

Transcript Details

This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: <https://reachmd.com/programs/clinicians-roundtable/unpacking-post-covid-cognitive-changes-the-potential-role-of-immune-exhaustion/35466/>

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Unpacking Post-COVID Cognitive Changes: The Potential Role of Immune Exhaustion

Announcer:

You're listening to *Clinician's Roundtable* on ReachMD. On this episode, we'll hear from Dr. Jennifer Frontera, who's a neurologist at NYU Langone Health in New York City. She'll be discussing the potential impact of immune exhaustion on cognitive outcomes in post-COVID-19 patients. Here's Dr. Frontera now.

Dr. Frontera:

In a project that we've been working on, which is a prospective study of patients who have had COVID and some COVID-negative controls, we've been looking at cognitive outcomes in these folks using very rigorous, cognitive testing and neuro-psych testing, interviews with dementia specialist clinicians, MRI imaging, and biomarkers. And, in a much more robust fashion, what we do wind up seeing is, in terms of inflammation, some of these patients seem to have increased markers of basically anti-inflammatory type cytokines, increased markers of wound healing-related cytokines, and actually also increased markers of blood-brain barrier—potentially—integrity markers. And then they have decreased inflammatory markers like IL-4, IL-8, or TNF alpha. And so part of that makes us wonder about this phenomenon of immune exhaustion in the later stages after COVID, in the very post-acute period, so we're talking one, two, or three years post COVID. Immune exhaustion means that, basically, you may have residual proteins or viral components that hang around kind of chronically stimulating your immune system, and so in your immune system, the profiles of the T-cells and B-cells actually wind up changing, and some people postulate that this might be going on in patients that have long COVID or ME/CFS.

Immune exhaustion is something I think worth exploring more. Treatment for immune exhaustion would be using a checkpoint inhibitor. Checkpoint inhibitors are used for different types of cancer therapies, so they have a lot of side effects, and we'd need a lot more data before really using that as a therapeutic intervention. But there are studies going on that are looking at checkpoint inhibitors, and so we should have some data coming out in the next few months that will give us some sense of whether this is a reasonable type of pathogenesis or pathobiology to go after.

Announcer:

That was Dr. Jennifer Frontera talking about her research on immune exhaustion in patients who had COVID-19. To access this and other episodes in our series, visit *Clinician's Roundtable* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!