



Breast imaging in Ireland

An interview with Dr. Gormlaith Hargaden, consultant radiologist at the Mater Misericordiae University Hospital and for BreastCheck, the Irish national breast screening programme, both in Dublin.

ESR: *Early detection of breast cancer is the most important issue for reducing mortality, which is one reason for large-scale screening programmes. What kind of programmes are in place in your country and where do you see the advantages and possible disadvantages?*

Gormlaith Hargaden: BreastCheck is an Irish Government-funded programme that provides free mammograms to eligible women on an area-by-area basis every two years. BreastCheck is being extended and by the end of 2021, all eligible women aged 50 to 69 will be invited for routine screening.

A national screening programme provides the opportunity to reduce the mortality and morbidity associated with later stage diagnosis of breast cancer. It also leads to improved patient awareness of breast cancer and earlier presentation to symptomatic breast services.

ESR: *Do you know how many women take part (percentage)? Do patients have to pay for this?*

GH: The service is free from the initial mammogram through to diagnosis and treatment. The uptake rate varies but was 76.5% in 2014 with 135,996 women attending; 890 women had a cancer detected, representing 6.5 cancers for every 1,000 women screened.

ESR: *The most common method for breast examination is mammography. When detecting a possible malignancy, which steps are taken next? Are other modalities used for confirmation?*

GH: Every woman who has an abnormality detected on a screening mammogram is recalled for further evaluation. Many of these women will have additional mammographic views or tomosynthesis, and all will have a breast ultrasound. Core biopsies are performed using ultrasound guidance where possible, or using vacuum biopsy with stereotactic or tomosynthesis guidance. MRI may also be used in a sub-set of patients.

ESR: *Diagnosing disease might be the best-known use of imaging, but how can imaging be employed in other stages of breast disease management?*

GH: Most of our breast cancer patients have wire localisations performed pre-operatively using ultrasound or mammographic guidance. Sentinel node mapping is performed using scintigraphy. We are also using vacuum assisted excision for some of our patients with B3 lesions. MRI is used for evaluation of disease extent in selected patients. CT, bone scanning and PET-CT are also used for staging when indicated.

ESR: *What should patients keep in mind before undergoing an imaging exam? Do patients undergoing radiological exams generally experience any discomfort?*

GH: Women need to be aware that screening does not prevent breast cancer, but it helps to find it early. Cancer can occur at any time, including the time between mammograms. Not all breast cancers can be found by a mammogram.

Although every woman's experience of mammography is different most women do not find it painful. The majority of women find it a little uncomfortable and compare it to having their blood pressure taken. The radiographer will work with the patient to make it as comfortable as possible.

ESR: *How do radiologists' interpretations help in reaching a diagnosis? What kind of safeguards help to avoid mistakes in image interpretation and ensure consistency?*

GH: The detection of mammographic abnormalities and further evaluation of these by radiologists is critical in the early diagnosis of breast cancer, with double reading increasing the diagnostic accuracy. To ensure the best patient outcomes, the highest standards need to be maintained in every aspect of the programme. All radiographers and radiologists must be highly trained; quality assurance and on-going professional development are essential, with regular meetings to look at outcomes and ways to continuously improve the service.

ESR: *When detecting a malignancy, how is the patient usually informed and by whom?*

GH: The breast surgeon tells the patient the biopsy results at a return appointment, but the radiologist has usually discussed the possible diagnosis with the patient at the time of biopsy.

ESR: *Some imaging technology, such as x-ray and CT, uses ionising radiation. How do the risks associated with radiation exposure compare with the benefits? How can patient safety be ensured when using these modalities?*

GH: All imaging is performed based on a risk/benefit analysis. Patient safety is prioritised at all times through the use of correct imaging techniques, performed on safe equipment with rigorous quality assurance systems in place.

ESR: *How aware are patients of the risks of radiation exposure? How do you address the issue with them?*

GH: There is information available on the screening website. If patients have concerns they would often speak with the radiographer at the time of screening who will re-assure them that the dose of radiation used in a mammogram is very small and is within recommended limits, so the risk to the woman's health is very low.

ESR: *How much interaction do you usually have with your patients? Could this be improved and, if yes, how?*

GH: All women who are recalled for an abnormality detected by screening meet with the radiologist who will perform their ultrasound and discuss the radiographic findings with them.

ESR: *How do you think breast imaging will evolve over the next decade and how will this change patient care? How involved are radiologists in these developments and what other physicians are involved in the process?*

GH: I think that breast screening will become more tailored to individual patient needs, based on their own imaging findings and family history. E.g. those with dense breast tissue may be offered more frequent or additional imaging.

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