# **DEteCTing gout, with or without a needle**

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The diagnostic value of DECT in acute gout attacks had not yet been established and is therefore not used in daily practice. In this study all patients undergo DECT scan to assess the value of DECT scan in diagnosing acute arthritis caused by gout.

Ethische beoordeling	Positief advies
Status	Werving gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

# Samenvatting

#### ID

NL-OMON24638

Bron NTR

Verkorte titel DEteCTing gout, with or without a needle

#### Aandoening

Gout

#### Ondersteuning

**Primaire sponsor:** Performer: Meander Medical Center **Overige ondersteuning:** self-financing research Meander Medical Center

### **Onderzoeksproduct en/of interventie**

#### Uitkomstmaten

#### Primaire uitkomstmaten

The sensitivity and specificity (95% CI) of DECT scanning for the detection of MSU deposition will be calculated. The area under receiver operating characteristic curve(AUC-ROC) will be employed to evaluate the screening method's performance.

# **Toelichting onderzoek**

#### Achtergrond van het onderzoek

Rationale: Gout is a disease with growing incidence and complexity due to increased life expectancy, co-morbidity and medication. The disease can be diagnosed by microscopy, demonstrating monosodium uric acid (MSU) in synovial fluid of the affected joint or in tophi (subcutaneous or peritendinous MSU depositions). In daily practice, however, the diagnosis is difficult to ascertain due to sampling error (no synovial fluid acquired because the needle was not exactly placed in the affected joint, or the location of the gout might have been extraarticular e.g. around tendons) or to a different cause of acute arthritis (e.g. infection, reactive arthritis). Recently, Dual Energy CT scan has become available. This technique allows the visualization and quantification of MSU. Although imaging modalities such as DECT show promise in the classification of gout, the studies to date have been small and have primarily involved people with established disease.

A study with cross-sectional design in which patients for whom the clinical questions "does this patient have gout?" are referred for participation may contribute to assess the value of DECT scan in diagnosing acute arthritis caused by gout.

Objective: Assessment of value of DECT scan in diagnosing acute arthritis, caused by gout.

Study design: Prospective

Study population: Patients with acute mono or oligo arthritis without prior diagnosis, the rheumatologist has an indication for diagnostic needle aspiration.

Nature and extent of the burden and risks associated with participation, benefit and group relatedness: In current daily practice, patients with acute mono- or oligo-arthritis without prior diagnosis undergo a diagnostic aspiration of the affected joint. This can be done by blind aspiration or ultra sound guided aspiration depending on the judgement of the rheumatologist. The aspirated synovial fluid is then assessed by polarized microscopy to detect MSU crystals. The diagnostic value of DECT in acute gout attacks had not yet been established and is therefore not used in daily practice. In this study all patients undergo DECT scan to assess the value of DECT scan in diagnosing acute arthritis caused by gout. If the DECT scan demonstrates MSU depositions and the diagnosis of gout was not ascertained prior to DECT scanning by MSU crystals in the synovial fluid, then additional ultrasound guided aspiration will take place, with knowledge of DECT results, followed by repeat microscopy

#### Doel van het onderzoek

The diagnostic value of DECT in acute gout attacks had not yet been established and is

therefore not used in daily practice. In this study all patients undergo DECT scan to assess the value of DECT scan in diagnosing acute arthritis caused by gout.

#### Onderzoeksopzet

week 0,2

#### **Onderzoeksproduct en/of interventie**

In this study all patients undergo joint aspiration and DECT scan to assess the value of DECT scan in diagnosing acute arthritis caused by gout. If the DECT scan demonstrates MSU depositions and the diagnosis of gout was not ascertained prior to DECT scanning by MSU crystals in the synovial fluid, then additional ultrasound guided aspiration will take place, with knowledge of DECT results, followed by repeat microscopy.

## Contactpersonen

#### **Publiek**

Meander Medisch Centrum, afd Reumatologie; Postbus 1502 R. Klaasen Amersfoort 3800 BM The Netherlands 033-8505050

#### Wetenschappelijk

Meander Medisch Centrum, afd Reumatologie; Postbus 1502 R. Klaasen Amersfoort 3800 BM The Netherlands 033-8505050

### **Deelname eisen**

#### Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

- Age > 18 years

- Mono or oligo arthritis (2-3 swollen joints)

- Indication for diagnostic aspiration of an inflamed joint in which gout is one of the possibilities

### Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

- Polyarthritis (¡Ý4 swollen joint);
- Chrystal proven gout in history
- Patient is on uric acid lowering therapy (Allopurinol, Benzbromaron, Febuxostat)
- Hip arthritis\*
- Metal or prosthesis of the inflamed joint
- Highly suspicion of infectious arthritis
- Pregnancy
- Contra indication of joint aspiration (skin infection, hemophilia)
- No informed consent

# Onderzoeksopzet

### Opzet

Type: Onderzoeksmodel: Toewijzing: **Controle:** N.v.t. / onbekend Interventie onderzoek Parallel N.v.t. / één studie arm

### Deelname

Nederland	
Status:	Werving gestart
(Verwachte) startdatum:	25-04-2016

Aantal proefpersonen: Type: 100 Verwachte startdatum

# **Ethische beoordeling**

Positief advies	
Datum:	24-05-2016
Soort:	Eerste indiening

## Registraties

### **Opgevolgd door onderstaande (mogelijk meer actuele) registratie**

ID: 42591 Bron: ToetsingOnline Titel:

### Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

#### In overige registers

Register	ID
NTR-new	NL5682
NTR-old	NTR5826
ССМО	NL54454.100.15
OMON	NL-OMON42591

# Resultaten