

**What is METEOR?**

METEOR has been founded by the MERIT foundation, in order to stimulate treat-to-target, improve patient care and create an international rheumatoid arthritis research database. Originally, the METEOR tool has been designed, which is a free, online tool, available worldwide in different languages. In the tool, data of all RA patients visiting a rheumatologist can be entered. This can be new as well as existing RA patients, who are followed according to usual care. For each patient, patient and disease characteristics, patient and physician reported outcomes and prescribed treatment can be registered. Based on the available data, the tool automatically calculated a range of disease activity scores (e.g. DAS, DAS28, SDAI, CDAI, RAPID3). Furthermore, the HAQ can be completed. Medications, disease activity and physical functioning are subsequently displayed in illustrative and user-friendly graphics, facilitating treatment decisions and patient-physician interactions.
In recent years, an increasing number of hospitals have implemented Electronic Health Record Systems to record daily patient care. This means that using the METEOR tool would necessitate a double data entry. Therefore METEOR has developed upload and download facilities. The download facility can be used to enter data from the METEOR database in the local EHR. The upload facility can be used to upload data from local databases in the METEOR database. This can be a single upload, but it can also be a recurring upload of all data recorded in a local register (e.g. data could be uploaded every quarter of a year). This is currently for example done in the Netherlands, Portugal and India. Using the upload facilities enables users to benefit from the benchmark and research facilities, without the problem of data entry or having to give up local registries. Currently, the METEOR database contains data from >39,000 patients and >200,000 visits, added by 78 sites using the METEOR tool and 50 sites using the upload facilities. These data stem from 32 different countries, which are ever increasing.

**Data protection**

All patient data in the METEOR database are anonymized, by storing all patient identifying data in an encrypted manner. Therefore, for none of the included countries – for example the Netherlands, South-Africa, Mexico and the USA – an informed consent is needed when adding new patients to the database. Identifying data can only be decrypted by the site that has created the data, such that rheumatologists always have access to detailed data regarding their own patients.

**Data ownership and research possibilities**

All METEOR users who are actively contributing data to the database, including those centers that add data through the upload facility, can perform research in the database. The leading principle is that each participating rheumatologist or centre is the owner of its own data. Therefore, each user can at any time perform research and publish articles using his/her own data without previous permission from the METEOR board.
Researchers can also submit research proposals with a request to perform research on (a part of) the complete METEOR database. These research proposals are assessed by a scientific committee regarding relevance, quality and ethical aspects. Once approved by the scientific committee, a representative rheumatologist of each site can decide if they allow their data to be used in that particular research project. Data is never used for a research project without asking permission first.



Furthermore, for sites adding considerable amounts of data to a research project, a co-author is listed on the resulting publication.
Research proposals without a request for funding can be submitted continuously. Research proposals with a request for funding can be submitted once a year (generally before the 1st of August). Funding can be requested for a maximum duration of 1 year, with a maximum amount of €25,000. For each research project, a scientific representative of the METEOR board is assigned as a mentor. These can be currently prof. Robert Landewé, prof. Désirée van der Heijde, prof. Tom Huizinga or dr. Pedro Machado.

**Further information**

Further information regarding METEOR can be found at the METEOR website ([www.meteorfoundation.com](http://www.meteorfoundation.com)) or in previous publications regarding METEOR (e.g. van den Berg et al. The METEOR initiative: the way forward for optimal, worldwide data integration to improve care for RA patients. *Clin Exp Rheumatol* 2014;32:S-135-40).

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