Expression of chemokine receptors upon doxorubicin treatment in breast cancer and sarcoma patients.

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To get a better understanding of the kinetics of the expression of CXCR1, CXCR2 and the CXCR1/2 ligands (including IL-8), blood samples of patients with breast cancer or sarcoma will be collected at different timepoints. We expect that with these...

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

Summary

ID

NL-OMON51299

Source
ToetsingOnline

Brief title
Chemokine receptors and anthracyclines

Condition

- Miscellaneous and site unspecified neoplasms benign

Synonym
breast cancer, Sarcoma

Research involving
Human

Sponsors and support

Primary sponsor: Leids Universitair Medisch Centrum
Source(s) of monetary or material Support: NWO grand to J.J.C. Neefjes and R. Arens: NWO zwaartekracht;project nummer 21526 (Neefjes) en 21434 (Arens)

Intervention

Keyword: Cancer, Chemokine receptors, Doxorubicin

Outcome measures

Primary outcome

Determine the CXCR1 and CXCR2 expression on immune cells of cancer patients

prior and after treatment with doxorubicin.

Secondary outcome

Assess the expression of CXCR1 and CXCR2 ligands in the serum of the same

patients.

Study description

Background summary

Earlier experiments in mice and ex vivo in human PBMCs showed that doxorubicin can alter the expression of different chemokine receptors on the surface of immune cells. Furthermore, literature indicates that these chemokine receptors are involved in the migration of immune cells towards the tumor site. Since doxorubicin is a standard treatment modality for breast cancer and sarcoma patients, we would like to determine the effect of doxorubicin treatment on the expression of chemokine receptors on the immune cells in these patients.

Study objective

To get a better understanding of the kinetics of the expression of CXCR1, CXCR2 and the CXCR1/2 ligands (including IL-8), blood samples of patients with breast cancer or sarcoma will be collected at different timepoints. We expect that with these clinical data we can better understand the effect of doxorubicin on the immune system, with the ultimate aim to improve the anti-tumor effectivity of (combination-) treatment with doxorubicin.

Study design

Observational study.

Study burden and risks

We expect the burden and risks associated with participation to be small. A possible minimal risk is pain and hematoma during and/or after blood collection.

Contacts

Public
Leids Universitair Medisch Centrum

Einthovenweg 20
Leiden 2333ZC
NL
Scientific
Leids Universitair Medisch Centrum

Einthovenweg 20
Leiden 2333ZC
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)

Inclusion criteria

- Chemotherapy naïve breast cancer and/or sarcoma patients
- Receive doxorubicin as standard treatment of care
- Age > 18
- Male and female patients
- Ability to understand the study and give signed informed consent prior to

beginning of protocol specific procedures

Exclusion criteria

If any other treatment is administered earlier to treat the disease, we cannot include the patient.

Study design

Design

Study type: Observational invasive

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

Recruitment

NL

Recruitment status:	Completed
Start date (anticipated):	27-05-2024
Enrollment:	14
Type:	Actual

Ethics review

Approved WMO

Date:	08-12-2022
Application type:	First submission
Review commission:	METC Leiden-Den Haag-Delft (Leiden) metc-ldd@lumc.nl

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	NL79973.058.21

Study results

Date completed: 14-10-2024

Results posted: 14-11-2024

First publication
01-01-1900