The Myth of the Distinction Between Classification and Diagnostic Criteria☆

El mito de la distinción entre criterios de clasificación y criterios diagnósticos

To the Editor:

Over time I have become more and more surprised with the emphasis placed on courses and conferences that distinguish between criteria for classification and diagnosis. The argument is that the classification criteria have been designed to select patients who will be included in a clinical trial and, therefore, their greater certainty and consistency seek to obtain stable and comparable populations from one study to another. The diagnostic criteria, on the other hand, would be those that establish a diagnosis in individual patients and can be used in daily clinical practice.[1] Table 1 describes the characteristics that distinguish them in practice. I will explain why, in my opinion this division into two types of criteria is fallacious, and why the existence of different criteria is a myth, because in actual practice we all use the criteria for classification as diagnostic criteria.

First, we must note that the process of medical diagnosis is in itself a classification process,[2] which starts from a set of data and transforms into a theoretical construct that we name a disease, such as rheumatoid arthritis (RA) or ankylosing spondylitis (AS). Over time, doctors have tried to make a nosologic classification of diseases based on their differences in clinical signs, evolution and response to treatment. This classification has changed as we acquire more or better evidence of the differences between the nosological constructs. The paradigmatic example is ankylosing spondylitis, initially interpreted as a form of rheumatoid arthritis, or ankylosing vertebral hyperostosis (AVH) that required a war between *the pater familias* of international rheumatology (Forestier vs SCHMORL with Rotés Querol in between), until it was recognized as an entity distinct from AS. Thus, disease classifications are modified over time and therefore it is not surprising that their diagnostic criteria do so as well. As a nosological classification system, we have widely accepted the International Classification of Diseases (ICD) which is now in version 10.[3]

In any case, the aim during the diagnostic process is to fit the morbid details of a patient (and the patient itself as a consequence) inside one of the boxes in the available diagnostic classification. In other words, when performing a diagnosis we also carry out a classification process. And on what basis do we make this diagnosis/classification process? In a series of more or less constant and predictive data in a group of subjects with the disease in question; of course, these data coincide in most cases with that used in the so-called classification criteria. An important point is that these criteria are a limited subset of the events that may occur in a disease, because in the classification criteria there are typically deleted items that are redundant or which have collinearity (highly correlated with each other), as well as the late or uncommon manifestations of disease. Therefore, the dataset used for diagnosis is greater than that used in the classification criteria. But this does not mean that the classification criteria are different from the so-called diagnostic criteria. In fact, I have not found a differential formal description of such criteria in any publication, as only the classification criteria are always described.

Table 1
Differences Between Criteria for Classification and Diagnostic Criteria.

	Classification criteria	Diagnostic 'criteria' process
Objective	Appropriately select patients for clinical trials	To diagnose patients with a particular disease
Number of items	Few, essential to selecting good candidates for clinical trials	All diagnostic data available to allow a diagnosis
Selection of items	Statistical/epidemiological studies	At the discretion of the attending physician
Emphasis	Specificity (avoidance of false positives)	Sensitivity (avoidance of false negatives)
Threshold criteria	Fixed, well established (qualitative or weighted)	Undetermined/arbitrary

The classification criteria, like many things in medicine, are not completely perfect, having a certain sensitivity and specificity for the diagnosis, as made by experts, something that usually is not a gold standard but a consensus based on their own experience. There is a certain relationship between the classification criteria and the actual disease state of the patient, whose diagnosis is usually based on the experience of expert clinicians, but not on formal diagnostic criteria, unless there is a specific gold standard (biopsy or pathognomonic finding).

What is clear is that, in general, patients who meet criteria may be diagnosed with the disease, so often these criteria are the basis used to confirm the suspected diagnosis. The reverse is not always true: some patients who fail to meet criteria may also be diagnosed using additional data to that included in the classification criteria.

To summarize, the concept of diagnostic criteria is fallacious because they either overlap with the classification criteria or are not formally well defined and simply refer to the concept of diagnosis based on experience. Consequently, the habit of comparing the two types of criteria in publications and conferences should be abandoned, because it is based on a misunderstood and inappropriate concept. The classification criteria are also diagnostic criteria, although it must be emphasized that reaching the clinical diagnosis in some patients may require additional data that are included in the classification criteria being used.

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Conflict of Interest

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Reference

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Effectiveness of Certolizumab Pegol in Chronic Anterior Uveitis Associated to Crohn's Disease and Ankylosing Spondylitis☆

Efectividad del certolizumab pegol en el tratamiento de la uveítis anterior crónica asociada a enfermedad de Crohn y espondilitis anquilosante

Dear Editor,

The increasingly widespread off-label use of anti-tumor necrosis factor alpha (TNF-α) drugs has changed the therapeutic panorama of uveitis when topical or systemic treatment with corticosteroids and classic immunosuppressive drugs failed to control the disease.

Certolizumab pegol is an anti-TNF-α drug approved by the FDA for use in Crohn's disease in 2008, and for rheumatoid arthritis by the EMEA and FDA in 2009. Recently, a series of 7 cases of uveitis treated with certolizumab pegol was published. This is one of them.[1]

The case is a 33-year-old patient affected since 2003 by recurring episodes of acute alternating unilateral anterior uveitis and HLA-B27 positive spondyloarthropathy, the reason for which he was in treatment with infliximab at doses of 3 mg/kg/body weight every eight weeks. Until 2004, he had suffered recurrent episodes of acute alternating unilateral anterior uveitis which came to be controlled with topical steroids. During this year the pattern of ocular involvement was changing, with anterior uveitis episodes becoming more frequent and associated with bilateral episcleritis/scleritis, while presenting the onset of digestive symptoms, being diagnosed with Crohn's disease after a colonoscopy and biopsy. Treatment was established, therefore, with oral prednisone azathioprine and infliximab and dosages increased to 5 mg/kg/body weight every 6 weeks. In 2010 recurring ocular and intestinal flares lead to a change of anti-TNF drug to adalimumab 40 mg weekly. After initial control, the patient presented a flare of uveitis and ileitis after one year. In October 2011 the uveitis unit switches the patient to a third anti-TNF drug, certolizumab pegol 400 mg initial dose and 200 mg every 2 weeks for maintenance, with negative Tyndall result and resolution of synechiae from the second dose, but without resolution of intestinal manifestations. He is admitted for an ileal resection surgery in January 2012. The biological treatment was suspended due to the surgery and the patient presents a severe flare of uveitis in the right eye (AV 0.5, synechiae, Tyndall 3+). The patient is treated with oral and topical corticosteroids. After surgery in February 2012, treatment with certolizumab pegol and azathioprine is resumed. The patient is currently inactive with good visual acuity (VA 1.0) and no flares up until March 2014 when a flare of unilateral uveitis which was controlled with topical treatment (Table 1).

In some cases of anterior uveitis associated with spondyloarthropathies, systemic treatment is necessary to control inflammatory activity and flares (Fig. 1). Uveitis associated with Crohn's disease has somewhat different characteristics, leading to a more chronic form, sometimes more aggressive, and even middle and posterior eye involvement, unlike uveitis associated with ankylosing spondylitis.[2] Among classical immunosuppressants used for treating anterior uveitis the literature suggests methotrexate[3,4] and sulfasalazine as effective[5] as well as anti-TNF-α drugs. However, due to high cost and off-label use, they are used as second line therapy. There are papers describing case series and isolated cases of patients with anterior uveitis treated with anti-TNF-α.[6–9]

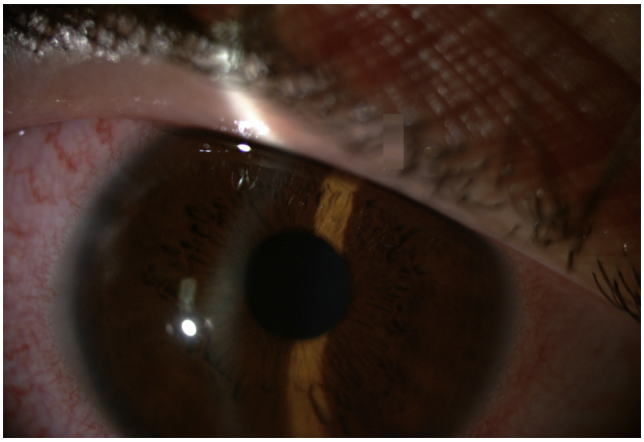

Fig. 1. Anterior uveitis with perikeratic injection.

Table 1
Pattern of Uveitis and Treatments Received.

	2003–2010	2010–2011	2012–2014
Uveitis pattern	URAAU	CAU	CAU
Anti-TNF-α	Infliximab	Adalimumab	Certolizumab
Immunosuppressive therapy	Azathioprine	Azathioprine	Azathioprine
Adjuvant treatment	Periocular infiltration oral corticosteroids	Periocular injections oral corticosteroids	Ileal resection

URAAU, unilateral recurrent acute anterior uveitis; CAU, chronic anterior uveitis.

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