

POSH study – correlation of radiological features of breast cancer in women under 40 years with genetic, pathological and outcomes information.

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Abstract: The POSH study has recruited 2000 women less than 40 years, and has already obtained family history and lifestyle questionnaires, bloods for genetic analysis, and a BCC grant by which pathology will be studied in depth. The present proposal is to review all the radiology at the time of diagnosis in these women to gain a complete understanding of the radiological features of cancer and the mammographic density of the normal breast in relation to the lifestyle and family history information, the cancer genetics, the pathological study and the outcomes. This should allow a complete understanding of prognostic markers from the radiology at the time of diagnosis that may contribute to patient care.

The expected value of the research to the breast cancer community

Better knowledge of the radiological features of breast cancer on the standard imaging modalities will enhance the diagnostic process and inform screening strategies in younger women. The relation to genetic status will parallel the existing papers on pathology of tumours in gene carriers. This has the potential to improve outcomes for young women.

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List of collaborators, but not co-applicants

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Consequences for Radiology Departments:

The administrative and expert team in Cambridge will request loan of the mammograms, ultrasound studies and MRI data for digitising and storage from participating centres. This falls within the original POSH study intentions and the consent for access to medical records signed for by participant women. The records will be returned in general within one working week, and will all be logged in and out, and sent by signed mail. (Contact: Mrs Iqbal Warsi, above) *We are not able to formally pay for this, but a member of our team will come and find the records in file if that is helpful, or we can contribute the equivalent cost of her fare for your staff to do this for us.*

Mammographic density of the non-cancer side will be measured by an automated 2D thresholding method (Cumulus: Yaffe; Toronto)

A web-based reporting system is being created so that the radiological review can be undertaken without inconvenience by a number of radiologists across the UK. Its descriptors are based on the ACR BIRADS lexicon (2003). Volunteers from the participating centres are requested to notify their wishes to Ruth Warren (above). The named radiological input in the review and, where possible, in patient care will be acknowledged in all publications, within the journal publication rules.