

Introducing two new BreastScreen SA Project Officers

This edition of **Keeping Abreast** includes a special feature: *New study: Investigating the relationship between steroid receptors and breast cancer risk.*

"The primary goal of this study is to determine the relative contribution of estrogens and androgens acting via the estrogen receptor and androgen receptor respectively, in the development of breast cancer."

BreastScreen SA statistics reported in earlier editions of **Keeping Abreast***, show that Indigenous women and those from culturally and linguistically diverse (CALD) backgrounds do not participate in regular breast cancer screening to the same levels as non-Indigenous and non-CALD women. It is therefore very exciting for BreastScreen SA to introduce two new Project Officers - **Nora Sevallos** and **Marg Smith** - to work specifically with these communities.



Marg Smith, CALD Project Officer, and Nora Sevallos, Aboriginal and Torres Strait Islander Health Worker.

Nora and Marg will primarily be responsible for contributing to the design, planning, implementation and evaluation of culturally appropriate educational and recruitment strategies. The ultimate aim is to increase participation in two-yearly screening by both Indigenous and CALD women.

Nora commenced work in late July 2006 in the newly-created position of **Aboriginal and Torres Strait Islander Health Worker**.

Nora's most recent position was at Nunku-warrin Yunti of South Australia, where she was employed as an Aboriginal Health Worker. Nora has also worked in an administrative position at the Yaitya Purrana Indigenous Health Unit, Department of General Practice, at the University of Adelaide, and was involved in the recruitment and retention of Indigenous students studying in the Health Sciences.

Marg Smith began work as the **CALD Project Officer** in mid September 2006.

Marg has worked with non-government organisations for the past 17 years, engaging with a wide range of CALD communities. Cultural and linguistic diversity was at the core of her work with the organisation Diversity Directions, and Marg has also worked for Australian Volunteers International and Australian Council for Overseas Aid. She has extensive experience in program promotion, adult and community education and development of community networks.

Since 1995, BreastScreen SA has grant-funded The Cancer Council SA (TCCSA) to employ a CALD Project Officer. **Jelena Poljak-Fligic** held this position until her resignation in July 2006.

BreastScreen SA acknowledges and commends Jelena on her work commitment and excellent results as CALD Project Officer for over 10 years. Her contribution is evidenced by the increased screening participation rates among CALD women.

Nora and Marg are keen to work with GPs and allied health professionals. Their contacts are listed below. We wish both Nora and Margaret great success.

Nora Sevallos, Aboriginal and Torres Strait Islander Health Worker
 Phone: 8274 7144
 Email: nora.sevallos@health.sa.gov.au
 Works from BreastScreen SA Monday to Friday, 8.45am to 5.00pm.

Marg Smith, CALD Project Officer
 Phone: 8291 4168
 Email: mwsmith@cancersa.org.au
 Works from TCCSA Tuesday, Wednesday and Thursday, 8.45am to 5.00pm.

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“The greater the uptake of screening, the greater would be the expected benefit in public health terms.”



The oblique mammogram.

“...most experts would agree that the weight of evidence strongly supports mammography screening.”

Population screening for cancer

Introduction

Screening is commonly practised in public health to identify population members at elevated risk of disease, who may benefit from follow-up investigation and care. Screening targets apparently healthy people, who need to know about the availability of this screening, its benefits and risks, in order to make informed decisions about participation. The greater the uptake of screening, the greater would be the expected benefit in public health terms.

Benefits of cancer screening include prevention of invasive disease through the detection and treatment of precursor lesions, and reductions in mortality and morbidity through earlier detection of cancer at a more treatable stage.

Risks include false reassurance that a person is disease free when lesions are missed due to sub-optimal screening sensitivity; and anxiety, morbidity and cost if the abnormal screening test leads to further assessment and investigation.

Recommendations to introduce screening in Australia are provided by expert committees, generally of the National Health and Medical Research Council (NHMRC) or Australian Health Ministers' Advisory Council (AHMAC), who weigh the evidence and decide whether benefits would be sufficient to outweigh risks. Community representatives are normally included in these committees.

Only three types of cancer screening have been endorsed by the NHMRC viz cervical screening, breast screening, and colorectal screening.

The remainder of this article will focus only on screening for breast cancer.

Mammography screening

Breast cancer is the most common female cancer reported to the South Australian Cancer Registry and the leading cause of cancer death in females. The age-standardised death rate from this cancer was either stable or showed evidence of an

increase prior to 1990, but a downward trend has occurred since then. This amounted to an average annual reduction of approximately 2.6% in women aged 50 years or more, equating with a 23% reduction over a 10-year period. By comparison, there was little evidence of a reduction in younger females.

The reduction in death rates in older women has been attributed to benefits from screening mammography and related early detection initiatives, plus advances in adjuvant therapies and in surgical management.

During 1991, the national and state governments launched population-based mammography screening in South Australia. This followed a pilot phase that commenced in 1989. Biennial screening was promoted in 50-69 year old women, while 40-49 year old women and those aged 70 years or more were given access to screening on demand.

Mammography screening had its origins in the “New York Health Insurance Plan (HIP) Trial”, initiated in late 1963. Eighteen years after the commencement of that trial, women invited for screening showed a breast cancer mortality reduction of 25% when compared with women not invited for screening. This percentage probably under-estimated the mammography effect, since not all invited women participated fully in the screening (ie it would have been expected that reductions would have been greater in those women who in fact attended for screening).

At least seven further trials were undertaken in Sweden, the United Kingdom and Canada. All but the Canadian trial yielded results broadly consistent with the New York HIP findings.

The reason for the discordant Canadian results has been the subject of debate, with questions directed at screening quality in the Canadian trial. Vigorous debate has continued about the mammography evidence more generally, and although most breast screening evidence originated from randomised controlled trials, some

researchers have criticised the design or conduct of the trials, and raised questions about validity. Despite this, most experts would agree that the weight of evidence strongly supports mammographic screening.

Meta-analyses of trial data indicate that 50-69 year old women invited for screening would expect to achieve at least a 25% reduction in breast cancer mortality. A group of 24 experts from 11 countries, brought together in 2002 by WHO's International Agency for Research on Cancer (IARC), concluded that the trial data were consistent with a 35% reduction in breast cancer mortality among 50-69 year old women who participated fully in the screening.

There have also been program evaluations of screening services introduced in the United Kingdom, Holland, Sweden, North America and Australia. In general, they have shown lower breast cancer mortality among screened than unscreened populations, although these reductions have varied in scale and not always been statistically significant. Also, it can be difficult in evaluations in normal program settings to adjust effectively for other influences on outcomes, leading to greater uncertainty in the interpretation of these data.

A NSW evaluation study found an association between lower breast cancer mortality and breast screening participation. The results indicated that the reduction would be about 32% in 50-69 year olds, if there were a 70% screening participation rate. This equated with a reduction of 40% or more from full participation, which is broadly consistent with findings of the IARC expert group.

In South Australia, 63% of 50-69 year old women are participating in population-based screening (ie at BreastScreen SA), which is a higher participation rate than seen in other states and territories and nationally (56%)*. Were the results of the NSW evaluation study to apply in South Australia, the participation rate of 63% in 50-69 year olds would be associated with a reduction in breast-cancer mortality of approximately 30%.

Lower participation rates apply to Indigenous women, and to some culturally and linguistically diverse groups, than for other women. While improving participation in screening within these groups remains a challenge for Australian breast screening programs, comparatively good headway has been made in South Australia.

In response to breast screening and allied early detection initiatives, the proportion of small breast cancers (diameters <15mm) detected in South Australia increased from 13% in the 1980s to 37% from the late 1990s. This is consistent with the "stage shift" that confers potential mortality reductions from mammographic screening: ie cancers are detected at an early stage, so that with time, there are more small cancers detected, and the proportion of advanced cancers decreases in women having regular screening.

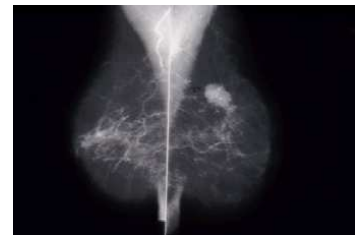
The advantage of finding small cancers by mammographic screening is that these cancers are more amenable to conservative management, allowing women to have less radical surgery.

Hospital-based cancer registry data for 1987-2000 indicated that the proportion of patients having conservative breast surgery, as opposed to a mastectomy, was 63% for cancers initially detected through screening mammography, compared with 46% for other breast cancers. Meanwhile, more recent data for 2001-2002 indicated that 75% of screen-detected breast cancers were treated with breast-conserving surgery.

Aside from these positive findings, concern has been expressed about the potential for mammographic screening to find lesions that may not have progressed if left untreated. Mostly this concern has been directed at ductal carcinoma *in situ* (DCIS), a lesion uncommonly seen in unscreened populations.

About 20% of screen-detected cancers are detected at this early stage. Because the natural history of DCIS is poorly understood, there is concern about unnecessary detection (ie "over-diagnosis") and potentially over-treatment.

"...WHO's IARC concluded that the trial data were consistent with a 35% reduction in breast cancer mortality among 50-69 year old women who participated fully in the screening."



The oblique mammogram showing cancer in the left breast.

"...the proportion of small breast cancers (diameters <15mm) detected in South Australia increased from 13% in the 1980s to 37% from the late 1990s."

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Estimates of the proportion of screen-detected invasive and *in situ* cancers in the “over-diagnosis” category have ranged from 0% to 25% or more, with 12% or so commonly cited. These are statistical inferences, however, based on uncertain assumptions, which are themselves subject to debate.

Further research is needed to determine the scale of any “over-diagnosis” and this should cover new digital mammography technologies as well as conventional methods. More particularly, the radiology, pathology and molecular determinants of DCIS progression are a high priority for research, in order to develop predictive models to inform treatment planning.

Note: This article is adapted from the Department of Health, Public Health Bulletin, SA, Edition 5, 2006: “Opportunities to Increase Cancer Control”, by Professor David Roder.

References available on request.

*The participation rate of 63% for mammography screening in South Australia as stated above is cited from the Australian Institute of Health and Welfare’s *BreastScreen Australia monitoring report 2002-2003* (Cancer Series No 32), 2006. However, the population of women entering the target age group 50-69 in South Australia is increasing at around 2- 3% per year.

As BreastScreen SA is currently unable to increase screening capacity to match this population increase, the South Australian participation rate has recently fallen, and is now just below 60%.

“...data for 2001-2002 indicated that 75% of screen-detected breast cancers were treated with breast-conserving surgery.”

For more information please contact:

Medical Officers
BreastScreen SA
1 Goodwood Road
WAYVILLE SA 5034
Phone: (08) 8274 7150
Fax: (08) 8357 8146
email: BSSAenquiries@health.sa.gov.au

WE’RE ON THE WEB
www.breastscreen.sa.gov.au

Information in this newsletter is not a substitute for seeking appropriate specialist advice in individual clinical situations.

Strategies for General Practitioners

Building collaborative partnerships with GPs is an important strategy for BSSA. We offer:

- a range of free printed resources, including brochures in 15 different languages, and stickers with which to tag the files of your female clients over age 50.
- seminars for health professionals and practice managers – at BSSA or your venue.
- a Clinical Audit Activity developed by BSSA’s Medical Officers.
- screening participation statistics by postcode.
- personalised contact with GPs via surgery visits.
- display materials.
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