BREAST CANCER CAMPAIGN TISSUE BANK

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Spreading The Word – Birmingham 30 August 2012

On 30th August, Stuart Griffiths, Head of Commissioned Research at Breast Cancer Campaign, introduced a small team of representatives from the charity, to an audience of interested parties at the University of Birmingham. The audience of surgeons and researchers were keen to know how the BCC Tissue Bank could help in their work to find a cure for breast cancer.

The BCC team of experts were there to relate how the tissue bank works, what samples it held, the data that was stored alongside each sample, and Maggie, Mairead, and myself were there to provide support, from the standpoint of being both patients and the public, and as members of ICPV and the BCC Tissue Bank Access Committee.

Stuart introduced opened the proceedings with an explanation of how the Bank worked, how it started, and why it was set up. The latter because a paper published in 2008 (Evaluation of the current knowledge limitations in breast cancer research: a gap analysis) showed which areas of breast cancer research, if targeted by researchers and funding bodies, could produce the greatest impact on patients. There were seven areas, including genetics, disease initiation, progression, disease markers, and prevention. It was realised that a tissue bank, a specialised collection of diseased and healthy breast tissue, would provide the raw material for much of the research into these areas. (This paper is the 10th most downloaded paper in breast cancer research.)

In 2008, BCC announced that they would found such a tissue bank, and included patient and public representation (PPI) right from the start.

Stuart then introduced each member of the team from the four core units Dundee, Leeds, Nottingham, and Bart's. There are three other associated banks, and significant funding from BCC goes into them.

Tissue banks hold much tissue of variable quality, and with limited information. Modern banks are concentrated in few centres, and are often driven by local needs and interests. In contrast, the BCC tissue bank is run by researchers for researchers, with patients at centre stage. Preparation and storage techniques are standardised, and the vital information about each sample is garnered and stored with it. As samples are used and further information is gathered, this information is fed back to the bank and stored with the samples. At the time of writing, there are currently 3000 samples in frozen and fixed form (ie in paraffin wax). The data associated with them are not only the details of the pathology, ie nodal status, whether ER positive, HER2 positive, etc, but also the patient details, of gender, age, and treatment with the response. This is what makes the samples so valuable – the data.

BCC have not neglected the routine administration of the bank either. A bespoke database has been designed to manage the bank, and a portal to allow on-line requests for tissue to be made according to the characteristics required. There are even algorithms to protect rare samples, or those with only few aliquots present, from being selected too often in the selection process.

Phil Quinlan from Dundee (IT guru for the enterprise) showed the audience how to apply for tissue using the BCC portal, selecting for characteristics and preparation. As not all samples are yet in the portal, Professor Louise Jones (Head of Pathology, Barts) asked the audience to get in touch with BCC directly shortly after creating their request on the portal, to ensure their needs would be met. This session ended with acknowledgement of the support of ICPV, and the selfless generosity of patients giving their tissue to the Bank, without any expectation of reward or individual recognition.

The audience were then talked through the review process, where the lay members of the Tissue Access Board look at the application and review the lay summary of the research proposal. BCC feel that this grounds the researcher in what their research is all about, where the tissue comes from, and that ultimately, it is to benefit patients.

Questions were invited from the audience, and discussions ensued about aliquots of tissue, how the service might expand to include metastatic disease and from patients as they proceed along the treatment pathway, the collection of tissue from associated cancers such as ovarian and tissue with BrCa1/BrCa2 genetic characteristics. The imagination of the audience brought forward some very interesting ideas, and the day closed on a very positive note for the future.

And that future? Patients are often displeased when they come to realise that their tissue is disposed of, incinerated, and wasted. BCC aims to harvest this resource in a controlled and scientific manner with all associated data, in a standardised form. Applications are currently invited from researchers in the UK and Ireland, but as the bank grows in size, BCC hope to extend this to collaborate with researchers in industry, the EU, and internationally. If a cure is found, it will be down to the generosity of women who freely give their tissue to banks such as this, and the researchers who use this precious material to track down the cause, cure, and prevention of this disease.

Jacqui Gath
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http://breastcancertissuebank.org/our-research.php