Response to: 'Does adding the presence of MRI detected bone marrow oedema improve the accuracy of the 2010 EULAR/ACR criteria for rheumatoid arthritis?' by Nieuwenhuis *et al*

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We are very excited to receive the interesting results from Leiden Early Arthritis Clinic.[1] The major difference between our results[2] and the results from the Leiden Early Arthritis Clinic is the value of MRI-detected bone marrow oedema (BME) to improve the accuracy of the 2010 Rheumatoid Arthritis Classification Criteria. Although both groups have used 1.5 T MRI and obtained the identical definition of BME, we can find the two differences regarding the procedure of MRI and patient population from the Leiden Early Arthritis Clinic.

First, we have examined both hands though Nieuwenhuis *et al* scanned only unilateral hand. Our previous data showed that the sensitivity of detection of BME declined by unilateral hand compared with both hands.[3] Our present MRI data are derived from gadolinium-diethylenetriamine pentaacetic acid (Gd-DTPA)-enhanced MRI; however, Nieuwenhuis *et al* might have used plain MRI. If so, the sensitivity of detection of BME also declines by plain MRI compared with Gd-DTPA-enhanced MRI. The above differences of MRI procedure may affect the difference of MRI results of both groups.

Second, our patient population is more early (median 8 weeks vs 10.7 weeks) and more anticitrullinated protein antibody (ACPA)-positive (34.1% vs 22%). Therefore, we might examine more active and rheumatoid arthritis (RA)-prone 1987-undifferentiated arthritis (UA) patients compared with the Leiden Early Arthritis Clinic. These clinical characteristics may also result in the difference of the role of MRI BME to assist the diagnostic performance of 2010 Rheumatoid Arthritis Classification Criteria.

In conclusion, the difference of role of MRI-detected BME is found between our cohort and the Leiden Early Arthritis Clinic; however, these might be attributable to the differences of MRI procedure and patient characteristics.

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