

April 2019

## 1245 BREAST CANCER DIAGNOSES COULD BE MISSED EACH YEAR IN ENGLAND DUE TO PAINFUL MAMMOGRAM EXPERIENCE\*

FUJIFILM is committed to improving the screening and detection of  
breast cancer

25% - 46% of women who fail to re-attend screening cite pain as the reason. <sup>1</sup>

Reducing pain and discomfort in mammography is important for improving screening attendance.

### FUJIFILM's Innovations In Patient Comfort

#### Fit Sweet Paddle

A unique adaptive compression paddle designed to fit the natural shape of the breast, allowing pressure to be more evenly distributed across the breast.

88% of women report a reduction in pain with the Fit Sweet Paddle. <sup>2</sup>

100% of respondents in the NHSBSP Evaluation of the AMULET Innovality reported the patient comfort system as Excellent (75%) or Good (25%). <sup>3</sup>

#### Comfort Comp

Breast tissue does not return to its original state immediately following compression. After positioning full compression is applied as normal however, when Comfort Comp is activated controlled decompression is triggered, relieving pain during image acquisition. The breast tissue remains at optimum thickness for imaging (due to hysteresis) as the "relaxation" of tissue may take several seconds.

56% of patients report a reduction in pain with Comfort Comp, especially those that experienced extreme pain during conventional compression. <sup>4</sup>

#### Fast Workflow

Reduced compression time means less pain and discomfort for patients.

AMULET Innovality performs at fast workflow speeds\*\*.

15 second exposure interval  
4 second tomosynthesis scan  
2 second image preview

\*\*Speed varies depending on density and thickness of breast.

#### Design and Operability

Ergonomic design provides support and comfort during examination to aid relaxation – tension increases pain.

Easy positioning tools means less time in compression.

## FUJIFILM's Screening Technology

### AMULET Innovality's 50µm Image Resolution

This is the finest resolution in mammography (direct conversion detector), resulting in enhanced image detail.

### Hexagonal Close Packing (HCP)

HCP delivers a higher DQE than with square pixel design panels, which leads to higher image quality or lower dose.

### Iterative Super-resolution Reconstruction (ISR)

A new process derived from auto-recognition technologies, originally developed through Fujifilm's imaging innovations, which reconstructs images at a finer resolution, leading to enhanced detail and reduced noise.

### Breast Density Measurement

Automatically calculates breast density, allowing clinicians to customise appropriate imaging pathways early in the patient's screening cycle.

## FUJIFILM's Symptomatic Technology

### Digital Breast Tomosynthesis (DBT)

Fujifilm delivered the first dual angle (DBT) to the market. Whilst the use of DBT in symptomatic patients is a well-recognised clinical pathway, several clinical trials appear to confirm DBT offers potential for screening too.<sup>5</sup>

### S-View

Synthesized 2D uses iterative reconstruction of DBT slices to create a single image, speeding up reporting from multiple DBT images to 4 single S-View images. This can also reduce dose by up to 50% compared to dedicated 2D.

### CEDM

Fujifilm's CEDM uses energy subtraction processing technology, which results in lesion enhancement. This advanced clinical application is a well-tolerated alternative to MRI which has similar rates of detection and specificity.<sup>6</sup>

**The AMULET Innovality is a single system which can be calibrated for both screening and symptomatic mammography.**

<sup>1</sup> "The effect of mammography pain on repeat participation in breast cancer screening: A systematic review" (P Whelehan et al – The Breast, Elsevier, August 2013)

<sup>2</sup> "For appropriate compression of breasts in mammogram exam – Experience of using FS paddle (18x24)" (Tomoko Takahashi et al 2014)

<sup>3</sup> NHSBSP Evaluation of AMULET Innovality - <https://www.gov.uk/government/publications/breast-screening-fujifilm-amulet-innovality-dbt-system>

<sup>4</sup> "Novel Compression Control for More Comfortable Mammography Examinations" (Haruka Aoyagi et al. – 74th Annual Meeting of the JSRP Japanese Society of Radiological Technology)

<sup>5</sup> "Prospective trial comparing full-field digital mammography (FFDM) versus combined FFDM and tomosynthesis in a population-based screening programme using independent double reading with arbitration" (Skaane et al. Eur Radiology 2013) and "Performance of one-view breast tomosynthesis as a stand alone breast cancer screening modality: results from the Malmö Breast Tomosynthesis Screening Trial, a population-based study" (Lang et al. EUR Radiology 2015)

<sup>6</sup> "Mammografia con mezzo di contrasto versus Risonanza magnetica con mezzo di contrasto nella valutazione di lesioni mammarie sospette: risultati preliminari di uno studio prospettico monocentrico" (Dr Anna Russo et al, 2019)



## \*Appendix 1 - Assessment of NHS Digital Breast Screening Programme Key Findings 2017-18, England

### Screening 2017-18

2.54 million women, aged 50 – 70, invited for routine screening in 2017-18  
1.79 million women attended (70.5%)  
= 750,000 women didn't attend  
- of which 386,741 had previously attended a mammogram†

### † Invitation Uptake

13.7% of women who previously attended a mammogram within last 5 years didn't take up screening invitation in 2017-18:

- 1.69 million invited
- 231,530 didn't attend

54.7% of women who previously attended a mammogram over 5 years ago didn't take up screening invitation in 2017-18:

- 283,750 invited
- 155,211 didn't attend

### Cancer Detection Rate

14,455 women aged 50-70 received cancer diagnosis as result of attending screening in 2017-18  
= 0.8% of total women screened in 2017-18

Of these, 12,615 women who had previously had a mammogram received a cancer diagnosis as a result of attending screening in 2017-18  
= 0.7% of total women screened in 2017-18

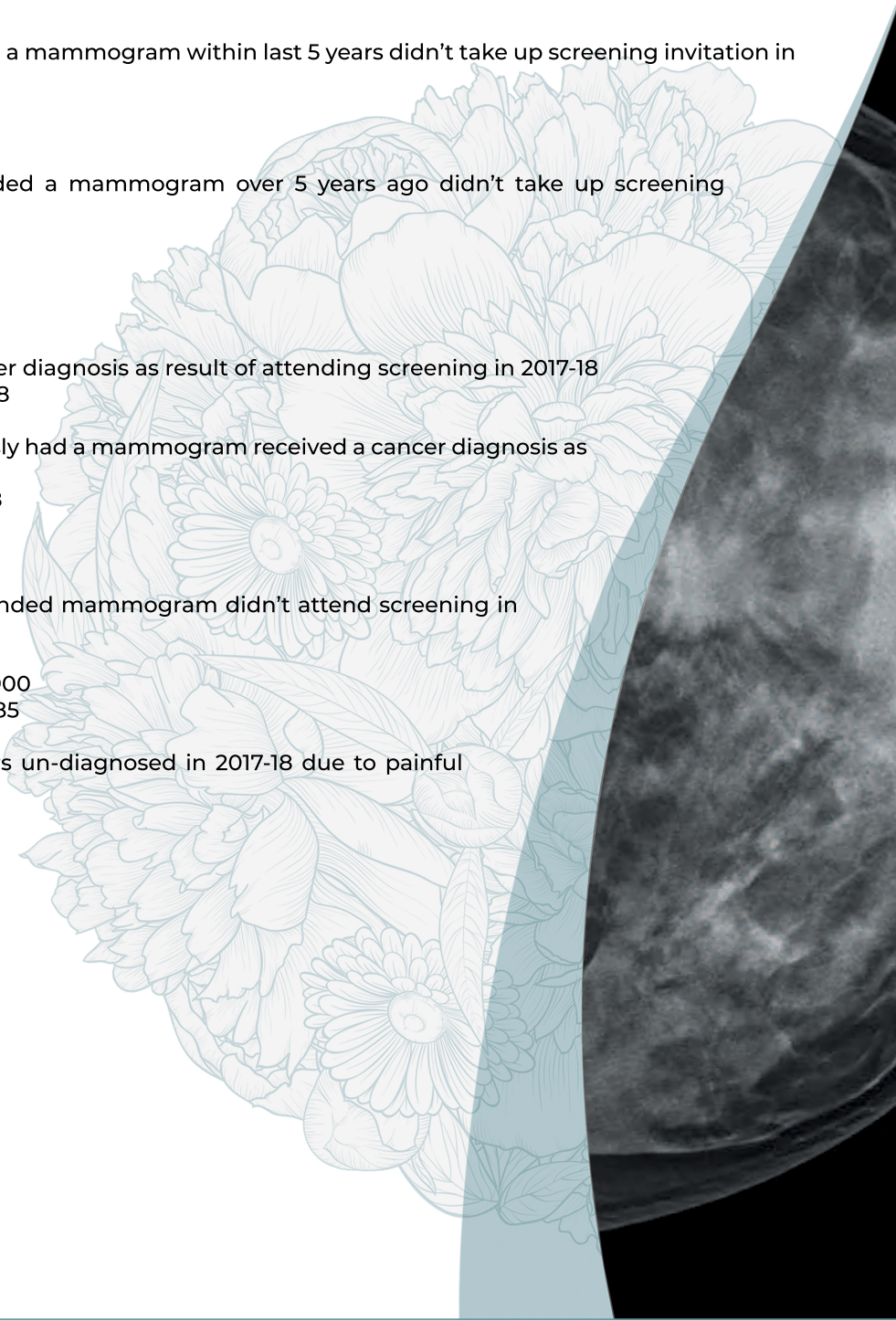
### Extrapolation of Data

386,741 women who had previously attended mammogram didn't attend screening in 2017-18

If 46% didn't re-attend due to pain = 177,900

If 25% didn't re-attend due to pain = 96,685

$177,900 \times 0.7\%$  = potentially 1,245 cancers un-diagnosed in 2017-18 due to painful mammogram experience



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