Predictive markers for individualized biology-driven treatment for esophageal cancer

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Ethical review	Approved WMO
Status	Recruiting
Health condition type	Gastrointestinal neoplasms malignant and unspecified
Study type	Observational invasive

Summary

ID

NL-OMON47729

Source
ToetsingOnline

Brief title
Predictive markers in esophageal cancer treatment

Condition

- Gastrointestinal neoplasms malignant and unspecified

Synonym
esophageal cancer, esophageal carcinomas

Research involving
Human

Sponsors and support

Primary sponsor: Vrije Universiteit Medisch Centrum
Source(s) of monetary or material Support: KWF kankerbestrijding;E 174.800;-

Intervention

Keyword: biomarkers, chemo-radiotherapy, esophageal cancer, response

Outcome measures

Primary outcome

Study the relationship between genome-wide genetic and epigenetic alterations as well as characteristics of the tumor immune microenvironment of esophageal carcinomas and the association with disease free and progression free survival in order to identify biomarkers for response to treatment.

Secondary outcome

Study the relationship between genome-wide genetic and epigenetic alterations as well as characteristics of the tumor immune microenvironment of in esophageal carcinomas and the association to prognosis. Thereby we hope to identify a molecular alteration or profile that is associated with a high risk of distant metastasis.

Study description

Background summary

Esophageal cancer (EC) is the eight most common cancer and one of the leading causes of cancer related death in the western world. Worldwide approximately 460.000 patients are diagnosed annually and incidence rates have increased 6-fold in the last 30 years. EC has one of the highest mortality rates among solid tumors with a 5-years survival rate of only 10-15%. One important determinant of the poor survival is that treatment response is unsatisfactory. Treated patients suffer from local recurrence and distant metastasis while no signs of advanced or metastatic disease are present at initial diagnose . Biomarkers that assist in predicting risk of progressive disease and poor response will prevent major surgical procedures in patients with short life expectancy that might have more benefit from chemotherapeutic treatment. Difference between patients in tumor behavior and respons to therapy might be

explained by differences in genetic and epigenetic alterations as well as the tumor immune microenvironment that influence tumor biology. We hypothesize that by unraveling genetic and epigenetic alterations involved in biological processes that are important for sensitivity to chemo-radiotherapy, we will identify biomarkers for response to treatment that might guide individualized-biology driven esophageal cancer treatment that will increase survival.

Study objective

This project aims to unravel genetic and epigenetic alterations as well as characteristics of the tumor immune microenvironment that influence important biological processes in esophageal cancer and determine response or resistance to chemo-radiotherapy. These alterations might serve as biomarkers for response to therapy and tailor treatment decisions.

Study design

This is a prospective cohort study in which we collect biopsy specimens from normal and tumor tissue of all patient that undergo endoscopic ultrasound for tumor staging during diagnostic work-up, before treatment is started. Furthermore we collect blood samples before start and after finishing of the treatment. The patient will be treated according to the current (international) treatment standard in VUmc. Detailed information on clinicopathologic characteristics such as tumor stage, treatment, response rate, pathological response to chemo-radiotherapy after surgery, disease or progression free survival will be collected. The biopsy specimen will be used for DNA- and RNA isolation for genetic and epigenetic analysis as well as immune analyses by immune histochemistry and flow cytometry.

Study burden and risks

For biopsy purposes a different endoscope is necessary. This will cause minimal physical discomfort for the patient because the patient is sedated during the procedure. There is only a small risk of complication, which includes bleeding at the biopsy side that may or may not require treatment and perforation of esophagus which may require surgical repair.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

All patients with esophageal cancer that undergo endoscopic ultrasound for disease stageing.

Exclusion criteria

Patients with PT-INR/PTT >1.5

Study design

Design

Study type: Observational invasive

Masking:	Open (masking not used)
Control:	Uncontrolled

Primary purpose:	Diagnostic

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	09-07-2013
Enrollment:	180
Type:	Actual

Ethics review

Approved WMO Date:	22-05-2013
Application type:	First submission
Review commission:	METC Amsterdam UMC
Approved WMO Date:	05-06-2014
Application type:	Amendment
Review commission:	METC Amsterdam UMC
Approved WMO Date:	03-11-2017
Application type:	Amendment
Review commission:	METC Amsterdam UMC
Approved WMO Date:	06-02-2018
Application type:	Amendment
Review commission:	METC Amsterdam UMC
Approved WMO Date:	25-10-2019
Application type:	Amendment
Review commission:	METC Amsterdam UMC
Approved WMO Date:	19-02-2020
Application type:	Amendment
Review commission:	METC Amsterdam UMC

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
CCMO	NL41907.029.12