

EULAR Big Data in RMDs Study Group

Established Spring 2020 by Prof. Laure Gossec

The use of big data and of artificial intelligence, computational modeling and machine learning is a rapidly evolving field with the potential to profoundly modify RMD research and patient care. The term “big data” is used for large-scale data sets which include imaging data, electronic health records, or administrative claim records, among others. Big data is often linked to specific analytics and statistical methods, such as artificial intelligence and machine learning.

EULAR recently developed points to consider on how to apply big data to rheumatic and musculoskeletal disorders (RMDs) (Gossec, Ann Rheum Dis 2019). The points cover general principles as well as ethical issues in big data for RMDs, particularly data sources, data platforms, data collection, data sharing, and data privacy. EULAR also noted the big data field needs adequate reporting of methods and benchmarking, careful data interpretation and implementation in clinical practice. Since then, the EMA has recently developed recommendations for Big Data and clearly this field is moving quickly.

Within the EULAR Big Data taskforce, it was strongly felt that the points to consider were a starting point rather than an ending point. The proposal for this study groups stems from the 2019 big data taskforce.

The aim of this study group is to create a platform for methodological, logistic, and scientific collaboration across European centres in order to maximise the potential use of Big Data in RMDs, to maximise the quality of the scientific outputs and to facilitate collaborations and scientific exchanges.

This study group mainly focuses on the use of Big Data / AI in the field of epidemiological and outcomes research (rather than omics or basic science big data).

The specific aims of the study group include

- To share experience and best practice for use of big data / AI in RMDs across all interested stakeholders, through provision of regular open meetings.
- To create links with Big Data/ AI specialists outside the field of rheumatology (eg computer science or artificial intelligence)
- To provide the infrastructure to enable methods-development in Big Data.
- To interact with the EULAR Research Centre methodology/statistics aspects.

1. Core Group / founding members

The Study Group is open to anyone interested in collaborative efforts in the field of Big Data in RMDs.

Name	Degree/role	Affiliation
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