MS classifications revised

Changes may affect treatment decisions.

by Marcella Durand

Over the last two decades, advances in magnetic resonance imaging (MRI) and breakthroughs in research have enabled our understanding of multiple sclerosis to evolve significantly. Now, thanks to revised disease classifications, the language that we use to describe the courses of MS has caught up with these advances.

Describing the disease
"The new descriptions outline what can happen in the course of MS better than the old descriptions did," says Kathleen Costello, an MS nurse practitioner and associate vice president, Healthcare Access, at the National MS Society. "They can help people understand what is happening over time with their disease." Improved understanding, in turn, helps facilitate more precise treatment plans and research protocols, as well as more collaborative discussions with healthcare providers.

The National MS Society Advisory Committee on Clinical Trials in MS first defined the clinical courses of MS in 1996. At the time, the committee acknowledged that advances in imaging and research might significantly change how we understand the different courses, also called types, of MS in the future.

Changes in MS disease course descriptions

The revised disease course descriptions are now being integrated into the Society's online

and print materials. View the revisions chart.

Beginning in 2011, the International Advisory Committee on Clinical Trials of MS, jointly sponsored by the Society and the European Committee for Treatment and Research in MS (ECTRIMS), brought together a group of MS researchers, known as The MS Phenotype Group, to revisit the classifications. The revised descriptions were published in **Neurology** (July 2014) and, after a period of time to gauge reaction by MS researchers and doctors, they are now being integrated into the Society's online and print materials.

The courses of MS

The committee retained three of the disease course descriptions first developed in 1996, added one new course of MS (clinically isolated syndrome, or CIS) and eliminated another (progressive relapsing MS, or PRMS), as follows:

- **Relapsing-remitting MS (RRMS)**. The most common MS course, RRMS may now also be described either as **active**—meaning the individual is experiencing a relapse and/or new MRI activity—or as **not active**, meaning that no disease activity is occurring. However, RRMS characterized as "not active" may still be **worsening**, if there is a confirmed increase in disability due to symptoms persisting after a relapse. Conversely, doctors may characterize a person's RRMS as active but **not worsening** if they see new MRI activity, but no increase in clinical symptoms.
- **Primary progressive MS (PPMS)**. PPMS is characterized by steadily worsening neurologic function or disability from the onset of symptoms. A diagnosis of PPMS may be further modified at any point in time as **active**, with new MRI activity and/or relapses, or as **not active**. In addition, both active and not active PPMS may be further modified as **with progression**, meaning there is objective evidence of sustained worsening over time, or **without progression**. Active PPMS may still be described as "without progression" if there are new lesions on MRI, but no observable increase in disability.

Previously, people diagnosed with PPMS were not considered eligible for treatment with a disease-modifying therapy (DMT). However, under the new descriptions, people with active PPMS (those who have new inflammation or a new relapse) may talk with their doctors about possible treatment with a DMT. "The current therapies all have an anti-inflammatory effect," says Costello.

Anyone diagnosed with progressive forms of MS, and particularly those diagnosed with PPMS that is not active but with progression, should discuss rehabilitation strategies to maintain their function and mobility. People who were diagnosed with progressive relapsing MS (PRMS) under the previous descriptions would now be considered to have active PPMS.

- **Secondary progressive MS (SPMS)**. Like PPMS, SPMS is characterized by a progressive worsening of neurologic function; however, unlike PPMS, SPMS follows an

initial relapsing-remitting course. It can be characterized at different points in time as **active** or **not active**, as well as **with progression** or **without progression**. As with active PPMS, people with active SPMS should discuss treatment with a DMT with their healthcare providers.

- **Clinically isolated syndrome (CIS)**. CIS is a first episode of neurologic symptoms, lasting at least 24 hours, and caused by inflammation and demyelination in the central nervous system. “Now there is a way, using these newer diagnostic criteria, to diagnose and treat a person as having MS with the first clinical event, if they have certain findings on their MRI,” says Dr. Bruce Cohen, head of the Society’s National Medical Advisory Committee. And early treatment of CIS has been shown in studies to delay the onset of MS. Correspondingly, individuals who have experienced CIS and who are considered at high risk of developing full-blown MS—that is, their CIS is accompanied by MS-like lesions seen on MRI—may now be treated with a DMT.

What the modifiers mean

The modifiers, such as “active” and “not active,” incorporate information from MRIs, relapses and degree of disability. “The original MS course descriptions were purely clinical—that is, based on observations of symptoms—and we’ve learned over the last 20 years that, in fact, clinical activity is a less sensitive measure of MS activity than MRI,” says Dr. Cohen.

Accordingly, the new classifications also provide guidelines for how often MRIs should be used to assess someone’s MS. “Before, we waited until someone had another event with more clinical findings and more disability,” explains Costello. “Now, the newer criteria include utilizing MRI with gadolinium (a contrast agent) to help make a diagnosis sooner and to recognize changes in established MS so that treatment changes can be considered.”

Ultimately, the most important impact of the descriptions may be helping people understand their own disease better. “When people understand MS better,” says Costello, “they are able to have more meaningful discussions with their healthcare teams and make more informed treatment decisions.”

Marcella Durand is a New York-based writer.

To learn more about the disease courses, visit Types of MS.