Absolute bioavailability trial of oral imatinib (Glivec®) using a stable isotope labeled intravenous imatinib-d8 microdose

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The absolute bioavailability of oral imatinib (Glivec®) at steady state can be calculated using LC-MS/MS after concomitant administration of a single 100 µg microdose of stable isotope labeled imatinib (imatinib-d8).

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

Samenvatting

ID

NL-OMON21434

Bron
NTR

Aandoening

Cancer, gastrointestinal stromal tumor, imatinib, absolute bioavailability

Ondersteuning

Primaire sponsor: Antoni van Leeuwenhoek
Overige ondersteuning: Antoni van Leeuwenhoek

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

To ascertain whether the absolute bioavailability of oral imatinib (Glivec®) at steady state

can be calculated using LC-MS/MS after concomitant administration of a single 100 µg microdose of stable isotope labeled imatinib (imatinib-d8).

Toelichting onderzoek

Achtergrond van het onderzoek

The aim of this proof of concept study is to determine the ABA of imatinib using a SIL-microtracer trial design. Imatinib is chosen as a model compound because ABA trial results using a cross-over trial design are already available. (1) The results obtained from this new proof of concept study can be compared to the results obtained using the traditional cross-over trial design. When the results are comparable, this study provides proof that microtracer ABA trials are feasible in our institute, making it possible to reduce patient burden and saving costs and time in future trials where the ABA of oral anticancer agents needs to be investigated.

Doel van het onderzoek

The absolute bioavailability of oral imatinib (Glivec®) at steady state can be calculated using LC-MS/MS after concomitant administration of a single 100 µg microdose of stable isotope labeled imatinib (imatinib-d8).

Onderzoeksopzet

Blood will be drawn for pharmacokinetic research at 16 time points at day 1: t=0 (predose), t=0.5h, t=1h, t=1.5h, t=2h, t=2.5h (pre IV microdose), t=3h, t=3.5h, t=4h, t=4.5h, t=5h, t=6h, t=8h, t=12h, t=24h, t=48h. The 48h timepoint will be collected in an outpatient setting. For each timepoint 4 mL of blood will be collected. In total, 64 mL of blood will be collected for the trial.

Onderzoeksproduct en/of interventie

Intravenous injection with stable isotople labeled imatinib and subsequent blood collection

Contactpersonen

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

1. Locally advanced or metastatic cancer;

2. On imatinib treatment at a stable dose of 400 mg once daily in the morning for at least 7 days (steady state plasma concentration)

3. Age ≥ 18 years;

4. Able and willing to give written informed consent;

5. WHO performance status of 0, 1 or 2;

6. Able and willing to undergo blood sampling for PK analysis

7. Minimal acceptable safety laboratory values
>
a. ANC of ≥ 1.5 x 109 /L

b. Platelet count of ≥ 100 x 109 /L

c. Hepatic function as defined by serum bilirubin ≤ 2 x ULN, ALAT and ASAT ≤ 5 x ULN

d. Renal function as defined by glomerular filtration rate (GFR MDRD) > 40 ml/min/1.73m2

8. Able and willing to get two lines for intravenous infusion (one for microdose infusion and one for PK sampling)

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

Any treatment with investigational drugs within 30 days or 5 half-lives prior to receiving the investigational treatment;

2. Any treatment with inhibitors of CYP3A4 (e.g. boceprevir, claritromycine, erytromycine, indinavir, itraconazol, ketoconazol, ritonavir and voriconazol), inhibitors of Pgp (e.g. ciclosporine, kinidine and verapamil), inhibitors of BCRP (e.g. lapatinib), inductors of CYP3A4, Pgp or BCRP;

4. Woman who are pregnant or breast feeding;

5. Patients suffering from any known disease or dysfunction that might influence the dissolution and/or absorption of imatinib (e.g. inflammatory bowel disease)

Onderzoeksopzet

Opzet

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

Deelname

Nederland

Status:	Werving nog niet gestart
(Verwachte) startdatum:	01-01-2019
Aantal proefpersonen:	6
Type:	Verwachte startdatum

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	ID
NTR-new	NL6773
NTR-old	NTR7642
Ander register	: N18IBA

Resultaten

Samenvatting resultaten
N/A