Genetic variations as predictors of outcome and toxicity in non-small-cell lung cancer patients undergoing chemoradiation or chemotherapy with platinum agents.

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Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Miscellaneous and site unspecified neoplasms benign
Study type	Observational invasive

Summary

ID

NL-OMON47255

Source
ToetsingOnline

Brief title
Pharmacogenetics lung cancer - PGx-Lung cancer

Condition

- Miscellaneous and site unspecified neoplasms benign
- Respiratory tract neoplasms

Synonym
lung cancer, Non-small-cell lung cancer

Research involving
Human

Sponsors and support

Primary sponsor: Sint Antonius Ziekenhuis
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: Chemoradiation, Chemotherapy induced toxicity, Genetic variants, NSCLC

Outcome measures

Primary outcome

Esophagitis (grade 1-4), nephrotoxicity (grade 1-4), neurotoxicity (grade 1-4)

and genetic markers. All toxicities will be graded according to *National

Cancer Institute Common Terminology Criteria for Adverse Events* (NCI CTCAE),

v4.0.

Secondary outcome

Survival time is defined as survival from date of diagnosis in months. Besides,

patient-reported outcomes and quality of life will be compared at 4 points in

time (before treatment, after 3 months of treatment, after 6 months and 1 year

follow-up). Skeletel muscle mass measured on available (PET)CT scans.

Study description

Background summary

Lung cancer is the most common malignancy worldwide. Clinical factors including age, performance status and disease stage influence the likelihood of benefit from radiation and/or chemotherapy. However, the hypothesis is that the genetic profile of individual patients is an independent predictor of response and toxicity. These findings might provide opportunities to personalize therapeutic strategies.

Study objective

The objective of this study is to identify genetic variations associated with clinical response and toxicity in non-small cell lung cancer patients (NSCLC) undergoing chemoradiation or chemotherapy with platinum agents (carboplatin, cisplatin). The aim of this study is to assess whether TGF*1 polymorphisms are associated with severe esophagitis in NSCLC patients receiving chemoradiation as well as to assess the association between ERCC1, SLC22A2 and nephro- and neurotoxicity in patients treated with platinum agents. In addition, the association between genetic variations and toxicity for CYP2C19, tPA, ACE, EGFR, ENG, TRAF3, ITGB2, PTGS2, IL1A, IL8, TNF, TNFRSF1B, MIF, NOS3, PRKCE, TNFSF7 (chemoradiation) and NAT2, EPHX1, eIF3*, SLC47A1, GSTT1 (chemotherapy with platinum agents) will be investigated. Secondary objective(s) include evaluating survival rates, the correlation of delay, switching and discontinuation of treatment as well as the patient-reported outcome measures (quality of life) of radiation and/or chemotherapy in NSCLC patients with and without genetic variants. In addition, to determine the association between skeletel muscle mass and occurence of chemotherapy related toxicities.

Study design

Retrospectively and prospectively nested case-control study. Medical charts will be reviewed and patients will be asked to donate blood samples during regular hospital visits as part of regular care. Besides, patients will be asked to fill out the EQ-5D, EORTC QLQ-C30, EORTC QLQ-LC13 and EORTC QLQ-CIPN20 questionnaires at 4 points in time during 1 year follow-up.

Study burden and risks

The burden for patients participating in the study is that blood samples will be collected during regular care. This does not imply an additional venipuncture. Besides, patients will be asked to complete questionnaires to a maximum of 4 points in time; before chemoradiation/chemotherapy, after 3 months of treatment, after 6 months and 1 year follow-up.

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

* Diagnosed with NSCLC (stage II-IV)
* Age *18 year
* Received or starting with chemoradiation or chemotherapy with platinating agents (carboplatin, cisplatin)

Exclusion criteria

* Unable to give informed consent
* Patients with cognitive impairment or those who are not able to read or write Dutch (because of difficulties in completing questionnaires)

Study design

Design

Study type:	Observational invasive
Intervention model:	Other
Allocation:	Non-randomized controlled trial

Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Treatment

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	16-02-2016
Enrollment:	350
Type:	Actual

Ethics review

Approved WMO Date:	17-08-2015
Application type:	First submission
Review commission:	MEC-U: Medical Research Ethics Committees United (Nieuwegein)
Approved WMO Date:	28-01-2016
Application type:	Amendment
Review commission:	MEC-U: Medical Research Ethics Committees United (Nieuwegein)
Approved WMO Date:	02-03-2017
Application type:	Amendment
Review commission:	MEC-U: Medical Research Ethics Committees United (Nieuwegein)
Approved WMO Date:	13-09-2017
Application type:	Amendment
Review commission:	MEC-U: Medical Research Ethics Committees United (Nieuwegein)
Approved WMO Date:	13-12-2017
Application type:	Amendment

Review commission:	MEC-U: Medical Research Ethics Committees United (Nieuwegein)
Approved WMO Date:	12-09-2018
Application type:	Amendment
Review commission:	MEC-U: Medical Research Ethics Committees United (Nieuwegein)
Approved WMO Date:	18-12-2018
Application type:	Amendment
Review commission:	MEC-U: Medical Research Ethics Committees United (Nieuwegein)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

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

ID: 27534
Source: NTR
Title:

In other registers

Register	ID
CCMO	NL53736.100.15
OMON	NL-OMON27534