Participant Information Sheet Group 2

You will be given a copy of this information sheet to keep.

Pers**o**nalised **G**enetic **R**isk **E**stimate**s** for Cancer **S**creening & Prevention (**ProGREsS)**

We would like to invite you to take part in this research study. Before you agree to take part it is important that you read and understand this information sheet. Please read this carefully and discuss it with friends, family and your General Practitioner (GP) if you wish. It describes the purpose, procedures, benefits, risks, discomforts and precautions of the study. It also explains your right to withdraw from the study at any time. You will be given ample time to consider your participation in the study and a member of the study team will answer any questions you may have. Please let the team know if there is anything you do not understand or if you would like further information.

Thank you for taking the time to read this.

What is the purpose of the study?

The purpose of this study is to gain a better insight into what members of the general public feel about having their genes routinely tested (via saliva or blood samples) to detect changes that they were born with (mutations or polymorphisms) and combining this information with family history and lifestyle factors to help determine their chances of developing certain diseases such as cancer. The study also aims to investigate whether this information can help guide and motivate people to make changes in their lifestyle or take medications to help prevent them from developing cancer or to be involved in screening programs to help detect cancer earlier. There are 2 parts of the study. The first part involves an online questionnaire survey of people living in the West London area and their GPs.

This information sheet refers to Part 2 of the study only.

Part 2 of the study is being done to help find out if a computer program designed to calculate the risk of a person developing breast or ovarian cancer (risk assessment tool) can be used to help members of the public make informed decisions about making changes in their lifestyle (diet and exercise) or taking medications such as the contraceptive pill to help prevent them from developing cancer, or to be involved in national screening programs to help detect cancer earlier. In the future it is hoped that the results of this study can be used to improve how doctors and the government promote ways of preventing disease to the general public and how members of the public are selected to be involved in screening programs for diseases such as cancer.

Why have I been invited?

You have been invited because you live in the West London Area, are a female aged between 30 and 60 years old and attend a GP practice in the region.

Who is organising the study?

The study is sponsored by Imperial College London and supported by Ovarian Cancer Action (OCA).

Do I have to take part?

No, your decision to participate is voluntary. If you do decide to take part, after reading this information sheet you will be asked to complete and sign a consent form. You will be able to withdraw from this study at any time for any reason. A decision to withdraw at any time, or a decision not to take part, will not affect your future medical care.

What will happen to me if I take part?

Before any study procedures are done you will be asked to read and sign the informed consent form. You will be asked at your GP practice to provide a saliva sample and give a blood sample (20ml, approximately 3 teaspoons of blood). You will also be asked to complete a questionnaire which includes questions about your personal and medical history and certain lifestyle factors such as smoking, diet and exercise that are relevant to the study. The saliva sample will be sent to Imperial College where scientists will remove genetic material, called DNA, from it. This DNA will then be sent to SOPHiA Genetics in Switzerland where scientists will test it for any changes in the code that make up the DNA which you might have been born with. We call these changes single-nucleotide polymorphisms or SNPs. This information will be combined with the information that you provide on

your questionnaire and then all of this data will be entered into the computer program that we have designed to provide an estimate of your individual chances or risk of developing breast or ovarian cancer in your lifetime. We will refer to this as your 'risk score' for breast and ovarian cancer. The blood sample that we wish to take will be stored at Imperial College London for at least 5-years or until consent withdrawal and might be used for further research in the future. The DNA from the saliva sample that you provide will also be tested at Imperial College for changes called 'epigenetic changes'. The reason for this is explained a little further on in this information sheet. Epigenetic changes are chemical changes in your genes that can occur due to diet, medications and smoking amongst other things. We know that certain things such as dietary changes and medications can help reduce the risk of certain diseases causing epigenetic changes (chemical modifications) in your genes and we wish to test for such changes in study participants.

Approximately 8-12 weeks after this first study visit, you will be invited to attend an appointment with Dr Krell and his team at Hammersmith Hospital. At this appointment, Dr Krell and his team will explain to you the results of your risk score for breast and ovarian cancer, that will have been calculated using the information provided from the questionnaire you completed and the saliva sample that you provided. The risk score might indicate that you have a slightly lower, average or slightly higher chance of developing breast or ovarian cancer than what would be considered to be the average chance of a woman developing these cancers. A doctor and specialist trained in discussing genetics and cancer risk (a genetics counsellor) will be present at this consultation to explain the results in detail. They will talk to you about how this might make you feel and also about ways in which you can help prevent these cancers from occurring and ways in which they could be detected earlier. The team will discuss whether you would consider taking the use of the oral contraceptive pill or making changes in your diet and exercise levels to help reduce your risk of developing ovarian cancer in your lifetime. In addition, you will be asked to complete questionnaires at this consultation, including questionnaires on your overall wellbeing and your levels of worry about cancer risk. You will also be asked to consider whether the result will alter your views on national cancer screening programmes and whether you might be more or less likely to participate in these. As the results of this consultation may cause anxiety and worry, all participants will be offered appointments with a genetic counsellor at Hammersmith Hospital. Participants who decline genetic counseling will be provided with contact details to arrange counselling at a later date if they wish or can be referred to a trained psychologist if they prefer.

You will be asked to attend an additional consultation 6 months after you have received your results to discuss whether the results have led to you making changes in your lifestyle such as diet and how much you exercise. We will also discuss whether, based on your calculated risk of ovarian and breast cancer, you chose to start taking the oral contraceptive pill and continued to do so and whether your attendance at your breast screening appointments, if you have them, has changed at all . You will also be asked to complete questionnaires at this visit. An additional saliva sample will be collected at this visit too. This saliva sample will be tested at Imperial College to determine whether any changes in your lifestyle or use of the contraceptive pill has led to changes in your genes called epigenetic changes. Some epigenetic changes have been associated with increased or decreased risk of cancers and we want to see whether these can be detected in your genes based upon any changes you have made in your lifestyle or contraceptive pill use.

Some patient's family history and questionnaire results may suggest an increased risk of having a genetic mutation in the BRCA1 and/or BRCA2 genes:

> **BRCA (Breast Cancer Susceptibility Gene)** – Many different types of genetic mutations (changes) in the BRCA1 and BRCA2 genes have been identified, and some are harmless. However, people who have harmful mutations in these genes may be more likely to develop breast cancer, ovarian cancer, and other types of cancer.

In those patients where this risk is measured to be >10% (using the risk assessment model) the blood sample that has previously been collected will have BRCA mutation analysis performed. If a BRCA mutation is identified you will be referred to a specialist genetics counselling service for further discussion on what this may mean for you and your family.

In those patients who are deemed to be at low risk of BRCA mutations and with your permission, blood samples will be stored at Imperial College London for future research studies. You may withdraw your consent from this storage at any time and your sample will be destroyed.

What are the possible disadvantages and risks if I take part?

If you participate in the study you will be required to attend at least 2 extra visits at Hammersmith Hospital. During these sessions, we will discuss what we feel your risk of developing breast or ovarian cancer might be in the future based on the genetic test and questionnaire information. There is the possibility of receiving unwelcome news at these appointments which may cause

anxiety or distress in those participants affected. Discussions that take place during these sessions will be confidential and will not be disclosed to any third party without your permission. Furthermore, you will be offered the support of a doctor and genetic counsellor should you wish to meet with either or both, during or after the study.

Blood samples will be taken from a vein in your arm using a needle. Taking blood from your arm may cause swelling, pain, redness, bruising, or infection (infection rarely happens) at the site where the needle is inserted. Light-headedness and/or fainting may occur during blood collection.

What are the possible benefits of taking part?

There are no direct benefits in taking part in this study. It will have no impact on your care but it may improve your knowledge about cancer awareness and cancer screening. The aim of the study is to improve the way in which we promote disease prevention to the general public and the ways in which members of the public are selected for screening programs for diseases such as cancer. We hope to diagnose cancers earlier, particularly in those people who are at higher risk of developing cancer because of inherited changes in their genes and therefore treat the disease sooner. This project could lay the groundwork for the implementation of a national personalised cancer screening and prevention strategy.

What if something goes wrong?

Imperial College London holds insurance policies which apply to this study. If you experience serious and enduring harm or injury as a result of taking part in this study, you may be eligible to claim compensation without having to prove that Imperial College is at fault. This does not affect your legal rights to seek compensation.

If you are harmed due to someone's negligence, you may have grounds for a legal action. Regardless of this, if you wish to complain, or have any concerns about any aspect of the way you have been treated during the course of this study then you should immediately inform the Investigator (Dr Jonathan Krell 0208 383 4671). The normal National Health Service complaints mechanisms are also available to you. If you are still not satisfied with the response, you may contact PALS (Patient Advice and Liaison Services) for further information on participating on clinical trials - 020 3313 3322 imperial.pals@nhs.net).

You may also contact the Imperial College Joint Research Compliance Office on:

020 75949459 jrco@imperial.ac.uk

What will happen to the results of this study?

The study results will be available after its completion and are likely to be submitted for publication in relevant medical journals. Should you wish to see the results, or the publication, please ask the study research doctor. You will not be identified in any report or publication that arises from this work.

If you are withdrawn from the study data or tissue already collected with consent would be retained and used in the study. No further data or tissue would be collected or and no further research procedures would be carried out.

What will happen if I don't want to carry on with the study?

This research study is voluntary and you are free to withdraw at any time without giving a reason. This will not affect the standard of care you receive. Any data that could be identified as yours will be destroyed if you wish. The study doctors may decide to discontinue your participation in the study for many reasons including a change in your health or if you are unable to follow directions of the study.

If you have given informed consent but lose capacity to consent during the study you will be withdrawn from the study. Identifiable data or tissue already collected with consent would be retained and used in the study. No further data or tissue would be collected or any other research procedures carried out on or in relation to the participant.

Will my taking part be confidential?

All information that is collected about you during the course of the study will be kept confidential to the extent permitted by law. Information you disclose will also be kept confidential, unless you specifically wish it to be undisclosed.

With your permission we will inform your GP of your participation in the study. Your GP will be provided with a summary of the risk assessment score, results of the shared decision and guidance as to whether a secondary/specialist genetic service referral is required.

If you join the study, some parts of the data collected for the study will be looked at by authorised persons at Imperial College London for auditing purposes. Saliva samples collected as part of this study will have DNA extracted at Imperial and this anonymised material will be sent to SOPHiA Genetics in Switzerland using a specialist biological sample courier service, where only authorised persons will have access. Blood samples will also be collected and stored as per local Tissue Bank regulations at Hammersmith Hospital for further study purposes.

All data will be stored in secure offices at the Garry Weston Centre in Hammersmith Hospital. Any electronic data will be stored in password protected computers within the hospital.

Who has reviewed the study?

This research study has been reviewed by the East Midlands- Nottingham 1 Research Ethics Committee – a committee of people separate from your doctor, whose primary concern is to safeguard the safety, rights and welfare of participants in the study.

Contact for further information?

If you have any questions about this research study or at any time you are concerned or require additional information, please contact your study doctor. The doctor in charge is:

Dr Jonathan Krell 0208 383 4671

24 hour Emergency Contact number: 020 33115522

For counselling or further support services you may contact MacMillan cancer support services on 0808 808 00 00 Monday - Friday 9am - 8pm

www.macmillan.org.uk