Abstract AB1273 Table 1. Baseline characteristics of RA patients with and without ILD in HUMANISM cohort

Variables	RA-ILD (n=74)		RA without ILD (n=239)		P
Sex (female)	46	(62.2)	202	(84.5)	<0.001
Age	65.4	± 10.9	58.9	± 10.3	<0.001
Disease duration	8.7	± 7.6	11.3	± 7.8	0.011
DAS28-ESR	3.7	± 1.4	3.3	± 1.2	0.021
DAS28-CRP	2.6	± 1.1	2.3	± 0.9	0.041
RF (+)	67	(90.5)	191	(79.9)	0.036
ACPA (+)	66	(89.2)	213	(89.1)	0.189
Medications					
MTX	39	(52.7)	193	(80.8)	<0.001
Biologic DMARDs	12	(16.2)	50	(20.9)	0.302
OC	43	(58.1)	68	(28.5)	<0.001
OC dose ^a , mg/day	4.2	± 2.7	2.6	± 1.7	<0.001
HRCT findings					
UIP	29	(39.2)			
NSIP	29	(39.2)			
OP	7	(9.5)			
Overlapping of HRCT patterns	6	(8.1)			
Others	3	(4.0)			

^a Prescriptions of regular oral glucocorticoids were considered in the calculation and the prednisone-equivalent dose was presented

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AB1274

OF 60 PUBLICATIONS REFERRING TO BIG DATA IN RHEUMATIC AND MUSCULOSKELETAL DISEASES, 33 APPLIED ARTIFICIAL INTELLIGENCE STATISTICAL TECHNIQUES: A SYSTEMATIC LITERATURE REVIEW INFORMING A EULAR TASKFORCE

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Background: Big data are defined as data sets that are too large or complex for traditional data-processing application software to adequately deal with. Artificial Intelligence (AI) includes various statistical techniques which can deal with big data. The current use of these concepts in publications related to RMDs is unknown.

Objectives: To assess the current use of big data and AI in the field of RMDs.

Methods: A systematic literature review (SLR) was performed in PubMed MEDLINE in November 2018, with key words referring to ("big data"[All Fields] OR "Artificial Intelligence"[Majr]) and RMDs. All original reports published in English and referring to big data in RMDs were analyzed. We collected general information on the paper (including year of publication and impact factor of the journal, and country of the first author), and information on the rheumatic disease, the number of data analyzed and the statistical methods used. The analysis was descriptive.

Results: Of 648 articles, 60 met the inclusion criteria. Among them, 34 (57%) were observational studies including 22 (37%) cohort studies, 3 (5%) were experimental studies, 7 (12%) were literature reviews or literature data mining and 16 (27%) were general reviews which provided no original data. Among the 44 original papers, the mean year of publication was 2015 (SD=5.0, range 1991-2018), with 38 articles (86%) published during the last 5 years. The mean impact factor was 5.1 (SD=8.5, range 1.6-41.9). The mean number of data was 1.4 million (SD=4.6 million, range 212 MRIs – 25 million units of observation). Many articles were written by European (N=16, 36%) or US (N=15, 34%) authors. Most

papers were on inflammatory joint diseases (N=17, 37%) (Figure 1); 7 (16%) were applied to -omics and 9 (20%) to imaging. Statistical methods were based on AI in 33 papers (75% of 44), specifically Machine Learning (N=28 articles, 64%) (Figure 2), with varied methods applied (mostly different kinds of Artificial Neural Networks, N=17).

Conclusion: Big data is an emergent area in the field of RMDs, and we found 60 papers on various diseases and with diverse applications of "big data". Most of these papers were published very recently, and some in high impact factor journals, indicating the interest of researchers for this field. Overall, 33 publications mentioned AI techniques to deal with big data, whereas 11 used usual statistical methods. The heterogeneity of methods used indicates the need for further research in this area, and for collaboration with data scientist specialized in big data, particularly to determine which statistical methods (traditional or AI) should be used. These findings will inform a EULAR taskforce on big data in RMDs.

Figure 1: Description of the RMDs

FIGURE 2: DESCRIPTION OF THE MACHINE LEARNING TECHNIQUES

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AB1275

COMPARATIVE ANALYSIS OF LOCAL COMPLICATIONS OF HIP AND KNEE ARTHROPLASTY IN PATIENTS WITH RHEUMATOID ARTHRITIS AND OSTEOARTHRITIS

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Background: Surgical treatment of patients with rheumatoid arthritis (RA) is associated with an increased risk of complications. It can be caused by: an inflammatory process, the osteoporosis, the reduced physical activity, the severity of functional impairment, long-term glucocorticoid therapy, biologic and disease-modifying antirheumatic drugs. All of the above reasons provide elongated wound healing period, the development of infectious complications, increased risk of periprosthetic fractures.

Objectives: to provide a comparative analysis of local complications of hip and knee arthroplasty in RA and osteoarthritis (OA) patients.

Methods: We analyzed 2142 operations: hip (n = 1177) and knee (n = 965) replacement, which were performed to patients with RA and OA between 1998 and 2018.