Results: The population ranged from 35- 90 years and duration of RA from 1- 30 years. CCP Ab was present in 75% of patients and RF in 71%. Patients were on DMARDs either monotherapy (29%), dual therapy (60%) or triple therapy (10%). Antirheumatic medications used were plaquenil, methotrexate, leflunomide, etanercept, adalimumab, infliximab, tofacitinib, upadacitinib and rituximab. ESR range was 2-110 and CRP 0.2-83.1. The CDAI and RAPID3 concordance was found to be 37% with RAPID3 being higher in 45% of patients. RAPID3 was lower only in 14% of patients. There was incorrect calculation of the RAPID3 26% of the time by clinic staff. Table 1 summarizes this data. Figure 1 shows RAPID3 and CDAI compared in scatterplots.

Figure 1. Scatterplots of three RAPID3 strata. Red dots represent discordant subjects when compared to CDAI. Note: Panel C demonstrates the subjects that were in low disease activity in red that had a high severity RAPID3 score

Conclusion: This study shows that RAPID3 may overestimate disease activity level for patients above low disease activity. Treatment escalation based on RAPID3 in discordant patients may be inappropriate. When making treatment decisions, a measure that includes objective physical examination and provider judgment is desirable.

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IDENTIFYING CORE VARIABLES TO DEVELOP A SEVERITY INDEX IN RHEUMATOID ARTHRITIS: A NATIONWIDE DELPHI CONSENSUS

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Background: Early interventions during the “window of opportunity” have been shown to improve clinical outcomes in rheumatoid arthritis (RA). However, intensive treatment can induce toxicity so identifying patients most likely to benefit from it is of great importance. Hence, tools for guiding therapeutic decisions in early disease stages are needed.

Objectives: To identify core variables to develop a RA severity index according to an expert panel.

Methods: An expert panel was prompted to analyze relevant variables to define a “severity” construct, specified as “early severe disease”, able to classify patients with data collected on the first 2 years of the disease. They were also asked to identify potential modifying factors and external criteria to evaluate criterion validity.

An anonymous nationwide 2-round Delphi survey was applied to look for consensus about: (1) the priority of inclusion of each variable, (2) the feasibility to obtain them from usual sources (e.g., medical records) and (3) their definition. Each item was rated on a 10-point (priority) or 5-point (feasibility and definition) Likert scales were 0=complete disagreement and 5-10=complete agreement. After the 1st round, any item rated from 5 to 10 in priority and 3 to 5 for feasibility by at least 70% of responders was included in the final variable list. Items not reaching at least 20% consensus were discarded. The remaining ones would be voted again in the 2nd round and adopted if they reached at least 50% consensus or else discarded.

Results: The task force identified 17 variables to define the “severity” construct (Table 1). Socio-economic status, knowledge of their own disease, type or work adherence to treatment, among others were proposed modifying factors. Rheumatoid factor or anti-citrullinated peptide antibody seropositivity as predictive factors. The physician global assessment and the “burden of treatment” (lines of treatment, number and dose of DMARDs and cumulative steroid dose received) were proposed for evaluating criterion validity.

A total of 61 stakeholders from across Spain took the survey, 56% were female and had 19.8 years of average experience after training. All variables were included after 1st round. Nonetheless, definitions were submitted for a 2nd round after rephrasing, including comments received on the survey. The final list was reduced to 15 items after merging 3 of the initial variables into a new one called “refractoriness” (Table 1).

Conclusion: The consensus process resulted in a list of variables and modifying factors deemed of relevance for the severity construct as we defined it. These items will be used to develop a severity index to guide treatment decisions in early disease stages.

Table 1. Variables proposed for the severity construct.

N	Initially proposed variables	N	Final variables after Delphi
1	Polyarthritis	1	Polyarthritis
2	Big joint involvement	2	Big joint involvement
3	High disease activity at 2 years of follow-up	3	High disease activity at 2 years of follow-up
4	Maintained disease activity in the first 2 years	4	Maintained disease activity in the first 2 years
5	Acute phase reactants persistently elevated	5	Acute phase reactants persistently elevated
6	Extra-articular manifestations	6	Extra-articular manifestations
7	Failure to reach remission	7	Failure to reach remission
8	Need for aggressive therapy in the first 2 years	8	Need for aggressive therapy in the first 2 years
9	Presence of erosions at diagnosis	9	Presence of erosions by at diagnosis
10	Number of erosions at 2 years of follow-up	10	Number of erosions at 2 years of follow-up
11	Lack of improvement in the HAQ-DI	11	Lack of improvement in the HAQ-DI
12	Need for prosthetic surgery	12	Need for prosthetic surgery
13	Hospital Admissions	13	Hospital Admissions
14	Cortico-dependence	14	Cortico-dependence
15	MTX withdrawal due to loss of efficacy	15	Refractoriness
16	Completely absent response to MTX		
17	Number of drugs with lack of efficacy		

Underlined variables on the left were merged into a new variable called “Refractoriness”. HAQ-DI: Health Assessment Questionnaire-Disability Index

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