

Disease Activity Monitoring in Rheumatoid Arthritis in Daily Practice: Experiences with METEOR, a Free Online Tool

To the Editor:

In a recent study, quality indicators for monitoring patients with rheumatoid arthritis (RA) were developed that prescribe frequent monitoring and registration of disease activity and functionality, together with subsequent treatment adjustments¹. From the literature it is clear that frequent monitoring of disease activity with adjusted treatment improves outcome². However, there is also evidence that in daily practice, treatment steered according to disease activity scores is not yet routine³.

To provide a tool to easily incorporate monitoring and registration of disease activity and functionality into daily routine, a group of international rheumatologists has developed the METEOR program. Our aim is to inform all rheumatologists about the first experiences with METEOR in daily practice and the tool itself.

METEOR stands for Measurement of Efficacy of Treatment in the Era of Outcome in Rheumatology. The software tool, designed by and for rheumatologists, is available online for free for any interested hospital. Only a minimum of actions is required to calculate and register both disease activity and functional ability. Disease activity can be automatically calculated according to one's preference as a Disease Activity Score (DAS), 28-joint count DAS (DAS28), Simplified Disease Activity Index

(SDAI), Clinical Disease Activity Index (CDAI), or joint count. Medication can be registered at the same time and the program then provides a table or graph of the disease course and treatment over time. There is a possibility to fill in free text, and assessment of patient-reported outcomes is included within the program. At all times, specialized data reports can be generated to get insight into your own patients.

At this moment 90 hospitals in 32 different countries are joining the project either by registering data using the METEOR tool, or by linking existing databases with the international METEOR database. Data have been entered for almost 8000 patients. The mean baseline DAS is 2.0 (SD 1.0, n = 4799) and the mean DAS28 3.3 (SD 1.4), representing a mean low disease activity. Mean Health Assessment Questionnaire score is 0.8 (SD 0.8, n = 2944).

To guide the implementation of frequent monitoring as well as the METEOR tool, a qualitative study was performed to identify inhibiting and enhancing factors. Interview topics included practicalities of disease activity measurements, the content of the consultation, advantages and disadvantages of the METEOR tool, and accomplishments of the goals of METEOR. Semistructured interviews were used to get feedback from 17 rheumatologists in 6 Dutch hospitals, in both academic and peripheral settings.

All rheumatologists indicated that they are aware of the importance and benefits of DAS-driven therapy. Fifty percent spontaneously mentioned

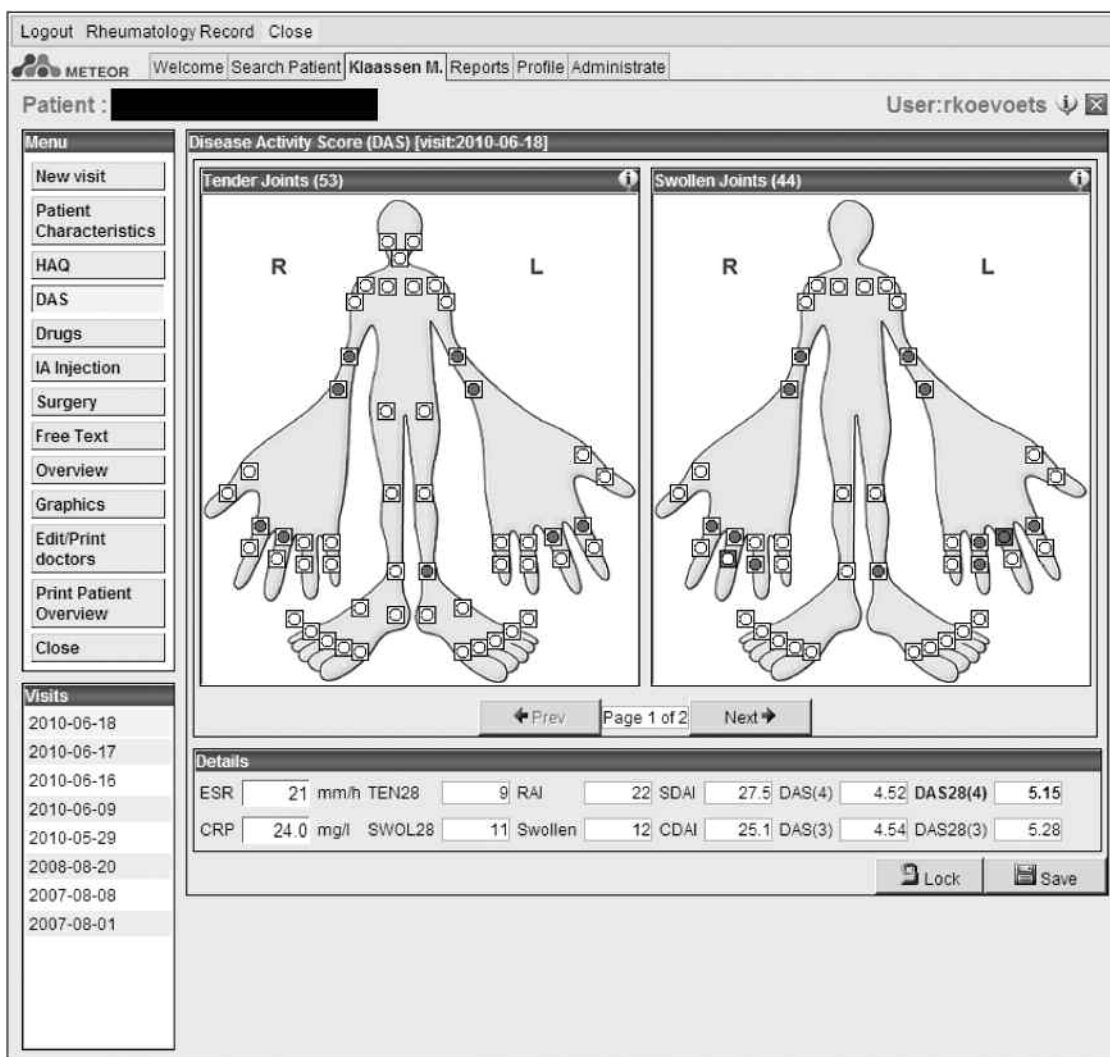


Figure 1. Disease Activity Score manikin of the METEOR program represents a fictional case.

Table 1. Patient numbers in participating countries per July 2010 (hospitals not yet including patients are not shown).

Country	Participating Hospitals	Patients Included
Argentina	5	2
Bosnia and Herzegovina	1	2
Brazil	4	2
Cyprus	1	15
Spain	3	46
France	4	107
Great Britain	8	2098
Ireland	3	225
India	5	22
Italy	4	208
Japan	4	372
Latvia	1	19
Malta	1	5
Mexico	1	1
Netherlands	14	3547
Poland	2	9
Portugal	3	814
Thailand	1	14
Ukraine	1	14
United States	4	301
Total	70	7823

that having METEOR in the office increased their awareness of the need for monitoring and makes them perform physical examinations more frequently and thoroughly, which is the main goal of METEOR. Data-base-building and benchmarking, 2 other goals of METEOR, are less known and used. Rheumatologists find the METEOR tool user-friendly, not time-consuming, and practical. The majority mentioned that the visual presentation with graphics or tables was very helpful to discuss results and

the need for therapy adjustments with patients. Most also indicated that there is some overlap between the existing medical record and data sources and the METEOR tool, which may require local technical solutions.

We conclude that in the care of patients with RA, METEOR can be a valuable and easy to use tool to help rheumatologists register disease activity on a regular basis and adjust the medication to achieve low disease activity.

Interested readers can find more information at the Website (www.meteorfoundation.com) or contact the local country representative (<http://meteorfoundation.com/Portals/0/Current%20Country%20Leads.pdf>).

ROSANNE KOEVOETS, MD; CORNELIA F. ALLAART, MD; DÉSIREE M.F.M. van der HEIJDE, MD, Professor; TOM W.J. HUIZINGA, PhD, Department of Rheumatology, Leiden University Medical Centre, Leiden, The Netherlands. Address correspondence to Dr. Koevoets; E-mail: r.koevoets@lumc.nl

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