

A comprehensive disease characterisation study in adult bronchiectasis

Submission date 18/04/2023	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 27/04/2023	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 15/07/2025	Condition category Respiratory	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

Bronchiectasis is a common lung disease which causes your airways to become filled with mucus (sputum). This leads to frequent chest infections and breathlessness among other problems. Doctors and scientists are still learning how bronchiectasis affects the lungs and need to develop more effective treatments to manage the condition.

This study will complete a thorough range of tests on people, both with and without bronchiectasis, allowing for the most detailed mapping ever of the condition. This will enable researchers to see how bronchiectasis affects people and what differences there are between the two groups.

Who can participate?

Adults aged 18 years and over with a diagnosis of bronchiectasis and healthy controls living within the NHS Tayside boundary

What does the study involve?

Tests will look at the lungs to see how they are affected by bronchiectasis. These tests will include a CT scan, lung function tests and a bronchoscopy with lung biopsies. The researchers wish to study a group of 80 people who have bronchiectasis and a group of 40 people with no bronchiectasis in order to compare them.

What are the possible benefits and risks of participating?

There will be no direct benefit to participants. However, the outcome of the study could help the care of patients in the future. Some of the procedures might be a little uncomfortable, but discomfort and risks are minimised by the use of experienced clinical staff.

Where is the study run from?

University of Dundee Medical School, Ninewells Hospital Dundee (UK)

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

August 2020 to July 2025

Who is funding the study?
AstraZeneca (UK)

Who is the main contact?
Prof. James Chalmers, j.chalmers@dundee.ac.uk

Contact information

Type(s)

Principal investigator

Contact name

Prof James D Chalmers

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Additional identifiers

Integrated Research Application System (IRAS)
292518

Central Portfolio Management System (CPMS)
52829

Protocol serial number
1.006.21

Study information

Scientific Title

Bronchiectasis Research Into Leukocyte biology and Lung Infections to Accelerate New Therapies (BRILLIANT)

Acronym

BRILLIANT

Study objectives

The overall objective of the study is to identify clinically relevant endotypes (subgroups of patients defined by distinct biological mechanisms) by integrating clinical, inflammatory, microbiological, mucociliary and pathological assessments.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 09/08/2021, East of Scotland Research Ethics Service (EoSRES, Tayside Medical Science Centre, Residency Block Level 3, George Pirie Way, Ninewells Hospital and Medical School, Dundee DD1 9SY, UK; +44 1382 383848; tay.eosres@nhs.scot), ref: 21/ES/0064

Study design

Single-centre prospective observational study

Primary study design

Observational

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Bronchiectasis

Interventions

Tests will look at the lungs to see how they are affected by bronchiectasis. These tests will include a CT scan, lung function tests and a bronchoscopy with lung biopsies. The researchers wish to study a group of 80 people who have bronchiectasis and a group of 40 people with no bronchiectasis in order to compare them.

Intervention Type

Other

Primary outcome(s)

The molecular endotypes of bronchiectasis during stable disease, determining by integrating data from multiple sources including clinical, inflammatory, microbiological, mucociliary and pathological assessments to identify candidate endotypes. Cross-sectional at baseline (single timepoint).

Key secondary outcome(s)

Biological characteristics measured at a single time point:

- 1.1. Inflammatory markers – including blood eosinophils, serum biomarkers
- 1.2. Microbiology – including BAL culture and sequencing
- 1.3. Lung physiology – including Spirometry and lung function testing

Completion date

01/03/2026

Eligibility

Key inclusion criteria

Bronchiectasis cohort:

1. Age >18 years
2. Bronchiectasis diagnosed by CT scan
3. Symptoms consistent with bronchiectasis: cough, sputum and/or frequent respiratory tract infections
4. Clinically stable defined by the absence of antibiotic therapy in the previous 4 weeks

Healthy control cohort:

1. Age >18 years

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 years

Sex

All

Key exclusion criteria

Bronchiectasis cohort:

1. A primary diagnosis of asthma or COPD (secondary diagnoses and individuals with historical misdiagnosis will be permitted)
2. Immunodeficiency requiring immunoglobulin replacement therapy
3. Active allergic bronchopulmonary aspergillosis (defined by receipt of oral corticosteroids or anti-fungal therapy)
4. Active tuberculosis
5. Traction bronchiectasis due to interstitial lung disease
6. Active SARS-CoV-2 infection or contact with a confirmed case in the previous 14 days
7. Active malignancy excluding non-melanoma skin cancer
8. Antibiotic treatment for an acute respiratory tract infection or exacerbation in the previous 4 weeks
9. Treatment with anticoagulants
10. Any contraindication to study procedures including bronchoscopy
11. Current smoking or smoking in the preceding 3 months

Healthy control cohort:

1. Any respiratory diagnosis (asthma, COPD, bronchiectasis, pulmonary fibrosis or any other chronic respiratory condition requiring regular treatment)
2. Inflammatory conditions including rheumatoid arthritis, inflammatory bowel disease, and any other connective tissue disease
3. Active SARS-CoV-2 infection or contact with a confirmed case in the previous 14 days
4. Active malignancy excluding non-melanoma skin cancer
5. Antibiotic treatment for an acute respiratory tract infection in the previous 4 weeks
6. Any contraindication to study procedures including bronchoscopy

7. Current smoking or smoking in the preceding 3 months
8. Upper respiratory tract infection in the previous 4 weeks or current sinusitis
9. Treatment with anticoagulants

Date of first enrolment

16/08/2022

Date of final enrolment

01/03/2026

Locations

Countries of recruitment

United Kingdom

Scotland

Study participating centre**Ninewells Hospital**

Dept. of Respiratory Medicine

Dundee

United Kingdom

DD1 9SY

Sponsor information

Organisation

University of Dundee

ROR

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

Funder(s)

Funder type

Industry

Funder Name

AstraZeneca

Alternative Name(s)

AstraZeneca PLC, Pearl Therapeutics, AZ

Funding Body Type

Government organisation

Funding Body Subtype

For-profit companies (industry)

Location

United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

The data-sharing plans for the current study are unknown and will be made available at a later date.

IPD sharing plan summary

Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
HRA research summary			28/06/2023	No	No