List of definitions:

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General risk factors for progression to severe COVID-19 include higher age, male sex, smoking, obesity, multimorbidity (especially pre-existing lung disease, renal insufficiency, diabetes mellitus, hypertension, coronary heart disease).

Rheumatic diseases are a group of heterogeneous chronic medical conditions which primarily affect the joints, peri-articular structures and tissues of the musculoskeletal system, although in some cases, internal organs are also involved. Chronic inflammatory arthritis (IA), include mainly rheumatoid arthritis, psoriatic arthritis (PsA) and spondyloarthritis (SpA). Connective tissue diseases (CTD), include conditions such as systemic lupus erythematosus (SLE), Sjögren's syndrome (SS), systemic sclerosis, polymyalgia rheumatica (PMR), and vasculitis between others.

List of abbreviations:

CDC: Centre for Disease Control and Prevention

TCA: Total cumulative agreement

Supplementary Table 1: ACCORD Checklist

Item number	Manuscript Section	Item wording	
T1	Title	Identify the article as reporting a consensus exercise and state the consensus methods used in the title.	✓
I1	Introduction	Explain why a consensus exercise was chosen over other approaches.	✓
I2	Introduction	State the aim of the consensus exercise, including its intended audience and geographical scope (national, regional, global).	✓
I3	Introduction	If the consensus exercise is an update of an existing document, state why an update is needed, and provide the citation for the original document	Not applicable
M1	Methods > Registration	If the study or study protocol was prospectively registered, state the registration platform and provide a link. If the exercise was not registered, this should be stated.	✓
M2	Methods > Selection of SC and/or panellists	Describe the role(s) and areas of expertise or experience of those directing the consensus exercise.	✓
M3	Methods > Selection of SC and/or panellists	Explain the criteria for panellist inclusion and the rationale for panellist numbers. State who was responsible for panellist selection.	✓
M4	Methods > Selection of SC and/or panellists	Describe the recruitment process (how panellists were invited to participate)	✓
M5	Methods > Selection of SC and/or panellists	Describe the role of any members of the public, patients, or carers in the different steps of the study.	Not applicable
M6	Methods > Preparatory research	Describe how information was obtained prior to generating items or other materials used during the consensus exercise.	✓
M7	Methods > Preparatory research	Describe any systematic literature search in detail, including the search strategy and dates of search or the citation if published already.	Not applicable
M8	Methods > Preparatory research	Describe how any existing scientific evidence was summarized and if this evidence was provided to the panellists.	Not applicable
M9	Methods > Assessing consensus	Describe the methods used and steps taken to gather panellist input and reach consensus (for example, Delphi, RAND/UCLA, nominal group technique)	✓

M10	Methods > Assessing consensus	Describe how each question or statement was presented and the response options. State whether panellists were able to or required to explain their responses, and whether they could propose new items.	✓
M11	Methods > Assessing consensus	State the objective of each consensus step.	✓
M12	Methods > Assessing consensus	State the definition of consensus (for example, number, percentage, or categorical rating, such as “agree” or “strongly agree”) and explain the rationale for that definition.	✓
M13	Methods > Assessing consensus	State whether items that met the prespecified definition of consensus were included in any subsequent voting rounds.	✓
M14	Methods > Assessing consensus	For each step, describe how responses were collected, and whether responses were collected in a group setting or individually.	✓
M15	Methods > Assessing consensus	Describe how responses were processed and/or synthesized.	✓
M16	Methods > Assessing consensus	Describe any piloting of the study materials and/or survey instruments.	✓
M17	Methods > Assessing consensus	If applicable, describe how feedback was provided to panellists at the end of each consensus step or meeting.	✓
M18	Methods > Assessing consensus	State whether anonymity was planned in the study design. Explain where and to whom it was applied and what methods were used to guarantee anonymity.	✓
M19	Methods > Assessing consensus	State if the steering committee was involved in the decisions made by the consensus panel.	✓
M20	Methods > Participation	Describe any incentives used to encourage responses or participation in the consensus process.	✓
M21	Methods > Participation	Describe any adaptations to make the surveys/meetings more accessible.	✓
R1	Results	State when the consensus exercise was conducted. List the date of initiation and the time taken to complete each consensus step, analysis, and any extensions or delays in the analysis.	✓
R2	Results	Explain any deviations from the study protocol, and why these were necessary.	Not applicable
R3	Results	For each step, report quantitative (number of panellists, response rate) and qualitative (relevant sociodemographics) data to describe the participating panellists.	✓

R4	Results	Report the final outcome of the consensus process as qualitative (for example, aggregated themes from comments) and/or quantitative (for example, summary statistics, score means, medians, and/or ranges) data.	✓
R5	Results	List any items or topics that were modified or removed during the consensus process. Include why and when in the process they were modified or removed.	✓
D1	Discussion	Discuss the methodological strengths and limitations of the consensus exercise.	✓
D2	Discussion	Discuss whether the recommendations are consistent with any preexisting literature and, if not, propose reasons why this process may have arrived at alternative conclusions.	✓
O1	Other information	List any endorsing organizations involved and their role.	✓
O2	Other information	State any potential conflicts of interests, including among those directing the consensus study and panellists. Describe how conflicts of interest were managed.	✓
O3	Other information	State any funding received and the role of the funder.	✓

Supplementary Table 2. Questions and results of voting from first, second and third round

Round 1 questions	Results	Round 2 questions	Results	Round 3 questions	Results	TCA
RISK PROGRESSION TO SEVERE COVID-19						
1. Excluding known risk factors*, within patients with systemic autoimmune /autoinflammatory diseases diagnosed with COVID-19, do you think they all present similar risk of progression	Strongly disagree – final consensus reached					86.6%
2. Excluding known risk factors*, within patients with musculoskeletal disease diagnosed with COVID-19, do you think they all present similar risk of progression to severe disease?	Strongly disagree – final consensus reached					80%
COVID-19 PREVENTION						
3. Do you agree with the inclusion of patients with musculoskeletal diseases in COVID-19 prevention campaigns?	Agreement not reached	Same question with feedback and percentages from previous round	Agreement not reached	Same question with feedback and percentages from previous round	Moderate agreement - final consensus reached	80%
4. Do you agree with the inclusion of patients with systemic autoimmune diseases in COVID-19 prevention campaigns?	Strong agreement – final consensus reached					86.6%
5. Do you agree that all patients with no other known risk factors*, with rheumatologic diseases	Agreement not reached	Same question with feedback and percentages from previous round	Moderate agreement - final consensus reached			80%

receiving immunomodulatory or immunosuppressive treatment, diagnosed with COVID-19, should receive antiviral treatment as early treatment, even if they are asymptomatic?						
6. Do you agree that all patients with known risk factors* with rheumatologic diseases receiving immunomodulatory or immunosuppressive treatment, diagnosed with COVID-19, should receive antiviral treatment as early treatment, even if they are asymptomatic?	Agreement not reached	Same question with feedback and percentages from previous round	Strong agreement – final consensus reached			80%
COVID-19 DIAGNOSTIC						
7. In the case of rheumatologic patients with negative antigen in nasopharyngeal exudate, but with clinical and radiological findings compatible with lower respiratory tract viral infection, would you agree with performing a SARS-CoV2 PCR?	Strongly agree – final consensus reached					86.6%
MANAGEMENT OF COVID-19 IN PATIENTS UNDER RHEUMATOLOGICAL TREATMENT						

8. Do you agree with the withdrawal of treatment with targeted synthetic DMARDs (JAK inhibitors and apremilast) in rheumatology patients with a confirmed diagnosis of COVID-19 with mild symptoms?	Agreement not reached	Same question with feedback and percentages from previous round	Moderate agreement - final consensus reached			80%
9. Do you agree with the withdrawal of treatment with biological DMARDs (TNF inhibitors, IL-6 inhibitors, IL-1 inhibitors, IL-17A/17F/17AF inhibitors, IL-12/23 inhibitors, CTLA4-Ig, anti-BAFF) in rheumatology patients with a confirmed diagnosis of COVID-19 with mild symptoms?	Agreement not reached	Same question with feedback and percentages from previous round	Moderate agreement - final consensus reached			86.6%
10. Do you agree with the withdrawal of treatment with rituximab in rheumatologic patients with a confirmed diagnosis of COVID-19 with mild symptoms?	Strong agreement-consensus reached with amendment to question. Amendment: Please note that by withdrawal we intend: - Postponement of treatment - Change of treatment (when possible) - Postponement of treatment until					86.6%

	disappearance of symptoms					
11. Do you agree with the withdrawal of treatment with with immunosuppressive drugs (azathioprine, cyclophosphamide, cyclosporine, mycophenolate or tacrolimus) in rheumatologic patients with a confirmed diagnosis of COVID-19 with mild symptoms?	Agreement not reached	Same question with feedback and percentages from previous round	Moderate agreement - final consensus reached			93.3%
12. Do you agree with the withdrawal of treatment with glucocorticoids in rheumatologic patients with a confirmed diagnosis of COVID-19 with mild symptoms?	Moderate disagreement- final consensus reached					80%
13. Do you agree with the withdrawal of treatment with targeted synthetic DMARDs (JAK inhibitors and apremilast) in rheumatologic patients with a confirmed diagnosis of COVID-19 with severe symptoms?	Strong agreement – final consensus reached					80%
14. Do you agree with the withdrawal of treatment with biologic DMARDs (TNF inhibitors, IL-6 inhibitors, IL-	Strongly agree – final consensus reached					80%

1 inhibitors, IL-17A/17F/17AF, IL-12/23 inhibitors, CTLA4-Ig, anti-BAFF) in rheumatologic patients with a confirmed diagnosis of COVID19 with severe symptoms?						
15. Do you agree with the withdrawal of treatment with rituximab in rheumatologic patients with a confirmed diagnosis of COVID-19 with severe symptoms?	Strong agreement- consensus reached with amendment to question. Amendment: Please note that by withdrawal we intend: - Postponement of treatment - Change of treatment (when possible) - Postponement of treatment until disappearance of symptoms					100%
16. Do you agree with the withdrawal of treatment with immunosuppressive drugs (azathioprine, cyclophosphamide, cyclosporine, mycophenolate or tacrolimus) in rheumatologic patients with a confirmed diagnosis of	Strong agreement – final consensus reached					100%

COVID-19 with severe symptoms?						
17. Do you agree with the withdrawal of treatment with glucocorticoids in rheumatologic patients with a confirmed diagnosis of COVID19 with severe symptoms?	Agreement not reached	Same question with feedback and percentages from previous round	Moderate disagreement - final consensus reached			86.6%
COVID-19 TREATMENT IN RHEUMATOLOGICAL PATIENTS						
18. Do you agree that patients diagnosed with COVID-19, with rheumatic diseases, should receive treatment with nirmatrelvir/ritonavir or remdesivir according to availability and possible interactions?	Agreement reached	Same question with feedback and percentages from previous round	Moderate agreement - final consensus reached			80%
19. Do you agree that patients diagnosed with COVID-19, with rheumatic diseases should receive treatment with nirmatrelvir/ritonavir plus remdesivir whenever possible?	Agreement not reached	Same question with feedback and percentages from previous round	Agreement not reached	Same question with feedback and percentages from previous round	Final consensus is not reached	
20. Do you consider that patients diagnosed with COVID-19, with rheumatic diseases should receive combined treatment with remdesivir or	Agreement not reached	Same question with feedback and percentages from previous round	Agreement not reached	Same question with feedback and percentages from previous round	Moderate disagreement - final consensus reached	80%

nirmatrelvir/ritonavir and a monoclonal antibody?						
21. Do you think that serology should be performed on all rheumatologic patients as a requirement to consider them as candidates for specific treatments?	Agreement not reached Clarificatory note added	Do you think that serology should be performed on all rheumatologic patients as a requirement to consider them as candidates for specific treatments? Please note that with serology we refer to an anti-S IgG serology.	Moderate disagreement - final consensus reached			80%
COVID-19 VACCINE						
22. Do you agree with considering the rheumatic population a priority in vaccination campaigns along with other immunosuppressed patients?	Strong agreement – final consensus reached					86.6%
23. Do you agree that the rheumatic population should be vaccinated annually for COVID-19 as in the case of other vaccines such as influenza?	Agreement not reached	Same question with feedback and percentages from previous round	Strong agreement – final consensus reached			86.6%
24. Do you agree that in order to improve the efficacy of COVID-19 vaccination patients with rheumatic	Agreement not reached	Same question with feedback and percentages from previous round	Strong agreement – final consensus reached			93.3%

disease, treated with rituximab, should wait 6 months since the last cycle and/or receive the vaccine a minimum of 4 weeks before the next cycle?						

* General risk factors for severe COVID-19: higher age, male gender, smoking, obesity, multi-comorbidity, especially pre-existing lung disease, renal insufficiency, diabetes mellitus, hypertension, coronary heart disease; TCA=Total Cumulative Agre