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A comprehensive disease characterisation study in adult bronchiectasis

Submission date 18/04/2023	**Recruitment status** Recruiting	[ ] Prospectively registered [ ] Protocol
Registration date 27/04/2023	**Overall study status** Ongoing	[ ] Statistical analysis plan [ ] Results
Last Edited 15/07/2025	**Condition category** Respiratory	[ ] Individual participant data [X] 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

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Additional identifiers

EudraCT/CTIS number
Nil known

IRAS number
292518

ClinicalTrials.gov number
Nil known

Secondary identifying numbers
1.006.21, IRAS 292518, CPMS 52829

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

Secondary study design
Case-control study

Study setting(s)
Hospital, University/medical school/dental school

Study type(s)
Treatment

Participant information sheet
Not available in web format, please use contact details to request a participant information sheet

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 measure
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).

Secondary outcome measures

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

Overall study start date
16/08/2020

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

Participant type(s)
Mixed

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
80

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
Scotland

United Kingdom

Study participating centre
Ninewells Hospital
Dept. of Respiratory Medicine
Dundee
United Kingdom
DD1 9SY

Sponsor information

Organisation
University of Dundee

Sponsor details

Tayside Medical Science Centre (TASC)
NHS Tayside Ninewells Hospital and Medical School.
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Sponsor type
University/education

Website
https://www.dundee.ac.uk/tasc

ROR
https://ror.org/03h2bxq36

Funder(s)

Funder type
Industry

Funder Name
AstraZeneca

Alternative Name(s)
AstraZeneca PLC, Pearl Therapeutics

Funding Body Type
Government organisation

Funding Body Subtype
For-profit companies (industry)

Location
United Kingdom

Results and Publications

Publication and dissemination plan
Planned publication in a high-impact peer-reviewed journal

Intention to publish date
01/07/2026

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