were excluded. Associated columnar lesions with atypia were not excluded. Histologic scar of macrobiopsy was systematically searched in surgical specimens. A pathologic upgrade was defined by presence of invasive cancer or DCIS on surgical specimen. Statistical tests used were the chi-square or Fisher's exact test.