Tumour-specific fluorescence-guided surgery for gastroenteropancreatic neuroendocrine neoplasms using PHT001: a phase 1, open-label, single-arm, dose-escalation study

No registrations found.

Ethical review	Not applicable
Status	Pending
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON26268

Source
NTR

Brief title
PHOTON

Health condition

Gastroenteropancreatic neuroendocrine neoplasms

Sponsors and support

Primary sponsor: Amsterdam UMC
Source(s) of monetary or material Support: Cancer Center Amsterdam, Amsterdam Gastroenterology Endocrinology Metabolism

Intervention

Outcome measures

Primary outcome

1. No. of (serious) adverse events and suspected unexpected serious adverse reactions;
2. Identify the dose with the optimal tumour-to-background ratio;
3. Ex vivo validation of targeted uptake by tumour tissue by histopathology.

Secondary outcome

1. Comparison of no. of (additionally) identified (metastatic) GEP-NENs using intraoperative fluorescent imaging compared to preoperative 68Ga-DOTATATE PET imaging and histopathological examination;
2. Complete removal of tumour tissue.

Study description

Background summary

Rationale: Currently, preoperative imaging of GEP-NENs is conducted using 68Ga-DOTATATE, which makes use of the overexpressed somatostatin type 2 receptors (SSTR-2) on cell surfaces of GEP-NENs. PHT001 is proved to be able to clearly delineate tumour boundaries in vitro on human biospecimens of NENs. Successful implementation PHT001 in clinical practice is therefore expected to aid in adequate and complete removal of tumour cells, identify malignant lymph nodes and distant metastases.

Objective: The aim of this study is to produce and implement a SSTR-2 targeted fluorescent tracer and assess its safety and best dose to accurately identify gastroenteropancreatic neuroendocrine neoplasms during surgical resection.

Study design: Phase 0 microdosing study.

Study population: Patients undergoing surgery for GEP-NEN.

Intervention: Patients will receive a bolus injection of MMC(IRDye800CW)-TOC.

Main study end-points:
• No. of (serious) adverse events and suspected unexpected serious adverse reactions;
• Identify the dose with the optimal tumour-to-background ratio;
• Ex vivo validation of targeted uptake by tumour tissue by histopathology.

Study objective

MMC(IRDye800CW)-TOC is safe to inject in patients for intraoperative visualization of

gastroenteropancreatic neuroendocrine neoplasms

Study design

Primary outcomes:
1. SAEs will be assessed within 30 days after administration of the IMP, and will be graded according to CTCAR v5.0;
2. Optimal dose will be assessed after acquiring and analyses of images using ImageJ software;
3. Ex vivo validation will be assessed by comparing tissue slides with H&E, anti-SSTR2 and fluorescence microscopy using the Nikon Ti2 microscope or Odyssey CLx device.

Secondary outcomes:
1. Comparison of new lesions will be made postoperatively by correlating intraoperative finding with the pre-operative PET-CT images;
2. Complete removal of tumour tissue will be assessed by the pathologist postoperatively.

The overall follow-up period is 30 days.

Intervention

Single bolus injection of PHT001

Contacts

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Eligibility criteria

Inclusion criteria

• Patients undergoing surgery for a primary GEP-NEN (stomach, duodenum, ampulla of Vater,

pancreas, jejunum, ileum, colon or rectum), of any stage, grade and intent (i.e. curative/palliative) or metastases of a GEP-NEN;
• SSTR-2 positive disease, as proven by a DOTATATE PET scan pre-operatively (conducted at location AMC and part of standard care);
• Age of 18 years and older;
• Written informed consent.

Exclusion criteria

• NEN, not meeting the inclusion criteria (non-GEP-NEN, unknown location);
• Pregnant or breast-feeding women;
• Known hypersensitivity to the investigational medicinal product (IMP) or any of its components;
• Patients with an allergic/infusion reaction to 1 mg of TOC test dose of the unlabelled TOC;
• Patients with known allergies to intravenous radiographic contrast agents;
• Patients who have not provided a signed informed consent form to participate in the study, prior to the start of any protocol related activities;
• Patients who, within the last 30 days, have participated in any clinical study of a therapeutic agent which may interfere with the safety or efficacy analysis of the IMP;
• Serious non-malignant disease (e.g. psychiatric infectious, autoimmune, metabolic, renal, hepatic, cardiovascular or hematological), that may interfere with the objectives of the study or with the safety of the subject, as judged by the investigator;
• A marked baseline prolongation of QT/QTc interval (e.g., repeated demonstration of a QTc interval >450 ms);
• A history of additional risk factors for torsade de pointes (e.g., heart failure, hypokalaemia, family history of Long QT Syndrome);
• The use of concomitant medications that prolong the QT/QTc interval.

Study design

Design

Study type:	Interventional
Intervention model:	Other
Allocation:	Non controlled trial
Masking:	Open (masking not used)
Control:	N/A , unknown

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-04-2022
Enrollment:	15
Type:	Anticipated

IPD sharing statement

Plan to share IPD: No

Ethics review

Not applicable

Application type:	Not applicable

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
NTR-new	NL9298
Other	METC AMC : Pending

Study results