

International Committee on Clinical Trials in MS proposes new “mechanism-driven” framework to describe types of MS

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- Proposed framework moves away from purely clinical descriptions of separate phases, like relapsing-remitting, primary progressive, or secondary progressive MS
- Framework focuses on understanding MS as a continuous disease process influenced and driven by underlying mechanisms of nervous system injury, counter-balanced by how well an individual’s body can repair or compensate for that injury

An international panel of MS experts has proposed the creation of a **new framework redefining how different types of multiple sclerosis are described**, laying the groundwork for better understanding and treatments in the future.

The goal of the new framework – published today in **Lancet Neurology** – is to eventually move away from describing the clinical course of MS as having separate phases, like [relapsing-remitting](#), [primary progressive](#), or [secondary progressive](#) MS. Instead, the panel proposes understanding MS as a continuous disease process that is influenced and driven by underlying mechanisms of nervous system injury, counter-balanced by how well an individual’s body can repair or compensate for that injury. Ultimately, having a biological understanding of what drives any individual’s disease course will lead to better, more personalised treatments that can stop MS in its tracks.

The paper, by Tanja Kuhlmann, M.D. (University Hospital Münster, Germany) and collaborators, was written on behalf of the [International Advisory Committee on Clinical Trials in MS](#), a long-standing initiative jointly supported by ECTRIMS and the [National MS Society](#) (USA). The Committee **provides perspective and guidance** in areas of interest to planning and implementation of clinical trials for new agents for the treatment of multiple sclerosis.

“Describing MS based on underlying biology, rather than how it appears clinically, will require a better understanding of the mechanisms that drive disease worsening. This paper reviews ongoing research to uncover and detect the underlying biological mechanisms active in individuals with MS and identifies knowledge gaps.”

*Tanja Kuhlmann, M.D.
Lead Author*

The paper outlines the following key points:

- Factors that are likely to influence how any individual experiences MS and its disease course include the person's duration of disease, age, biological sex, genes, race and ethnicity, co-existing health conditions, health behaviors, therapies, and social and environmental exposures.
- Some mechanisms being investigated for their role in nervous system injury include acute and chronic inflammation, myelin loss, nerve fiber (axon) and neuron loss, and insufficient energy to maintain the health of brain cells (mitochondrial dysfunction).
- An ongoing balance between injury and the ability to repair or compensate for that injury is likely to determine what an individual's MS looks like and how it evolves throughout its course.
- Any new framework for classifying MS in the future will require a sea change in how individuals with MS, clinicians, and drug developers and regulators understand and describe MS. This would enable the development and approval of more biologically based treatment approaches for each individual with MS.
- The Committee's vision is that the tools to detect an individual's disease course and underlying mechanisms are developed and are eventually available in clinical settings to inform biologically based treatment decisions.

“This proposal is among many initiatives that the Committee has supported over the years as part of its overarching aim to constantly improve, update and enhance clinical trial design and inform clinical care delivery for people living with MS and their healthcare teams.”

Ruth Ann Marrie, MD, PhD

Chair, Int. Advisory Committee on Clinical Trials in MS

“[Multiple sclerosis progression: time for a new mechanism-driven framework](#),” by Drs. Tanja Kuhlmann, Marcello Moccia, Timothy Coetzee, Jeffrey A. Cohen, Jorge Correale, Jennifer Graves, Ruth Ann Marrie, Xavier Montalban, V. Wee Yong, Alan J. Thompson, Daniel S. Reich, on behalf of the [International Advisory Committee on Clinical Trials in MS](#), was published on 18 November 2022 in **Lancet Neurology**.

A podcast on the proposed framework is now available on the ECTRIMS Podcast, featuring authors Tanja Kuhlmann from Münster University, Daniel Reich from the National Institute of Mental Health, and host Alan Thompson from the MS Journal.

➤ [Listen to the podcast](#)

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