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Identifying new tumour markers in oesophageal (gullet) and gastroesophageal (stomach/gullet) cancers

Submission date 12/08/2022	**Recruitment status** No longer recruiting	[X] Prospectively registered [X] Protocol [_] Statistical analysis plan [X] Results [_] Individual participant data
Registration date 19/08/2022	**Overall study status** Completed	
Last Edited 28/03/2025	**Condition category** Cancer	

Plain English summary of protocol

Background and study aims
People with oesophageal (gullet) and gastroesophageal (stomach/gullet) cancers receive treatments such as, chemotherapy, radiotherapy and surgery, but often they are not effective in curing the cancer. Scientists and doctors are working together to make develop new immunotherapy treatments, immunotherapy helps the immune system fight cancer. There are some immunotherapy treatments for oesophageal and gastroesophageal cancers, but they only work in a small number of people.
There are markers in the cancer cells which can sometimes tell which immunotherapy will work best for a person, called neoantigens. To be able to develop more immunotherapy treatments we first have to find out which neoantigens are in oesophageal and gastroesophageal cancers. This study will collect cancer tissue samples from people with oesophageal and gastroesophageal cancer. Scientists at Platinum Informatics Ltd will look at the cancer tissue to identify neoantigens.

Who can participate?
• 18 years of age or older
• Willing and able to provide written informed consent
• Histologically confirmed oesophageal or gastroesophageal junctional adenocarcinoma.

What does the study involve?
Participants will be asked to provide tissue biopsy samples of their gullet or gullet/stomach cancer tumours. These samples will be taken when participants are already having procedures carried out for their medical care for their cancer. A small number of participants may be asked if they agree to having an endoscopy specifically to collect biopsy samples for the research study if they are not due to have a medical care procedure. Participants will also give a blood sample when their tissue biopsy sample is collected and 18 weeks later. Participants will be followed up for 18 weeks where details of how their condition progresses will be collected. Participants may also have optional biopsy samples taken on 3 more occasions and optional blood samples on 2 more occasions during the 18 week follow-up period. These will be taken if a participant is having a medical care procedure which would allow this.

What are the possible benefits and risks of participating?
The trial may not immediately benefit the participant, but if the the trial may identify new neoantigens which may lead to targeting of treatments for this group of participants.
Risks:
The tissue biopsy samples will be collected wherever possible when the participants are undergoing biopsy
procedures as part of their routine care. If that is not possible, then the biopsies will be carried out for the study
purpose only. Collecting these tissue samples is considered safe, but the possible risks include:
- Bleeding at the time the samples are removed.
- Infection at the site where the samples are removed.
- Pain at the time the samples are removed.
These complications happen 1 in 1000 endoscopic biopsies and are usually minor and short-lived (discomfort or
minor bleeding at biopsy sites).

Where is the study run from?
University of Dundee (UK)

When is the study starting and how long is it expected to run for?
December 2021 to November 2023

Who is funding the study?
Platinum Informatics Ltd (UK)

Who is the main contact?
Russell Petty, r.petty@dundee.ac.uk

Contact information

Type(s)
Scientific, Principal investigator

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Additional identifiers

Clinical Trials Information System (CTIS)
Nil known

Integrated Research Application System (IRAS)
309452

Protocol serial number
2-014-22, IRAS 309452

Study information

Scientific Title
Proteomic Profiling of Oesophageal Adenocarcinoma Neoantigens

Acronym
PROTEAN

Study objectives
To characterise neoantigen profiles of oesophageal or gastroesophageal junction adenocarcinomas

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 24/08/2022, Wales REC 6 (Health and Care Research Wales Support and Delivery Centre, Castlebridge 4, 15-19 Cowbridge Road East, Cardiff, CF11 9AB, UK: +44 2920 230457; Wales.REC6@wales.nhs.uk), ref: 22/WA/0223

Study design
Observational study with specimen collection

Primary study design

Observational

Study type(s)
Screening

Health condition(s) or problem(s) studied
Oesophageal cancer

Interventions
Medical history
• To confirm eligibility
• Location of primary tumour
• Histological and molecular diagnosis details – Human epidermal growth factor receptor 2 (HER2), PD-L1 testing
• Tumour stage according to AJCC/UICC version 8 for cancers of the oesophagus and stomach
• Stage and location of metastases
• Progression assessment – RECIST Criteria 1.1
• Medical co-morbidities
• Smoking history

Demographics
• Age, gender, body mass index

Concomitant medication
• Details of any scheduled or prior cancer treatment

Biopsy
• A fresh tumour biopsy will be collected:
o Prior to the commencement of any subsequent scheduled anticancer treatments*; OR
o After the completion of the latest line of anticancer treatment*; OR
o During follow up when a participant is not receiving or is between scheduled anti-cancer treatments*.
*Anti-cancer treatments excluding surgery
• The biopsy may be obtained from any site of tumour, primary or metastatic as considered the most appropriate and feasible at the time of the procedure.
• Biopsies from more than one tumour site may be obtained at the same time point and procedure, but this is not mandatory, only biopsy of a single tumour site is required for study participation.
• Up to 10 biopsies, approximately 2mm each, will be taken at each timepoint and if tumour biopsy is being undertaken by endoscopy 2 biopsies approximately 2mm each of adjacent normal oesophageal or gastric mucosa.
• As far as possible, tumour biopsies for the study will be obtained during routine clinical care procedures e.g. endoscopy, surgery, stenting. However, where this is not possible, consent will be requested for study specific procedures for biopsy to obtain tumour material.
• Participants may provide additional consent for further biopsies during further routine clinical care procedures to be taken as an optional part of the study.

Research bloods
• A maximum of 20ml of blood will be collected at each visit.
• Sites which have the facilities to carry out peripheral blood mononuclear cell preparations (PBMC) analysis will process and complete analysis on site. These samples will be processed at

sites for PBMCs.
• Details of sample collection, processing, storage and transfer will be provided in PROTEAN Clinical Sample Handling Manual.
Outcome assessment
• Tumour response status according to RECIST v1.1
• Overall Survival
• Adverse events (AE)

The total duration of observation and follow up is 18 weeks.

Intervention Type
Other

Primary outcome(s)
Neoantigen profiles for individual patients with oesophageal or gastroesophageal junction adenocarcinomas measured by liquid chromatography-tandem mass spectrometry (LC-MS/MS) of tumour biopsies taken at Day 1 and a maximum of 3 further optional research biopsy samples may be collected between day 1 and week 18, timings will vary for participants for these biopsies to fit in with their standard care procedures.

Key secondary outcome(s))
1. Proportion of patients in which neoantigen profiles are successfully generated measured as percent of patients in the study for whom neoantigen profiles are obtained by liquid chromatography-tandem mass spectrometry (LC-MS/MS) of their tumour biopsies taken at Day 1 and a maximum of 3 further optional research biopsy samples may be collected between day 1 and week 18, timings will vary for participants for these biopsies to fit in with their standard care procedures.
2. Characterise pre-existing T cell responses to identified neoantigens measured by ex vivo IFN Gamma ELISPOT assays on peripheral blood mononuclear cells isolated from patients stimulated with synthesized neoepitope peptides identified from patient's tumour biopsies
3. Correlate objective response rate, disease control rate, progression free survival and overall survival with neoantigen profiles measured by analysis of participants grouped by any identified common features of neoantigen profiles of tumours
4. Genomic and transcriptomic analysis and neoantigen validation measured by Whole genome sequencing and RNA sequencing of tumour biopsies and compared to neoantigen profiles of individual patients with oesophageal or gastroesophageal junction adenocarcinomas measured by liquid chromatography-tandem mass spectrometry (LC-MS/MS) of tumour biopsies

Completion date
11/10/2023

Eligibility

Key inclusion criteria
1. 18 years of age or older
2. Willing and able to provide written informed consent
3. Histologically confirmed oesophageal or gastroesophageal junctional adenocarcinoma.
4. Able to provide a tumour biopsy sample as per protocol requirements

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 years

Sex
All

Total final enrolment
86

Key exclusion criteria
1. Concurrent systemic anti-cancer treatment and/or radiotherapy (participants undergoing cancer surgery are eligible.)
2. Any significant medical condition that in the opinion of the Principal Investigator (PI) would impair the ability of the participant to complete the requirements of the protocol

Date of first enrolment
01/09/2022

Date of final enrolment
31/03/2023

Locations

Countries of recruitment
United Kingdom

England

Northern Ireland

Scotland

Wales

Study participating centre
Ninewells Hospital
Ninewells Avenue
Dundee
United Kingdom
DD1 9SY

Study participating centre
Glasgow Royal Infirmary
84 Castle Street
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G4 0SF

Study participating centre
University Hospital Southampton NHS Foundation Trust
Southampton General Hospital
Tremona Road
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SO16 6YD

Study participating centre
United Leeds Teaching Hospitals NHS Trust
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Great George Street
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LS1 3EX

Sponsor information

Organisation
University of Dundee

ROR
https://ror.org/03h2bxq36

Funder(s)

Funder type
Industry

Funder Name
Platinum Informatics Ltd

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
Other unpublished results			29/01/2025	No	No
Participant information sheet	version 1	17/05/2022	19/08/2022	No	Yes
Participant information sheet	version 2	19/08/2022	05/09/2022	No	Yes
Protocol file	version 1	17/05/2022	19/08/2022	No	No