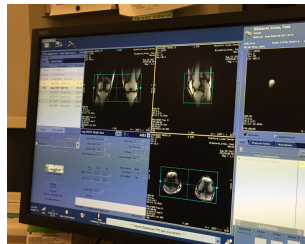




OARSI Collaborative Scholarship
2017



STANFORD
SCHOOL OF MEDICINE



Susanne Eijgenraam, MD

Time period: July – October 2017

Home Institute: Advanced Musculoskeletal Imaging Research (ADMIRE),
Dept of Radiology, Erasmus University Medical Center, Rotterdam, The Netherlands

Home Professor: Edwin H.G. Oei, MD PhD

Host Institute: Joint & Osteoarthritis Imaging with Novel Technology Group (JOINT),
Dept of Radiology, Stanford University, Stanford CA, USA

Host Professors: Garry E. Gold, MD & Brian A. Hargreaves, PhD

Summary

I was fortunate to receive the OARSI Collaborative Scholarship in 2017. This grant gave me the opportunity to work in the unique, highly specialized setting of Stanford University Medical Center— one of the world’s leading research institutions. I got the chance to further strengthen a long-standing close collaboration between the department of Radiology at Stanford and my home institute; the department of Radiology at Erasmus University Medical Center. Together with my Stanford-colleague Akshay Chaudhari (post-doc in Radiology and Bio-engineering, on first page: lower row, central picture) , I set up and conducted a research project on knee MRI at the Department of Radiology.

We assessed a novel 3D double-echo steady-state (DESS) MRI sequence, generating quantitative measurements and morphological images of the knee in only 5 minutes. We validated MRI based biomarkers for knee osteoarthritis, obtained with this 5-minute DESS sequence, for cartilage and meniscus, in a clinical osteoarthritis population. We found a promising construct validity of DESS, compared to the gold standard technique. The results of this study are currently in submission and will be published soon.

This project was a great experience for me, in many ways. I learned a lot about quantitative MRI techniques and MRI physics, from top-researchers in the field. I got the chance to attend interesting and useful meetings and lectures, and to talk and brainstorm with inspiring researchers. Moreover, I learned about analyses and statistics, programming, MRI acquisition and a lot more. And, last but not least, I experienced the “Stanford life” for 3 months; a wonderful campus, top-level research, very kind people, great atmosphere, and... warm & sunny!

I would like to thank the departments of Radiology and Bioengineering of Stanford University for hosting me and for all the valuable input. I had a great time at the Lucas Center or Imaging Research, thanks so much! A special thanks for Garry Gold, professor in Radiology, for letting me stay at his (very, very beautiful) house for the whole period and for all his help and input regarding the project. In addition, I would like to thank OARSI for providing this Scholarship. This grant made it happen! I would strongly recommend applying for this Scholarship!

Example images of the knee, obtained with a 5-minute-DESS MRI sequence

