

# **Newer classification criteria 2010:How adequate is this to classify Rheumatoid Arthritis?**

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# **New Classification Criteria for RA.....WHY??**

- **During the last decades, the focus of the management of RA has shifted to the early phase of the disease.**
- **Studies showing that early achievement of a low disease activity state is beneficial for the further course of RA.**
- **These studies raised awareness regarding the importance of early treatment and pointed to the relevance of early recognition of RA.**
- **From this perspective, the 1987 American College of Rheumatology (ACR) criteria for RA have been criticized, because they are not equipped to diagnose early RA.**

# ACR 1987 Classification Criteria for Rheumatoid Arthritis

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Patients Must Have Four of Seven Criteria:

Morning Stiffness Lasting at Least 1 Hour\*

Swelling in 3 or More Joints\*

Swelling in Hand Joints\*

Symmetric Joint Swelling\*

Erosions or Decalcification on X-ray of Hand

Rheumatoid Nodules

Abnormal Serum Rheumatoid Factor

\* Must Be Present at Least 6 Weeks.

## **1987 criteria**

- **The 1987 criteria were developed in order to define homogeneous patient groups for research purposes**
- **Were based on patients in whom the average disease duration was 7 years.**

**The 2010 American College of Rheumatology/European League Against  
Rheumatism classification  
criteria for rheumatoid arthritis**

**Target population (Who should be tested?):**

**Patients who**

- 1) have at least 1 joint with definite clinical synovitis  
(swelling)**
- 2) with the synovitis not better explained by another  
disease**

**The 2010 ACR/EULAR classification  
criteria for rheumatoid arthritis**

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**Classification criteria for RA (score-based algorithm: add score of categories A–D; a score of 6/10 is needed for classification of a patient as having definite RA)**

**A. Joint involvement**

<b>1 large joint</b>	<b>0</b>
<b>2-10 large joints</b>	<b>1</b>
<b>1-3 small joints (with or without involvement of large joints)</b>	<b>2</b>
<b>4-10 small joints (with or without involvement of large joints)</b>	<b>3</b>
<b>10 joints (at least 1 small joint)</b>	<b>5</b>

**The 2010 ACR/EULAR classification  
criteria for rheumatoid arthritis**

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<b>B. Serology (at least 1 test result is needed for classification)</b>	
<b>Negative RF <i>and</i> negative ACPA</b>	<b>0</b>
<b>Low-positive RF <i>or</i> low-positive ACPA</b>	<b>2</b>
<b>High-positive RF <i>or</i> high-positive ACPA</b>	<b>3</b>
<b>C. Acute-phase reactants (at least 1 test result is needed for classification)</b>	
<b>Normal CRP <i>and</i> normal ESR</b>	<b>0</b>
<b>Abnormal CRP <i>or</i> normal ESR</b>	<b>1</b>
<b>D. Duration of symptoms</b>	
<b>&lt;6 weeks</b>	<b>0</b>
<b>≥6 weeks</b>	<b>1</b>

## **The 2010 ACR/EULAR classification criteria for rheumatoid arthritis**

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- **The criteria are aimed at classification of newly presenting patients.**
- **In addition, patients with erosive disease typical of RA with a history compatible with prior fulfillment of the 2010 criteria should be classified as having RA.**
- **Patients with longstanding disease, including those whose disease is inactive (with or without treatment) who, based on retrospectively available data, have previously fulfilled the 2010 criteria should be classified as having RA.**

**The 2010 ACR/EULAR classification  
criteria for rheumatoid arthritis**

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- **If it is unclear about the relevant differential diagnoses to consider, an expert rheumatologist should be consulted.**
- **Although patients with a score of <6/10 are not classifiable as having RA, their status can be reassessed and the criteria might be fulfilled cumulatively over time.**
- **Joint involvement refers to any *swollen* or *tender* joint on examination, which may be confirmed by imaging evidence of synovitis.**
- **Distal interphalangeal joints, first carpometacarpal joints, and first metatarsophalangeal joints are *excluded from assessment*.**

## The 2010 ACR/EULAR classification criteria for rheumatoid arthritis

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- **Categories of joint distribution are classified according to the location and number of involved joints, with placement into the highest category possible based on the pattern of joint involvement.**
- **“Large joints” refers to shoulders, elbows, hips, knees, and ankles.**
- **“Small joints” refers to the metacarpophalangeal joints, proximal interphalangeal joints, second through fifth metatarsophalangeal joints, thumb interphalangeal joints, and wrists.**

The 2010 ACR/EULAR classification  
criteria for rheumatoid arthritis ...cont'd

- **When >10 joints are affected, at least 1 of the involved joints must be a small joint; the other joints can include any combination of large and additional small joints, as well as other joints not specifically listed elsewhere (e.g., temporomandibular, acromioclavicular, sternoclavicular, etc.).**
- **Regarding serology, Negative refers to IU values that are less than or equal to the upper limit of normal (ULN) for the laboratory and assay; low-positive refers to IU values that are higher than the ULN but 3 times the ULN for the laboratory and assay; high-positive refers to IU values that are 3 times the ULN for the laboratory and assay.**

## **The 2010 ACR/EULAR classification criteria for rheumatoid arthritis**

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- **Where rheumatoid factor (RF) information is only available as positive or negative, a positive result should be scored as low-positive for RF.**
- **For acute phase reactants (ESR or CRP), normal/abnormal is determined by local laboratory standards**
- **Duration of symptoms refers to patient self-report of the duration of signs or symptoms of synovitis (e.g., pain, swelling, tenderness) of joints that are clinically involved at the time of assessment, regardless of treatment status.**

## **The 2010 ACR/EULAR classification criteria for rheumatoid arthritis**

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- **Application of these criteria provides a score of 0–10, with a score of 6 being indicative of the presence of definite RA**
- **A patient with a score below 6 cannot be classified as having definite RA, but might fulfill the criteria at a later time point**
- **To classify a patient as having or not having definite RA, a history of symptom duration, a thorough joint evaluation, and at least 1 serologic test (RF or ACPA) and 1 acute-phase response measure ESR or CRP must be obtained.**

## **The 2010 ACR/EULAR classification criteria for rheumatoid arthritis**

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- **An individual patient may meet the definition of RA without requiring that all tests be performed. For example, patients with a sufficient number of joints involved and longer duration of symptoms will achieve 6 points regardless of their serologic or acute-phase response status.**
- **However, for the purposes of clinical research and trial enrollment, documentation of each domain will be necessary for phenotyping.**

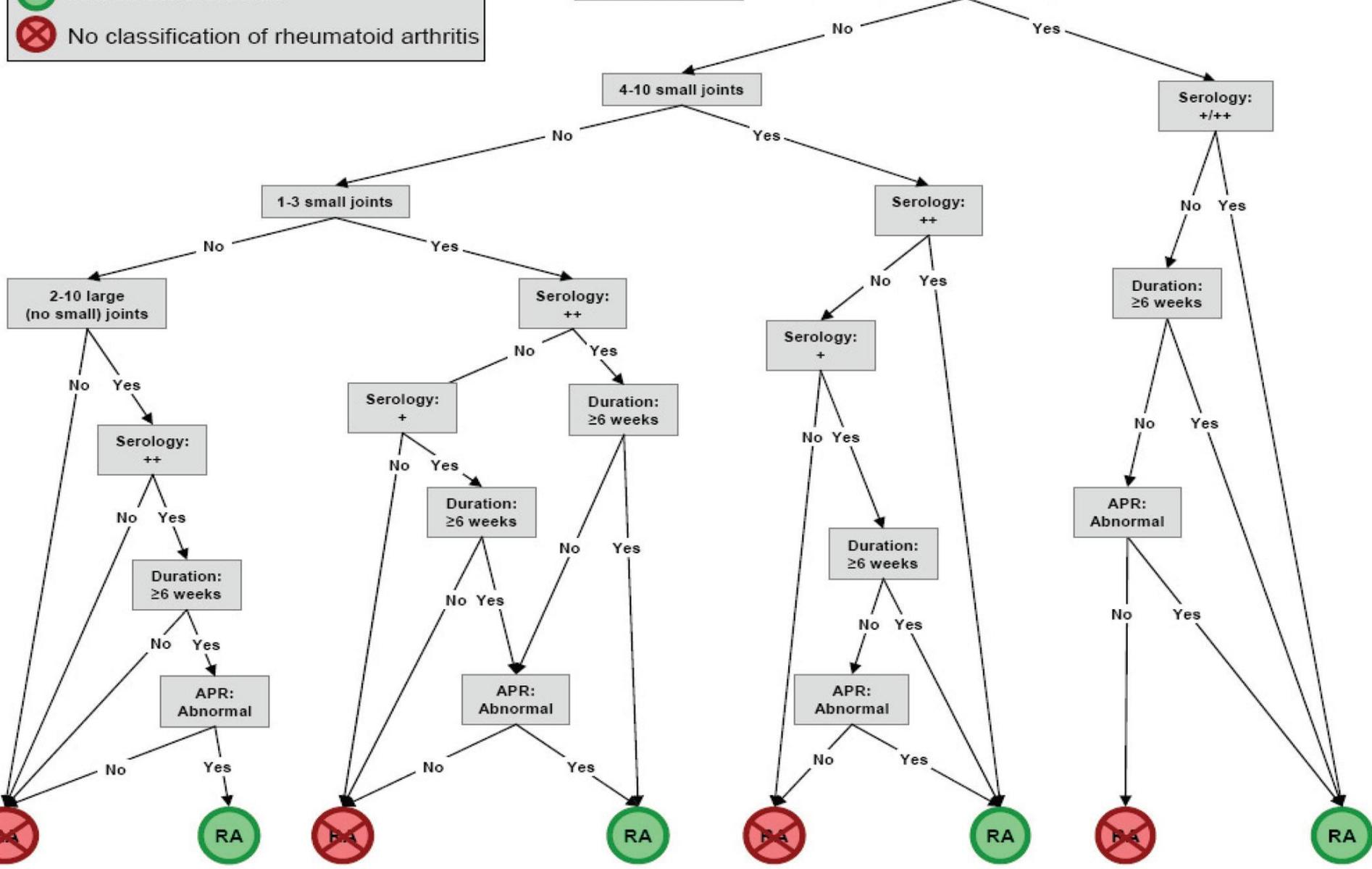
**The 2010 ACR/EULAR classification  
criteria for rheumatoid arthritis .....cont'd**

- **The main purpose of these 2010 criteria is to achieve increased sensitivity and specificity for identifying RA in an early phase.**
- **The working group that developed the 2010 criteria stressed that patients fulfilling the 2010 criteria are probably less homogeneous and, therefore, that in clinical trials, researchers should “document the proportions of study subjects who fulfill the previous (1987) criteria and the new RA classification criteria, to enable comparisons.”**
- **Moreover, the working group warned that the 2010 criteria may increase heterogeneity by including different phenotypes, thereby making basic science studies more difficult.**

 Rheumatoid arthritis  
 No classification of rheumatoid arthritis

**START**  
(eligible patient) 

>10 joints (at least one small joint)



## **The 2010 ACR/EULAR classification criteria for rheumatoid arthritis in the Heinola inception cohort-diagnoses confirmed by long-term follow-up.**

[Kaarela K](#), [Kauppi JE](#), [Kauppi MJ](#).

[Clin Rheumatol](#). 2011 Nov 4.

- **The aim of this study : to evaluate the 2010 ACR/EULAR classification criteria for RA in a cohort with early arthritis and true diagnosis confirmed by long-term follow-up.**
- **Authors concluded that the 2010 ACR/EULAR criteria should be documented in all patients with arthritis. If the criteria are not fulfilled at baseline in a nonerosive patient, the true diagnose may still be RA due to seroconversion or diagnostic manifestations during the follow-up.**

# **Level of agreement of the 1987 ACR and 2010 ACR/EULAR rheumatoid arthritis classification criteria: an analysis based on ESPOIR cohort data.**

[Fautrel B, Combe B, Rinceval N, Dougados M; for the ESPOIR Scientific Committee](#)

[Ann Rheum Dis.](#) 2012 Mar;71(3):386-389. Epub 2011 Oct 28.

**OBJECTIVE:** To assess agreement between 1987 American College of Rheumatology (ACR) and 2010 ACR/EULAR) criteria and the potential source of discordance, based on ESPOIR cohort data.

**CONCLUSION:** 2010 ACR/EULAR criteria identified more patients with RA than did 1987 criteria. The 2010 criteria failed to identify RA patients with symmetrical seronegative arthritis and limited joint involvement.

# Undifferentiated arthritis characteristics and outcomes when applying the 2010 and 1987 criteria for rheumatoid arthritis.

[Krabben A, Huizinga TW, van der Helm-van Mil AH](#)

[Ann Rheum Dis.](#) 2012 Feb;71(2):238-41. Epub 2011 Sep 27

**OBJECTIVE:** Undifferentiated arthritis (UA) is a diagnosis 'per exclusionem'. Therefore this patient population may change since the development of the ACR/EULAR 2010-criteria for RA. This study evaluated characteristics and outcomes of UA in its new shape. Second, it was evaluated whether the 2010-criteria and the Leiden prediction rule were congruent in categorizing UA-patients.

**CONCLUSION:** UA in the era of the 2010-criteria is less prevalent and milder at presentation and in outcome. This implies that UA-patients with unfavorable characteristics are now more often classified as RA.

# **The clinical picture of rheumatoid arthritis according to the 2010 American College of Rheumatology/European League Against Rheumatism criteria: Is this still the same disease?**

[de Hair MJ](#), [Lehmann KA](#), [van de Sande MG](#), [Maijer KI](#), [Gerlag DM](#), [Tak PP](#).

[Arthritis Rheum.](#) 2012 Feb;64(2):389-93. doi: 10.1002/art.33348.

**Objective:** To examine the implications of using the new classification criteria for RA in clinical practice in a cohort of patients with very early arthritis.

**Conclusion:** Use of the 2010 ACR/EULAR criteria clearly allows earlier diagnosis of RA, although the clinical picture is slightly different on the group level, and RA may be falsely diagnosed in some patients with self-limiting disease.

## **Validation of the 2010 ACR/EULAR classification criteria for rheumatoid arthritis: slight improvement over the 1987 ACR criteria**

Karin Britsemmer, Jennie Ursum, Martijn Gerritsen, Lilian van Tuyl, Dirkjan van Schaardenburg

*Ann Rheum Dis* 2011;70:1468–1470.

**Objective:** To evaluate the diagnostic and discriminative ability of these new criteria compared with the 1987 ACR criteria and the Visser decision rule.

**Conclusion:** The 2010 ACR/EULAR criteria were slightly more sensitive, but otherwise performed similarly to the older criteria. A high percentage of 'non-RA' patients used methotrexate, the gold standard for RA. The ability of the new criteria to identify patients with erosive disease was low, possibly owing to the effect of intensive treatment.

- **Classification of Rheumatoid Arthritis. Comparison of the 1987 American College of Rheumatology Criteria and the 2010 ACR/EULAR Criteria**

M. P. M. van der Linden, R. Knevel, T. W. J. Huizinga, and A. H. M van der Helm-van Mil  
ARTHRITIS & RHEUMATISM Vol. 63, No. 1, January 2011, pp 37–42

***Objective.*** New criteria to classify RA have been derived in order to increase the specificity and sensitivity for early RA compared with the 1987 ACR criteria. The aim of this study was to evaluate differences in classification between the 1987 ACR criteria and the 2010 ACR/EULAR criteria in an early arthritis cohort and to determine the test characteristics of the 2010 ACR/ EULAR criteria.

***Conclusion.*** Compared with the 1987 criteria, the 2010 criteria classify more patients with RA and at an earlier phase of the disease. The discriminative ability of the 2010 criteria is acceptable.

# **Classification criteria vs Diagnostic criteria**

- **The working group has deliberately labeled these criteria as “classification criteria” as opposed to “diagnostic criteria.”**
- **The aim is to provide a standardized approach for discriminating, from a population of individuals presenting with undifferentiated synovitis, the subgroup with the highest probability of persistent or erosive RA, who may be enrolled into clinical trials and other studies through the use of uniform criteria.**
- **In the new criteria, prediction rules aimed at early diagnosis have been developed and validated.**

## **Classification criteria vs Diagnostic criteria**

- **Nonetheless, it is recognized that the new criteria will likely also be used as a diagnostic aid.**
- **Much like other classification criteria, clinicians may be able to diagnose an individual who has not met the classification criteria definition or who has features that are not a component of the classification criteria.**
- **The question of what method is best to identify early RA on the individual patient level is still unanswered and is a subject for future studies.**

Thanks