

Magnetic nanoparticle thermoablation - retention and maintenance in prostate

Submission date 17/12/2013	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 17/12/2013	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 09/08/2019	Condition category Cancer	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

Plain English summary of protocol

<http://www.cancerresearchuk.org/cancer-help/trials/a-study-looking-nanoparticles-heat-destroy-prostate-cancer-magnablade-i-trial>

Contact information

Type(s)

Scientific

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Additional identifiers

ClinicalTrials.gov (NCT)

NCT02033447

Protocol serial number

15516

Study information

Scientific Title

MAGnetic NANoparticle thermoabLAation - retention and maintenance in prostatE: a Phase 0 study in men (MAGNABLATE I trial)

Acronym

MAGNABLATE I

Study objectives

This Phase 0 dose escalation safety trial aims to evaluate the retention of magnetic nanoparticles in the prostate.

The primary study objectives are:-

1. To conduct a dose escalation safety trial of magnetic nanoparticles injected into the prostates of men prior to cystoprostatectomy.
2. To conduct a dose escalation safety trial of magnetic nanoparticles injected into the prostates of men prior to prostatectomy.
3. To evaluate ex-vivo prostates with a special marker to determine the retention and distribution of the magnetic nanoparticles in relation to the intended target area at time of injection.

The secondary study objectives are:-

To evaluate the anatomical distribution of magnetic nanoparticles compared with injection site in prostate assessed by both Perls staining and postoperative imaging (MRI and CT) of the ex vivo tissue.

Ethics approval required

Old ethics approval format

Ethics approval(s)

First MREC approval date 17/09/2013, ref: 13/LO/1233

Study design

Non-randomised interventional treatment trial

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Topic: National Cancer Research Network; Subtopic: Prostate Cancer; Disease: Prostate

Interventions

The trialists are aiming for a minimum of 60% of injected nanoparticles to be retained within the prostate over an average of first 6 patients. They aim to recruit a representative group of men who have overt cancer lesions as well as overt benign areas for injection.

They are aiming for the following:

Minimum number of benign prostate lobes 12

Minimum number of malignant lobes 6

Men undergoing Radical Cystoprostatectomy and Radical Prostatectomy will be recruited until the above numbers are fulfilled.

Injection of nano-particles, Pre-operative preparation: This procedure will be carried out just prior to the surgery (cystoprostatectomy or prostatectomy). The patient will be admitted on the morning of the procedure. The patient will be asked to sign the hospital procedure specific consent form.

Procedure set-up: Intravenous antibiotics (Gentamicin 120mg and Cefuroxime 1.5gm) are given just prior to injection unless contra-indicated.

The injection will be administered under general anaesthetic.

Surgery, Removal of prostate during radical cystoprostatectomy or radical prostatectomy surgery

Post-procedure care: The patient is discharged home once he has recovered from his major surgery as per standard of care. A contact number is given to the patient to call if any problems are encountered.

Intervention Type

Other

Phase

Not Applicable

Primary outcome(s)

Rate of serious and other adverse events; Timepoint(s): For the duration the patient is in the study

Key secondary outcome(s)

1. Anatomical distribution of magnetic nanoparticles compared with injection site in prostate; Timepoint(s): On removal of the prostate
2. Percentage microsphere retention using Perl staining on whole-mount histology; Timepoint(s): At removal of the prostate

Completion date

03/12/2014

Eligibility

Key inclusion criteria

1. Men undergoing:
 - 1.1. Radical cystoprostatectomy for bladder cancer, or
 - 1.2. Radical prostatectomy for prostate cancer
2. Men able to give informed consent

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Sex

Male

Key exclusion criteria

1. Have taken any form of hormones (except 5alpha reductase inhibitors) within the last 6 months
2. Unable to have MRI scan or CT scan, or in whom artefact would reduce scan quality
3. Unable to have general or regional anaesthesia
4. Men on immunosuppression or predefined immunosuppressed state
5. Men with a coagulopathy predisposing to bleeding to clot formation
6. Men with an inherited or acquired condition limiting metabolism of iron
7. Unable to give informed consent

Date of first enrolment

04/12/2013

Date of final enrolment

03/12/2014

Locations**Countries of recruitment**

United Kingdom

England

Study participating centre

University College London

London

United Kingdom

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Sponsor information**Organisation**

University College London (UK)

ROR

<https://ror.org/02jx3x895>

Funder(s)

Funder type

Government

Funder Name

NIHR (UK) - Central Commissioning Facility

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?
HRA research summary			28/06/2023	No	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes