

# Effect of anti-tumour necrosis factor alpha (TNF $\alpha$ ) therapy on blood vessel health in patients with rheumatoid arthritis

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<b>Registration date</b> 09/05/2008	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 02/02/2015	<b>Condition category</b> Musculoskeletal Diseases	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

Not provided at time of registration

## Contact information

### Type(s)

Scientific

### Contact name

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### Contact details

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## Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

## Secondary identifying numbers

ETADA90 v1

# Study information

## Scientific Title

Effect of anti-tumour necrosis factor alpha (TNFa) therapy on endothelial function and other surrogate markers of cardiovascular disease in patients with rheumatoid arthritis

## Study objectives

Rheumatoid arthritis (RA) is a chronic autoimmune inflammatory disorder characterized by a symmetrical erosive polyarthritis with inflammatory multisystemic involvement. Most patients exhibit a chronic fluctuating course of disease that, if left untreated, results in progressive joint destruction, deformity, and disability. The patient with RA has their life span shortened by 15-20%, with 34-40% of excess deaths being due to cardiovascular disease.

## Study aim:

To assess the effect of the TNFa blocking drug etanercept and adalimumab on endothelial dysfunction and other surrogate markers of cardiovascular diseases in patients with RA. We hypothesised that the biologic drugs have the potential to improve endothelial dysfunction and other surrogate markers of cardiovascular disease (CVD) in patients with RA. We believe that if etanercept and adalimumab can improve endothelial dysfunction in RA patients they may be able to reduce the cardiovascular morbidity and mortality seen in this group of patients.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Tayside Committee on Medical Research Ethics. Date of approval: 05/09/2005 (ref: 05/S1401/112)

## Study design

Observational open-label single-centre study

## Primary study design

Observational

## Secondary study design

Cohort study

## Study setting(s)

Not specified

## Study type(s)

Treatment

## Participant information sheet

Not available in web format, please use the contact details below to request a patient information sheet

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

Rheumatoid arthritis

## **Interventions**

This is an observational study. The drugs are prescribed by the rheumatology team, and this study assesses the impact of those drugs on blood vessel health.

90 RA patients (30 due to be started on methotrexate, 30 due to be started on etanercept and 30 due to be started on adalimumab) will be recruited from rheumatology clinics throughout Tayside. Treatment allocation (etanercept, adalimumab or methotrexate) will be decided by the rheumatologists in the clinic.

The drugs are normally prescribed as:

Etanercept: Subcutaneous injections 25 mg twice a week or 50 mg once a week

Adalimumab: Subcutaneous injections 40 mg every other week

Methotrexate: Orally once a week. Doses range from 7.5 mg a week to 25 mg a week

Surrogate markers of cardiovascular disease will be measured at baseline (before commencement of methotrexate/ etanercept/ adalimumab), 2 months and at 4 months.

## **Intervention Type**

Other

## **Phase**

Not Specified

## **Primary outcome measure**

Endothelial function measured by the following at baseline, 2 and 4 months:

1. Laser Doppler flowmetry after iontophoretic delivery of acetylcholine and sodium nitroprusside (microvascular)
2. Brachial artery flow mediated dilatation (macrovascular)

## **Secondary outcome measures**

The following were assessed at baseline, 2 and 4 months:

1. Endothelial function measured by blood testing of vascular function and damage (E selectin, thrombomodulin)
2. Arterial stiffness measured by ultrasound echo tracking and applanation tonometry
3. Oxidative stress (Isoprostane levels)
4. RA disease activity (28-item Disease Activity Score [DAS28], Health Assessment Questionnaire [HAQ], 36-item Short Form health survey [SF-36])

## **Overall study start date**

10/02/2006

## **Completion date**

25/04/2008

## **Eligibility**

### **Key inclusion criteria**

1. Both males and females, 18 years old or over
2. Fulfil the 1987 American College of Rheumatology (ACR) classification criteria for rheumatoid arthritis
3. No exposure to anti-TNFa drugs in the last 3 months
4. Fulfil the National Institute for Clinical Excellence guidelines on the use of anti-TNFa drugs in rheumatoid arthritis\* and be:
  - 4.1. About to start etanercept or adalimumab (treatment group)
  - 4.2. About to start methotrexate (control group)

\* The patients in the control group must have had adequate therapeutic trial of at least one previous Disease Modifying Anti-Rheumatic Drug (DMARD) rather than two

**Participant type(s)**

Patient

**Age group**

Adult

**Lower age limit**

18 Years

**Sex**

Both

**Target number of participants**

90

**Key exclusion criteria**

1. Previous cardiovascular or cerebrovascular event in the last 3 years
2. Undergoing treatment for a cardiovascular risk factor except:
  - 2.1. Patients with hypertension on stable medication for the last 3 months
  - 2.2. Patients with hypercholesterolaemia on stable medication for the last 3 months

**Date of first enrolment**

10/02/2006

**Date of final enrolment**

25/04/2008

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

Scotland

United Kingdom

**Study participating centre**

Vascular and Inflammatory Diseases Research Unit  
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## Sponsor information

### Organisation

University of Dundee (UK)

### Sponsor details

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### Sponsor type

University/education

### Website

<http://www.dundee.ac.uk>

### ROR

<https://ror.org/03h2bxq36>

## Funder(s)

### Funder type

Industry

### Funder Name

Wyeth

### Alternative Name(s)

### Funding Body Type

Private sector organisation

### Funding Body Subtype

For-profit companies (industry)

### Location

United States of America

# Results and Publications

## Publication and dissemination plan

Not provided at time of registration

## Intention to publish date

## Individual participant data (IPD) sharing plan

## IPD sharing plan summary

Not provided at time of registration

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	01/03/2010		Yes	No