evaluate the accuracy of image interpretation and improve the validity and reliability of mammographic practice.

Though our study results are in recommended ranges, we believe that with Phosphor-Screen digital imaging it is possible to reach the standards expected for conventional mammography.

### 121                                                      POSTER
### The Singapore national breast screening programme: implementation and first year results

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Breast cancer is the largest cause of cancer deaths in Singapore women. Singapore has the highest incidence of breast cancer of any Asian country or city, with a peak incidence in the 50–55 age group and an age-adjusted incidence of 53.1 per 100,000 women-years.

In January 2002, BreastScreen Singapore was launched. This is the first Asian national mammographic breast screening programme. It is coordinated by the Singapore Health Promotion Board. Women 50–64 are invited biannually, and women 40–49 are eligible to be screened annually.

Service delivery is distributed, with no comprehensive one-stop centres. There are currently 12 satellite mammography centres, mostly based in government polyclinics. There are 4 specialist reading centres, one of which is in the private sector, and 2 recall assessment centres, both of which are hospital-based.

BreastScreen Singapore is uniquely structured and funded. Funding is based on a co-payment model from screening through to diagnosis and treatment. Clients pay half the usual fee for screening mammography; the remainder is paid through a government subsidy. Subsidies for assessment and biopsy are through the existing hospital fee system.

Government financial commitment is for centralized administration and funding through the Health Promotion Board, which coordinates service provision, accreditation, quality assurance, data collation and analysis, publicity and education programmes.
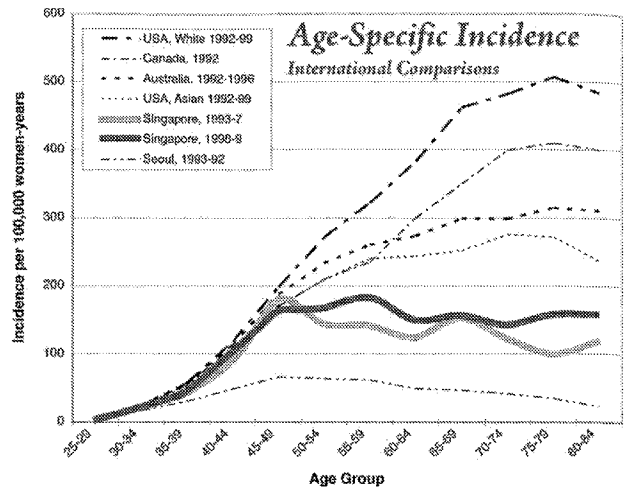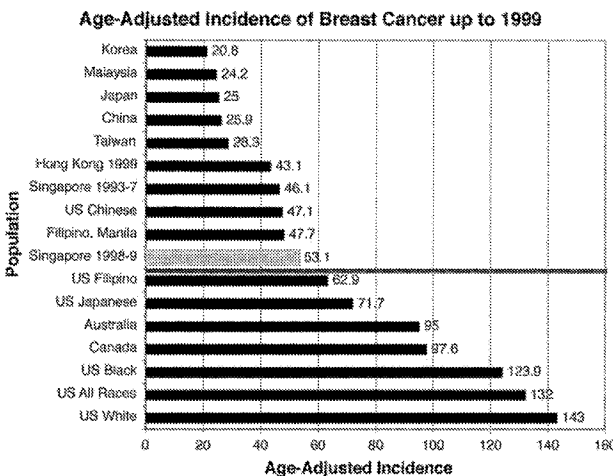
Key advantages of this system are long-term ongoing financial viability for service providers, flexibility in development and scaling of the programme over time, and a reasonable reading fee to ensure ongoing radiologist involvement.

By mid-2004, centres will be linked by an integrated web-based database for recruitment, scheduling, reading and assessment with live on-line data entry, query and results reporting. This system will be linked to the National Cancer Registry.

Statistics for the first year of the programme are summarised in Table 1.

Table 1. BreastScreen Singapore First Year Statistics

| Descriptor | Statistic |
| --- | --- |
| Screens read | 35,600 |
| Ages <50 : >50 | 54% : 56% |
| Recalled for assessment | 3036 (8.5%) |
| Cancers in recalled women | 172 (0.5% of screens) |
| DCIS detection rate | 35% of diagnosed malignancies |
| Needle biopsy rate | 21% of assessments |
| Assessment cancer detection rate | 6% of assessed women |



Age-Adjusted Incidence of Breast Cancer up to 1999





Age-Specific Incidence — International Comparisons

### 122                                                      POSTER
### Interval cancers in the breast cancer screening program of Strasbourg (France)

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The evaluation of interval cancers is a major indicator of the efficiency and quality of a breast cancer screening program.

The Ademas program started in 1989 in the department of Bas-Rhin in France. The interval cancers are defined as cases of invasive cancer occurring in negative screened patients, before the next screening examination would have taken place, i.e. during the 2 years period. This group consists of cancers that were existent at the time of screening but "missed" for some reason, as well as newly developed (incident) cancers.

After a precise census performed by correlation with the Cancer Registry of Strasbourg, all the mammograms of the test just preceding the diagnosis of the interval cancer have been reviewed to classify interval cancers into true interval, minimal signs or false negative. The mammographic revision is a blind method including the mammograms of the interval cancers in a large set of normal and positive tests of the same period so that the reader is put in similar conditions to his usual interpretation.

The repartition of radiological images in each category was studied, especially to compare false negative and minimal signs. The radiological sign more often missed seems to be masses and not some subtle sign, only seen by comparison with previous mammograms. The identification of the types of images which are more often in relation to the occurrence of an interval cancer is much important for the improvement of the screening programme and the training of the radiologists.

Because of the increase of complaints about screening programs, it becomes important to define the conditions of rereading during an expert's report. This is the only way to give precise figures on acceptable level of each type of interval cancer and the results of this expertise could be of great help in medico-legal problems.

### 123                                                      POSTER
### Core needle biopsy for breast cancer: discrepancies in pre- and post-operative pathology reports

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**Background:** Pre-operative core biopsies have a high sensitivity for the diagnosis of breast cancer. Pathologic interpretation of pre-operative core biopsies is one of the central factors in modern algorithms for the surgical treatment of breast cancer. Diagnosis of invasive ductal carcinoma (IDC) as ductal carcinoma in situ (DCIS), or inadequate assessment of tumor grade on pre-operative core biopsy may impact on whether sentinel node biopsy is undertaken. If tumor ablation were contemplated, it would not even be possible to reach the correct diagnosis. With these possibilities in mind, we assessed the accuracy of core biopsies in predicting the final pathology.

**Methods:** Pathology reports from the pre-operative core biopsy and the surgical specimen for 160 breast cancer patients were retrospectively analyzed. All core biopsies for microcalcifications were performed using the 11G Mammotome needle. When the pre-operative diagnosis of DCIS