# Correspondence on 'Changing the outcome measures, changing the results? The urgent need of a specific disease activity score to adult-onset Still's disease'

Our interest in correspondence of Ruscitti *et al* focusing on the analysis of the data of the multicentre double-blind randomised placebo-controlled trial assessing the efficacy and safety of canakinumab in patients with adult-onset Still's disease (AOSD) can be explained by the authors' astonishing assumption stating that the clinical trial by Kedor *et al* "… is a further example of how the absence of validated measures could impair the expected positive results, despite the strong scientific rationale."[1 2] Ruscitti *et al* seriously believe that changing the measurement units will change the results of the trial; therefore, a specific AOSD activity score is required immediately.[1] Kedor *et al* used the DAS28 to assess the disease activity, selecting patients with active joint involvement as previously performed by a number of researchers, including Ruscitti.[2–4] The primary endpoint was the proportion of patients with a clinically relevant reduction in disease activity at week 12 as determined by the change in disease activity score (ΔDAS28 >1.2). However, for some reason, Kedor *et al* did not compare this indicator with the current disease activity (DAS28) as recommended when evaluating the efficacy (good and moderate responses) of a treatment.[2 5] Remember that unlike the American College of Rheumatology improvement criteria, the EULAR response criteria include changes in disease activity as well as current disease activity.[5] High activity of disease was defined as a DAS28 >5.1. Low activity of disease was defined as a DAS28 <3.2. Good responders were patients with a significant change (ΔDAS28 >1.2) and low disease activity. Moderate responders were patients with a significant change and moderate/high disease activity or patients with a change <1.2 and >0.6 and low/moderate disease activity. Non-responders were the remaining patients.[5] If Kedor *et al* had taken this into consideration, the canakinumab efficacy in AOSD would have been different.[2] Furthermore, the following information is missing from the study by Kedor *et al*[2]:

1. The pattern of the clinical course of the disease:
   - The monocyclic (or self-limiting) pattern characterised by systemic symptoms occurring in a single episode of varying duration and subsequent complete remission.
   - The polycyclic or intermittent pattern characterised by two or more episodes of systemic symptoms, which are separated by clinical remission lasting at least 2 months.
   - The chronic articular pattern characterised by severe inflammation of joints, which can lead to joint destruction.
2. Systemic symptoms. The systemic score assigns 1 point to the following disease manifestations[6]: 1. Fever; 2. Rash; 3. Pleuritis; 4. Pneumonia; 5. Pericarditis; 6. Hepatomegaly or abnormal liver function tests; 7. Splenomegaly; 8. Lymphadenopathy; 9. Leucocytosis $\geq 15\times10^9$/L; 10. Sore throat; 11. Myalgias; 12. Abdominal pain.
3. Except for the name of the disease, the diagnosis does not specify
   - Clinical form: systemic (a monocyclic or polycyclic pattern) or a chronic articular pattern.
   - Activity based on the systemic score.
   - Refractoriness to administered medication therapy.
   - Radiology stage
   - Functional class (grades).
   - Complications.

In addition, the authors totally neglected the commonly accepted 'treat-to-target' recommendations that do not imply specific indicators for evaluation of the disease activity.

Apparently, everything listed earlier affected the results and "the study was terminated prematurely and the primary endpoint did not achieve statistical significance."[2] In the meantime, the published data support the treatment of patients with AOSD with canakinumab using 4 mg/kg body weight every 4 weeks.

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**Contributors** Discussion.

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient and public involvement** Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

**Patient consent for publication** Not required.

**Provenance and peer review** Not commissioned; internally peer reviewed.



**To cite** Muraviov Y, Muraviova L. *Ann Rheum Dis* Epub ahead of print: [*please include* Day Month Year]. doi:10.1136/annrheumdis-2020-218692

Received 27 July 2020
Accepted 30 July 2020

Linked

► http://dx.doi.org/10.1136/annrheumdis-2020-218868
► http://dx.doi.org/10.1136/annrheumdis-2020-218749

*Ann Rheum Dis* 2020;**0**:1. doi:10.1136/annrheumdis-2020-218692

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