

(87%) reached surgery, of these 6 obtained a complete pathologic response (pCR), 42 had a partial response (PR), 48 had no change (NC) and 1 had progressive disease (PD). Thirteen did not go to surgery. Median survival for the entire study 7.4 years.

The 3-year survival for patients treated in the first half-part of the study was 52% vs 82% for patients treated in the latest half-part. Survival according to response did not show a consistent pattern, 3-year survival for CR, PR and NC was 54%, 73% and 76%, respectively.

**Conclusion:** Changes in treatment modalities available through the millennium, is reflected in an increase in survival. As surgery mainly was performed as early as possible response at surgery was not reflected in survival.

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Poster

#### Treatment of the axilla in locally advanced breast cancer

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**Background:** A retrospective analysis of women treated for locally advanced breast cancer (LABC) with local regional radiotherapy with or without neo-adjuvant chemotherapy and/or surgery focusing on axillary control.

**Materials and Methods:** All consecutive 131 patients diagnosed from January 1990 to December 2005 treated with local regional radiotherapy were reviewed. Treatment consisted of 50 Gy in 25 fractions of 2 Gy to the breast and regional lymph node areas and a boost of 20 Gy in 2 Gy fractions to the primary tumour area in 7 weeks. 80% of the patients had lymph node metastases. 46 patients received an axillary, 4 a supraclavicular and 1 an infraclavicular boost because of gross nodal involvement.

40 patients received irradiation only (IR) (1 of whom received breast irradiation only). 34 received neo-adjuvant chemotherapy without surgery (NC) and 57 patients received neo-adjuvant chemotherapy with surgery (NCS) before irradiation (33 wide local excision, 24 mastectomy) of whom 5 did not receive regional lymph node irradiation.

Of the whole cohort 89 patients (68%) did not receive axillary surgery, all of these patients were irradiated to the axillary lymph node region except for 1 patient. In the IR group 2 patients were treated with an axillary lymph node dissection (ALND). In the NCS/NC groups 36 were treated with an ALND and 4 with a sentinel node (SN) procedure, axillary lymph node irradiation was omitted in 5 of them. Median follow up was 65 months for the entire cohort.

**Results:** The 5-year local control rate was 76.9% (IR), 61.9% (NC) and 90.4% (NCS) in favour of the neo-adjuvant chemotherapy with surgery group (p-value = 0.004). The 5-year regional control rate was 94% in all groups (p-value 0.919). There were 7 regional recurrences, 4 in the supraclavicular fossa (IR: 1, NC: 1, NCS: 2) and 3 in the axillary region (1 in every group). 5 year axillary control rate was 100% for the 42 patients treated with ALND/SN and 98% for the remaining 89 patients (not significant).

**Conclusion:** Best outcome is achieved in terms of local control for the trimodality treatment consisting of neo-adjuvant chemotherapy, surgery and loco-regional irradiation in patients with locally advanced breast cancer. The data suggest that in these patients omitting ALND/SN did not influence axillary recurrence rate.

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Poster

#### Trends in advanced breast cancer in a developed Asian society

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**Introduction:** Although the overall incidence of breast cancer in Singapore is about one-third that of Western countries, the incidence of advanced breast cancer, including locally advanced breast cancer and metastatic breast cancer, is more common. It was observed in countries where nationwide mammographic screening was introduced, that breast cancers were being detected at an earlier stage. Singapore introduced nationwide mammographic screening in January 2004; going by previous observations, we would expect the incidence of advanced breast cancer to decrease following this. We therefore examined the trends in advanced breast cancer over a 8-year period, spanning a period before and after the introduction of nationwide breast screening.

**Materials and Methods:** A retrospective review of the breast cancer database from our institution, a tertiary hospital, from 1<sup>st</sup> January 2001 to 31<sup>st</sup> December 2008 was performed. Two thousand two hundred

patients were diagnosed with breast cancer during this period. Standard clinicopathological parameters were analysed.

**Results:** The incidence of advanced breast cancer had not changed significantly over the years, and ranged from 25% to 30% of all cancers (including ductal carcinoma-in-situ) diagnosed. Patient factors that correlated significantly with advanced breast cancer included older age, Malay ethnicity, nulliparity and a positive family history of breast cancer. High tumour grade, the presence of lymphovascular invasion (LVI), hormone receptor negativity and HER2 positivity were also significantly correlated with advanced breast cancer. On multivariate analysis, only Malay ethnicity, older age and the presence of LVI predicted for advanced breast cancer. Interestingly, among Malays, advanced breast cancer was more common among younger women. Tumour grade and LVI, but not hormone receptor or HER2 status, correlated with advanced breast cancer in Malays.

**Conclusions:** The incidence of advanced breast cancer has not decreased despite the introduction of breast cancer screening. In an earlier publication on breast cancer trends in our institution from January 2001 to December 2004, we had reported that Malays were more likely to present with advanced breast cancer. This has remained unchanged in recent years. Our study suggests that efforts to increase breast cancer awareness and early diagnosis should be directed towards Malay women, who are more likely to present at an advanced stage.

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Poster

#### The use of vertical rectus abdominis myocutaneous flap for post-mastectomy defect cover of large breast tumours

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**Background:** Primary chemotherapy is the mainstay of therapy for advanced breast cancers, but surgery is still needed for local control in selected patients. In such cases, the post-mastectomy defect is often too large to allow for primary skin closure. Split skin grafts were previously used, but in recent years, our institution has moved towards using the vertical rectus abdominis myocutaneous (VRAM) flap. We present our results.

**Material and Methods:** This is a retrospective review of 13 patients who underwent a VRAM flap from 1<sup>st</sup> January 2008 to 30<sup>th</sup> September 2009. We reviewed clinicopathological parameters and various surgical outcomes.

**Results:** Thirteen patients with T4 tumours underwent VRAM flap following mastectomy. Median age was 61 years (range 33 to 86 years old). Nine were Chinese and 4 were Malays. Median tumour size at the time of presentation was 100 mm (range 30 to 150 mm); all had skin involvement. Nine patients (69.2%) received primary chemotherapy, but either had no clinical response or progressively enlarging tumours. At the time of surgery, 7 patients (53.8%) had fungating tumours and 5 patients had clinical chest wall involvement. All patients underwent mastectomy and axillary clearance. It is our usual practice for the Plastics team to begin raising the VRAM flap concurrent with the mastectomy. The mean total time taken for both procedures was 279 minutes. Two patients developed major post-operative complications. One developed a haematoma, which required emergency haemostasis on the same day. Another developed partial flap loss, which required surgical debridement. There were three minor complications; one of the elderly patients suffered from functional decline post-surgery and received inpatient rehabilitation. Two patients had superficial wound infections which resolved with intravenous antibiotics. None of our patients had an incisional hernia. Median hospital stay was 10 days (range 6 to 40 days). Radial resection margins were clear in all 13 cases, although there was deep margin involvement in 3. Most patients were started on adjuvant therapy within 3 weeks of surgery.

**Conclusions:** Our review shows that the VRAM flap is a good option for coverage of a large post-mastectomy defect. There are few flap-related and minimal donor-site complications and a shorter hospital stay compared to skin-grafting. The recovery route to adjuvant therapy is short with a robust flap much more able to withstand the rigours of radiotherapy.

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Poster

#### Synchronous and metachronous bilateral breast cancer: one or two entities?

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**Background:** The aim of this study is to compare histopathological and clinical characteristics of synchronous and metachronous bilateral breast cancer (BBC).

**Materials and Methods:** We analyzed the data for 64 BBC pts registered during three years in Daily Hospital for Chemotherapy, Institute