Adoptive TIL therapy in combination with chemoimmunotherapy in advanced NSCLC patients

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This study has been transitioned to CTIS with ID 2024-517939-53-00 check the CTIS register for the current data. Primary: To evaluate the safety and toxicity of TIL therapy in patients with metastatic NSCLC preceded by chemotherapy with or without...

Ethical review	Approved WMO
Status	Recruiting
Health condition type	Respiratory tract neoplasms
Study type	Interventional

Summary

ID

NL-OMON53375

Source
ToetsingOnline

Brief title
TIL in NSCLC

Condition

- Respiratory tract neoplasms

Synonym
non-small cell lung cancer

Research involving
Human

Sponsors and support

Primary sponsor: Leids Universitair Medisch Centrum
Source(s) of monetary or material Support: afdelingsfonds

Intervention

Keyword: Feasibility study, Non-small cell lung cancer, Phase 1, T-cell therapy

Outcome measures

Primary outcome

Safety and toxicity of TIL with or without Pembrolizumab after carboplatin

based chemotherapy according to CTCAE 5.0 criteria.

Secondary outcome

N/A

Study description

Background summary

Despite the introduction of targeted therapies and immunotherapies in the treatment armamentarium of non-small cell lung cancer, overall survival rates are poor. Approximately 20% 5 year survival can be expected with modern treatment algorithms.. Adoptive T-cell therapy has recently shown to improve survival as compared to SoC treatment in advanced melanoma (Haanen,2022). Also, phase I studies in NSCLC have shown that TIL therapy in pretreated advanced NSCLC is feasible and capable of inducing long term responses (Creelan, 2021)

Study objective

This study has been transitioned to CTIS with ID 2024-517939-53-00 check the CTIS register for the current data.

Primary: To evaluate the safety and toxicity of TIL therapy in patients with metastatic NSCLC preceded by chemotherapy with or without immunotherapy. Secondary: Clinical response according to RECIST 1.1 criteria and immune response criteria (irRC). Progression free survival (PFS) and overall survival (OS). Feasibility of study procedure defined by the number of patient that undergo a resection of a tumor lesion and eventually receive TIL infusion. Several immunological parameters will be evaluated to answer translational questions.

Study design

A phase I single-institution, single-arm intervention study using a 3+3 design

Intervention

Patients will receive standard chemotherapy consisting of carboplatin AUC 5, d1 plus paclitaxel 175 mg/m2, d1, q3 weeks as an IV infusion for a maximum of 3 cycles. Patients in the second cohort will receive in addition to chemotherapy pembrolizumab q 3 weeks as an IV infusion for a maximum of 2 years. Starting on day 7 after the first course of chemotherapy patients will receive tumor infiltrating T cell infusions q 3 wks for 2 cycles.

Study burden and risks

Experience with the ten patients treated in the context of protocol P04.085 and the 20 melanoma patients treated with TIL that are obtained using exactly the same protocol, revealed that there are no immediate or long-term toxic or adverse effects. We conclude that the risk of the treatment protocol described here may be considered very limited. Patients with progressive NSCLC have a poor prognosis for which further improvement of alternative treatment options are necessary. The chance to obtain clinical benefit in these patients, that otherwise have a bad prognosis, justifies for the burden and possible toxicities.

Contacts

Public
Leids Universitair Medisch Centrum

Albinusdreef 2
Leiden 2333ZA
NL
Scientific
Leids Universitair Medisch Centrum

Albinusdreef 2
Leiden 2333ZA
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

• Age >=18 years
• Presence of measurable stable or progressive disease according to RECIST version 1.1.
• Patients must have histologically confirmed metastatic NSCLC with at least one lesion -primary or metastatic- of sufficient size (> 1 cm in total) amendable for biopsy and/or resection and must be willing to undergo such a procedure for experimental purposes. Furthermore there must be at least one other lesion to monitor response.
• Patients must have radiological stable disease on standard of care first line treatment with at least two courses of single agent immunotherapy or chemoimmunotherapy or progressive disease on or after standard of care first line treatment.
• In case the lung cancer is characterized by an oncogenic driver, patients must have exhausted all targeted therapies and platinum based chemotherapy.
• Patients must have a clinical performance status of ECOG 0 or 1 and an expected life expectancy of at least 3 months.

Exclusion criteria

• Requirement for immunosuppressive doses of systemic corticosteroids (>10 mg/day prednisone or equivalent) or other immunosuppressive drugs within the last 3 weeks prior to start of treatment.
• Patients who have uncontrolled central nervous system (CNS) metastases. Patients who have asymptomatic CNS metastases no greater than 1 cm before resection of a tumor lesion for retrieval of TIL may be eligible.
• All toxicities due to prior non-systemic treatment must have recovered to a grade 1 or less. Patients may have undergone minor surgical procedures or focal palliative radiotherapy (to non-target lesions) within the past 4 weeks, as long as all toxicities have recovered to grade 1 or less.
• Serious acute or chronic illnesses, e.g. active infections requiring antibiotics, bleeding disorders, or other conditions requiring concurrent

medications not allowed during this study.
• Active immunodeficiency disease or autoimmune disease requiring immune suppressive drugs. Vitiligo is not an exclusion criterion.

Study design

Design

Study type: Interventional

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

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	20-12-2023
Enrollment:	15
Type:	Actual

Medical products/devices used

Product type:	Medicine
Generic name:	Somatic cells autologous
Product type:	Medicine
Brand name:	Carboplatin
Generic name:	Carboplatin
Registration:	Yes - NL intended use
Product type:	Medicine
Brand name:	Keytruda
Generic name:	Pembrolizumab
Registration:	Yes - NL intended use
Product type:	Medicine
Brand name:	Taxol
Generic name:	Paclitaxel

Registration:	Yes - NL intended use

Ethics review

Approved WMO Date:	30-06-2023
Application type:	First submission
Review commission:	CCMO: Centrale Commissie Mensgebonden Onderzoek (Den Haag)
Approved WMO Date:	08-12-2023
Application type:	First submission
Review commission:	CCMO: Centrale Commissie Mensgebonden Onderzoek (Den Haag)

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
EU-CTR	CTIS2024-517939-53-00
EudraCT	EUCTR2023-000175-12-NL
CCMO	NL83665.000.23