

Non-invasive cardiac screening in patients with peripheral arterial disease: the GROUND study.

Submission date	Recruitment status	<input type="checkbox"/> Prospectively registered
20/12/2005	No longer recruiting	<input type="checkbox"/> Protocol
Registration date	Overall study status	<input type="checkbox"/> Statistical analysis plan
20/12/2005	Completed	<input type="checkbox"/> Results
Last Edited	Condition category	<input type="checkbox"/> Individual participant data
14/11/2008	Circulatory System	<input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Not provided at time of registration

Contact information

Type(s)

Scientific

Contact name

Dr A.M. de Vos

Contact details

University Medical Centre Utrecht (UMCU)
Housepost nr E.01.132
P.O. Box 85500
Utrecht
Netherlands
3508 GA
+31 (0)30 250 9111
GROUND@azu.nl

Additional identifiers

Protocol serial number

NTR340

Study information

Scientific Title

Acronym

GROUND

Study objectives

Screening of asymptomatic coronary artery disease using non-invasive modalities in patients with manifestations of atherosclerosis, ie peripheral arterial disease (PAD), and subsequent treatment will result in a reduction of cardiac morbidity and mortality.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Received from the local medical ethics committee

Study design

Multicentre, randomised, active controlled, parallel group trial

Primary study design

Interventional

Study type(s)

Screening

Health condition(s) or problem(s) studied

Peripheral arterial disease (PAD), coronary artery stenosis

Interventions

1. Patients randomised to the control group will undergo a computed tomography (CT) scan to determine the coronary calcium score
2. Patients in the intervention group will undergo a CT scan for calcium score, and a contrast enhanced CT scan for the evaluation of coronary stenosis.

If no stenosis is found a dobutamine stress MRI of the heart will be performed to identify myocardial ischaemia. If a stenosis is found on either diagnostic test, the patient will be referred to the cardiologist, who will decide if and which treatment he will give the patient for the encountered coronary stenosis.

Intervention Type

Other

Phase

Not Specified

Primary outcome(s)

Fatal and non-fatal myocardial infarction and stroke, and vascular death (death due to vascular disease).

Key secondary outcome(s)

1. Fatal and non-fatal myocardial infarction
2. Fatal and non-fatal stroke
3. Vascular interventions

4. Amputation
5. Aortic rupture
6. End stage renal failure
7. Extracranial haemorrhage
8. Complications of coronary artery bypass graft (CABG) or percutaneous transluminal coronary angioplasty (PTCA)
9. All cause mortality

Completion date

31/12/2012

Eligibility

Key inclusion criteria

1. PAD patients, stage Fontaine II (intermittent claudication) diagnosed by the vascular surgeon
2. Patients must provide consent in writing after proper education and discussion with the treating physician and/or research physician
3. Patients must be aged 50 years or over

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Sex

All

Key exclusion criteria

1. History of symptomatic cardiac disease
2. Cardiac rhythm other than sinus
3. Unable to sustain a breath-hold for 25 seconds
4. Asthma (contraindication beta-blockers)
5. Contra-indications to magnetic resonance imaging (MRI) examination
6. Contra-indications to iodine contrast
7. Severe arterial hypertension (greater than 220/120 mmHg)
8. Significant aortic stenosis
9. Unable to remain in supine position for at least 60 minutes
10. Morbidly obese (body mass index [BMI] greater than 40)
11. Renal insufficiency (creatinine greater than 140mmol/l)
12. Severe physical deterioration due to concomitant illness
13. Language barrier
14. Acute coronary syndrome
15. Contra-indications to dobutamine

Date of first enrolment

01/01/2005

Date of final enrolment

31/12/2012

Locations

Countries of recruitment

Netherlands

Study participating centre

University Medical Centre Utrecht (UMCU)

Utrecht

Netherlands

3508 GA

Sponsor information

Organisation

Julius Centre for Health Sciences and Primary Care (The Netherlands)

ROR

<https://ror.org/0575yy874>

Funder(s)

Funder type

Hospital/treatment centre

Funder Name

University Medical Centre Groningen (UMCG) (The Netherlands) - Department of Radiology

Funder Name

Julius Centre for Health Sciences and Primary Care (The Netherlands)

Results and Publications

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?
Study website	Study website	11/11/2025	11/11/2025	No	Yes