You are being invited to take part in a research trial. Before deciding whether to take part, you need to understand why this research is being done and what it involves. Please take time to read the following information carefully and talk to others about the trial if you wish. Please ask us if anything is unclear or if you would like more information. Please take time to decide whether or not you wish to take part.

Section 1 tells you the purpose of this trial and what will happen to you if you take part. Section 2 gives you more detailed information about the conduct of the trial.

Section 1: Purpose of the trial and what will happen

1. **What is the purpose of the trial?**
   The purpose of this trial is to determine whether additional imaging with one of several types of scans, is helpful in diagnosing breast cancer in women with dense breast tissue. We will do this by comparing breast cancer detection between women who receive the standard of care (3 yearly mammograms) with those who receive the standard of care plus two additional scans in between NHS breast screening rounds.

2. **What is being tested?**
   There are three different imaging techniques being tested in this trial. All of them use CE marked devices which means that they comply with European directives on health and safety. The devices are already being used on women with breast cancer or high risk of breast cancer. This trial will use these imaging techniques to examine women participating in the NHS breast screening programme (NHSBSP). The results of these extra scans will be compared with each other and with mammogram alone to see which technique (if any) is best. The three Imaging techniques being tested are:

   **Automated Whole Breast Ultrasound (ABUS)**
   Ultrasound is a non-invasive imaging test that does not use any radiation (X-Rays). Images of the tissue are created using sound waves. Automated whole breast ultrasound (ABUS) is a new device that uses a different shaped transducer, which automatically slides across the whole breast to acquire many pictures in quick
succession. These pictures are then put together on a computer to make a 3D image of the breast.

**Contrast Enhanced Spectral Mammography (CESM)**
A contrast enhanced spectral mammography will seem very similar to your screening mammogram. The same or very similar x-Ray equipment is used and you will be positioned in the same way to take the images. With CESM though, a special dye called a contrast media is used to help the radiologists who look at the images see the difference between normal and abnormal breast tissue. In addition, two images are taken in each position.

**Abbreviated Breast Magnetic Resonance Imaging (ABB-MRI)**
Magnetic resonance imaging (MRI) is a non-invasive imaging test that does not use any radiation (X-Rays). Detailed images of the breasts can be created on a computer using a magnetic field and radio frequency pulses. Usually a breast MRI takes about 30 minutes from start to finish. The time and the costs associated with this mean that it cannot be used at present in the national breast screening programme for women who do not have an elevated risk of developing breast cancer. The abbreviated MRI is a new, faster technique developed for a screening examination, this means we can perform the exam in no more than 15 minutes.

3 **Why have I been invited?**
You have been invited to participate in this trial because your most recent screening mammogram within the NHS Breast Screening Programme showed that you have dense breast tissue. It is known that it can be harder to see breast abnormalities, particularly small breast cancers on mammograms in women with dense breast tissue. If you have dense breast tissue, there is also a 2-fold risk of developing breast cancer compared with those who have the lowest breast density. For that reason, we are inviting you to take part in this trial so that we can see if the additional imaging techniques detect more breast cancers at an earlier stage.

We plan to include 12,000 participants with dense breasts identified on their screening mammograms from a number of hospitals across the UK.

4 **Do I have to take part?**
Participating in this trial is voluntary. If you decide to participate you will be asked to sign a consent form, however you are still free to change your mind and leave the trial at any time without giving a reason. If you choose not to participate or to leave the trial, your future medical treatment and normal standard of care will not be affected in any way.

5. **What will happen to me if I take part?**
If you agree to participate in the trial, you will sign the consent form at the end of this document and a copy will be provided to for your records.

As we do not know which way of screening for breast cancer in women with dense breasts is best we need to compare different imaging techniques. We put people into groups and give each group different imaging. You will be allocated into one of the groups for this trial in a random way (by chance), much like flipping a coin. Depending on what imaging techniques are available at your local breast screening centre you will have a chance of receiving imaging with ABUS, CESM or ABB-MRI or no supplementary imaging (standard of care).

**Baseline Visit**
If after reading this information and having had the opportunity to ask questions you decide you would like to participate, the study health professional will then confirm you are eligible, they may need to ask you some questions about your medical history to do this. You will then be asked to read and sign the informed consent form. The person
taking consent, usually a doctor, research nurse, radiographer or other study health 
professional, will also sign.

Both the consent and the baseline visit can occur remotely over a telephone call with 
the study health professional. This is in order to avoid you having to make an extra visit 
to hospital for this part of the study. If you prefer to though, an appointment can be 
made for you at the study site for these.

**Questionnaires**
You will also be asked to complete the CanRisk questionnaire about your personal and 
group history. This is electronic and will usually be completed at the baseline visit but 
can be completed at any point during your study participation. The answers to these 
questions along with your saliva sample and breast density will help us to study 
personal breast cancer risk in the future.

**Randomisation**
Once they have confirmed you are eligible, the study health professional will enter 
anonymised data about you into the trial database and you will be allocated with a 
participant ID that will be used to identify you throughout the study. You will be 
allocated to one of 4 groups based on the breast screening clinic that you originally 
attended. Once you have consented, the study health professional will let you know 
which group you are in right away. Which groups are available to you will also depend 
on the equipment available within your local breast screening office area. Some sites 
do not have ABUS or CESM available to them, please ask your study health 
professional to which groups you could be randomised.

**Arm A: ABUS**
**Prior to the ABUS procedure**
The scan will be scheduled to take place at your local screening centre within 6 
months, but more likely much sooner, of your screening mammogram and the study 
health professional will inform you when and where to attend.

**ABUS procedure**
The radiographer or advanced practitioner will ask you to lie on an examination table. 
They will need to ensure you are in the correct position to perform the scan and may 
use some sheets to prop you up on your side. The headrest will also be slightly raised 
to ensure you are comfortable. A layer of ultrasound lotion or gel is then spread across 
your entire breast. The scanner is then firmly positioned over your breast to acquire the 
images. An ultrasound transducer automatically moves from one edge of your breast to 
the other over 30 seconds. The scanner will be re-positioned and images taken from 
three or four (depending on your breast size) different angles. The radiographer will ask 
you to keep very still and not to talk during the image acquisition. The examination 
takes approximately 15 minutes for both breasts.

**Following the ABUS procedure**
You will be able to leave the scanning department straight away after the ABUS 
procedure is complete.

**Arm B: CESM**
**Prior to the CESM procedure**
The study health professional will ask you about your menstrual cycles to determine 
when the first additional imaging procedure should be booked. If you are still having 
regular periods then it should take place on days 6-16 of your menstrual cycle. It will be 
scheduled to take place at your local screening centre within 6 months of your 
screening mammogram, but more likely much sooner, and the study health 
professional will inform you when and where to attend.
On the day of the scan you will be asked to complete a short questionnaire (yes/no answers) about your health, any allergies and any previous imaging examinations with contrast media (dye). You may also need a finger prick blood test so we can check how well your kidneys are working. If you are pre-menopausal you may need a urine pregnancy test.

**CESM procedure**
A cannula (a thin tube inserted into a vein) will be placed in your arm by a suitably trained health professional, usually the radiographer who is going to perform the scan. You will be given an injection of contrast media (dye) into the cannula. This is the same type of contrast media that is used routinely in Computed Tomography (CT) scanning. Two minutes after the injection the radiographer will position you in the mammography machine and take pictures in each of the four routine mammography positions.

From the injection of the contrast media the whole procedure should take around 10 minutes.

**Following the CESM procedure**
You will be asked to remain in the scanning department for 15 minutes after the scan is complete and the cannula will remain in place in your arm for at least 5 minutes after the procedure. This is so that in the very rare instance that you have an allergic reaction to the contrast media the trained medical staff can administer appropriate treatment quickly. Once 15 minutes has passed and the cannula has been removed you will be able to go home.

**Arm C: ABB-MRI**

**Prior to the ABB-MRI procedure**
The study health professional will ask you about your menstrual cycles to determine when the first additional imaging procedure should be booked. If you are still having regular periods then it should take place on days 6-16 of your menstrual cycle. It will be scheduled to take place at your local screening centre within 6 months of your screening mammogram, but more likely much sooner, and the study health professional will inform you when and where to attend.

Please inform the study health professional or the MRI radiographer if you have:
- Any form of surgical implants
- Pacemakers
- Cochlear implants
- Internal electronic devices
- Artificial heart valves
- Clips on arteries especially following brain surgery
If any of the above apply, you may still be able to have an MRI but we will need to check it is safe first.

On the day of the scan you will be met by a radiographer who will go through a safety checklist with you and explain the procedure. It is very important that you do not bring anything metal into the scanning room with you and please do not wear make-up on the day of the scan as it sometimes contains metal (if you are wearing any make up this can be removed by you before the scan) You will be reminded of these things on the day of the test. If you have a history of kidney disease or may be pregnant, the MRI department will follow their usual procedures, to ensure any scanning is carried out according to the standard safety guidelines in place.

You will be asked to change into a hospital gown prior to the scan.

**ABB-MRI procedure**
A cannula (a thin tube inserted into a vein) will be placed in your arm by a suitably trained health professional, usually the radiographer who is going to perform the scan. You will be asked to lie on the MRI couch on your front. The radiographer will assist
you to place your breasts through two holes in the couch. Let them know if you are not comfortable as you will need to lie very still for the scan. An injector pump will be connected to the cannula in your arm prior to the start of the scan. The MRI procedure itself can be quite noisy, this is completely normal, but you will be given either headphones (if available, to play music) or earplugs / ear defenders to reduce the noise. Once you are in position the couch slowly slides through the scanner and the images are acquired. The radiographer will be behind a partition in the control room when the scan is being taken but you can talk to each other through an intercom. A Gadolinium containing contrast media (dye) is used for breast MRI, this will be injected into your arm towards the end of the scan through the injector pump by the radiographer from the control room. You may feel a cold sensation in your arm immediately following the injection.

**Following the ABB-MRI procedure**

In most cases the cannula will be removed and you can go home immediately following the scan. If you are feeling unwell you may be asked to remain in the scanning department for up to 30 minutes after the scan is complete and the cannula will remain in place in your arm during this time. This is so that in the very rare instance that you have an allergic reaction to the contrast media the trained medical staff can administer appropriate treatment quickly. Once the MRI staff are satisfied that there are no signs of an adverse reaction and the cannula has been removed you will be able to go home.

**Arm D: Standard of Care**

No additional imaging will be scheduled for you. You will however remain in this study until your next screening mammogram is completed in the national breast screening programme. We will collect data about your most recent mammogram, your next screening mammogram and any breast abnormalities that are diagnosed in the intervening period. This data will be collected by the study health professionals from your NHS health records and anonymously entered into the study database under your trial ID. You will not need to have any extra visits for the trial but we would like you to complete the online CanRisk questionnaire and provide the saliva sample at your convenience.

**Genetics Testing**

A saliva sample will be collected from you at your visit for your breast examination. The collection kit will be provided by the study health professional who will help and advise you to collect the sample using the instructions provided. This involves spitting into a tube until 2ml of saliva is collected without the presence of bubbles. It can take some people up to 10 minutes to produce this much saliva, the research staff will provide you with water if needed and a cheek massage can be done to assist you with the sample. We ask that you do not eat anything, smoke or drink anything other than plain water for 30 minutes prior to the collection of this sample. Once complete the study health professional will seal the container and label it with your trial ID. If you are in the standard of care arm then the kit will be posted out to you or can be collected when you attend for your next mammogram.

This sample will then be sent to Strangeways Research Laboratory at the University of Cambridge where it will be stabilised and stored for future genetic testing. At the moment, we do not know what, if any genetic testing will be done in this study but we would like to collect these samples so that any future developments in the genetics of breast cancer in women with dense breasts can be looked at in your sample.

Any genetic testing that we propose to do within the study will be submitted for approval by the Research Ethics Committee that originally approved the study before it begins. In addition, your saliva sample and any DNA that has been extracted from your saliva sample as part of the BRAID study may be used for future ethically approved research that is not part of the study.
You and your healthcare professionals will not receive the results of the testing that is carried out on your sample.

**Research Risk Score**
For each participant, a risk score will be estimated based on their breast density and CanRisk questionnaire. At some point during the study the results of any genetic testing may also be incorporated into this score. However, the result of your personal risk score will not be provided to you during the course of your active participation in the study. This is because any scores we calculate as part of the research are not validated to be used to make clinical decisions.

If after your active participation in the study has ended you wish to know this result, you may ask the Principal Investigator at your research site to provide you with this. If you have any concerns at any time about your personal risk of breast cancer you should seek referral from your GP, radiologist or study Principal Investigator for NHS genetic testing.

**Follow-up for those who have additional scans (Groups A, B & C)**
The images from your supplementary procedure will be read by a trained radiologist (a medical doctor who is an expert at reading breast scan reports). You will receive the results of your scan by post.

If an abnormality is seen on your scan you will be given an appointment in an assessment clinic for further investigation and diagnosis.

A follow-up imaging procedure (of the type that you were originally randomised to) will be scheduled for you approximately 18 months after the screening mammogram you had just before entering the study. This can take place between 15 & 21 months after your baseline mammogram. This will follow the exact same procedures outlined above. At the time of the second scan, those who are in the ABUS and ABB-MRI groups will have another mammogram; this mammogram will follow the normal procedure for a breast screening mammogram and will be used by the radiologist for comparison with the supplementary imaging. Every effort will be made by the hospital staff to schedule both your mammogram and the second supplementary imaging procedure for the same day wherever possible, however, there may be occasions where this will require two separate visits to hospital. Those in the CESM group do not need to have a repeat mammogram at the second round of imaging because the CESM incorporates a mammogram scan.

After the second additional imaging examination has been completed, you will not need to have any extra visits for the trial or complete any further questionnaires.

**Long-term follow-up for all participants**
You will remain in this study until your next two screening mammograms are completed in the national breast screening programme. We will collect data about these screening mammograms and any breast abnormalities that are diagnosed in the intervening period. This data will be collected by the study health professionals from your NHS health records and anonymously entered into the study database under your trial ID.

If you turn 71 during your participation in this study you won’t need to have any further mammograms but we will continue to collect data about you and any subsequent breast diagnosis.

In the unfortunate event that you are diagnosed with breast cancer any treatment for this condition will follow the standard of care pathway and you will be considered ‘off trial’, however we will continue to collect data about your condition and how you are doing for the duration of the study unless you specifically withdraw your consent for this.
We are seeking your permission to collect your NHS number in order to cross reference it with Public Health England (PHE) held National Cancer Registration and Analysis Service (NCRAS) data in the future. NCRAS aims to collect data on all cases of cancer that occur in people living in England. The data is used to support public health, healthcare and research. NCRAS take great care to keep the information they hold about you confidential, and as with other medical records, strict ethical and security safeguards are in place, and access is strictly controlled. Information about NCRAS including why information about you and your cancer is recorded, how this information is used, and how, if you wish, you can see your information or have it removed can be found here: https://www.gov.uk/guidance/national-cancer-registration-and-analysis-service-ncras. NCRAS was formed by the merger of two organisations that previously collected this data, NCIN (National Cancer Intelligence Network) and NDRS (National Disease Registration Service). More information can be obtained here; http://www.ncin.org.uk/about_ncin/ and here; https://www.ndrs.nhs.uk/. Public Health England (PHE) are an executive agency of the Department of Health and Social Care, and a distinct organisation with operational autonomy. They provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific expertise and support. They exist to protect and improve the nation's health and wellbeing, and reduce health inequalities. PHE govern the cancer screening programmes in England and also NCRAS.
Table of study procedures

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<sup>A</sup> Only for those randomised to have supplementary imaging
<sup>B</sup> For those in the control arm this can be collected by post or at the end of study
<sup>C</sup> Only for those in the ABUS & ABB-MRI arms
<sup>D</sup> Only for those who are still routinely being recalled for screening by NHSBSP (i.e. those aged <71)

6. What are the possible disadvantages and risks of taking part?

Additional visits
For all participants, additional visits will be minimised as much as possible and the baseline visit to provide informed consent and complete the questionnaire can be conducted over the telephone and the internet. If you are randomised to have supplementary imaging you will be required to make an additional 2 visits to your local breast screening site for the procedures and for any assessment that is needed as a result of the supplementary imaging. In some areas of the UK routine mammographic breast screening takes place in a mobile unit or static site that is conveniently local to your home address. However, the additional trial visits have to take place at the local breast screening centre, usually a large hospital, because that is where the equipment is located. Therefore, some participants may need to travel further than usual; your study health professional can let you know where you would need to travel to take part in the trial.

Use of Contrast
For those randomised to have additional imaging with CESM or ABB-MRI you will require a contrast media (dye) to be injected. It is likely you may experience some
bruising at the site of the injection. It is also possible that you may suffer an allergic reaction to the contrast media. Minor reactions, e.g. skin rashes, hives, itching, nausea, dizziness, runny nose, brief retching and/or vomiting; will be closely monitored by the Breast or MRI Unit staff until symptoms have alleviated or further action is needed. Moderate reactions e.g. headache, persistent vomiting, wheezing, palpitations, facial swelling, raised blood pressure (hypertension), abdominal cramps; may require an injection of antihistamine and/or adrenaline. A pack of emergency drugs for this purpose will be kept in the room where the procedure is carried out.

In the exceptional event of a serious reaction which has the potential to be life-threatening, e.g. difficulty breathing, chest pain, irregular heartbeat, collapse, seizure, cardiac arrest; staff will make an urgent call the hospital’s emergency resuscitation team.

**Gadolinium based contrast for MRI**
This contrast agent is the same agent used for all MRI examinations in the department.

Common side effects that between 1 in 10 to 1 in 100 people experience are headache and nausea (feeling sick).

Uncommon side effects (between 1 in 100 and 1 in 1000 people will experience) include dizziness, an altered sense of taste, a reaction or some discomfort at the site of the injection and hypersensitivity reactions involving the symptoms described above.

Rare side effects (between 1 in 1,000 and 1 in 10,000 people experience these) include dry mouth, feeling tired, feeling cold, palpitations or irregular heartbeat, loss of consciousness, convulsions (fits) & altered sense of smell.

Unknown frequency side effects (these side effects were only observed after the contrast was already licensed and in use) are cardiac arrest and Nephrogenic Systemic Fibrosis (NSF). NSF is a serious syndrome but only occurs in people with very poor renal (kidney) function. Therefore, the radiographer will ask you about any kidney problems you have had and may check your kidney function prior to administering the contrast.

It is known that small amounts of gadolinium may remain in the brain and body after a scan with these agents, although there is currently no evidence that these small amounts cause any harm. As a precaution, doctors are using macrocyclic contrast agents injected into the vein as these are thought to cause less deposition in the brain and body compared with linear agents. Your radiologist or radiographer will use the lowest dose required for a clear image.

**Iodine based contrast for CESM**
This contrast agent is the same agent used for all iodine based intravenous contrast used in the Radiology Department.

Common side effects that between 1 in 10 to 1 in 100 people experience are feeling hot and temporary changes in breathing rate (breathing faster or slower than usual).

Uncommon side effects (between 1 in 100 and 1 in 1000 people will experience) include nausea, excessive sweating, cold feeling, vasovagal reactions (fainting) and pain or discomfort at the injection site.

Rare side effects (between 1 in 1,000 and 1 in 10,000 people experience these) include hypersensitivity reactions involving the symptoms described above, headache, abnormal heart rate, vomiting, fever, dizziness, muscle weakness or paralysis, aversion to light, feeling drowsy or tired, visual impairment, cough, diarrhoea, and impairment of renal (kidney) function including acute renal failure – Your radiographer will ask you if
you have had any kidney problems and may check your kidney function prior to administering the contrast.

Very rare side effects (less than 1 in 10,000 people will experience these) include altered sense of taste, changes in blood pressure, abdominal pain or discomfort, shivering, seizures (fits), loss of consciousness, strokes, sensory abnormalities (including numbness, tingling, involuntarily shaking), heart attack, flushing, shortness of breath.

Unknown frequency side effects (frequency cannot be estimated from the available data) acute allergic reactions and associated symptoms as described above, a sudden drop in heart rate and blood pressure that causes fainting, salivary gland enlargement, low blood levels of platelets, overactive thyroid, temporary underactive thyroid, confusion, agitation, restlessness, anxiety, temporary speech disorder, temporary memory loss, temporary coma, disorientation, brain swelling, temporary hearing loss, temporary blindness, heart failure, chest pain, inflammation of a vein, blood clots, inflammation of the pancreas, joint pain, muscle cramps, reactions at the injection site.

Discomfort associated with the examinations

By having an additional scan, you may experience some discomfort that you would not have otherwise. Some people find the pressure applied to the breast during a mammogram or ABUS procedure uncomfortable. Some people will find that lying on their front in the MRI scanner or on their back during the ABUS procedure and holding very still is uncomfortable. In all cases, any discomfort experienced is usually mild and is temporary. The radiographer will do everything possible to make the scan as comfortable as possible for you.

Incidental Findings

By having additional scans to usual there is an increased risk that we will find something for which we need to recall you to an assessment clinic for further investigations but turns out to be nothing concerning. This is known as a “false positive” and the disadvantage of finding a false positive is that you may undergo additional unnecessary and possibly invasive (such as a biopsy) procedures. This could also cause you unnecessary distress and anxiety.

In addition, there is a possibility that we detect an abnormality that you go on to receive treatment for which if it had been left undetected would never have required treatment. This is called “over-diagnosis”. It is very difficult to estimate how likely this is to occur because once treatment has been given it is impossible to tell what would have happened had no treatment been given.

Radiation Exposure

Mammography uses ionising radiation to form images of the breast. Ionising radiation is associated with a risk of cancer induction. The amount of radiation dose you will receive by participating in this study will vary depending on which study group you are in however the risk associated with these exposures is considered to be low. Due to your participation in the NHS breast screening programme, you will have received some of the mammography even if you were not participating in the study. Each examination is equivalent to around 3 months of the dose received from naturally occurring background sources of radiation.

Similarly to mammography, Contrast Enhanced Spectral Mammography (CESM) also uses ionising radiation to form images of the breast. The radiation dose received from this examination is higher than that from normal mammography but can still be considered low. Each CESM examination is equivalent to around 5 months of the dose received from naturally occurring background sources of radiation.

The largest radiation exposure to a participant in the study is likely to arise in the arm undergoing CESM. The risk to a typical participant of induction of cancer from the total radiation exposure in that arm (and where the results of the screening mammogram
are normal) is around 1 in 10,000. However if only the imaging that is considered additional to that normally received in the screening programme is considered, the additional risk of induction of cancer to a typical participant in that arm of the study is 1 in 20,000. Participants in the other arms of the study will receive less radiation than this.

7. **What are the possible benefits of taking part?**
   There is no guarantee that you will benefit from taking part in this trial. There is a possibility of a breast cancer being detected at an earlier stage (when it is smaller and/or before it has spread outside the breast) by taking part in this study. There is more chance of surviving breast cancers that are detected and treated at an early stage.

   You may not experience any direct benefit from taking part. However, information collected as part of your participation in this trial may benefit women with dense breasts in the future by informing us on how best to screen them for breast cancer.

8. **What will happen to me at the end of the study?**
   Once you have undergone both of the supplementary imaging procedures and you have received the results of these scans and any additional investigations that are required as a result of them you will no longer be required to make any visits or provide any information directly for the study. We will continue to collect data about you and any subsequent breast diagnosis you have for six years after your entry into the study. This data will be collected directly from your health records as long as your consent for the study remains. Six years after you consented to the study your participation formally ends and we will no longer collect any data about you.

9. **Expenses & Payment?**
   You will not receive any payment for participating in this trial and we are unable to reimburse any expenses e.g. travel incurred by your participation in this trial.

   **Section 2: Trial Conduct**

10. **What if new information becomes available?**
    Sometimes during the course of a trial, new information becomes available which might affect your decision to continue participating in this trial. Your trial doctor will contact you to discuss the new information and whether you wish to continue participating in the trial. If you still wish to continue on the trial, you will be asked to sign a new consent form.

    The trial sponsor, the regulatory authority or the trial doctor may decide to stop the trial at any time. If that happens, we will tell you why the trial has been stopped and arrange for appropriate care and treatment for you.

11. **What if I decide I no longer wish to participate in the trial?**
    You are free to come off this trial at any time without giving a reason and without affecting your future care or medical treatment. If you decide not to participate any further, you will have two options for withdrawal:
    - Withdrawing consent to only future interventions (your previously collected data and samples may still be used in analysis and you are happy for follow-up data to be collected)
    - Withdrawing consent to any future active participation (no more interventions and no more data will be collected but the data and samples already collected can still be used)

    Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. If you withdraw from the study, we will keep the information about you that
we have already obtained. To safeguard your rights, we will use the minimum personally-identifiable information possible.

The trial doctor may also choose to withdraw you from the trial if they feel it is in your best interests or if you have been unable to comply with the requirements of the trial. In this case the three options for withdrawal outlined above will still be available for you to choose. Reasons for trial withdrawal could include:

- You have experienced a serious side effect
- You are unable to complete the visits, imaging procedure or trial documentation as required
- You become pregnant or plan to become pregnant during before the end of study
- You develop a breast cancer

If you have experienced any serious side effects during the course of the trial, which require you to withdraw from the trial, your trial doctor will follow-up with you regarding your progress until the side effect has stabilised or resolved.

12. **What if there is a problem?**

Any complaint about the way you have been dealt with during the trial or any possible harm you might suffer will be addressed. If you have any concerns about any aspect of this trial you should speak to your trial doctor or study healthcare professional who will do their best to answer your questions.

In the event that something goes wrong and you are harmed by taking part in the research and this is due to someone’s negligence then you may have grounds for a legal action for compensation against Cambridge University Hospitals NHS Foundation Trust or the University of Cambridge. The normal National Health Service complaints mechanisms will still be available to you (if appropriate). The University has obtained insurance which provides no-fault compensation i.e. for non-negligent harm, you may be entitled to make a claim for this.

If you wish to complain or have any concerns about any aspect of the way you have been approached or treated during this trial, you can do this through the NHS complaints procedure. In the first instance, it may be helpful to contact the Patient Advice and Liaison Service (PALS) at your hospital:

PALS and complaints department, Box 53
Cambridge University Hospitals NHS Foundation Trust
Hills Road, Cambridge, CB2 0QQ
Email: pals@addenbrookes.nhs.uk
Telephone: 01223 216756

13. **Will my taking part in this trial be kept confidential?**

Cambridge University Hospitals NHS Foundation Trust (CUH) and The University of Cambridge are the joint sponsors for this clinical trial based in the United Kingdom. They will be using information from you and your medical records in order to undertake this trial and will act as the data controller for this trial. This means that they are responsible for looking after your information and using it properly. The sponsor organisations will keep identifiable information about you for 10 years after the trial has finished to ensure your safety and allow the trial to be reviewed by the authorities after it is finished.

Your rights to access, change or move your information are limited, as the sponsor organisations need to manage your information in specific ways in order for the research to be reliable and accurate. To safeguard your rights, we will use the minimum personally-identifiable information possible.
You can find out more about how the sponsors use your information using the information below:

- For Cambridge University Hospitals NHS Foundation Trust, please visit: https://www.cuh.nhs.uk/corporate-information/about-us/our-responsibilities/looking-after-your-information, or email the Data Protection Officer at: gdpr.enquiries@addenbrookes.nhs.uk

- For University of Cambridge, please visit: https://www.medschl.cam.ac.uk/research/information-governance/, or email the Information Governance team at: researchgovernance@medschl.cam.ac.uk

Cambridge University Hospitals will collect information from you and your medical records for this research study and will keep your name, date of birth, NHS number, Breast screening ID and contact details to contact you about this trial, and make sure that relevant information about the trial is recorded for your care, and to oversee the quality of the trial. Individuals from the sponsors and regulatory organisations may look at your medical and research records to check the accuracy of this trial. Cambridge University Hospitals will pass your date of birth and NHS number to the University of Cambridge along with the information collected from you and your medical records. The only people in the University of Cambridge who will have access to information that identifies you will be people who need to collect follow-up data about you from NCRAS or audit the data collection process. The people who analyse the information will not be able to identify you and will not be able to find out your name or contact details. Cambridge University Hospitals will keep identifiable information about you from this trial for 10 years after the trial has finished.

All information collected about you as a result of your participation in the trial will be kept strictly confidential. Your personal and medical information will be kept in a secured file and be treated in the strictest confidence.

Once you have agreed to participate in this trial you will be allocated a Trial ID Number. This is a unique trial number that will be used on all your trial documentation along with your date of birth. Your date of birth is considered personal information. We collect this personal information on trial documentation to help ensure that the data we receive as part of your trial participation is correctly allocated to you. By cross checking these unique references we can ensure the integrity of the data. We will also collect your NHS number, this is also considered personal information. We want to collect this so that the researchers can use this, along with your date of birth to crosscheck with the National Cancer Registration and Analysis Service (NCRAS) records for collecting long-term outcomes in the future follow-up period of this trial.

Only anonymous trial data, without any personal information will be published at the end of the trial.

When you agree to take part in this trial, the information about your health and care may be provided to researchers running other research studies in this organisation and in other organisations. Your information will only be used by organisations and researchers to conduct research in accordance with the UK Policy Framework for Health and Social Care Research.

This information will not identify you and will not be combined with other information in a way that could identify you. The information will only be used for the purpose of health and care research, and cannot be used to contact you or to affect your care. It will not be used to make decisions about future services available to you, such as insurance.
The University of Cambridge will collect information about you for this trial from NCRAS. This information will include your NHS number, date of birth and health information, which is regarded as a special category of information. We will use this information for the outcome analysis of the trial.

We will need to inform your GP of your participation in this trial so that any medical decisions made by your GP account for any imaging you are receiving as part of this trial.

14. **What will happen to my samples?**

Your saliva sample will be sent to the research tissue bank at Strangeways Research Laboratory, University of Cambridge where it will be stabilised and stored for future testing, pending Ethical Approval for use in the future of this project. This laboratory is licensed under the Human Tissue Authority to store relevant material for possible further research. It is likely that we will seek ethical approval to extract DNA from this sample in order to perform genetic testing to inform the BOADICEA risk prediction model for breast cancer. Your sample or DNA extracted from it may also be used in future ethically approved studies relating to breast cancer risk.

Access to your sample will be limited to staff members of the laboratory and all samples are bar coded with a unique identifier and then logged on a dedicated sample management tracking database which is held on a secure internal network that is part of the University of Cambridge. No identifiable data are held in this database.

We will retain your sample in the research tissue bank for as long as it can still be useful for genetic studies of breast cancer. If at any point your sample will no longer be stored it will be disposed of in accordance with the Human Tissue Authority’s Code of Practice.

15. **What will happen to the results of the trial?**

The results of the trial will be anonymous and you will not be able to be identified from any of the data produced. When the results of this trial are available they may be published in peer reviewed medical journals and used for medical presentations and conferences. They will also be published on the EU Clinical Trials Register website, a central registry for all clinical trials conducted in the EU.

Anonymous datasets from the trial may also be made available to other researchers in line with national and international data transparency initiatives.

At the time of publication, the anonymised results and de-identified ABUS images will also be made available to GE Healthcare who are commercially supporting this trial by providing equipment and some resources.

Additional companies may support this study by providing software to the study sites for automated assessment of the breast density on your scan. This is to see whether this method is more accurate than a radiologist estimating density by a visual score. Your personal, identifiable data will not be shared with the companies but anonymised images from your scans may be shared with them.

We will also use the anonymised data and anonymised images collected about you during the study in future ethically approved studies.

If you would like to obtain a copy of the published results please contact your trial doctor directly who will be able to arrange this for you.
15. Who is funding the trial?
The trial is being funded by CRUK as part of an early detection programme grant. GE Healthcare are also providing some equipment and money to support the study and Bayer PLC are supporting the study by providing contrast and consumables for the MRI scans. GE Healthcare and Bayer PLC will not be involved in data management or in the interpretation of results of the study.

16. Who has reviewed this trial?
All research within the NHS is reviewed by an independent group of people called a Research Ethics Committee, to protect your interests. This trial has been reviewed and given favourable opinion by London-Surrey Research Ethics Committee.

17. Further information and contact details
For general information about the study and your participation, you can contact:

Your Study Health Professional;
Name: Braid Trial Team
Job Title: Research Nurse/Coordinator or Radiographer
Telephone: 01223 348937
Email: braid.trial@nhs.net

Or the Principal Investigator at your site;
Name: Professor Fiona Gilbert
Telephone: 01223 746438

You can also obtain independent advice locally from;
PALS and complaints department, Box 53
Cambridge University Hospitals NHS Foundation Trust
Hills Road, Cambridge, CB2 0QQ
Email: pals@addenbrookes.nhs.uk
Telephone: 01223 216756

For Complaints, please contact your local Patient Advice and Liaison Service (PALS);
PALS and complaints department, Box 53
Cambridge University Hospitals NHS Foundation Trust
Hills Road, Cambridge, CB2 0QQ
Email: pals@addenbrookes.nhs.uk
Telephone: 01223 216756

Or

the Chief investigator;
Professor Fiona Gilbert
Department of Radiology
University of Cambridge School of Clinical Medicine
Box 218 Cambridge Biomedical Campus
Cambridge
BB2 0QQ
Telephone: 01223 336892

In the event of an emergency please contact:
During office hours 0900-1700:
Professor Fiona Gilbert (Principle Investigator for BRAID) or Dr Penny Moyle (Clinical Director of the Cambridge Breast Unit) Tel: 01223 217627

Outside of office hours (17.00-09.00):
Please contact the Addenbrooke’s Main Switchboard on 01223 245151 and ask to speak to the Senior Radiology Specialist Registrar on-call.
INFORMED CONSENT FORM

**Trial Title:** BRAID

**Principal Investigator:** Fiona Gilbert

**Participant Number:**

If you agree with each sentence below, please initial the box

<table>
<thead>
<tr>
<th></th>
<th>INITIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I have read and understood the Participant Information Sheet version 1.3; dated 14/10/2019 for the above trial and I confirm that the trial procedures and information have been explained to me. I have had the opportunity to ask questions and I am satisfied with the answers and explanations provided.</td>
</tr>
<tr>
<td>2</td>
<td>I understand that my participation in this trial is voluntary and that I am free to withdraw at any time, without giving a reason and without my medical care or legal rights being affected.</td>
</tr>
<tr>
<td>3</td>
<td>I understand that personal information about me will be collected and used in accordance with this information sheet. This information will be kept in the strictest confidence and none of my personal data will be published. I give permission for my anonymised data and images to be used for future, ethically approved research.</td>
</tr>
<tr>
<td>4</td>
<td>I understand that sections of my medical notes or information related directly to my participation in this trial may be looked at by responsible individuals from the sponsor, regulatory authorities and research personnel where it is relevant to my taking part in research and that they will keep my personal information confidential. I give permission for these individuals to have access to my records.</td>
</tr>
<tr>
<td>5</td>
<td>I understand that my GP will be informed of my participation in this trial and sent details of the BRAID trial.</td>
</tr>
<tr>
<td>6</td>
<td>I understand that the information held and maintained by the central UK NHS bodies may be used to help contact me or provide information about my health status as part of this trial.</td>
</tr>
<tr>
<td>7</td>
<td>I understand that my personal data (NHS number and date of birth) will be transferred from the local trial team to the sponsor organisation in order for the researchers to follow me up by cross-checking these with NCRAS records held about me. I give consent for my NHS number and date of birth to be shared with the cancer registry in order for the research team to access data relevant to this study on my health status. I understand that any personal data will be sent and stored using secure and encrypted mail servers.</td>
</tr>
</tbody>
</table>
I give permission for a sample of my saliva to be collected, transferred to and processed at research tissue bank at Strangeways Research Laboratory, University of Cambridge and for genetic testing to be carried out on my sample for ethically approved research as part of this study. I understand my anonymised saliva sample and any DNA that has been extracted from my saliva sample may also be used in future, ethically approved research. I understand that I won’t personally receive any results of genetic testing.

I agree to participate in this trial:

Name of patient ____________________________ Signature ____________________________ Date __________

Name of person taking consent ____________________________ Signature ____________________________ Date __________

Time of Consent (24hr clock) _______ : _______

1 copy for the patient, 1 copy for the trial team, 1 copy to be retained in the hospital notes.