

Non-invasive characterization of paediatric brain tumours using metabolic imaging at high magnetic field

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We hypothesize that information from metabolic processes in the paediatric brain tumour and surrounding tissue will help to understand tumour physiology, which will improve diagnosis and treatment evaluation.

Ethische beoordeling	Niet van toepassing
Status	Werving nog niet gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON24537

Bron

NTR

Verkorte titel

MITCH

Aandoening

low grade glioma (LGG) and diffuse pontine glioma (DIPG)

Ondersteuning

Primaire sponsor: UMC Utrecht

Overige ondersteuning: Grant

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

To determine whether metabolic imaging at 7 Tesla is feasible and suitable to detect changes in phospholipids and APT levels in paediatric brain tumours

Toelichting onderzoek

Achtergrond van het onderzoek

Brain tumours are one of the leading causes of death in children. If possible, removing the tumour by surgery followed by radiotherapy and/or chemotherapy is nowadays the proposed treatment. But often the tumour cannot be removed and only chemo and/or radiation therapy are considered as treatment. During the treatment patients are monitored with structural imaging to evaluate response to therapy and its disease free survival. However, changes seen on imaging do not always reflect a change in tumour behaviour or growth; it might also reflect a reaction of the surrounding normal brain tissue on the treatment. From a diagnostic perspective, we are lacking a tool that can non-invasively identify tumour activity and indicate the aggressiveness of that piece of tumour. Information from metabolic processes in the tumour and surrounding tissue will help to understand tumour physiology, which will improve diagnosis and treatment evaluation, and may even help in choosing treatment strategy.

Objective: To determine whether metabolic imaging at 7 Tesla is feasible and suitable to detect changes in phospholipids and APT levels in paediatric brain tumours

Doel van het onderzoek

We hypothesize that information from metabolic processes in the paediatric brain tumour and surrounding tissue will help to understand tumour physiology, which will improve diagnosis and treatment evaluation.

Onderzoeksopzet

01-03-2020: start inclusion

01-09-2021: end inclusion

01-03-2022: end study

Onderzoeksproduct en/of interventie

MRI at 7T

Contactpersonen

Publiek

UMC Utrecht
Evita Wiegers

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Wetenschappelijk

UMC Utrecht
Evita Wiegers

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

- Children, 5-18 years diagnosed with a possible low grade glioma (LGG) or diffuse pontine glioma (DIPG)
- Children must be able to undergo MRI without anaesthesia;
- Informed and having given informed consent (either by patient and / or parents / legal guardian).

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

- The presence of claustrophobia;
- Patients from who it is known at the time of inclusion that they will undergo tumour resection within 1 month;
- MRI-specific exclusion criteria, such as metal implants. Screening for MRI specific exclusion criteria will be done using the regular MRI (at 7 Tesla) safety screening.
- Refusal or inability to provide informed consent by patient and / or parent / legal guardian.

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Anders
Toewijzing:	N.v.t. / één studie arm
Blinding:	Open / niet geblindeerd
Controle:	N.v.t. / onbekend

Deelname

Nederland	
Status:	Werving nog niet gestart
(Verwachte) startdatum:	01-03-2020
Aantal proefpersonen:	25
Type:	Verwachte startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Nog niet bepaald

Ethische beoordeling

Niet van toepassing	
Soort:	Niet van toepassing

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register

NTR-new

Ander register

ID

NL8285

METC Utrecht : METC 19/791

Resultaten