UNIVERSITY OF ALBERTA

Participant Information Sheet

Project Title: A pilot randomized trial of intravenous N-acetyl cysteine in patients undergoing a pharmaco-invasive reperfusion strategy early after ST-segment elevation myocardial infarction

Principal Investigator: Dr. Michelle Graham

Co-Investigators: Dr. Anoop Mathew, Dr. Sean van Diepen, Dr. Evangelos Mickelakis, Dr. Richard Thompson, Dr. Richard Coulden, Dr. Kevin Bainey

WHAT IS THE PURPOSE OF THE STUDY?

The purpose of this study is to determine whether a drug known as N-acetyl cysteine ("NAC") is effective in limiting the extent of heart muscle damage, when used in addition to standard clot busting drugs, during a heart attack. This drug acts by dissolving parts of the blood clots that are clogging blood vessels in the heart.

Early studies have shown that N-acetyl cysteine may reduce heart muscle damage in heart attack patients treated emergently with angioplasty (an invasive procedure to open the blocked heart artery and place a metal tube within the artery to keep the artery open). However, due to the lack of very large studies conducted across multiple hospitals, this drug has not become the standard of care for the treatment of patients presenting with heart attacks.

N-acetyl cysteine, administered into the vein, is already used for a number of reasons including to protect the liver following Tylenol (acetaminophen) over dosage and to protect the kidney from the effects of contrast dye in patients undergoing angioplasty. It has also been tested in healthy volunteers and in patients with heart attacks.

We would like to collect data in a small group of participants initially to determine if using this drug, in addition to standard therapy, will reduce the size of the heart attacks. We hope that information from this study will help design future studies to look at ways of improving the outcomes in similar patients presenting with heart attacks.

WHAT WOULD I HAVE TO DO?

You have been asked to participate in this research project because you are an adult presenting early with a heart attack and have received a clot busting drug known as tenecteplase or TNK (this is standard therapy). In addition, you are scheduled to undergo an invasive test known as coronary angiogram to look at your arteries and possibly will undergo stent implantation. If you agree to participate in this study, you will be asked to sign this consent form. Next, study personnel will collect demographic information, including your age and gender. Information about your past

medical history, current hospital admission, treatment, occurrence of complications, and adverse events or outcomes will also be documented. This information will be gathered either directly from you, or from your health records, including your electronic medical records. Study personnel may need to access your health records after the study is complete to confirm and verify any specific health information directly related to your participation in the study. In addition, no matter which group you are allotted to, you will have to undergo blood tests to estimate the levels of a certain clotting factor in your blood. This involves drawing about three tablespoons of blood from your veins. This helps us to determine how well the blood clots in your heart vessels are broken up. You will also be asked to provide two blood samples (baseline, and at the time of your coronary angiogram).

You will be assigned to one of two treatment groups by random selection (similar to flipping a coin)

- One group will be administered N-acetyl cysteine into the vein over 48 hours, this is called the "treatment arm".
- The other group will only receive standard therapy. This group is called the "control arm".

There is approximately a 50% chance you will be allocated to the "treatment arm" and a 50% chance you will be allocated to the "control arm". Neither you or your cardiologist, intensive care doctor, or study investigators can choose the treatment group to which you are assigned. Each participant is assigned a treatment group by a computer generated random allocation process.

WHAT ARE THE RISKS?

As a participant in this study, you may receive the study drug through a line placed into your veins for total duration of 48 hours, depending on the group to which you are assigned. This study drug has been used in multiple trials in thousands of participants. The main side effects found in these studies include temporary mild allergic reactions- itching, flushing and rash. These reactions settled with stopping the drug and administering a dose of hydrocortisone. You may experience some discomfort or bruising when your blood is drawn.

WILL I BENEFIT IF I TAKE PART?

If you agree to participate in this study you may or may not derive direct medical benefits. If you are allotted to the study drug group and if the drug does indeed work as indicated by the previous small trial in patients with heart attacks undergoing angioplasty, you might benefit through a reduction in the size of your heart attack. However, there is no guarantee that this research will help you, even if you are allotted to the study drug group. The information from this pilot study may help to improve care for future patients presenting early after a large heart attacks by informing the design of a future large scale study.

DO I HAVE TO PARTICIPATE?

Your participation in this study is voluntary. If you decide to take part, you will be asked to sign this consent form and will be given a signed copy to keep for your records. You may decline to take part in this study, or withdraw from the study at any time point. Please inform your study

doctor if you decide to stop participation. If you leave the study, we will not collect new health information about you, but we will need to keep the data that we have already collected. Your decision not to take part or to stop participating in the study will not affect your current or future medical care, or any benefits to which you may otherwise be entitled to.

Your participation in the study may be stopped for any of the following reasons:

- The investigator decides it is in the best interest of your health and welfare
- You decide you no longer wish to be involved
- The study is stopped at this study site for other reasons not yet known

You will be advised in a timely manner of any new information that becomes available that may affect your willingness to remain in the study.

WILL I BE PAID FOR PARTICIPATING?

You will not receive any payment, or other financial benefits for being in this study. There will be no additional costs to you.

WILL MY RECORDS BE KEPT PRIVATE?

During the study we will be collecting health data about you. We will do everything we can to make sure that this data is kept private. No data relating to this study that includes your name will be released outside of the study doctor's office or published by the researchers. Sometimes, by law, we may have to release your information with your name so we cannot guarantee absolute privacy. However, we will make every legal effort to make sure that your health information is kept private.

The study doctor/study staff may need to look at your personal health records held at the study doctor's office, and/or kept by other health care providers that you may have seen in the past (i.e. your family doctor). Any personal health information that we get from these records will be only what is needed for the study.

During research studies it is important that the data we get is accurate. For this reason, your health data, including your name, may be looked at by people from the University of Alberta or the Health Research Ethics Board. In addition to study monitors appointed by the Board of Governors of the University of Alberta, Health Canada may also review your records. By signing this consent form, you are giving permission for the study doctor/staff to collect, use and disclose information about you from your personal health records as described above.

After the study is done, we will still need to securely store your health data that was collected as part of the study. At the University of Alberta, we store data till 25 years after the end of the trial.

IF I SUFFER A RESEARCH-RELATED INJURY, WILL I BE COMPENSATED?

If you become ill or injured as a result of being in this study, you will receive necessary medical treatment, at no additional cost to you. By signing this consent form you are not releasing the investigator(s), institution(s) and/or sponsor(s) from their legal and professional responsibilities.

WHAT IF I HAVE QUESTIONS?

If you have questions about the research now or later, please contact the Investigator or research coordinator:

Research Investigator: Dr. Michelle Graham, **780-407-1590**
Research Coordinator: Dr. Anoop Mathew

If you have questions or concerns about your rights as a study participant, you may contact the **Research Ethics Office**, at **780-492-2615**. This office is independent of the study investigators.

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Consent Form

Project Title: A pilot randomized trial of intravenous N-acetyl cysteine in patients undergoing a pharmaco-invasive reperfusion strategy early after ST-segment elevation myocardial infarction

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	Yes	No
Do you understand that you have been asked to be in a research study?	☐	☐
Have you read and received a copy of the attached Information Sheet?	☐	☐
Do you understand the benefits and risks involved in taking part in this research study?	☐	☐
Have you had an opportunity to ask questions and discuss this study?	☐	☐
Do you understand that you are free to withdraw from the study at any time, without having to give a reason and without affecting your future medical care?	☐	☐
Has the issue of confidentiality been explained to you?	☐	☐
Do you understand who will have access to your records, including personally identifiable health information?	☐	☐
Do you want the investigator(s) to inform your family doctor that you are participating in this research study? If so, give his/her name _____	☐	☐

Who explained this study to you?

_____

I agree to take part in this study: YES ☐ NO ☐

Signature of Research Participant

_____

(Printed Name) _____

Date: _____

Signature of Witness

_____

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

Signature of Investigator or Designee _____ Date _____

THE INFORMATION SHEET MUST BE ATTACHED TO THIS CONSENT FORM AND A SIGNED COPY GIVEN TO THE RESEARCH PARTICIPANT