

Press release

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Basic information

Name: Rasmus Klose Jensen Email: raujen@rm.dk Phone: 31672106

Department of: Clinical Medicine

Main supervisor: Ellen Margrethe Hauge

Title of dissertation: High Resolution-peripheral Quantitative Computed Tomography and Erosive Rheumatoid Arthritis

Date for defence: 21/05/21 at (time of day): 13:00 Place:
<https://aarhusuniversity.zoom.us/j/68560479342>

Press release (Danish)

Højopløselige CT-skanner og erosiv leddegigt.

Den diagnostiske nøjagtighed af højopløselige CT-skanner sammenlignet med konventionel røntgenundersøgelse i forhold til at klassificere om patienter har erosiv leddegigt. Et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Rasmus Klose Jensen, der forsvare det d. 21/05/21.

Leddegigt er den mest almindelige autoimmune ledsygdom. Sygdommen er kronisk, og selv patienter i behandling med sygdomsmodificerende antireumatiske lægemidler oplever perioder med opblussen af deres inflammatoriske sygdom. Betændelse i patienternes led resulterer i progredierende strukturel skade på leddene. Destruktion af den lednære knogle (erosioner) er et kendetegn ved leddegigt. Konventionelle røntgenbilleder er guldstandard til at diagnosticere og monitorer led skader hos patienter med leddegigt. Billedmodaliteten bruges i klinisk praksis og i kliniske forsøg til evaluering af effektiviteten af patienternes behandling. Imidlertid er konventionelle røntgenbilleder ikke tilstrækkelig følsom til dette formål, da sensitiviteten for påvisning af skader er lav. Derfor er der behov for mere følsomme billeddiagnostiske undersøgelser.

En ny type højopløselige CT-skanner (HR-pQCT) har en overlegen billedopløsning i forhold til alle andre billeddiagnostiske modaliteter in vivo. Derfor er modaliteten blevet foreslået som en mulig erstatning for konventionel røntgenundersøgelse.

Ph.d. projektet omfatter den største kohorte af patienter med leddegigt undersøgt for erosiv sygdom med HR-pQCT skanning på nuværende tidspunkt. Ph.d. projektet undersøger den diagnostiske nøjagtighed af HR-pQCT skanning og fuld radiografisk undersøgelse i forhold til at klassificere om patienter med leddegigt har erosiv sygdom. Forsvaret af ph.d.-projektet er offentligt og finder sted virtuelt den 21/05 kl. 13:00 via Zoom, <https://aarhusuniversity.zoom.us/j/68560479342>. Titlen på projektet er "High Resolution-peripheral Quantitative Computed Tomography and Erosive Rheumatoid Arthritis". Yderligere oplysninger: Ph.d.-studerende Rasmus Klose Jensen, e-mail: raujen@rm.dk, tlf. 31672106.

Bedømmelsesudvalg:

Professor Elisabeth Bendstrup, MD, PhD (Chairman) Afdelingen for Lungesygdomme, Aarhus Universitetshospital, Denmark.

Professor, Georg Schett, MD, PhD Department of Internal Medicine 3 - Rheumatology and Immunology Friedrich-Alexander-University Erlangen-Nürnberg, Germany.

Uffe Møller Døhn, MD, PhD, Videncenter for reumatologi og ryg sygdomme, Københavns Universitetshospital, Denmark.

Press release (English)

High Resolution-peripheral Quantitative Computed Tomography and Erosive Rheumatoid Arthritis

The diagnostic accuracy of High Resolution - peripheral Computed Tomography compared to conventional radiography in relation to classifying whether patients have erosive rheumatoid arthritis. The project was carried out by Rasmus Klose Jensen, who will defend it on 21/05/21.

Rheumatoid arthritis (RA) is the most common chronic autoimmune joint disease. The disease is chronic, and even patients in treatment with disease-modifying anti-rheumatic drugs experience periods with inflammatory flare-ups. The inflammation of the joints can result in progressive structural damage to the joints. Bone erosions are a hallmark in RA. Conventional radiographs are presently the gold standard for diagnosing and tracing bone erosions in patients with RA. The modality is used in clinical practice and in clinical trials for evaluating the efficiency of treatments. However, conventional radiography is not sufficiently sensitive, as the sensitivity for detecting erosions is low. Therefore, more sensitive imaging is needed.

High Resolution - peripheral Quantitative Computed Tomography (HR-pQCT) imaging has a superior resolution to all other imaging modalities in vivo. Consequently, the modality has been proposed as a possible substitution for conventional radiography.

The PhD project includes the largest cohort of patients with rheumatoid arthritis examined for erosive disease with HR-pQCT imaging at present. The PhD project investigates the diagnostic accuracy of HR-pQCT scan and full radiographic examination in relation to classifying whether patients with rheumatoid arthritis have erosive disease.

The defence is public and takes place virtually on 21st of maj at 1:00 pm via Zoom, <https://aarhusuniversity.zoom.us/j/68560479342>. The title of the project is High Resolution-peripheral Quantitative Computed Tomography and Erosive Rheumatoid Arthritis. For more information, please contact PhD student Rasmus Klose Jensen, email: rauhen@rm.dk, Phone +45 31672106..

Assessment committee:

Professor Elisabeth Bendstrup, MD, PhD (Chairman) Department of Respiratory Diseases and Allergy Aarhus University Hospital, Denmark.

Professor Georg Schett MD, PhD Department of Internal Medicine 3 - Rheumatology and Immunology Friedrich-Alexander-University Erlangen-Nürnberg, Germany.

Uffe Møller Døhn, MD, PhD Center for Rheumatology and Spine Diseases, Copenhagen University Hospital, Denmark.name, title and place of employment of the three members of the committee

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