

# Campath, Calcineurin inhibitor reduction and Chronic allograft nephropathy

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| <b>Submission date</b><br>06/05/2010   | <b>Recruitment status</b><br>No longer recruiting | <input checked="" type="checkbox"/> Prospectively registered<br><input type="checkbox"/> Protocol |
| <b>Registration date</b><br>07/06/2010 | <b>Overall study status</b><br>Completed          | <input type="checkbox"/> Statistical analysis plan<br><input checked="" type="checkbox"/> Results |
| <b>Last Edited</b><br>18/12/2019       | <b>Condition category</b><br>Surgery              | <input type="checkbox"/> Individual participant data  |

## Plain English summary of protocol

### Background and study aims

In a healthy person, the kidneys are responsible for filtering out the waste products and excess water in the blood, and converting them into urine. If the kidneys suddenly stop working (acute kidney injury) or are suffering from severe, long-term disease of the kidneys (chronic kidney failure) then the body is unable to get rid of the waste products building up in the blood. In some patients, the damage to the kidneys becomes worse over time and so a kidney transplant is their only real option. When a person receives a kidney transplant, they have to take drugs called immunosuppressants, to prevent their immune system rejecting the new kidney (graft). Treatment with these drugs have managed to lower the rate of acute rejection (when the body's immune system rejects the transplant almost immediately), however the long-term survival of kidney transplants has not really improved over the past decade. The commonest cause of graft loss is a condition called chronic allograft nephropathy (CAN) where the graft itself dies over time due to long-term treatment with calcineurin inhibitors (a type of immunosuppressant medication). They work by stopping the activity of a protein called calcineurin which is involved in activating the certain cells of the immune system. A possible way to prevent this is to lower the amounts of calcineurin patients are taken by replacing them with other medications. This study is going to look at the long-term effects of Campath-1H (an initial immunosuppressant treatment that is not a calcineurin inhibitor) and sirolimus (a maintenance immunosuppressant treatment that is not a calcineurin inhibitor) to the standard treatments of the drugs basiliximab (standard treatment) and tacrolimus (a maintenance immunosuppressant that is a calcineurin inhibitor)

### Who can participate?

Adults who are scheduled to receive kidney transplant in next 24 hours

### What does the study involve?

Participants are randomly allocated to one of two groups. Those in the first group are treated with two doses of 30mg Campath-1H intravenously (directly into a vein) or subcutaneously (injection into the skin) 24 hours apart as well as taking tacrolimus tablets every day at a dose of 5-7 ng/ml for 6 months. Those in the second group are treated with two doses of 20mg basiliximab intravenously (directly into a vein) spaced four days apart (standard treatment) as well as tacrolimus tablets every day at a dose of 5-12 ng/ml for 6 months. After 6 months, the

two groups are randomly allocated to subgroups. From the first group, half of the participants continue taking tacrolimus tablets every day and the other half are given sirolimus tablets to take every day at a dose of 5-10 ng/ml for first 6 months then 5-8 ng/ml. From the second group, half of the participants continue to take tacrolimus tablets but at a dose of 5-8 ng/ml, and the other half are given sirolimus tablets to take every day at a dose of 5-10 ng/mL for first 6 months, then 5-8 ng/ml. For all groups, study treatments continue (prescribed by the participant's doctor) while their transplant remains functional. All participants are reviewed when they are discharged from hospital and at 1, 3, 6, 9, and 12 months after transplantation, in order to determine the transplant failure rate.

What are the possible benefits and risks of participating?

It is not known as to whether there will be any benefits or risks to those participating in this study.

Where is the study run from?

Oxford Transplant Centre (UK)

When is the study starting and how long is it expected to run for?

September 2010 to August 2017

Who is funding the study?

1. NHS Blood and Transplant Research and Development (UK)
2. Pfizer (UK)
3. Novartis (UK)

Who is the main contact?

Professor Peter Friend

ccc@ndph.ox.ac.uk

## Contact information

### Type(s)

Scientific

### Contact name

Prof Peter Friend

### Contact details

Oxford Transplant Centre

Churchill Hospital

Headington

Oxford

United Kingdom

OX3 7LJ

+44 1865 743743

ccc@ndph.ox.ac.uk

## Additional identifiers

Clinical Trials Information System (CTIS)

2008-008553-27

ClinicalTrials.gov (NCT)  
NCT01120028

Protocol serial number  
CTS03C1

## Study information

### Scientific Title

Open-label, randomised multicentre study of CAMPATH-1H versus basiliximab induction treatment and sirolimus versus tacrolimus maintenance treatment for the preservation of renal function in patients receiving kidney transplants

### Acronym

The 3C Study

### Study objectives

Reducing exposure to calcineurin inhibitors either by using more potent antibody induction (Campath) and/or an elective switch to sirolimus-based immunosuppression may improve function and survival of kidney transplants.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

Nottingham Research Ethics Committee (REC) 2 approved on the 2nd of December 2009 (ref: 09/H0408/101)

### Study design

Open label multicentre randomised controlled 2x2 factorial trial

### Primary study design

Interventional

### Study type(s)

Treatment

### Health condition(s) or problem(s) studied

Kidney transplantation

### Interventions

1. Campath-1H: 30 mg on days 0 and 1 (intravenously or subcutaneously)
2. Basiliximab 20mg on days 0 and 4 (intravenously)
3. Tacrolimus: oral tablets
  - 3.1. target trough level 8-12 ng/mL following basiliximab induction for first six months
  - 3.2. target trough level 5-7 ng/mL following Campath-1H induction and in all patients after 6 months, for duration of study.
4. Sirolimus: oral tablets; target trough level 5-10 ng/mL for first 6 months then 5-8 ng/mL. For

duration of study.

The total duration of follow up is at least 5 years for all treatment arms.

### **Intervention Type**

Drug

### **Phase**

Not Specified

### **Drug/device/biological/vaccine name(s)**

Campath-1H, basiliximab, tacrolimus, sirolimus

### **Primary outcome(s)**

1. Induction therapy comparison: biopsy-proven acute rejection during the first 6 months after transplantation
2. Maintenance therapy comparison: graft function is measured by estimated glomerular filtration rate at 2 years after transplantation

### **Key secondary outcome(s)**

All secondary outcomes are assessed using a study-specific questionnaire that has been devised to send to patients and the review of the UK Renal Registry, Hospital Episode Statistics, Office for National Statistics, National Cancer Registry and UK Transplant Registry at 1, 2 and 5 years.

1. Graft function and survival
2. Patient survival
3. Incidence of serious infections
4. Incidence of malignancy
5. Major vascular events

### **Completion date**

31/08/2017

## **Eligibility**

### **Key inclusion criteria**

1. Men or women aged over 18 years
2. Recipient of kidney transplant from live or deceased donor

### **Participant type(s)**

Patient

### **Healthy volunteers allowed**

No

### **Age group**

Adult

### **Lower age limit**

18 years

**Sex**

All

**Total final enrolment**

394

**Key exclusion criteria**

1. Recipients of multi-organ transplants
2. Previous treatment with Campath-1H
3. Active infection
4. Past history of anaphylaxis to humanized monoclonal antibodies
5. History of malignancy (except for adequately treated non-melanoma skin cancer)
6. Loss of previous transplant within 6 months not due to technical reasons
7. Medical history that might limit the participant's ability to take trial treatments for the duration of the study

**Date of first enrolment**

04/10/2010

**Date of final enrolment**

21/01/2013

**Locations****Countries of recruitment**

United Kingdom

England

**Study participating centre**

**Oxford Transplant Centre**

Churchill Hospital

Old Rd

Headington

Oxford

United Kingdom

OX3 7LJ

**Sponsor information****Organisation**

University of Oxford (UK)

**ROR**

<https://ror.org/052gg0110>

# Funder(s)

## Funder type

Government

## Funder Name

NHS Blood and Transplant Research and Development (UK) (ref 09-15-01-03)

## Funder Name

Pfizer (UK)

## Alternative Name(s)

Pfizer Inc., Pfizer Consumer Healthcare, Davis, Charles Pfizer & Company, Warner-Lambert, King Pharmaceuticals, Wyeth Pharmaceuticals, Seagen, Pfizer Inc

## Funding Body Type

Government organisation

## Funding Body Subtype

For-profit companies (industry)

## Location

United States of America

## Funder Name

Novartis (UK)

## Alternative Name(s)

Novartis AG, Novartis International AG

## Funding Body Type

Government organisation

## Funding Body Subtype

For-profit companies (industry)

## Location

Switzerland

# Results and Publications

## Individual participant data (IPD) sharing plan

### IPD sharing plan summary

Available on request

### Study outputs

| Output type                                   | Details                       | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|-------------------------------|--------------|------------|----------------|-----------------|
| <a href="#">Results article</a>               | results                       | 08/11/2014   |            | Yes            | No              |
| <a href="#">Results article</a>               | results                       | 01/06/2018   | 18/12/2019 | Yes            | No              |
| <a href="#">HRA research summary</a>          |                               |              | 28/06/2023 | No             | No              |
| <a href="#">Participant information sheet</a> | Participant information sheet | 11/11/2025   | 11/11/2025 | No             | Yes             |
| <a href="#">Study website</a>                 | Study website                 | 11/11/2025   | 11/11/2025 | No             | Yes             |