Oligometastatic directed radiotherapy for patients with castration resistant prostate cancer.

Published: 18-12-2024
Last updated: 18-01-2025

The aim of the study is to investigate the effect of MDRT to the visible lesions in patients with omCRPC (up to 3 metastases and/or local recurrence) while continuing the ongoing systemic treatment. Progression is based on prostate specific membrane...

Ethical review	Approved WMO
Status	Recruiting
Health condition type	Metastases
Study type	Interventional

Summary

ID

NL-OMON57227

Source
ToetsingOnline

Brief title
OLYMPIAN

Condition

- Metastases
- Male genital tract therapeutic procedures

Synonym
metastatic prostate cancer, oligoprogressive castraction resistant prostate cancer

Research involving
Human

Sponsors and support

Primary sponsor: Academisch Medisch Centrum
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: castration resistant, metastasis directed radiotherapy, oligoprogressive, prostate cancer

Outcome measures

Primary outcome

• 6, 12-and 24-months NEST-FS.

• 6- and 12- months rPFS.

Secondary outcome

• Quality of Life (QoL) evaluated using the EORTC QLQ-C30 for health related

QoL and the EORTC PR-25 for prostate symptom specific QoL.

• Acute and late toxicity reported using both physician-reported score (CTCAE

v5) and patient-reported questionnaires (RTOG/EORTC).

• Overall survival (OS).

Study description

Background summary

In patients with metastatic prostate cancer (PCa) who receive androgen deprivation therapy (ADT), the sensitivity to castration will eventually disappear due to the selection of castration-refractory clones. This will lead to the stage of metastatic castration-refractory prostate can-cer (mCRPC), which is incurable and results in a median overall survival of 2-3 years. (1-6)

Treatment options for patients with mCRPC include several systemic agents, such as andro-gen receptor-targeted agents (ARTA), chemotherapy (docetaxel, cabazitaxel) and bone-targeting agents (radium- 223). Clinical progression and, to a lesser extent, biochemical pro-gression traditionally imply a switch to the next line systemic treatment (NEST).

Within patients with mCRPC, there is a subgroup showing oligo-progression, defined as the progression of up to 3 lesions, including both metastatic and/or local relapse. Oligoprogression reflects a heterogeneous treatment response,

which, in turn, reflects the heterogeneity of the clonogenic cells that give rise to mCRPC.(7) Retrospective studies suggest that metastasis-directed radiotherapy (MDRT) to these oligoprogressive lesions delayed the need for NEST.(8-19) Recently, promising results were published on the use of MDRT in the oligopro-gressive mCRPC (omCRPC) setting, with a NEST-free survival (NEST-FS) of 21 months in well-selected patients.(20)

Currently, in The Netherlands, patients with omCRPC are frequently referred and treated with MDRT, but a clear treatment protocol and inclusion/selection criteria are missing. Moreover, the exact benefit of MDRT in patients with omCRPC remains unclear, as prospective evi-dence for MDRT in omCRPC is lacking.

Study objective

The aim of the study is to investigate the effect of MDRT to the visible lesions in patients with omCRPC (up to 3 metastases and/or local recurrence) while continuing the ongoing systemic treatment. Progression is based on prostate specific membrane antigen (PSMA) positron emission tomography (PET) scan. Primary endpoints are NEST-FS and the radiological progression-free survival (rPFS).

Study design

Single-arm prospective nonrandomised phase II trial.

Intervention

All patients eligible for the trial will be discussed at the multidisciplinary urology tumor board. The choice for MDRT will be based on the localization and size of the metastases, the nearby organs-at-risk, technical feasibility, any previous treatment, as well as patient medical history and preferences. The visible lesions (up to 3) will be treated with MDRT with a hypofractionated schedule.

Study burden and risks

Patients will receive MDRT to the visible lesions (up to 3). The side effects of MDRT are very mild and self-limiting. All patients participating in the study will complete toxicity and QoL questionnaires at baseline and during the treatment. In addition, there could be some additional imaging investigation according to the advice of MDO board before inclusion and during follow-up as in case of progression or clinical doubt on metastasis lesion one imaging modality. The treatment protocol and radiotherapy schemes used will be the same as standard of care protocols.

Contacts

Public
Academisch Medisch Centrum

Hanzeplein 1
Groningen 9713 GZ
NL
Scientific
Academisch Medisch Centrum

Hanzeplein 1
Groningen 9713 GZ
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

• Adenocarcinoma of the prostate.
• mCRPC setting, with testosterone level < 50 ng/dl or 1.7 nmol/l.
• Oligoprogressive disease diagnosed on PSMA scan; defined as the progression of pre-existing metastatic disease, and/or the appearance of new metastases and/or the appearance of a local relapse with a maximum of 3 lesions in total.
• Patients currently treated with ADT, whether combined with another systemic treatment such as ARTA, chemotherapy.
• For patients treated with chemotherapy, the course should be completed or stopped before start MDRT.
• In case of treatment with ARTA, a minimal of 3 months response (PSA or clinical response).
• WHO performance status 0-2.

• Age > = 18 years old.
• Patient should be presented at the multidisciplinary tumor board of the local hospital in which the therapy will be given.
• Before patient registration, written informed consent must be given according to ICH/GCO and national/local regulations.

Exclusion criteria

• Serum testosterone level > 50 ng/ml or > 1.7 nmol/l.
• Presence of more than 3 progressive/new metastatic lesions and/or local recurrence (which counts for 1 lesion).
• Active malignancy other than prostate cancer that can potentially interfere with the interpretation of the trial, except non-melanoma skin cancer or non-invasive urothelial cell carcinoma.
• Local recurrence in the prostate after previous radiotherapy.
• Previous treatments (RT, surgery) or comorbidities making new treatment with MDRT impossible.
• Disorder precluding understanding of trial information or informed consent or signing informed consent.
• Evidence of PSMA-negative disease.

Study design

Design

Study phase:	2
Study type:	Interventional
Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Treatment

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	03-01-2025
Enrollment:	30
Type:	Actual

Medical products/devices used

Registration:	No

Ethics review

Approved WMO Date:	18-12-2024
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)

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	NL87430.042.24