

Reducing repeat pleural biopsies in suspected cancer

Submission date 07/02/2024	Recruitment status Recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
Registration date 16/02/2024	Overall study status Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 08/07/2025	Condition category Cancer	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

Pleural mesothelioma is a cancer that affects the lung lining, caused by asbestos. Despite recent treatment advances, the prognosis is often poor. Prompt diagnosis is vital. A biopsy can diagnose mesothelioma, guide treatment and support compensation claims. However, some people need multiple biopsies, increasing the risk of biopsy-related complications and prolonging the time to diagnosis. Doing additional tests on initial biopsies may increase the chance of diagnosing mesothelioma and avoid repeat biopsies. This would allow anti-cancer treatment to be started sooner and improve survival. The extra tests are not genetic but look for genetic changes in the cancer that allow it to grow and spread. The genetic markers in mesothelioma are called BAP1, p16 and MTAP. If they have disappeared on biopsy mesothelioma is diagnosed. Another study was previously conducted on people with suspected mesothelioma who required further biopsies as their first biopsy did not give a diagnosis (TARGET: <https://www.isrctn.com/ISRCTN14024829>). It took place in eight UK centres and recruited 59 patients. This study aims to perform these additional tests on their biopsy samples to see whether this would have made the diagnosis sooner and removed the need for further biopsies. It will investigate how many biopsies could have been avoided, how much time would have been saved, how this may have impacted survival and what cost-savings this would have offered the NHS.

Who can participate?

This study includes the 59 participants in the original TARGET study who were recruited between September 2015 and September 2018. No additional participants will be recruited. Should any participants of the original TARGET trial wish to opt-out, they can contact the main contact below.

What does the study involve?

Biopsy samples taken as part of the participants' routine clinical care will be tested for the markers of genetic change in mesothelioma (BAP1, MTAP and p16). The ability to make a diagnosis using these tests will be compared with the original diagnostic pathway, which was before the use of these tests.

What are the possible benefits and risks of participating?

The benefits of enrolling are to future patients, whose diagnostic process could be improved, with no additional requirements of TARGET participants. As there are no additional interventions required of participants and this will not impact management, there are no risks identified.

Where is the study run from?

North Bristol NHS Trust (UK)

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

October 2022 to September 2025

Who is funding the study?

Southmead Hospital Charity

Who is the main contact?

Geraldine Lynch, Geraldine.lynch@nbt.nhs.uk

Study website

<https://www.nbt.nhs.uk/research-development/our-research/current-research/respiratory-research-hub/respiratory-current-research>

Contact information

Type(s)

Principal Investigator

Contact name

Prof Nick A Maskell

ORCID ID

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Type(s)

Principal Investigator

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Type(s)

Public, Scientific

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Additional identifiers

EudraCT/CTIS number

Nil known

IRAS number

329574

ClinicalTrials.gov number

Nil known

Secondary identifying numbers

V1.0, IRAS 329574

Study information

Scientific Title

Reducing repeat pleural biopsies in suspected cancer – a study of the TARGET trial cohort comparing the diagnostic yield of standard histology vs additional tests in suspected pleural malignancy

Acronym

REPLICA

Study objectives

Testing for BAP1, P16 FISH and MTAP IHC could remove the need for further invasive procedures in patients with suspected pleural malignancy and an initial non-diagnostic biopsy

Ethics approval required

Ethics approval required

Ethics approval(s)

Approved 28/03/2024, East Midlands - Leicester South Research Ethics Committee (3 Piccadilly Place, London Road, Manchester, M1 3BN, United Kingdom; +44 (0)207 104 8079; Leicestersouth.rec@hra.nhs.uk), ref: 24/EM/0042

Study design

Observational study using historical data and stored samples

Primary study design

Observational

Secondary study design

Cohort study

Study setting(s)

Laboratory, Medical and other records

Study type(s)

Diagnostic

Participant information sheet

No participant information sheet available

Health condition(s) or problem(s) studied

Improving diagnosis in pleural mesothelioma

Interventions

Current interventions as of 06/06/2025:

This is an observational study using historical data and stored samples from a multi-centre randomised controlled trial (TARGET; <https://www.isrctn.com/ISRCTN14024829>), where each participant will act as a case (additional tests applied to stored samples) and internal control (initial outcomes using standard testing only).

Pleural biopsies of patients with a final diagnosis of mesothelioma will be tested for BAP1 and MTAP using immunohistochemistry (IHC) and in some samples for P16 using fluorescent in-situ hybridisation (FISH).

Previous interventions:

This is an observational study using historical data and stored samples from a multi-centre randomised controlled trial (TARGET; <https://www.isrctn.com/ISRCTN14024829>), where each participant will act as a case (additional tests applied to stored samples) and internal control (initial outcomes using standard testing only).

Pleural biopsies will be tested for BAP1 and MTAP using immunohistochemistry (IHC) and in some samples for P16 using fluorescent in-situ hybridisation (FISH).

Intervention Type

Other

Primary outcome measure

Identification of malignancy on biopsy measured using immunohistochemistry (IHC) and fluorescent in-situ hybridisation (FISH) in the laboratory at one timepoint

Secondary outcome measures

The total number of biopsies required, time to diagnosis, stage at diagnosis, number of multi-disciplinary team (MDT) discussions, biopsy-associated costs, biopsy-related adverse events and survival measured using data recorded in medical records at one timepoint

Overall study start date

08/10/2022

Completion date

30/09/2025

Eligibility

Key inclusion criteria

All patients who were included in the TARGET trial (ISRCTN14024829).

TARGET eligibility required all of the following to apply:

1. Pleural thickening on CT suspicious for pleural malignancy
2. Have had any form of pleural biopsy in the last 12 months (either by thoracoscopy or under radiological guidance) which was non-diagnostic for cancer
3. Lung cancer/mesothelioma MDT decision to perform further CT-guided biopsy to pursue a diagnosis

Participant type(s)

Patient

Age group

Adult

Lower age limit

18 Years

Sex

Both

Target number of participants

59

Total final enrolment

59

Key exclusion criteria

Not eligible if not recruited to the TARGET trial

Date of first enrolment

29/04/2024

Date of final enrolment

30/09/2025

Locations

Countries of recruitment

England

Scotland

United Kingdom

Wales

Study participating centre**North Bristol NHS Trust**

Southmead Hospital

Southmead Road

Westbury-on-trym

Bristol

United Kingdom

BS10 5NB

Study participating centre**Gloucestershire Royal Hospital**

Great Western Road

Gloucester

United Kingdom

GL1 3NN

Study participating centre**Norfolk & Norwich University Hospital**

Colney Lane

Colney

Norwich

United Kingdom

NR4 7UY

Study participating centre

Northern General Hospital

Northern General Hospital NHS Trust
C Floor, Huntsman Building
Herries Road
Sheffield
United Kingdom
S5 7AU

Study participating centre**Royal Stoke University Hospital**

Newcastle Road
Stoke-on-trent
United Kingdom
ST4 6QG

Study participating centre**Oxford University Hospitals**

John Radcliffe Hospital
Headley Way
Headington
Oxford
United Kingdom
OX3 9DU

Study participating centre**Royal Gwent Hospital**

Cardiff Road
Newport
United Kingdom
NP20 2UB

Study participating centre**Queen Elizabeth University Hospital**

1345 Govan Road
Glasgow
United Kingdom
G51 4TF

Sponsor information

Organisation

North Bristol NHS Trust

Sponsor details

Learning & Research (Level 3), Southmead Hospital
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researchsponsor@nbt.nhs.uk

Sponsor type

Hospital/treatment centre

Website

<https://www.nbt.nhs.uk/>

ROR

<https://ror.org/036x6gt55>

Funder(s)**Funder type**

Charity

Funder Name

Southmead Hospital Charity

Results and Publications**Publication and dissemination plan**

The results of this research will be disseminated to patients and carers, fellow mesothelioma researchers and clinicians. Patients will be informed via the local mesothelioma patient group and the annual mesothelioma patient and carer conference. Results will be disseminated to the public via the Bristol Academic Respiratory and UK Pleural Society Twitter feeds. Results will be presented to fellow academics at scientific conferences e.g. the British Thoracic Oncology Group or International Mesothelioma Interest Group meetings. Clinicians will be informed via the UK Pleural Society state-of-the-art meetings and annual update day. The final report will be written up for publication in a peer-reviewed scientific journal, published open-access.

Intention to publish date

04/07/2026

Individual participant data (IPD) sharing plan

Deidentified data from this study will be made available by secure transfer from the corresponding author upon reasonable request from a qualified academic investigator for the sole purpose of replicating results presented in the article, under conditions of appropriate ethical oversight, upon investigator approval and execution of a data use agreement.

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol file	version 1.0	16/01/2024	07/02/2024	No	No