

## Preface

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The word *diagnosis* derives from the Greek words of *dia*-, “thoroughly” and *-gnosis*, “to come to know.” *Criterion* is from the Greek *krinein*, meaning “to judge” or “to separate.” Therefore, literally, diagnostic criteria are a metaprocess of judging the judgment.

What these words do not convey is the emotion associated with the process of diagnosis, or the feelings of both patient and physician associated with the diagnosis, or the inability to reach a clinical conclusion based on signs and symptoms. *Diagnostic Criteria in Neurology* has been compiled in order to guide clinicians with this process by compiling sets of diagnostic criteria derived from the medical literature. In this process, I have endeavored not to be the final arbiter of diagnostic criteria, but to show the diversity of criteria that have been proposed, and to study their various extents. Thus, *Diagnostic Criteria in Neurology* may be viewed as a “cento,” a text composed of pieces gathered from the works of other authors. In the process, I have purposely excluded conditions whose diagnosis depends solely on histopathology (e.g., brain tumors).

Another root for the genesis of *Diagnostic Criteria in Neurology* is the long-term observation regarding the statistical nature of medical diagnosis. One can imagine that diagnosis is a matching process of assigning a patient’s symptoms and illnesses to a particular category or set of categories, and then proceeding to narrow the search based on additional information. However, this overlooks the probabilistic nature of all diagnoses. When we say that a patient has X, what we are really saying is, “to the limit of medical certainty [to borrow a term from the medico-legal arena], the patient fulfills the criteria I utilize for making a given diagnosis.”

What happens when the diagnosis suggests a rarer entity? The individual practitioner has several routes of action. From a pragmatic standpoint, one approach is to refer the patient to a colleague, or an “expert,” in the hope that the patient will become their problem to solve. Frequently, this does not result in learning for the referring practitioner, and may increase patient frustration as he or she wait for the next health care encounter.

A second approach is to stick too tightly to one’s initial impressions or to provide only a diagnosis that refers to specific symptoms. Although this may satisfy some, it may lack intellectual rigor if it does not result in the acquisition of additional information that will help create appropriate, meaningful diagnostic information for both patient and physician.

Another approach would be to create the resource for the practitioner to consult the formal diagnostic criteria in the medical literature. Although one aim of medical training is to provide this comfort level with common illnesses, the ability to diagnose according to generally accepted criteria, even within one’s stated specialties, has become a challenge.

In notable cases, such as multiple sclerosis, the diagnostic criteria have changed with time. There may also be regional differences in criteria depending on the source. Some diagnoses have shifted categories with time. Tourette syndrome was once considered primarily a psychiatric disorder, but today has roots in genetics, immunology, neurology, and psychiatry and could be considered in texts on all of these subjects.

I have also purposely and specifically not included the literature that surrounds every set of diagnostic criteria. Issues of sensitivity, specificity, and positive and negative predictive values are inherent in any signal detection system. This should be an issue for authors of diagnostic criteria because the utility of their work will depend on its operational usefulness.

The utility of diagnostic criteria may also depend on the underlying distribution of diseases in the differential diagnosis. Just as it takes little skill to forecast a sunny day in Los Angeles during the summer, the practitioner can achieve high degrees of success with limited heuristics. Diagnosing Alzheimer’s

disease in every older individual with cognitive impairment will result in a high “hit rate” of correct diagnoses. However, this approach runs counter to significant trends in science. We do not, ultimately, do our patients a service by utilizing generic diagnosis. One could not treat leukemia today without reference to cell types and genetic markers, despite their once being lumped into larger categories. We should not be satisfied with this approach within our own specialty.

I am often reminded of the story drawn from the Book of Genesis. Man’s first act is to name the animals. Although open to many interpretations, one concept is that we gain control over the unknown and the emotionally terrifying through the process of naming. This process has ancient roots and I hope that *Diagnostic Criteria in Neurology* will help physicians in this ongoing task.

Please also keep in mind that this book is available as a personal digital assistant (PDA) product for easy and efficient clinical use. To obtain the PDA, please contact the publisher, Humana Press ([www.humanapress.com](http://www.humanapress.com)).

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