

# Evaluation of a novel blood test (Avantect) detecting signals of the presence of pancreatic cancer early in patients recently diagnosed with type 2 diabetes

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<b>Registration date</b> 28/01/2025	<b>Overall study status</b> Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
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## Plain English summary of protocol

### Background and study aims

Pancreatic cancer is often detected when it is at an advanced stage and very difficult to treat successfully. Early diagnosis is key for better survival rates. People with newly diagnosed type 2 diabetes have a higher-than-normal risk of being diagnosed with pancreatic cancer. In the UK, the lifetime risk of being diagnosed with pancreatic cancer is around 2%. Of these, 1 in 4 people are first diagnosed with diabetes. This is due to pancreatic cancer affecting the insulin cells in the pancreas. The aim of the study is to find out if the new experimental blood test called Avantect can be used as a monitoring aid to detect and treat pancreatic cancer at an early more curable stage.

### Who can participate?

Males and females 50-84 years old who have been diagnosed with type 2 diabetes within the last 6 months

### What does the study involve?

Participants will be allocated at random into the intervention group or the control group (following the standard of care). The participant will not know their allocation in the study. Participants in the intervention group will have their blood samples tested on the Avantect test as soon as possible, where "detected" results will be shared with participants and their General Practitioner to allow for further diagnostic investigation (MRI or CT scan). Participants in the control group will receive the current standard of care for diabetes management, and their blood samples will be used for potential future Avantect testing and/or future research. Participants will attend three study visits during a 12-month period, and provide a blood sample (30 ml) at each visit.

### What are the possible benefits and risks of participating?

#### Benefits:

Improving care for people with a new diagnosis of type 2 diabetes by detecting pancreatic

cancer early when it is still curable. If allocated to the intervention group participants will learn if the Avantect test has returned a “detected” result suggesting the possible presence of pancreatic cancer, and will have the opportunity to undergo further assessment or treatment at an earlier stage when more treatable. Data collected from the study will help doctors better understand how the Avantect test can help identify people at risk of pancreatic cancer in the future.

**Risks:**

Related to blood being taken – very rare, minor and short-term bruising/ discomfort or scratching sensation when the needle goes in.

related to the Avantect test – possible false positive or false negative results. False-negative results would not detect pancreatic cancer and could cause false reassurance, delaying diagnosis and treatment. False positive results may lead to imaging of pancreas when no pancreatic cancer is present. Only a small percentage of false positives is expected. In the event of incidental findings, the participant would be informed of such findings and any follow-up recommendations.

Related to MRI – Participants may experience some discomfort. Some people, especially those who tend to feel uncomfortable in small or closed spaces, may feel “closed in” and become anxious while in the scanner. The magnetic field used in MRI scanning may harm people who have metal in their bodies (pacemakers, neurostimulators, certain clips, or staples from surgery). MRI uses a contrast dye called gadolinium that may cause skin irritation, bleeding, and/or infection. The dye may increase the risk of a rare kidney disease for people with pre-existing kidney failure. In rare cases, an allergic reaction to the contrast agent might occur. If the MRI is contraindicated, participants would receive a CT pancreas scan instead.

Related to CT scan – ionising radiation may cause cancer many years or decades after the exposure. 50% of the population is likely to develop one of the many forms of cancer at some stage during our lifetime. Taking part in this study will increase the chances of this happening to you by about 0.4%. CT scans also use the contrast dye gadolinium which could cause rare allergic reactions. Scans may also detect other incidental findings, such as cysts that are not cancer and may require attention.

Where is the study run from?

Primary Care – GP practices and Specialist Diabetes Service Centres (UK)

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

February 2023 to February 2032

Who is funding the study?

ClearNote Health (USA)

Who is the main contact?

Kasia Anson-Wisniewska, K.Ansan-Wisniewska@soton.ac.uk

<https://www.cancerresearchuk.org/about-cancer/find-a-clinical-trial/a-study-looking-at-a-new-blood-test-to-spot-pancreatic-cancer-earlier-safe-d>

## Contact information

**Type(s)**

Public

**Contact name**

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Scientific

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## **Additional identifiers**

### **Clinical Trials Information System (CTIS)**

Nil known

### **Integrated Research Application System (IRAS)**

326332

### **Protocol serial number**

CPMS 56822

## **Study information**

### **Scientific Title**

SAFE-D: Surveillance of pAncreatic health aFter diabEtes Diagnosis: a randomised trial to evaluate the cfDNA pancreatic cancer test (Avantect) in the early detection of pancreatic cancer in patients with newly diagnosed diabetes mellitus

## **Acronym**

SAFE-D

## **Study objectives**

A new diagnostic blood test (Avantect) is able to detect pancreatic cancer early in patients diagnosed with type 2 diabetes in the last 6 months.

## **Ethics approval required**

Old ethics approval format

## **Ethics approval(s)**

Approved 26/02/2025, East Midlands - Leicester South Research Ethics Committee (Health Research Authority, 2 Redman Place, Stratford, London, E20 1JQ, UK; +44 (0)207 104 8193/+44 (0)207 104 8079; Leicestersouth.rec@hra.nhs.uk), ref: 25/EM/0016

## **Study design**

Interventional randomized controlled trial

## **Primary study design**

Interventional

## **Study type(s)**

Diagnostic

## **Health condition(s) or problem(s) studied**

Diabetes

## **Interventions**

This is a prospective, single-blinded interventional randomised multicentre study. Blood samples will be collected at three separate timepoints over 12 months to evaluate the Avantect pancreatic cancer test. State-Trait Anxiety Inventory (STAI) questionnaires and routine clinical data will also be used for the study. The study will initiate with a 6-month pilot phase recruiting up to 800 participants to assess recruitment feasibility and strategies, followed by Stage 1 (recruiting an additional 5,600 participants) and Stage 2 (recruiting an additional 8,600 participants).

## **Aims:**

To determine:

1. Whether it is feasible to recruit individuals diagnosed with type II diabetes within the last 6 months to a clinical trial investigating a novel diagnostic blood test for pancreatic cancer at a fast enough rate (Pilot)
2. Whether the sensitivity and specificity of the Avantect test are sufficient, and that its use results in an acceptable improvement in the proportion of diagnosed pancreatic cancers that are considered resectable (stage I/II)

Where the research will take place:

In Primary Care setting: Up to 3,000 GP practices and up to 200 Specialist Diabetes Service Centres (SDSC).

### Identification and approach:

Participants will be identified at Patient Identification Centres (PICs). These will be GP practices or SDSCs where newly diagnosed diabetic patients are referred to for support and education sessions. Staff at GP practices will search patient electronic health records (EHC) and SDSCs staff will screen available SDSC medical records for eligible patients. Participants will also be identified by the commercial platform (EMIS) that will search EHCs at their connected GP practices. Suitable potential participants will be invited to the study by text message, email or letter with a link to the study website where they can access more study information, the Patient Information Sheet, contact details for the research team and the booking system for selecting a convenient location for the first study visit. The study will be advertised at participating GP practices and SDSCs, and promoted within diabetes and pancreatic cancer communities.

### Research visits:

**Baseline (T0) – within 6 months from type II diabetes diagnosis**

Participants will attend the first research visit at a location of their choice (GP recruitment hub, NIHR Research Delivery Network recruitment hub or SDSC hub) where they can discuss the study further with a member of the research team before consenting to take part. Blood samples (up to 30mL) will be collected from the participant, medical history and short State-Trait Anxiety Inventory (STAI) questionnaire completed, and height, weight and waist measurements taken. The next study visit (T1) will be booked with the participant via the online booking system on the SAFE-D study website. After the visit, blood samples will be shipped to the WISH Laboratory in Southampton, where patients will be randomised to the intervention or control arm of the study and the sample processed and stored.

**T1 – 6 months from T0**

Participants will attend the T1 research visit, where blood samples (up to 30 ml) will be collected, medical history and short STAI questionnaire completed, and weight and waist measurements taken. Eligibility will be re-confirmed, and in case participants have been diagnosed with any cancer since the last visit, they will be withdrawn from the study. The next study visit (T2) will be booked with the participant via the online booking system on the SAFE-D study website. After the visit, blood samples will be shipped to the WISH Laboratory in Southampton for processing and storage.

**T2 – 12 months from T0**

Participants will attend the T2 research visit, where blood samples (up to 30 ml) will be collected, medical history and short STAI questionnaire completed, and weight and waist measurements taken. Eligibility will be re-confirmed, and in case participants have been diagnosed with any cancer since the last visit, they will be withdrawn from the study. After the visit, blood samples will be shipped to the WISH Laboratory in Southampton as above.

**T3-Follow up (36 months from T0)**

On 3 occasions during the study, the study team will remotely collect data from the cancer registry and mortality registry to see if participants have been diagnosed with any cancers, record details of and treatments for those cancers, and confirm whether participants are still alive. On these three occasions, only registries for patients within the 36-month follow-up period will be searched. Patient will therefore have up to 3 registry searches during their study participation. With permission, we will also contact some of our participants to gather more information relating to the health questionnaire.

### **Intervention Type**

Other

## Phase

Not Specified

## Primary outcome(s)

1. The sensitivity of the Avantect test in detecting PC is measured as the percentage of participants with PC diagnosed who have an Avantect “detected” result (within the intervention arm) at 6 months after T1, and after 3-year follow-up data has been collected for all participants.
2. Specificity of the Avantect test in ruling out PC is measured as the percentage of participants without PC diagnosed who have one or more Avantect “not detected” results and no Avantect “detected” results (within the intervention arm) at 6 months after T1, and after 3-year follow-up data has been collected for all participants.
3. The resectability rate of PC is measured as the percentage of PCs deemed resectable by the study MDT (compared between arms) at 6 months after T1, and after 3-year follow-up data has been collected for all participants.

## Key secondary outcome(s)

1. Pancreatic cancer stage shift is measured as the percentage of PCs diagnosed at stage I/II (compared between arms) at 6 months after T1, and after 3-year follow-up data has been collected for all participants.
2. Positive Predictive Value (PPV) of the Avantect test for detecting PC is measured as the percentage of individuals with an Avantect “detected” result who have PC diagnosed (within the intervention arm) at 6 months after T1, and after 3-year follow-up data has been collected for all participants.
3. Negative Predictive Value (NPV) of the Avantect test for ruling out PC is measured as the percentage of individuals with no Avantect “detected” test results who have no diagnosis of PC (within the intervention arm) at 6 months after T1, and after 3-year follow-up data has been collected for all participants.
4. Resection of PC is measured as the percentage of individuals with PC who underwent resection (compared between arms) at 6 months after T1, and after 3-year follow-up data has been collected for all participants.

## Completion date

29/02/2032

## Eligibility

### Key inclusion criteria

1. 50 – 84 years of age at the time of enrolment (within a year of birth, not month of birth)
2. Haemoglobin A1c (HbA1c)  $\geq 48$  or 6.5% and/or confirmed type II DM diagnosed within the last 180 days (+20 days flexibility allowance)
3. Willing to provide up to 30 mL of blood for each study visit
4. Willing and eligible to undergo MRI scan (or CT scan if MRI is contraindicated)
5. Understands the study process and is willing to take part in the study and sign the informed consent form

### Participant type(s)

Patient

### Healthy volunteers allowed

No

**Age group**

Mixed

**Lower age limit**

50 years

**Upper age limit**

84 years

**Sex**

All

**Key exclusion criteria**

1. Prior type I or type II DM diagnosis >6 months
2. A history of pancreatic cancer, pancreatic neuroendocrine tumour (pNET) or Pancreatitis
3. Under investigation for pancreatic cancer/ pancreatic cyst
4. Any known pancreatic surgery (not including ERCP), or other major surgery requiring anaesthesia within 3 months
5. Any invasive solid or haematological cancer in the past 3 years, including cancer recurrence after treatment in the last 3 years
6. Current chronic or acute oral or systemic steroid use within 3 months of initial HbA1c or diabetes diagnosis (estimate rather than accurate)
7. Blood transfusion within 1 month
8. Solid organ transplant recipient
9. Currently pregnant
10. Needing dialysis

**Date of first enrolment**

03/03/2025

**Date of final enrolment**

29/02/2028

**Locations****Countries of recruitment**

United Kingdom

England

**Study participating centre**

**Southampton General Hospital**

Tremona Road

Southampton

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# Sponsor information

## Organisation

University Hospital Southampton NHS Foundation Trust

## ROR

<https://ror.org/0485axj58>

# Funder(s)

## Funder type

Industry

## Funder Name

ClearNote Health

# Results and Publications

## Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study will be available upon request from the Southampton Clinical Trials Unit Data Sharing Release Committee ([sctu@soton.ac.uk](mailto:sctu@soton.ac.uk)).

SCTU is committed to the responsible sharing of clinical study data and samples with the wider research community. Data access is administered through the SCTU Data Release Committee, which will consider requests once the final analysis has been published.

## IPD sharing plan summary

Available on request