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### CEA-Scan® immunoscintigraphy in the imaging and diagnosis of breast cancer

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**Purpose:** CEA-Scan® (Immunomedics, Morris Plains, NJ, USA) is a recently approved product for imaging colorectal carcinoma, comprising an anti-carcinoembryonic antigen Fab' labeled with <sup>99m</sup>Tc. Since many mammary carcinomas express CEA, this study was conducted to determine the efficacy of this imaging agent in patients presenting with malignant lesions >0.5 cm or with mammographic (MM) indeterminate lesions.

**Methods:** 71 patients with histologically confirmed primary breast cancer and 59 consecutive patients with abnormal MM were studied by planar and SPECT imaging at 4–8 hr or later, after receiving a 1-mg dose having 20–30 mCi <sup>99m</sup>Tc.

**Results:** In primary breast cancer, CEA-Scan® had a sensitivity of 85% and positive predictive value of 100%. In patients with non-palpable, indeterminate MM of low cancer probability, CEA-Scan® was superior to MM in identifying cancers (60% vs. 12%), while having a 92% specificity and negative predictive value. In the latter, CEA-Scan® may obviate the need for surgical biopsies, as suggested Rosner et al. (ASCO 1996; 15: 102).

**Conclusion:** CEA-Scan® appears to be effective for detecting and diagnosing non-palpable breast cancers, and distinguishing benign from malignant lesions in indeterminate MM scans. (Supported in part by NIH Grant CA 39841.)

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### Quality of life and personal feelings following quadrantectomy (Q) or mastectomy with reconstructive surgery (M+R) in breast cancer patients (b.c.p.)

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**Purpose:** To evaluate the differences between Q and M+R in terms of the quality of life, body image, sexual problems and intimate relationships.

**Methods:** Eighty M<sub>0</sub> b.c.p. aged 20–70 years (40 Q and 40 M+R) were enrolled at least one year after their last surgery. The T- and chi-square tests were used for the statistical analysis. The following self reported measures were used: emotional discomfort (General Health questionnaire, Goldberg 1978), quality of life (5 visual analogue scales (vas), Noguchi et al., 1993, adapted); relationship with partner (3 vas, Noguchi et al., 1993, adapted); fear of relapse (vas); satisfaction with surgical results (3 vas).

**Results:** The two groups were well balanced. There was no statistically significant difference between the two groups in terms of psychological and physical problems, fear of relapse, cosmetic results, body image or quality of life (which was medium-high in both groups). The only statistically significant difference related to sexual functioning. The M+R patients experienced greater discomfort in sexual life and in being seen naked and thought that their partners were also embarrassed in sexual life.

**Conclusion:** These results suggest that b.c.p. are satisfied with the quality of their life and the cosmetic result of their breast surgery. However, M+R p. reported significant more problems relating to sexual functioning.

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### Intraoperative lymphatic mapping and identification of the sentinel node in breast cancer

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**Background:** In breast cancer, intraoperative lymphatic mapping and identification of the 1st draining node (the sentinel node) may allow some patients to avoid the potential morbidity of formal axillary dissection. We have initiated a pilot study to establish the reliability of the technique in predicting axillary nodal status.

**Methods:** 62 consecutive patients, 37 undergoing mastectomy and 25 wide local excision, were included. 2–4 mls of 2.5% patent blue dye was injected into adjacent breast tissue on the axillary side of the primary tumour.

After 5–10 minutes, the axilla was explored. Blue stained lymphatics were dissected to the sentinel node which was removed for frozen section examination, followed by routine histology. Formal axillary dissection was then completed.

**Results:** Sentinel nodes were successfully identified in 50 of 62 patients (80.6%). Histology of the sentinel node accurately predicted axillary nodal status in 48 of 50 cases (96%). There were 2 false negatives (4%). In both cases, only a single non-sentinel node was tumour-positive. Sensitivity and specificity were 88.2% and 100% respectively.

**Conclusions:** Based on our experience, this technique would allow a selective policy of formal axillary dissection in only node positive patients. However, further experience and refinement of the technique is needed to confirm this.

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### Breast cancer: Tumor excision + continuous Tamoxifen (TET) compared with modified radical mastectomy (MRM) in patients over 70 years of age with operable breast cancer

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**Purpose:** To ascertain whether in the elderly patient with operable breast cancer a mastectomy can be avoided.

**Method:** From September 1985 until March 1991 all patients over 75 years of age; with operable breast cancer stage 1 T3a were randomised to undergo either a MRM or TET. Tamoxifen dose 20 mg/day. No other adjuvant treatments were administered. Patient status up to October 1996 was reviewed. Median follow-up was 70 months.

	MRM	TET
Total number of patients evaluated	37	37
Death due to cancer	11	2
Death due to other causes	14	21
Alive free of disease	12	14
Completion mastectomy	0	4
Completion axillary dissection	0	1

The TET group had a significantly better overall survival. ( $p = 0.01$ ). The disease-free survival was not significantly better. ( $p = 0.17$ ).

These results indicate that TET is superior to MRM in the elderly in terms of survival and cost benefits, MRM can be avoided in the elderly patient.

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### Prevalence and severity of menopausal symptoms in women with a history of breast cancer

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**Purpose:** To determine the frequency and severity of menopausal symptoms and attitudes to hormone replacement therapy (HRT) in women undergoing follow up after adjuvant therapy for early stage breast cancer.

**Methods:** Women aged ≤65 years of age with stage I/II breast cancer who had completed adjuvant therapy and/or were taking tamoxifen, who remained disease free were asked to complete a questionnaire when attending for a routine clinic follow up.

**Results:** Responses from 85 women have been analysed and the study is ongoing. The median age of respondents was 55 years, 80% were post menopausal. All were receiving tamoxifen, 4% had undergone oophorectomy, 8% chemotherapy and 6% oophorectomy and chemotherapy. The prevalence of symptoms was as follows: hot flushes, 78% (47% moderate/severe); night sweats, 63% (44% moderate/severe); vaginal dryness, 40%; vaginal discharge, 46%; fatigue, 71% and feeling depressed, 49%. 28% of women were prepared to take HRT under medical supervision. The major concern amongst those unwilling to use HRT was increased risk of breast cancer recurrence.

**Conclusions:** Menopausal symptoms may have a significant effect on the quality of life of women with a history of breast cancer. There is a need for further clinical trials to determine the safest and most effective way to relieve these symptoms.