FAST MRI DYAMOND Trial

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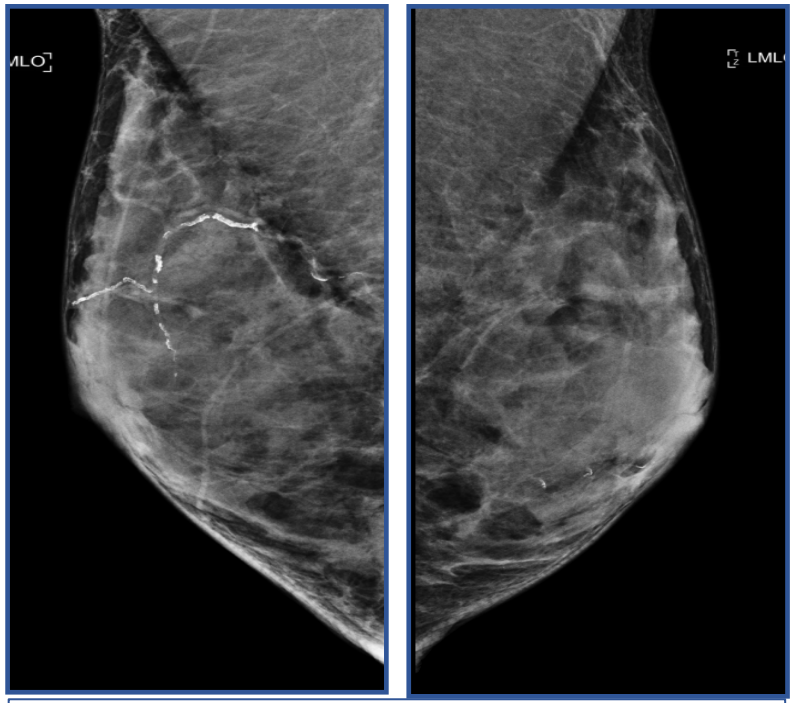
St George's, Epsom and St Helier Hospital Group (GESH)

Background

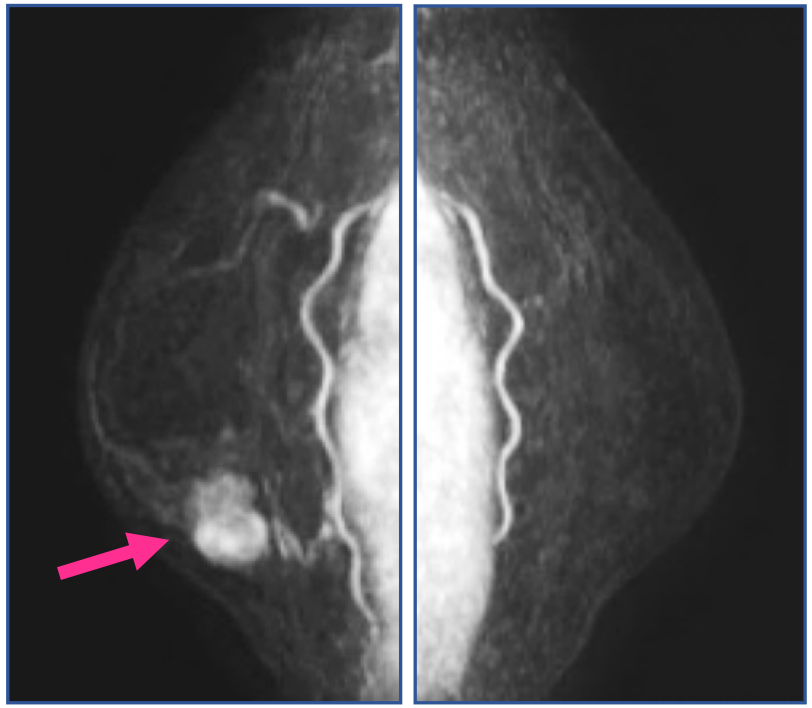
- Early detection of breast cancer is the important goal of breast screening
- Small grade 3 (aggressive) cancers are less well detected by mammography than by MRI
- For women at very high risk of breast cancer screening with breast MRI confers a survival advantage over mammography
- For women at population-risk, could a simpler form of breast MRI save more lives than mammography and be cost effective?



Background



Mammograms (obliques):
G3 TN cancer is occult mammographically



FAST MRI (sagittal MIPs):
G3 TN cancer shows clearly (pink arrow)

Trial Overview

Diagnostic **Y**ield study for **A**verage **M**amm**O**graphic scree**N**ing **D**ensity

A prospective, multicentre, diagnostic yield, single arm study with an embedded qualitative study.

To determine whether FAST MRI can detect breast cancers missed by mammography for women with **BI-RADS category B mammographic density** (40% of the population of women having their first mammogram with NHSBSP (age 50-52))



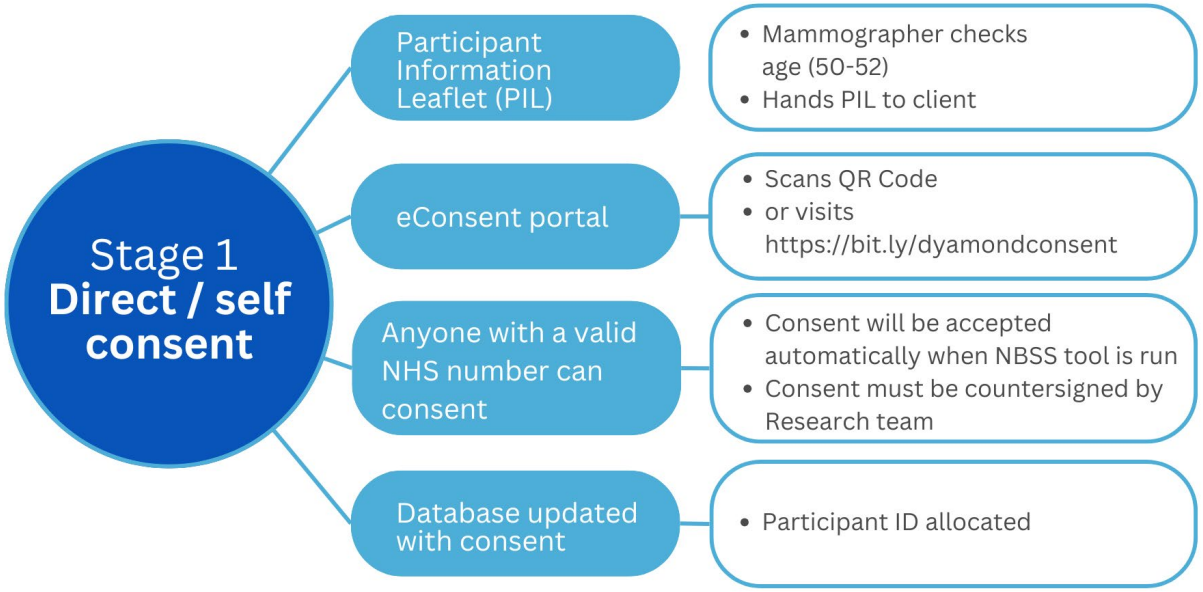
Trial Design

- Target of 1000 FAST MRI scans across 6 participating locations in England.
- FAST MRI is an abbreviated scan involving 5-7 minutes on the scanner using contrast.
- Planning and QA phase with 3 volunteers to test the scanning protocol.



Stage 1 (Breast Density Assessment)

- NHS BSP clients aged 50-52 attending their prevalent screening mammogram are invited to consent to stage 1 by the mammographer (handed a PIL in clinic)
- Consent- to have their mammographic breast density assessed (B or NOT B)
- Must be Routine Recall (RR)
- Confirm eligibility and send images for density assessment



Stage 2 (FAST MRI Scan)

Invited to Stage 2

- average breast density (B)
- clear prevalent-round mammogram (RR)
- no contraindications to contrast MRI

Not invited to stage 2

- Not B (i.e. BI-RADS A, C or D)= ineligible
- Participant notified with ineligible result

Answer any questions about study participation

Confirm mammogram was first under screening programme

Screen their suitability to have an MRI (complete MRI Safety checklist)

Confirm they have watched the “Having a FAST MRI” video

Receive their informed consent

Complete Clinical & Breast History Questionnaire



Scan and Reporting

Attend FAST MRI scan

- Allow 30-45mins in department
- 7 minutes prone on scanner (3-5 min scan)
- Cannulation prep and qualitative questionnaire



Readers

FAST MRI scans are read by DYAMOND-certified readers. All scans are double read by two Standard Readers. If classified as MR3, scan is additionally reviewed by members of the Expert Panel to decide between: repeat 1 year or recall to assessment clinic.

Scan Results

- **MR1-2** –Normal/Normal benign- back to RR (contact via letter or email)
- **MR3a** – Repeat FAST MRI at Year 1 and remain in routine screening (contact letter or email) (contact at 11 months to arrange FU)
- **MR3b, MR4 or MR5** – Requires triple assessment (examination, imaging and biopsy) (contact via telephone)

Cancers are treated in line with national guidance.

DYAMOND Site status

Recruiting to main study

- Bristol (2 scanners)
- Cheltenham
- St Georges
- Swindon
- Cornwall

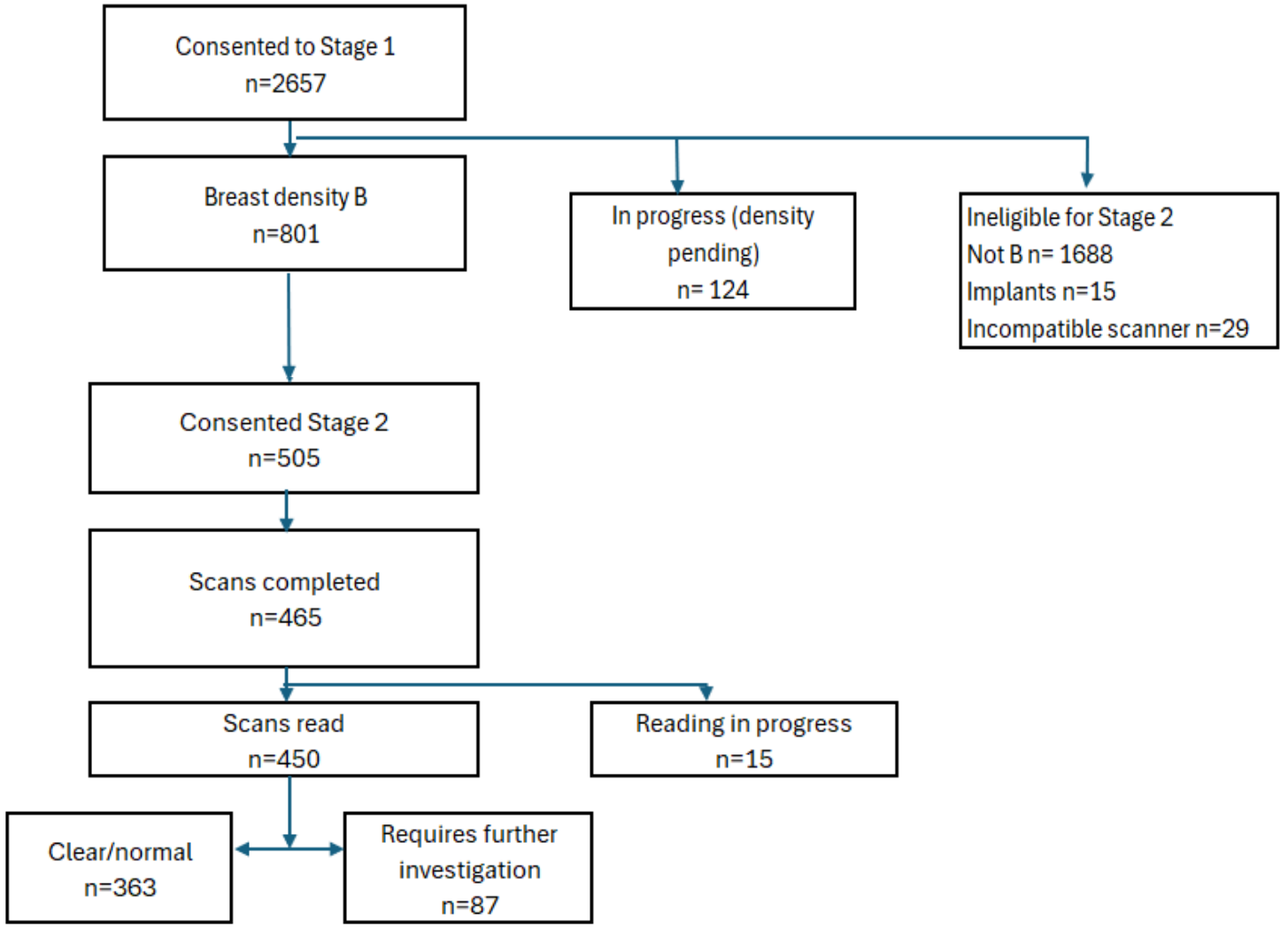
QA Phase

Kings

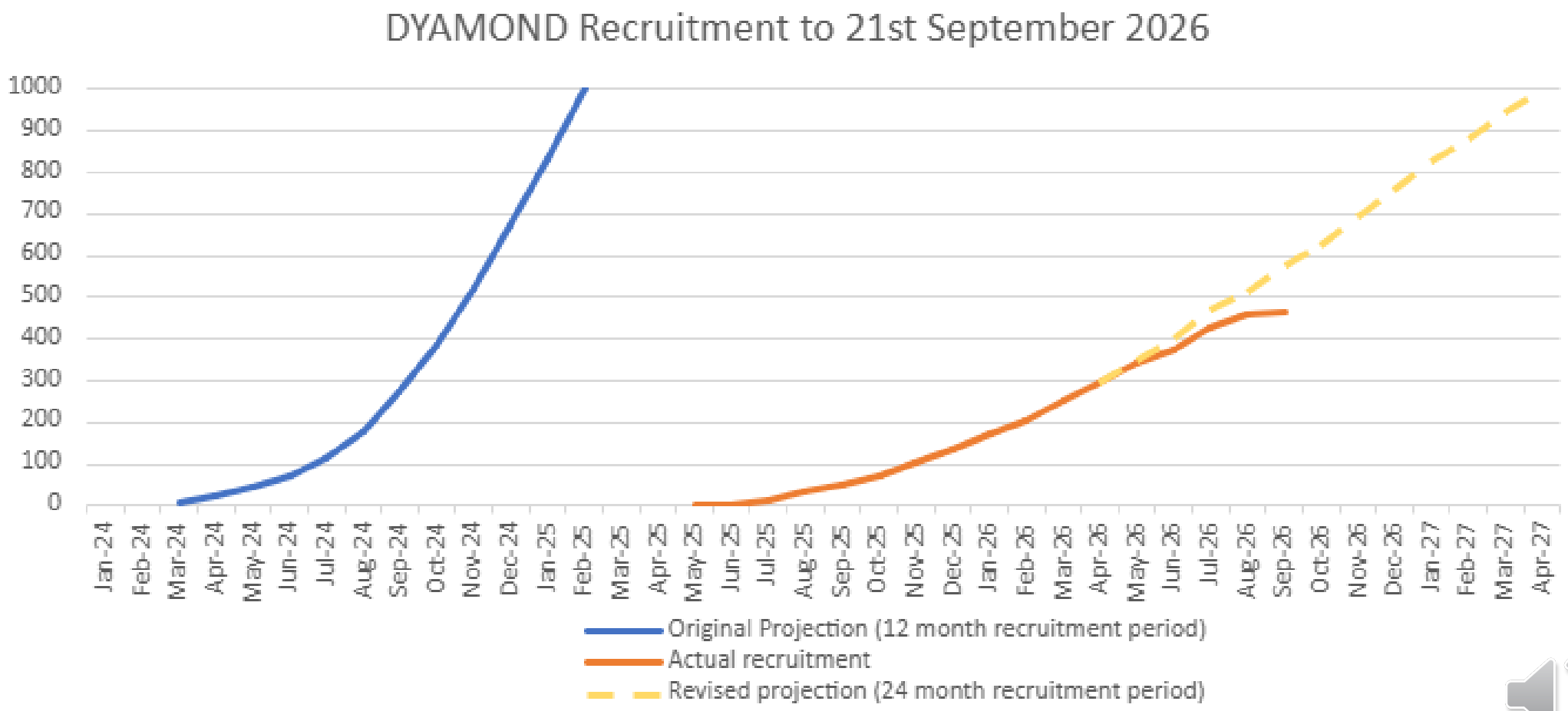
- 3/3 participants scanned, awaiting review
- IT/IG set up



Consent and recruitment (15/09/26)

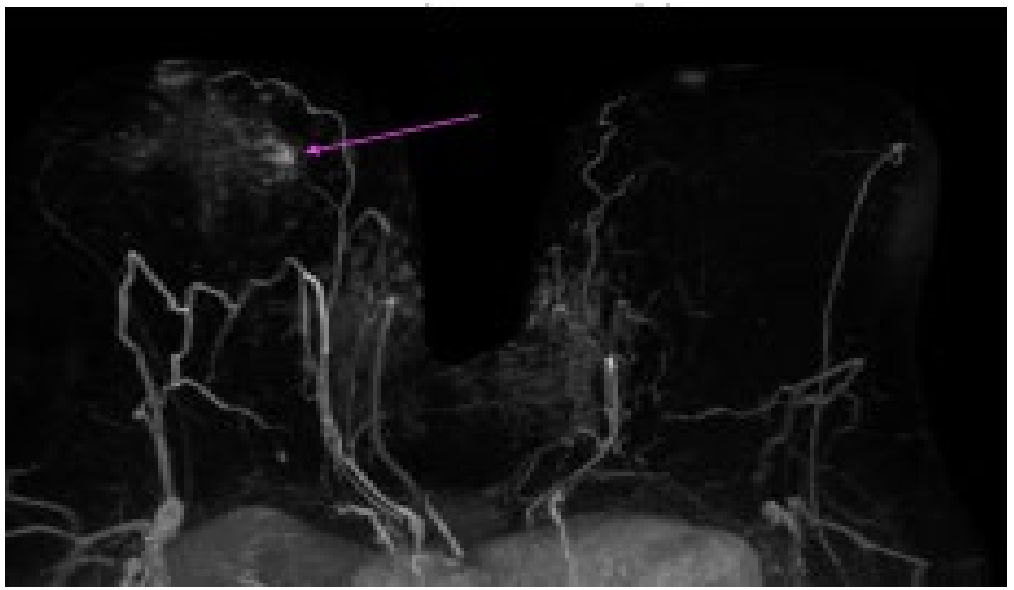


Stage 2 Recruitment (15/09/26)



Findings so far…

- Recruited over 500 participants to stage 2
- At least one cancer not visible on a mammogram



DYAMOND Safety reporting

One adverse event within 381.

- Not serious
- Vertigo sensation morning after scan, diagnosed with Benign Paroxysmal Positional Vertigo.

A second adverse evet has been reported.

- Not serious
- Participant felt unwell after two attempts at cannulation and did not proceed to receive a FAST MRI, therefore not recruited to Stage 2.



Interim Analysis – FAST MRI Acceptability

Qualitative survey completed by 67.2% of participants

61.3% reported their experience of having a FAST MRI as “a little” or “much” better than expected

95.3% reported a good to very good level of trust in their FAST MRI results

80.9% prefer screening with either FAST MRI or in combination with mammogram

What next?

- Results of the interim analysis have been submitted to San Antonio Breast Cancer Symposium SABCS 2026 - San Antonio Breast Cancer Symposium
- Available from 8th December onwards.
- Mammographers train to undertake FAST MRI scans for prevalent screens?

Questions and Thanks

With thanks to Bristol NHS Foundation Trust Research and Development Team (Trial Sponsor) for the information.

Trial Manager: Abi Loose and Sadie Mckeown-Keegan
Trial Chief Investigator: Lyn Jones

All questions to **bft.fastmri.southmead@nhs.net**

FASTMRI DYAMOND