Participant Information Sheet/Consent Form

Non-Interventional Study - *Adult providing own consent*

Heart Failure Patients

Title:	**Evaluating venous compliance in heart failure**
HREC Reference:	HREC/81404/Alfred-2021
Local Project Number:	1/22
Project Sponsor:	Alfred Health
Principal Investigator:	Professor David Kaye, Department of Cardiology, Alfred Hospital
Associate Investigators:	Assoc Prof Justin Mariani, Dr Shane Nanayakkara, Dr Hitesh Patel, Dr Jason Bloom, Ms Donna Vizi, Ms Liz Dewar, Ms Jia Tang, Mr Nicholas Hemsley, Mr Justin Lineham

This document is 12 pages long. Please make sure you have all the pages.

Part 1 What does my participation involve?

1 Introduction

You are invited to take part in this research project because you have been diagnosed with heart failure (HF). This research project is aiming to measure venous stiffness in patients with HF and to correlate this with measures of HF severity.

This Participant Information Sheet/Consent Form tells you about the research project. It explains the tests and treatments involved. Knowing what is involved will help you decide if you want to take part in the research.

Please read this information carefully. Ask questions about anything that you don't understand or want to know more about. Before deciding whether or not to take part, you might want to talk about it with a relative, friend or your local doctor.

Participation in this research is voluntary. If you don't wish to take part, you don't have to. You will receive the best possible care whether you take part or not.

If you decide you want to take part in the research project, you will be asked to sign the consent section. By signing it you are telling us that you:

- understand what you have read;
- consent to take part in the research project;
- consent to have the tests that are described;
- consent to the use of your personal and health information as described.

You will be given a copy of this Participant Information and Consent Form to keep.

2 What is the purpose of this research?

When the heart fails to function normally, either due to reduced pumping capacity or increased muscle stiffness, the body adapts in various ways. One of the most common changes is the retention of fluid which results in an increased amount of fluid returning to the heart and lungs. A key determinant of how much fluid returns to the heart via the veins is the stiffness of the veins themselves. Whilst much is known about stiffening of the arteries in heart failure, little is known about stiffening of the veins and its influence on determinants of heart failure.

This study will measure venous stiffness. We plan to study this in patients living with heart failure such as yourself and in healthy people.

This research has been initiated and designed by the study doctor, Professor David Kaye, and the study is supported by a research grant from the National Health and Medical Research Council of Australia. Professor Kaye and his team have conducted several studies over the past 25 years, using the techniques outlined in this study.

3. What does participation in this research involve?

You must meet certain requirements and have certain test results in order to take part. Some of these requirements include that you must have a diagnosis of Heart Failure. The specific conditions and other requirements will be discussed with you by your study doctor.

What will happen to me during the study?
If you agree to take part in this study, you will first sign this Participant Informed Sheet/Consent Form before any study-related procedures are performed. Before you sign, you will need to read the information in this form. The research staff will explain the study to you and you are free to ask questions of the research staff before you decide you want to participate. You will be given a copy of this signed form.

Study Procedures Summary
This will give you information about what taking part in the study will mean to you, for example, how often you have to come to the study centre, how long each visit will take, how much blood will be taken and when tests and procedures will be performed.

We will plan to conduct the study procedures on the same day as the right heart catheter procedure that has been booked for you by your Doctor and is clinically indicated for your condition. The data of your right heart catheter procedure will be collected. And the study procedures will be performed after your right heart catheter is complete. You will have already received information about this procedure and what to expect. If you have not, please let us know and we can provide the relevant information to you.

Study Visit (approximately 3 hours)

You will have had a light meal at least 3 hours before attending for the study visit.

The following procedures will take place:
- Informed consent discussion
- A full physical examination and medical history and check of all medications you are taking.
- Height and weight measurements
- Heart rate and blood pressure will be measured
- An electrocardiogram (ECG) will be performed
    - An ECG is a routine examination which records your heart rate and rhythm. It is a safe test. There is no risk of being electrocuted. Before an electrocardiogram, you may have small areas of your body hair shaved or skin cleaned so the electrodes stick on your

body properly. If you are wearing an underwire bra, you might be asked to take it off as it could affect the readings of the ECG. During an electrocardiogram, leads are attached to electrodes — sticky dots — that are placed on your arms, legs and chest. The leads connect to a machine, which takes the reading of your heart rate and rhythm.

- Non-fasting blood samples (approximately 2 teaspoons or 8 mL) to assess kidney function, a full blood count and NTproBNP – a marker of heart failure.
- A trans-thoracic echocardiogram:
  - This is a heart ultrasound scan, you may have had these performed before.
  - You will be asked to lie on a bed, as relaxed as possible, whilst the technician takes pictures of the heart for approximately 30 minutes. You will be asked by the technician to roll on your side and various positions in order to obtain different views of the heart.
  - A water-based gel is applied to the skin of your chest to allow soundwaves to be conducted from the ultrasound probe.
  - The ultrasound itself is painless; at times there may be some firm pressure applied to the chest from the ultrasound probe.
  - The echocardiogram is safe; it has no side effects.
  - Three sticky electrodes on your shoulders will record your ECG during the test. You may hear whooshing noises for some of the time, when blood flow is measured.
- **Venous occlusion plethysmography / venous stiffness test:**
  - A small tube (about 2mm in diameter) will be inserted into a vein in your left arm. It is the same type of tube used for intravenous drips and medications. A blood pressure cuff will be placed on your upper arm above the intravenous tube. A loose-fitting specialized elastic band (strain gauge) will be placed around your forearm below. The cuff will then be gently inflated (at a much lower pressure than that used to measure your blood pressure). Measurements of your forearm size will be measured by the strain gauge. We will also measure blood flow using an ultrasound machine. This test should take about 20-30 minutes.
  - We will also collect a 20-30mL blood sample (equal to about 1 to 1.5 tablespoons) through the tube in your vein.

Follow up contact

We will contact you by telephone 1 week after the study to check in on your well-being.

VISIT SUMMARY TABLE:

	Screening Procedures	**Study Procedures**	**Follow up (Phone call)**
Day of study	**Day -7 (±7)**	**Day 0**	**Day 7**
Informed Consent	**X**		
Inclusion/exclusion criteria check	**X**		
Physical examination	**X**		
Electrocardiogram (ECG)	**X**		
Medication Review	**X**		
Vital Signs	**X**		
Peripheral blood test	**X**		
Trans-thoracic echocardiogram (TTE) (if not one available within 3 months)	**X**		
Venous compliance test & blood collection		**X**	
Adverse Event report		**X**	**X**
Study review and close			**X**

[*] Depending on scheduling of your clinically-indicated right heart catheterisation, the screening procedures may occur on the same day as the study procedures, or alternatively within a 14-day period prior to the study.

There are no additional costs associated with participating in this research project, nor will you be paid. All medication, tests and medical care required as part of the research project will be provided to you free of charge.

You may be reimbursed for any reasonable travel, parking and other expenses associated with the research project visit.

It is desirable that your local doctor be advised of your decision to participate in this research project. If you have a local doctor, we strongly recommend that you inform them of your participation in this research project

4 What do I have to do?

There are no specific lifestyle restrictions during your participation in this study. You can take all other regular medications, unless specifically advised by the study researchers. Your ability to donate blood will not be affected by your participation in this study.

5 Other relevant information about the research project

This project will collect data from 50 participants who have been diagnosed with heart failure and another 20 healthy participants.

This project is a single-site study and Alfred Hospital is the only site. This study will be conducted at Baker Heart and Diabetes Institute and the Alfred Hospital. The project involves researchers from the Baker Heart and Diabetes Institute and the Heart Failure Research Group at the Alfred Hospital working in collaboration.

6 Do I have to take part in this research project?

Participation in any research project is voluntary. If you do not wish to take part you are not obliged to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage.

Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your routine treatment, your relationship with those treating you or your relationship with Alfred Health.

Before you make your decision, a member of the research team will be available so that you can ask any questions you have about the research project. You can ask for any information you want. Sign the Consent Form only after you have had a chance to ask your questions and have received satisfactory answers.

If you decide to withdraw from this project, please notify a member of the research team before you withdraw. This notice will allow that person or the research supervisor to inform you if there are any health risks or special requirements linked to withdrawing.

7 What are the alternatives to participation?

Your alternative is not to participate in this study. This research project is not providing a treatment option to you. If you decide not to participate in the study, this will not affect your treatment at the Alfred Hospital.

8 What are the possible benefits of taking part?

There will be no direct benefit to you from your participation in this research. However, this study may contribute possible benefits to people with heart failure in the future.

9 What are the possible risks and disadvantages of taking part?

Venepuncture (Taking Blood Samples): Having a blood sample taken may cause some discomfort or bruising. Sometimes, the blood vessel may swell, or blood may clot in the blood vessel. Some people may feel faint when having blood taken, and may occasionally faint. Rarely, there could be bleeding or a minor infection. If this happens, it can be easily treated.

Venous stiffness test: Insertion of an intra-venous cannula might be associated with some discomfort or minor bruising, similar to that experienced in a routine blood test. The inflation of the blood pressure cuff is only to a low level and should not cause any discomfort.

10 What will happen to my test samples?

The collection of the blood samples will be split into two parts. One component will be processed via the Alfred Pathology.

The second part will be processed at the Baker Heart and Diabetes Institute. Prof Kaye and his team have a specialised laboratory, that allow us to measure the levels of various chemicals in your blood samples. These blood samples will be stored in a re-identifiable manner (re-identifiable as yours by Professor Kaye only). This means that samples will be collected and labelled with a study identification number. These samples will be coded with a study number, of which a study log is kept, linking your study sample and your identity. This log is kept in secure area only accessible by Prof Kaye and his research team. Laboratory staff will not know who the samples belong to. Samples will be sent without any personal identifying information and the service will destroy the sample after analysis. Blood samples will be kept for a maximum of 10 years and will be destroyed thereafter using medical waste service.

Optional future research
It is possible that in the future we may develop collaborations with other research partners that have access to techniques or treatments of mutual research interest. As new techniques and information emerge in the future we would like to be able to reanalyse your blood samples to understand more about the mechanisms of heart failure. If you consent to the use of your blood samples for future research please tick the appropriate option on the Consent Form at the end of this document.

The blood samples left over from our initial studies will be frozen and stored in Professor Kaye's laboratory at the Baker Heart and Diabetes Institute, in a -80°C freezer. There is no possibility that you could be identified from the samples. In the event of such a collaboration we would first obtain approval from the Alfred Hospital Ethics Committee and also arrange for the necessary agreements between researchers.

These samples for future research will be kept for a maximum period of 10 years and will be destroyed thereafter using medical waste service.

11 What if new information arises during this research project?

During the research project, new information about the risks and benefits of the project may become known to the researchers. If this occurs, you will be told about this new information.

12 Can I have other treatments during this research project?

The study does not require any change to your usual medication. If you are currently prescribed and taking diuretic (fluid) tablets, we may ask you to withhold your dose on the day of the heart catheter test for your convenience. It is important to tell your study doctor and the study staff about any treatments or medications you may be taking, including over-the-counter medications, vitamins or herbal remedies, acupuncture or other alternative treatments. You should also tell your study doctor about any changes to these during your participation in the research project.

13 What if I withdraw from this research project?

If you decide to withdraw from this research project, please notify a member of the research team before you withdraw. A member of the research team will inform you if there are any special requirements linked to withdrawing.

If you do withdraw your consent during the research project, the study doctor and relevant study staff will not collect additional personal information from you, although personal information already collected will be retained to ensure that the results of the research project can be measured properly and to comply with law. You should be aware that data collected by the sponsor up to the time you withdraw will form part of the research project results. If you do not want them to do this, you must tell them before you join the research project

14 Could this research project be stopped unexpectedly?

This research project may be stopped unexpectedly. This may include the possibility of unexpected and unacceptable side effects becoming evident during the course of the study.

15 What happens when the research project ends?

The study results will be presented at national and international meetings, and published in medical journals.

Any personal information will be removed and you will not be identifiable from the results presented or published.

We will also put the results of the study on the Heart Centre website located on this link www.alfredheartcentre.org.au

Part 2 How is the research project being conducted?

16 What will happen to information about me?

By signing the consent form you consent to the study doctor and relevant research staff collecting and using personal information about you for the research project. Any information obtained in connection with this research project that can identify you will remain confidential.

Any information gathered during this research study that can identify you will remain confidential and will used for the purpose of this research study and future research related to heart failure, including the use of your stored samples. In accordance with applicable laws, every effort will be made to keep all information about you private. The information gathered will be stored in re-identifiable format with a study number. There is, however, a screening log kept by the study staff to connect the study number to your true identity, in order to perform data verification.

The samples and the data for this research project will be stored at the Alfred Hospital and Baker Heart Failure Group Laboratory.

A de-identified database will be created. Basic demographic data (age, sex, diagnosis), and cardiovascular data (echocardiographic and haemodynamic/catheter data) and basic clinic pathology data (including kidney function) will be recorded to correlate with blood tests. All study data for this trial will be kept indefinitely as per Alfred Research Ethics policy guidelines. Only members of the study team will have access to the data and all the information will either be securely locked in a storeroom, or protected by electronic encryption.

If you consent to future research, these data will also be used.

Information about you may be obtained from your health records held at this and other health services for the purpose of this research. By signing the consent form you agree to the study team accessing health records if they are relevant to your participation in this research project.

Your health records and any information obtained during the research project are subject to inspection for the purpose of verifying the procedures and the data. This review may be done by the relevant authorities and authorised representatives of the Sponsor, Alfred Health, the institution relevant to this Participant Information Sheet, the Human Research Ethics Committee that reviewed this project, or as required by law. By signing the Consent Form, you authorise release of, or access to, this confidential information to the relevant research personnel and regulatory authorities as noted above.

The re-identifiable information will only be shared with your permission, except as required by law. At the end of this study it is possible that the information collected for all patients, including you, may be presented at a local or international scientific conference or published in a scientific journal. All information will be presented in such a way that neither you nor any other patient may be identified. By signing the consent form you give permission for your re-identifiable data to be used in this way.

Information about your participation in this research project may be recorded in your health records.

In accordance with relevant Australian and/or Victoria privacy and other relevant laws, you have the right to request access to your information collected and stored by the research team. You also have the right to request that any information with which you disagree be corrected. Please contact the study team member named at the end of this document if you would like to access your information.

17 Complaints and compensation

If you suffer any injuries or complications as a result of this research project, you should contact the study team as soon as possible and you will be assisted with arranging appropriate medical treatment. If you are eligible for Medicare, you can receive any medical treatment required to treat the injury or complication, free of charge, as a public patient in any Australian public hospital.

You need to be eligible for Medicare to participate in this study as this is a requirement at Alfred Health.

18 Who is organising and funding the research?

This research project is being conducted by Professor David Kaye, who has designed this study and is supported by a research grant from the National Health and Medical Research Council of Australia

19 Who has reviewed the research project?

An independent group of people called a Human Research Ethics Committee (HREC) reviews all research projects in Australia involving humans. The ethical aspects of this research project have been approved by the HREC of Alfred Health – the Alfred Hospital Ethics Committee.

This project will be carried out according to the *National Statement on Ethical Conduct in Human Research (2007)*. This statement has been developed to protect the interests of people who agree to participate in human research studies.

20 Further information and who to contact

The person you may need to contact will depend on the nature of your query. If you want any further information concerning this project or if you have any medical problems which may be related to your involvement in the project (for example, any side effects), you can contact the principal study doctor on 03 *9076 3263* or any of the following people:

Clinical contact person

Name	Ms Donna Vizi, Ms Jia Tang or Mr Nik Hemsley
Position	Research Coordinators
Telephone	03 9076 2948, 03 9076 6519
Email	hfresearch@alfred.org.au

For matters relating to research at the site at which you are participating, the details of the local site complaints person are:

Complaints contact person

Position	Complaints Officer
Telephone	03 9076 3619
Email	research@alfred.org.au

If you have any complaints about any aspect of the project, the way it is being conducted or any questions about being a research participant in general, then you may contact:

Local HREC Office contact (Single Site - Research Governance Officer)

HREC name	Alfred Hospital Ethics Committee
Position	HREC Executive Officer
Telephone	03 9076 3619
Email	research@alfred.org.au

theAlfred

Consent Form - *Adult providing own consent*

Title	**Evaluating venous compliance in heart failure**
HREC	HREC/81404/Alfred-2021
Local Project Number:	1/22
Project Sponsor	Alfred Health
Principal Investigator	Professor David Kaye
Associate Investigator(s)	Assoc Prof Justin Mariani, Dr Shane Nanayakkara, Dr Hitesh Patel, Dr Jason Bloom, Ms Donna Vizi, Ms Liz Dewar, Ms Jia Tang, Mr Nicholas Hemsley, Mr Justin Lineham
Location	Alfred Hospital

Declaration by Participant

I have read the Participant Information Sheet or someone has read it to me in a language that I understand.

I understand the purposes, procedures and risks of the research described in this document.

I give permission for my doctors, other health professionals, hospitals or laboratories outside this hospital to release information to Alfred Hospital concerning my disease and treatment for the purposes of this project. I understand that such information will remain confidential.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to participate in this research project as described and understand that I am free to withdraw at any time during the study without affecting my future health care.

I understand that I will be given a signed copy of this document to keep.

Optional Future Research

I consent to the storage and use of blood samples taken from me for use in further research as described in this Participant Information Sheet. I understand that this is **optional**.

Yes ☐ ***No*** ☐

Name of Participant (please print) _____

Signature _____ Date _____

Declaration by Study Doctor/Senior Researcher†

I have given a verbal explanation of the research project; its procedures and risks and I believe that the participant has understood that explanation.

Name of Study Doctor/
Senior Researcher† (please print) _____

Signature _____ Date _____

† A senior member of the research team must provide the explanation of, and information concerning, the research project.

Note: All parties signing the consent section must date their own signature.

Form for Withdrawal of Participation - *Adult providing own consent*

Title	**Evaluating venous compliance in heart failure**
HREC Reference:	HREC/81404/Alfred-2021
Project Number	1/22
Project Sponsor	Alfred Health
Principal Investigator	Professor David Kaye
Associate Investigator(s)	Assoc Prof Justin Mariani, Dr Shane Nanayakkara, Dr Hitesh Patel, Dr Jason Bloom, Ms Donna Vizi, Ms Liz Dewar, Ms Jia Tang, Mr Nicholas Hemsley, Mr Justin Lineham
Location	Alfred Hospital

Declaration by Participant

I wish to withdraw from participation in the above research project and understand that such withdrawal will not affect my routine treatment, my relationship with those treating me or my relationship with Alfred Health

Name of Participant (please print) _____

Signature _____ Date _____

In the event that the participant's decision to withdraw is communicated verbally, the Study Doctor/Senior Researcher will need to provide a description of the circumstances below.

Declaration by Study Doctor/Senior Researcher†

I have given a verbal explanation of the implications of withdrawal from the research project and I believe that the participant has understood that explanation.

Name of Study Doctor/
Senior Researcher† (please print) _____

Signature _____ Date _____

† A senior member of the research team must provide the explanation of and information concerning withdrawal from the research project.

Note: All parties signing the consent section must date their own signature.