



Cancer Genetics Gazette



A newsletter for specialist clinicians from the Familial Cancer Unit

June 2007

Issue 3

Welcome to the first edition of The Cancer Genetics Gazette for 2007. In Focus this issue reports on novel therapeutic treatments for BRCA1/BRCA2 carriers.

In focus

Novel treatment trials involving the BRCA1 / BRCA2 Cancer Therapeutics Consortium

Although BRCA1 and BRCA2 mutation-associated familial breast and ovarian cancer accounts for a small proportion of breast cancers overall, there is considerable demand for improvements in therapy for this very high-risk group of women. Australian centres are now opening the first international treatment trials, in association with the BRCA1 / BRCA2 Cancer Therapeutics Consortium, for women who have mutations in the breast cancer predisposition genes, BRCA1 or BRCA2, and who have metastatic breast cancer or ovarian cancer.

BRCA1 and BRCA2 are proteins required for normal repair of DNA. In cancers arising in women with BRCA1 or BRCA2 mutations, it is believed that the tumour, but not the normal tissue, has lost this form of DNA repair. These tumour cells appear to be particularly sensitive to damage caused by platinum chemotherapy drugs (cisplatin and carboplatin). Although platinum drugs have not been widely used in women with breast cancer, they are already extensively used to treat patients with other types of cancer. Therefore, it has been possible to move straight to a randomised phase II cross-over "proof of concept" trial comparing tumour response and toxicity between carboplatin and docetaxel (a drug commonly used in breast cancer) in women with BRCA1 or BRCA2 associated metastatic breast cancer. This trial is now open at the Royal Melbourne Hospital (RMH), Melbourne, with support from the ANZBCTG.

These same cancer cells, which cannot repair DNA damage by the normal pathway, use an alternative pathway to repair DNA. This pathway can be inhibited by novel drugs known as PARP Inhibitors. Therefore, in these cancer cells, PARP Inhibitors cause DNA instability and death of the cancer cell. A separate phase II open label trial examining the effect of a potent PARP Inhibitor in BRCA1/2 metastatic breast or ovarian cancer upon recurrence after standard chemotherapy, will be underway at RMH and Peter MacCallum Cancer Centre (PMCC), Melbourne, and Prince of Wales Hospital, NSW, shortly. It is possible that combining these two

treatments together (platinum chemotherapy and PARP Inhibitor therapy) may be the future treatment for this type of breast cancer, and further trials will follow.

Only by fostering international collaborative trials, and referring our patients to centres running these trials, can we translate the explosion in understanding of cancer gene function into novel therapies for rare but genetically defined forms of cancer. In addition, the knowledge gained about this group of cancers may have implications for treatment of a wider, non-familial, yet related group of cancers.

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A South Australian node for these trials will be opened at Flinders Medical Centre (contact Associate Professor Bogda Koczwara on 8204 8997).

New resources

Age-specific cancer risks for counselling women with BRCA1 or BRCA2 mutations is an information leaflet has been developed to assist women who carry a BRCA mutation in their decision-making regarding prophylactic surgery. The leaflets are available from the Familial Cancer Unit upon request.

In Practice: cancer control in general practice updates primary health care providers about cancer prevention, detection and treatment, evidence-based guidelines and protocols, clinical trials, and the resources and services provided by The Cancer Council SA. Up-to-date information on aspects of familial cancer is covered by the regularly featured editorial *Familial Cancer In Practice* (replacing The Gene Pool). Available in hard copy or electronically. Feedback and suggestions for articles welcome. Please contact *In Practice* editor Belinda Lowcay on 08 8291 4272 or blowcay@cancersa.org.au.

Invitation to join The COSA Familial Cancer Group

In November 2006, the Familial Cancer Group within the Clinical Oncology Society of Australia (COSA) was formed. This group was established to allow individuals with common interest in familial cancer to contribute to improved familial cancer services, education and management and provide advocacy within COSA.

Familial Cancer Group aims to foster the development of sufficiently resourced professional services to assist in the optimal management of individuals and families at increased genetic risk of cancer.

An invitation to join the group is extended to specialist and scientific professionals with a common interest in the development of high quality Familial Cancer services, education and management. Ordinary or associate Membership to COSA is required.

If you are interested in joining the Familial Cancer Group please contact:

Dr Lara Lipton (Secretary) at lara.lipton@mh.org.au or Dr Graeme Suthers (Chairperson) on 08 8161 6995 (graeme.suthers@cywhs.sa.gov.au).

The COSA website can be accessed for membership enquiries at www.cosa.org. Alternatively contact:

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Invitation to contribute to the Gazette:

We invite your contribution The Cancer Genetics Gazette (a cancer genetics publication for specialist clinicians) brought to you by The SA Familial Cancer Service and The Cancer Council South Australia.

Contributions must be relevant to the area of cancer genetics, and may include:

- Websites of interest / review
- Research project snapshots/updates
- Letters to the Editor

- Conference reports
- New discussion documents / papers released
- New national initiatives
- Relevant Journal article for discussion
- Grants / funding opportunities
- Collaborations, clinical trials

For further details contact the Cancer Genetics Education Officer at The Cancer Council South Australia on 08 8291 9111. Word is limit 350 to 400 words plus references. All articles should include the author(s) contact details, including phone and email address.

Web watch

Web Watch connects specialist clinicians with relevant and up-to-date links to web based resources, with particular emphasis on familial cancer genetics.

<http://www.cancer.gov/cancertopics/pdq/genetics/risk-assessment-and-counseling/HealthProfessional> describes current approaches to assessing and counseling people about their chance of having an inherited susceptibility to cancer. From the US National Cancer Institute.

<http://www.genomel.org/> provides information on familial melanoma genetics research.

<http://www.nbcc.org.au/hsd/> a directory of Australian hospitals and clinics which provide services for women with breast cancer to enable consumers and clinicians to locate a service suitable for a woman's individual treatment needs. From the National Breast Cancer Centre.

Do you wish to receive other cancer genetics publications?

Familial Cancer In Practice is a regular editorial feature of the *In Practice* newsletter for general practitioners.

Gene Trek newsletter for Familial Cancer Unit clients.

If you wish to receive the Cancer Genetics Gazette or other publications electronically, please contact:

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