

# Utilising Digital Breast Tomosynthesis in Screening Assessment Clinics

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## Background

- Prospective screening studies using DBT with FFDM have demonstrated increased cancer detection rates compared with FFDM alone. DBT has the potential to improve sensitivity and specificity of imaging in screening, leading to more detected cancers with fewer false-positives.
- The Hologic DBT system has been approved in the UK by the National Health Service Breast Screening Programme (NHSBSP) for use in diagnostic work-up of breast abnormalities detected by FFDM. Screening with the addition of DBT would approximately double radiation dose, and evidence from further clinical trials is required before DBT can be adopted into routine breast screening practice.
- In NHS Grampian, DBT is implemented where there is uncertainty over diagnosis in order to reduce the risk of further unnecessary tests including invasive tissue sampling and MRI.
- DBT is available but requires additional licenses on most mammography machines in screening centres within NHS Scotland.
- Currently in NHS Grampian, we have access to 1 DBT machine in the symptomatic clinic. This is utilised for both symptomatic patients and for additional assessment review of breast screening patients. The unit is located a 15 minute walk away from the screening centre. Due to the delay and distance only limited selected cases where DBT would confer benefit were selected.

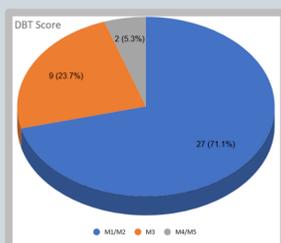
## Methods

- We retrospectively reviewed NHS Grampian breast screening centre utilisation of the Hologic DBT system during 2018 and 2019 in breast screening patients.
- Patient outcomes were then evaluated and proposed actions for future practice have been outlined.

## Results

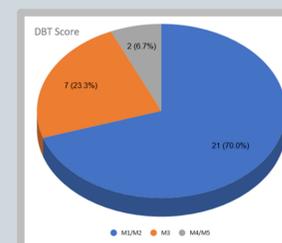
### 2018 Data

- 1/1/2018 - 31/12/2018
- 1088 patients had a breast screening assessment appointment following their initial screening appointment.
- 38 patients underwent additional imaging with DBT.



### 2019 Data

- 1/1/2019 - 31/12/2019
- 1019 patients had a breast screening assessment appointment following their initial screening appointment.
- 30 patients underwent additional imaging with DBT.



- No further investigations required for M1/M2 patients, all returned to routine recall (RR).
  - M4/M5 patients underwent biopsy and subsequent onward referral to Secondary Care following confirmed malignant result.
    - 6 underwent biopsy post DBT
    - 1 already had confirmed B3 result - referred to Secondary Care for surgical excision
    - 2 failed biopsies.
    - 4 required MRI.
  - 3 M3 patients had onward referral to Secondary Care
  - 33/38 DBT patients returned to RR
  - No recorded interval cancers in this group
- 6 underwent biopsy post DBT
  - 1 failed biopsy - Early Recall
  - 1 required MRI
  - 0 M3 patients had onward referral to Secondary Care
  - 27/30 patients returned to RR
  - No recorded interval cancers in this group
  - 1/30 patient on Early Recall

## Outcome Evaluation and Proposed Actions

- Due to limitations of distance to the symptomatic Department, only a small proportion of screening patients were referred for DBT in our centre.
- The results show that there is a significant reduction in the necessity for further invasive tests and/ or MRI imaging.
- Fewer unnecessary tests has positive implications for the patient and is more cost effective for the breast screening centre.
- This review supports the use of DBT in women who have been recalled from breast screening for further assessment.
- We propose, in-line with Scottish Health Technology Group recommendations that Scottish Breast Screening Programme (SBS) consider enabling DBT use in the assessment setting in screening centres across NHS Scotland.