

# Training experienced staff to extend their skills in breast ultrasound improves service for patients referred to a symptomatic breast clinic

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## Background

Currently there is a significant national shortage of breast radiologists. Most Health Boards in Scotland are seeing large numbers of new breast referrals in waiting list clinics performed in the evenings and weekends often not in their local area and at significant additional cost.

Audit of referrals to breast clinics in NHS Lanarkshire confirmed increasing numbers of referrals requiring assessment across all age groups. Persistent high numbers of referrals are seen in the younger age groups- Figure 1

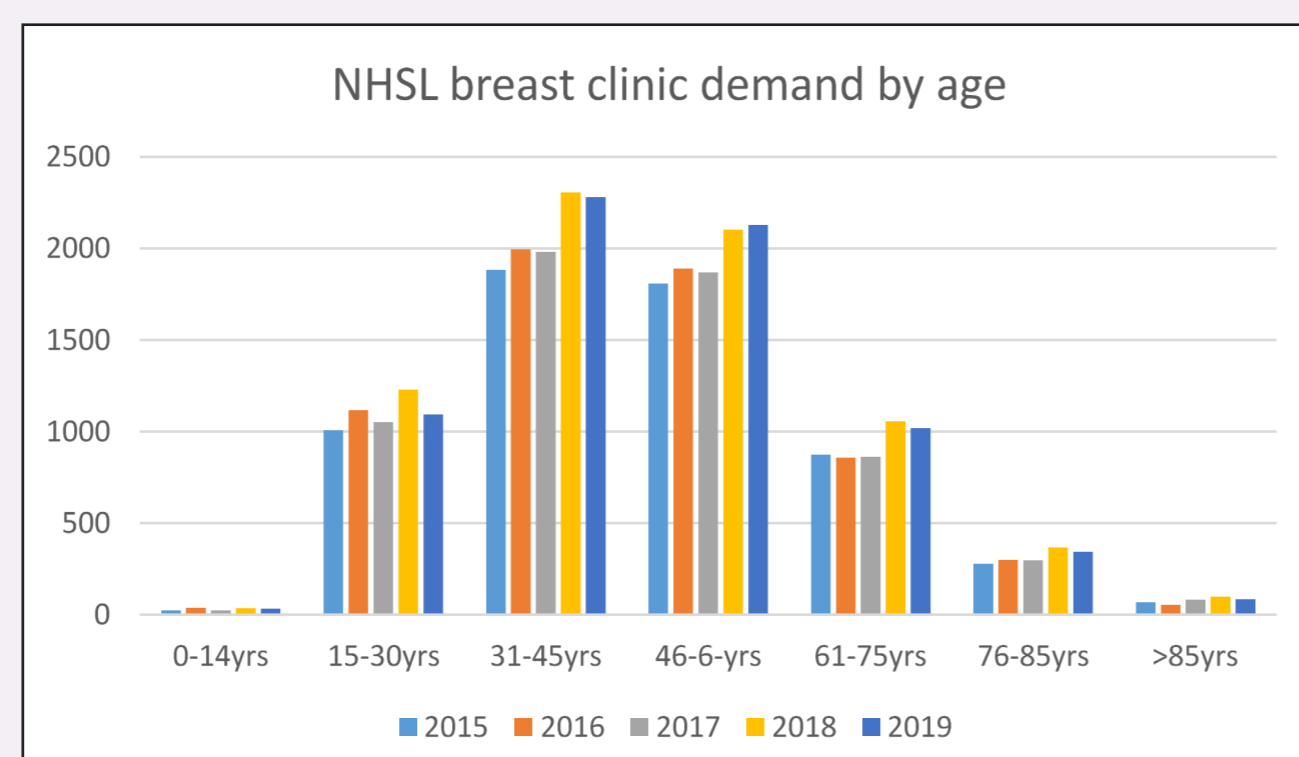


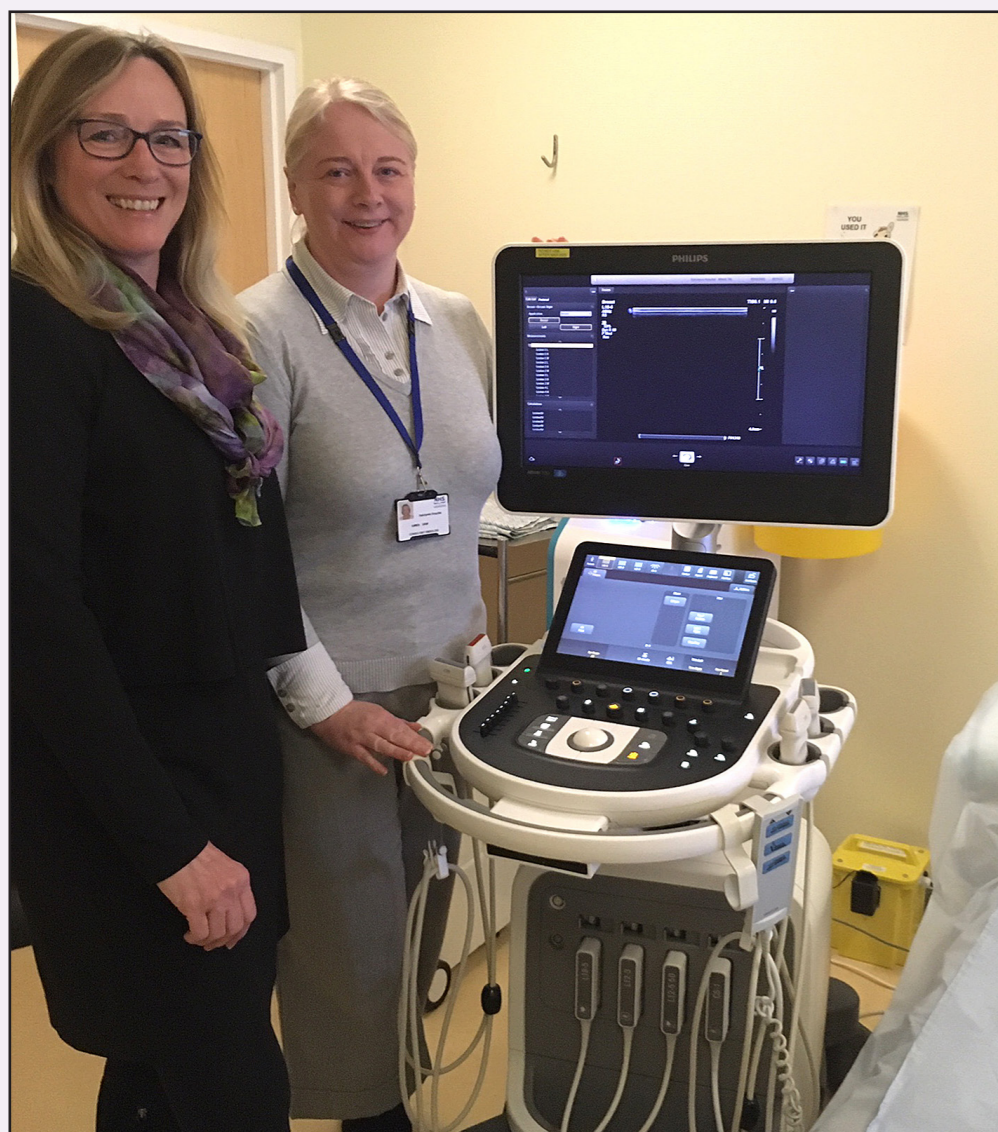
Figure 1 Five year review of breast clinic referrals by age

Patients under 40 do not routinely undergo mammography as part of their assessment but require examination and often breast ultrasound.

Southmead Hospital in Bristol developed a training course for non-radiologists to develop enhanced skills in performing breast ultrasound and ultrasound guided biopsies. This model was felt to be particularly relevant to our service in Lanarkshire where we have 2 very experienced specialty doctors who have a wide range of diagnostic experience and who work closely with our existing radiology team.

## Method

An application was made to the SAS development fund to support Dr Rachel Leach and Dr Katharin MacBain to pursue breast ultrasound training.



Dr Rachel Leach with Consultant radiologist mentor Dr Karen Gray



Dr Katharin MacBain with Consultant Radiologist mentor Dr Barbara Macpherson

Initial training was a 2 day course at Southmead Hospital Bristol.

Day one: physics of ultrasound, the principles of ultrasound in breast assessment, and criteria for assessment and investigation of breast lesions.

Day two: practical training in use of the ultrasound machine and performing guided aspiration and biopsy.

The next phase of training was a period of mentored practical training and completion of a log book of 100 breast ultrasound cases to include a range of pathology, guided cyst aspirations and guided core biopsies. SAS development funding covered the cost of secondment out of clinics to undergo this training. Logbooks were submitted for marking in 2019 and assessed as fulfilling the course criteria successfully.

The final assessment was back at Southmead Hospital and covered practical use of the ultrasound machine to obtain optimum imaging, then an OSCE exam of ultrasound images to be discussed graded and appropriate intervention discussed. Drs Leach and MacBain were both successful in completing this assessment.

## Results

Low risk one stop clinics have now been established in two hospitals in Lanarkshire run by Dr Leach and Dr MacBain. These are now routinely processing 18-24 young low risk patients per week. As anticipated the clinic appointments allow full triple assessment of breast symptoms (examination, imaging and biopsy if required) and the average time patients are in the clinic is 20 minutes. This compares favourably with the total time in clinic of 1.5-2 hours in the traditional model of patients attending for examination, moving to the x-ray department for imaging then back to the outpatient clinic to be given results.

Ultrasound scans are performed, graded and reported and any biopsies required (following the Association of Breast Surgery and Royal College for Radiologists guidelines) are performed.



Patient age 24, well defined oval hypoechoic lesion graded U2 meeting Stavros criteria for benign fibroadenoma, not requiring diagnostic biopsy as patient under 25



Patient age 19, lobulated hypoechoic lesion graded indeterminate U3 requiring diagnostic biopsy (Biopsy result B2 fibroadenoma)

There is improved continuity of care with ultrasound being performed by the examining clinician, allowing ongoing explanation of investigations and an opportunity to consolidate patient reassurance with demonstration of the ultrasound findings.

This initiative also provides flexibility of staff allowing cover for clinics when radiologists are not available and therefore maximising clinic throughput particularly of urgent GP referrals.

## Conclusion

To date this project has been a success developing the role of experienced specialty doctors, improving the clinic experience for a cohort of young low risk breast patients and optimising use of resources to allow timely full assessment of new GP referrals.

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