Mapping Organ Health following COVID-19 Disease due to SARS-CoV-2 Infection - COVERSCAN

Participant Information Sheet
Healthy Volunteer

This is a research study developed by Perspectum, Oxford University Hospitals NHS Trust and the Mayo Clinic. We invite you to take part in this research study primarily aimed at people who have recovered, or are recovering, from COVID-19 disease. You are being asked to consider joining the healthy volunteer arm of this study, which will allow us to draw comparisons against the findings observed in those who have suffered from COVID-19 disease. "We" refers to the Sponsor, Perspectum.

Before you decide whether or not to take part, it is important for you to understand why the study is being done and what it will involve. Please take time to read the following information carefully and discuss it with others, if you wish. If any part is not clear, or you would like more information, please contact the study team by using the below details:

Email: coverscan@perspectum.com

Telephone (hours 9am to 5pm)**:** 01865 655343

Thank you for your time and consideration.

Why have I been invited?

You are being invited to join this study as part of the healthy volunteer cohort. You will be 18 years of age or over. You will not have been diagnosed with or been suspected to have COVID-19; you will not have had significant exposure to COVID-19 disease, such as living with an infected household member. Furthermore, you do not have any underlying and/or history of health conditions and you are within a normal body mass index (BMI).

What is the purpose of the study?

The COVERSCAN study aims to observe any changes in certain organs that were infected with COVID-19 disease. In particular, this will involve looking at the lungs, heart, kidneys, liver, pancreas, spleen and body composition. This will be assessed using Magnetic Resonance Imaging (MRI) and blood tests. An additional healthy cohort will be recruited in order to compare, and better understand the nature of, the change within these various organs in those who have suffered from COVID-19 disease. We intend to recruit around 1970 participants to participate.

COVERSCAN started recruiting in April 2020. Since that time, the research findings have supported the role out of COVERSCAN MD (Medical Device), which was given MHRA EUA (Emergency Use Authorisation) approval in January

2021 for its use to clinically support post-COVID19 sufferers. Therefore, in the summer of 2021, COVERSCAN was redefined as clinical investigation of a medical device trial, which will allow data from this study to be used to support future regulatory applications.

What does the study Involve?

- Telephone call and your consent to proceed
- 6 Questionnaire/s (online) that should take around 40 minutes in total to complete
- One study visit at a study site closest to you
- 2 MRI scans (35-40 minutes each) - with a short 10min break between scans
- Height and weight to calculate Body Mass Index (BMI) score
- Blood pressure measurement

The following procedures are **OPTIONAL**:

- Pulse oximetry - a non-invasive method for measuring oxygen saturation
- Spirometry – a non-invasive and simple way of measuring lung function
- Cardiopulmonary Exercise Test – a test that involve assessing your aerobic exercise
- 6-Minute Walk Test – a non-invasive exercise test to assess your endurance
- Blood sample - in total, around 20ml of blood (around 1.5 tablespoons) may be sampled for immunologic tests.*

*Where participants have already taken part in the COVERSCAN study, they **may** be given the option of returning to have these optional additional immunologic bloods taken. This will support further immunological research and development. An updated informed consent form will be signed.

Your visit will take approximately 2 hours and 50 minutes.

Why is this study important?

This study is important for the current and future management of people who have, or are recovering from, COVID-19 disease.

How do I take part?

To take part, please electronically register your interest via the study website – www.coverscan.com. Your registration will be completed on a secure web-based platform that will allow you to read and review the participant information leaflet before being allowed to electronically consent to participation in the study. You will also be asked to answer a few basic questions about your eligibility for the study.

Will I be given any reimbursement for travel?

A reimbursement of travel expenses, up to £20, will be available for the study visit.

Do I have to take part?

No. You decide whether or not to take part. If you decide to take part, you are free to withdraw from the study at any time without giving a reason. If you withdraw from the study and decide to no longer participate, any information and samples that have been collected for research purposes up until the time you withdraw will continue to be held and used for the study as outlined in this leaflet. To withdraw from the study, please contact the study team, whose contact details can be found at the end of this information leaflet.

What will happen if I take part?

Telephone Call

Soon after registering, a member of the study team will call you to discuss the study, answer any questions and ask you to complete the online informed consent form. If you need more time to consider, take as long as you want – a member of the team will call you back at a time most convenient to you.

Once you have given your consent, we will schedule your first visit. You will be asked to attend your study visit at a study site closest to you. You will only be required to attend one study visit.

Questionnaires

Prior to your study visit, you will be given access to online questionnaires which we will ask you to complete. These questionnaires will help us to understand more about quality of life factors. At the end of the study, the pooled and anonymous results of the questionnaires will be available to all participants upon their request. No individual participant will be identified. The results of these questionnaires will also support us in better drawing comparisons with those within the COVID-19 study cohort.

Medical History

Prior to your study visit, we will ask you some questions about your full medical history, including any medications you have taken or are currently taking. With your consent, the study team may request access to your GP records at a later date to obtain a more detailed medical history.

Visit 1 (Baseline)

During Visit 1, a detailed scan of your internal organs will be carried out using magnetic resonance imaging (MRI). This visit will also involve the following:

Basic Measurements

We will take your blood pressure, as well as your height and weight.

Magnetic Resonance Imaging (MRI)

MRI is considered a safe and non-invasive procedure as it does not use X-rays or any form of ionising radiation. The MRI scanner uses a strong magnetic field to create detailed images of your body's organs. The research team will ensure there is no reason to exclude your having an MRI scan, e.g.

heart pacemaker, internal metal clips, pregnancy, among others. The study team will discuss safety aspects with you before you are enrolled into the study.

Your scan time will be made up of 2 identical 40 minute scans. After the first 40 minutes is complete, you will be taken out of the scanner for a short 10 minutes break before putting you back into the scanner for a second identical scan.

During the scans, you will be asked to lie on your back on a table that slides you into the scanner. You will be asked to hold your breath for 12 seconds at a time. The radiographer will practice this with you prior to the beginning of the scan. Should you feel the need to stop the scan, you can do so at any point by pressing a button that informs staff to stop. They will then slide you out of the scanner. Earplugs and/or headphones will be provided with the scan to limit noise and you may have the option to listen to music during the scan. We will ask you to fast (no food or liquids except water which you are encouraged to drink) for a minimum of 3 hours prior to the MRI scan to improve image quality.

Conducting 2 scans allows us to see whether we get the same results from the multi-parametric MRI imaging when it is repeated on the same person after a short break. This will help us to understand any variability between scans within our healthy volunteer cohort before drawing comparisons with the COVID-19 cohort.

The scans we do are for research purposes only. If any significant abnormality is found, we will tell you and send the report to your GP for further action.

Optional Procedures

Some participating sites will offer optional additional procedures that you may choose to complete if you wish. These are:

Spirometry (Optional):

Spirometry is a common lung function test. It is helpful in assessing breathing patterns. We will ask you to blow into a small machine that will help us to assess how well your lungs work by measuring how much air you inhale, how much you exhale and how quickly you exhale. The test should take around 10 minutes.

Pulse Oximetry (Optional):

A pulse oximetry test allows us to measure the amount of oxygen in your blood. It is a simple test that involves a small, painless clip to be put on your finger. It provides a measurement within seconds.

Cardiopulmonary Exercise Test (Optional):

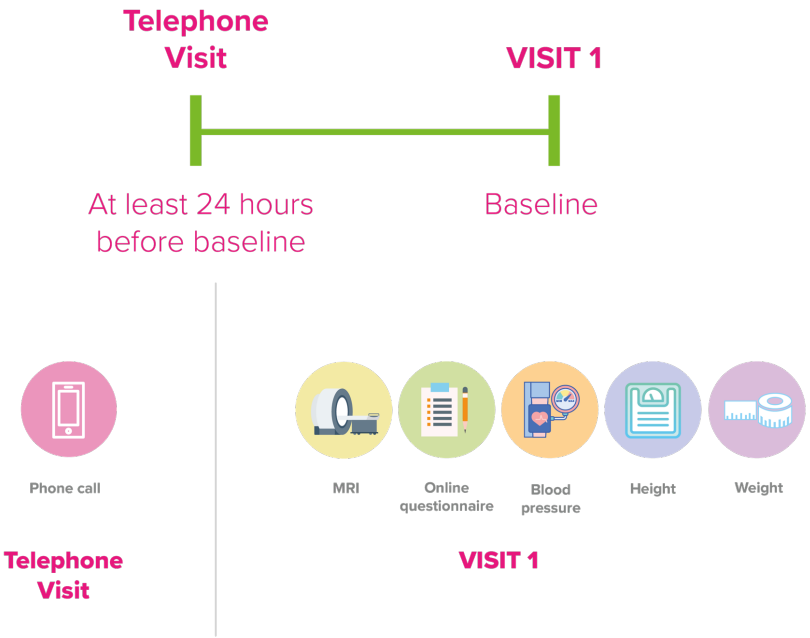
You will be given the option of undergoing a cardiopulmonary exercise test (CPET) to help us assess your exercise capacity (in other words, your aerobic fitness). This assessment is very popular throughout the world as a way of assessing a person's aerobic fitness. The procedure requires you to ride on a static exercise bike that allows us to measure the work you're putting into the exercise. The test will start at a low/easy intensity, and gradually increase, causing you to put more effort into the exercise. During the test, your heart rate will be tracked – this will be done by putting sticky patches, called electrodes, on your chest and connecting it to an ECG. In addition, you

will be asked to wear a facemask, which will allow us to assess your lungs (for specifically, your how much oxygen you use) during the exercise. We will take a blood sample using a finger prick test at the start of, and at various times during, the test. During the test, you will also be asked some questions about the effort you are using. If, at any point during the exercise test you do not wish to continue, you may ask to stop at any time. This will not affect your participation in the study.

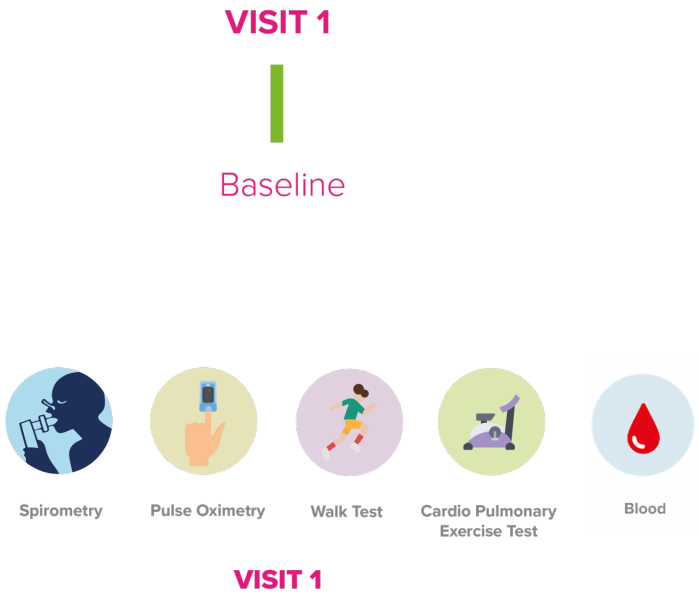
6-Minute Walk Test (Optional):
You will be asked to walk as far as possible within 6-minutes within an indoor pre-marked corridor. This will help us assess your endurance. You will be asked some questions before and after your walk about how you feel, as well as your heart rate and oxygen saturation being measured. If, at any point during the walk test you do not wish to continue, you may ask to stop at any time. This will not affect your participation in the study. We will also take a blood sample using a finger prick test at the start and end of the walk test.

Blood Sample (Optional):
We will ask to take up to 20ml of blood (around 1.5 tablespoons).

Study Flowchart



Optional Procedures Flowchart



Are there any possible disadvantages or risks from taking part?

MRI

Magnetic resonance imaging does not use ionising radiation. Safety checks are carried out prior to an MRI including information from your medical and personal history. MRI scans are considered lower risk because of the absence of ionising radiation compared to CT and general X-ray imaging and there are no known lasting side effects from the strength of scanners that we use. Some temporary side effects you may experience during the scan include an increase in temperature and peripheral nerve stimulation such as in your hands or feet. The MRI scan can be noisy, and earplugs/headphones will be provided to protect your ears. The scan also involves lying flat in a slightly confined space and a small number of people find this uncomfortable. Whether magnetic resonance could potentially affect an unborn child is unknown, therefore, you should not take part in this study if you are pregnant or think you might be.

Cardiopulmonary Exercise Test

The risk for CPET is the same as for mild-moderate exercise. You will be monitored closely during the test with continuous ECG and oxygen measurements. The exercise requires you to put maximal effort into the test. Therefore, we will ask you to perform a warm up and cool down during the testing session. If there are any concerns regarding your safety during the exercise testing, you will be asked to stop.

6-Minute Walk Test

A 6-minute walk test is a type of exercise test with no known risks.

Blood tests

Some people find having blood drawn as uncomfortable and bruising at the needle site may occur. The study team is highly trained in drawing blood and will make you as comfortable as possible. Very rare potential risks associated with drawing blood include a blood clot (thrombosis), infection or inflammation around the needle puncture site.

What are the possible benefits?

There may be no personal benefit to you; however, this research study will hopefully help us understand more about how COVID-19 disease affects various organs in the body and how quickly they get better. Results of this research may also lay the foundation to improving and supporting new future treatment options available to people who experience COVID-19 disease. You will also receive an overview of your research results during the course of the study following review by the study team (the timing of this will be dependent on our analysis pipeline).

Research is one of four key pillars of the UK government strategy to manage COVID-19. At present, we know that some recovering patients may have organ damage. However, we do not know how much and why some people are more affected than others. As we begin to learn and understand more, the study team and its investigators will host regular webinars throughout the course of the study to keep participants actively informed on the progress of COVERSCAN, including any interim findings. The study team might also send out occasional surveys to collect information about your feedback and experience. New and updates will also be available via the COVERSCAN website – www.coverscan.com

What happens when the research study stops?

We aim to publish the results of this study in scientific and medical journals. We will also present the findings at scientific meetings for the benefit of the wider medical community and to increase general understanding of how we can improve the recovery of patients who have succumbed to this disease. You will not be identified in any publication or presentation and your personal and clinical details will remain strictly confidential. Any scientific publication arising from the research will be available upon request to all participants. If you wish to see your scan results, please let the study team know. We ask your permission to use your images and associated research data for academic publications and patient communication purposes. No materials will include your name, study ID, or contact details.

Access to pseudonymised study data and results will also be granted to Health Data Research UK (HDRUK), Public Health England (PHE) and to the World Health Organization (WHO) to support global efforts in better understanding this disease.

Will my information be kept confidential?

Yes. The study team will collect information concerning you as part of the study and will be able to identify you. The study research team has a duty of confidentiality to you as a research participant and shall only use your information as outlined within the information leaflet.

When sharing your information with us and our study partners, your name will be replaced with a unique study-specific number so that we cannot identify you directly from your research data - this is known as 'pseudonymised personal data'. We will maintain a database which contains you study ID and contact details, but we will only link the

information where necessary as explained in this leaflet. Results of diagnostic tests and/or other tests (blood) that have been stored, and/or clinical observations made during your participation in the research study will be labelled with a pseudonymised personal data code and your initials instead of your name. These results/samples and any information created from using these samples will be treated as pseudonymised personal data and will be used and shared as a pseudonymised personal data.

Responsible members of the study team and regulatory bodies may be given access to your information for monitoring and/or auditing of the study to ensure that the research study is following the applicable regulations. All information that relates to you will be stored in our secure study database with a unique study code number that is not personally identifiable but will allow us to link together the different types of information. All such information will be kept strictly confidential.

OPTIONAL You will be given the option to consent to Perspectum linking your study data to your identifiable information to allow us to contact you about ethically approved research investigations in the future that are specifically suitable to your health status.

The study staff will ensure that the participants' privacy is maintained. The study will comply with the General Data Protection Regulation (GDPR) and Data Protection Act 2018.

How will we use information about you?

We will need to use information from you, your medical records and your GP for this research project. This information will include your initials, name and contact details. People will use this information to do the research or to check your records to make sure that the research is being done properly.

People who do not need to know who you are will not be able to see your name or contact details. Your data will have a code number instead.

We will keep all information about you safe and secure.

Once we have finished the study, we will keep some of the data so we can check the results. We will write our reports in a way that no-one can work out that you took part in the study.

What are your choices about how your information is used?

You can stop being part of the study at any time, without giving a reason, but we will keep information about you that we already have.

We need to manage your records in specific ways for the research to be reliable. This means that we won't be able to let you see or change the data we hold about you.

If you agree to take part in this study, you will have the option to take part in future research using your data saved from this study. [Insert details of any specific bank/ repository]

Where can you find out more about how your information is used?

You can find out more about how we use your information:

- by asking one of the research team,
- by sending an email to coverscan@perspectum.com
- at www.hra.nhs.uk/information-about-patients/
- our leaflet available from www.hra.nhs.uk/patientdataandresearch

What will happen to any blood samples that I give ?

All samples will be retained for future analysis and will be stored securely for up to 10 years and may be used in future research and development as our understanding of COVID-19 disease grows.

If you give your consent, samples may be used in other future research studies related to COVID-19 disease which have ethical approval. Additionally, samples may also be used to support pre-clinical work and development. Your anonymised samples will be used mainly by the study team, but ethically approved research projects may take place in hospitals, universities, non-profit institutions or commercial laboratories worldwide. Pre-clinical work and development may be organised by either non-commercial or commercial laboratories/companies worldwide. Further to this, we will also ask for your optional consent to use your samples in both future research studies and also pre-clinical work and development that are not related to COVID-19 disease.

What would happen if we find anything unexpected on your scan?

Since we do not carry out scans and blood tests for diagnostic purposes, these should not be a substitute for clinical appointments. Our scans are for research purposes only. However, with any abnormal finding that is deemed medically significant, a member of the study team and/or the Chief Investigator will contact you and your GP to discuss the results. Further investigations may need to be arranged if necessary. Your General Practitioner will be contacted and should be sought for ongoing care.

What would happen if something goes wrong or I have a complaint?

Complaints: If you have a concern about any aspect of this study, please contact the Head of Clinical Affairs at Perspectum who will liaise with the study's scientific advisory board.

Email: safety@perspectum.com

Telephone: 01865 655343

Participation in future research

We will ask if we can contact you about future research activities. This is optional - you can take part in this study but decline to be contacted again. If you consent, we will link your contact details to your research data to identify research activities which are relevant to your health status. You can withdraw your consent for future contact at any time without prejudice.

What if there is a problem?

Perspectum, as Sponsor, has appropriate insurance in place in the unlikely event that you suffer any harm as a direct consequence of your participation in this study. Please telephone 01865 655343 or send an email to : clinicalresearch@perspectum-diagnostics.com

If you wish to complain about the way you have been approached or interacted with during the course of this study, you should contact the Chief Investigator. Please telephone 01865 655343 or send an email to : clinicalresearch@perspectum-diagnostics.com

Who is organising and funding the research?

The research is being organised and funded by Perspectum.

Who has reviewed the research?

To protect the interest of research participants, the research is reviewed and checked by an independent group of people called a Research Ethics Committee (REC). This research has been reviewed and given a favourable opinion by the South Central – Berkshire B Research Ethics Committee (REC reference: 20/SC/0185).

Further information and contact details:

Website: www.coverscan.com

Please contact the study team using the below details:

Email: coverscan@perspectum.com

Telephone: 01865 655343

Address: Gemini One, 5520 John Smith Drive, Oxford Business Park, OX4 2LL

Thank you for your consideration.