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Ankylosing Spondylitis Disease Activity Score (ASDAS): 2018 update of the nomenclature for disease activity states

Pedro M. Machado, Robert Landewé, Désirée van der Heijde for the Assessment of SpondyloArthritis international Society.

The Ankylosing Spondylitis Disease Activity Score (ASDAS) is a measure of axial spondyloarthritis (axSpA) disease activity with validated cut-offs endorsed by the Assessment of Spondyloarthritis international Society (ASAS) and Outcome Measures in Rheumatology (OMERACT).[1,2] In 2016 update of the ASAS-EULAR management recommendations for axSpA it is recommended that biological disease-modifying antirheumatic drugs (bDMARDs) should be considered in patients with persistently high disease activity despite conventional treatments, and that the preferred measure to define active disease should be the ASDAS (ASDAS of at least 2.1, i.e. high disease activity).[3] The 2017 update of treat-to-target recommendations in axial and peripheral SpA, recommends that the treatment target should be inactive disease/clinical remission and that low/minimal disease activity may be an alternative treatment target. The same recommendations state that the preferred measure to define the target in axSpA is the ASDAS.[4]

ASDAS cut-offs for disease activity states are 1.3, separating “inactive disease” from “moderate disease activity”, 2.1, separating “moderate disease activity” from “high disease activity”, and 3.5, separating “high disease activity” from “very high disease activity”. While inactive disease equates to a remission-like state, there is no low/minimal disease equivalent in the above nomenclature of ASDAS cut-offs. At the 2018 ASAS annual meeting in Lisbon, Portugal, ASAS members discussed the proposal of changing the nomenclature of ASDAS cut-offs in order to fill this gap.

Arguments to change the designation of “moderate disease activity” to “low disease activity” were presented. The compelling argument is the fact that the majority of patients in this ASDAS category have indeed mild disease activity, an observation that is in line with the external constructs that were used to derive the ASDAS cut-off of 2.1: patient and physician global assessments <3, using the 90% specificity criterion to determine the optimal cut-off.[1,5] Furthermore, recent publications have shown that the majority of patients with ASDAS values in the “moderate disease activity” category consider themselves as being in a patient-acceptable symptom state (PASS), which can be defined as the maximum level of symptoms with which patients consider themselves to be well. Godfrin-Valnet *et al*[6] found that agreement between ASDAS-C-reactive protein (CRP) and ASDAS-erythrocyte sedimentation rate (ESR) was good and that values of ≤2.3 for each were associated

with the PASS. A previous study by Rodriguez-Lozano *et al*[7] suggested cutoff values between 2.5 and 3.0 for ASDAS-CRP and cutoff values between 2.8 and 3.5 for ASDAS-ESR (PASS as external construct), depending on the method used to determine the cutoff value. A more recent study by Sellas et al[8] suggested that the ASDAS cut-off of 2.04 was associated with patient-PASS while the ASDAS cut-off of 2.44 was associated with physician-PASS.

Following an open discussion among ASAS members about the topic, the proposed nomenclature change from ASDAS “moderate disease activity” to ASDAS “low disease activity” was voted and approved by ASAS members (Figure 1). Other possibilities that were considered but rejected by ASAS members were the use of the wording “low/moderate disease activity”, “mild disease activity” and “moderate/high disease activity” (the later proposed to replace “high disease activity” state).

In conclusion, the nomenclature of ASDAS disease activity states was updated by ASAS. The “moderate disease activity” state is replaced by “low disease activity” state, better reflecting the opinion of patients and physicians about what ASDAS values ≥1.3 and <2.1 represent. This change will improve the interpretability of ASDAS scores and will facilitate the implementation of treat-to-target strategies in axSpA.

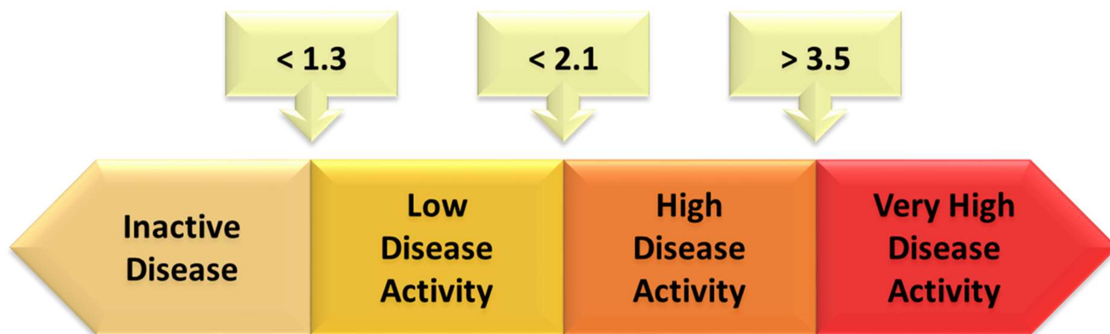

Figure 1. 2018 update of the nomenclature for ASDAS disease activity states. ASDAS, Ankylosing Spondylitis Disease Activity Score.

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