Biomarker research to help modernize care in multiple sclerosis

Aug 21, 2024

Biomarkers in Multiple Sclerosis: Advancing a More Proactive Care Approach

In Canada, more than 90,000 people – or one in 400 people – are living with multiple sclerosis (MS) , a neurodegenerative, chronic condition that affects the central nervous system. Due to its unpredictable nature, people affected by MS often find it challenging to know what the future holds. The severity of symptoms can also vary from person to person and evolve as the disease progresses, which means no two people living with MS have the same experience.3 As such, this complex condition requires tailored, personalized, and adaptive treatment strategies based on individual needs and the rate of disease evolution.

Despite significant advancements on the therapeutic front over the past two decades, the way disease progression is detected remains vastly unchanged. Subtle progression and early changes often go undetected, making it challenging for care teams to intervene early, before brain damage occurs. When it comes to the care available, what is currently missing is the ability to detect disease progression earlier and act on it in a more strategic manner.

Developing digital, fluid, and imaging biomarkers has emerged as a key focus area in the field, with the potential to usher in a new era of truly personalized medicine. A biomarker is an objective measure that helps assess disease severity and can also reveal how someone is responding to their treatment. Although they have been widely studied in major disease areas such as cancer and heart disease, today, there is increased interest in developing disease-specific biomarkers that could estimate disease severity and cognitive status in people living with MS.

Since 2021, Novartis Canada and Innodem Neurosciences have been working together to advance the application of novel biomarkers into clinical practice as a way to enable clinicians to make more informed decisions throughout the disease course and achieve better long-term outcomes.

In 2024, Health Canada granted approval of the Eye-Tracking Neurological Assessment for Multiple Sclerosis (ETNA™-MS), a new, non-invasive tool developed by Innodem Neurosciences that turns an iPad Pro into a medical device capable of capturing and analyzing several hundreds of eye movement parameters for use in tracking disease progression in people living with MS.

This tool and our ongoing work in this space are helping to move past the status quo and pave the way for a more proactive approach to care. By pushing the boundaries of innovation beyond traditional confines, our aim is to improve the standard of care by enabling doctors to act prior to the onset of irreversible damage.

Read more about how this could modernize the approach to care in MS, in the Toronto Star.

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