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# The potential role of B-Type natriuretic peptide (BNP) and high-sensitivity troponin t(hs-tnt) pre-screening by GPs to better target rapid access chest pain clinic referrals

**Submission date**
29/12/2009

**Recruitment status**
No longer recruiting

**Registration date**
06/04/2010

**Overall study status**
Completed

**Last Edited**
13/02/2017

**Condition category**
Circulatory System

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

## Plain English summary of protocol

Background and study aims
At present the most accurate way of telling whether chest pain is coming from the heart or from any other cause such as muscular strain is by doing a blood test 12 hours after the chest pain starts. This test is called the Troponin T test. There is a newer blood test that may be able to provide doctors with the same information much quicker so that a decision on your care can be made faster and more accurately. There is evidence from previous studies that this may be so in patients with other heart conditions. This test is called the B-Type Natriuretic Peptide (BNP) test which is the name of a hormone that is produced by the heart muscle. The aim of this study is to assess the accuracy of this test in patients who present to hospital with chest pain.

Who can participate?
Adults aged between 20 and 93 presenting to the rapid Access Chest Pain Clinic with heart-related chest pain.

What does the study involve?
Participants provide background information and then have a blood sample taken while they are having their routine blood tests when they are admitted to hospital. Participants are followed up for 12 months in order to find out if they are admitted to hospital again for chest pain.

What are the possible benefits and risks of participating?
There are no direct benefits involved with participating. There is a small risk of discomfort or bruising from the blood test.

Where is the study run from?
Ninewells Hospital (UK)

When is the study starting and how long is it expected to run for?
February 2004 to October 2009

Who is funding the study?
Chest Heart and Stroke Scotland (UK)

Who is the main contact?
Dr Jacob George
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# Contact information

### Type(s)
Scientific

### Contact name
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# Additional identifiers

### Protocol serial number
GEO003

# Study information

### Scientific Title
The potential role of B-Type natriuretic peptide (BNP) and high-sensitivity troponin t(hs-tnt) pre-screening by GPs to better target rapid access chest pain clinic referrals: a prospective observational longitudinal cohort study

### Study objectives
The aim of this study is to determine how accurate a pre-screening test for BNP and high-sensitivity troponin t(hs-tnt) would be in safely identifying that a potential RACPC referral was unnecessary.

### Ethics approval required
Old ethics approval format

### Ethics approval(s)
Tayside Local Research Ethics Committee, 04/08/2005, ref: 05/S1402/49

### Study design
Prospective observational longitudinal cohort study

### Primary study design
Observational

### Study type(s)
Diagnostic

### Health condition(s) or problem(s) studied
Cardiac chest pain

### Interventions
625 patients attending Rapid Access Chest Pain Clinics in Tayside were recruited into the study over a two year period. Each patient had demographic data, a near patient BNP and high-sensitivity troponin t(hs-tnt) level (Biosite®), clinical and laboratory measurements documented. The initial diagnosis was considered positive for ischaemic heart disease (IHD) if the patient had a positive troponin T or was referred for angiography. All patients were then followed up one year after their initial RACPC attendance using hospital medical records, primary care records and telephone calls to document further RACPC attendance, hospitalisations for chest pain and survival data.

### Intervention Type
Other

### Phase
Not Applicable

### Primary outcome(s)
Negative predictive value of BNP compared to final clinical diagnosis and troponin T result is measured by a near-patient assay at 12 months.

### Key secondary outcome(s))
Clinical event rate such as further admissions for chest pain, referral for angioplasty or coronary artery bypass grafting and death are assessed continuously for 12 months.

### Completion date
01/10/2009

## Eligibility

### Key inclusion criteria
1. Patients presenting to the rapid Access Chest Pain Clinic with Cardiac Chest Pain
2. Aged 20 - 93 years, both male and female

### Participant type(s)
Patient

**Healthy volunteers allowed**
No

**Age group**
Adult

**Sex**
All

**Key exclusion criteria**
Patients with non-cardiac chest pain

**Date of first enrolment**
01/03/2007

**Date of final enrolment**
01/10/2008

# Locations

**Countries of recruitment**
United Kingdom

Scotland

**Study participating centre**
**Ninewells Hospital**
Department of Clinical Pharmacology
Dundee
United Kingdom
DD1 9SY

# Sponsor information

**Organisation**
University of Dundee

**ROR**
https://ror.org/03h2bxq36

# Funder(s)

**Funder type**

Charity

**Funder Name**
Chest Heart and Stroke Scotland

# Results and Publications

### Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are/will be available upon request from Dr Jacob George (j.george@dundee.ac.uk)

### IPD sharing plan summary
Available on request

### Study outputs

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|---|---|---|---|---|
| Results article | results | 01/02/2012 | | Yes | No |
| Participant information sheet | version V1 | 30/12/2009 | 13/02/2017 | No | Yes |