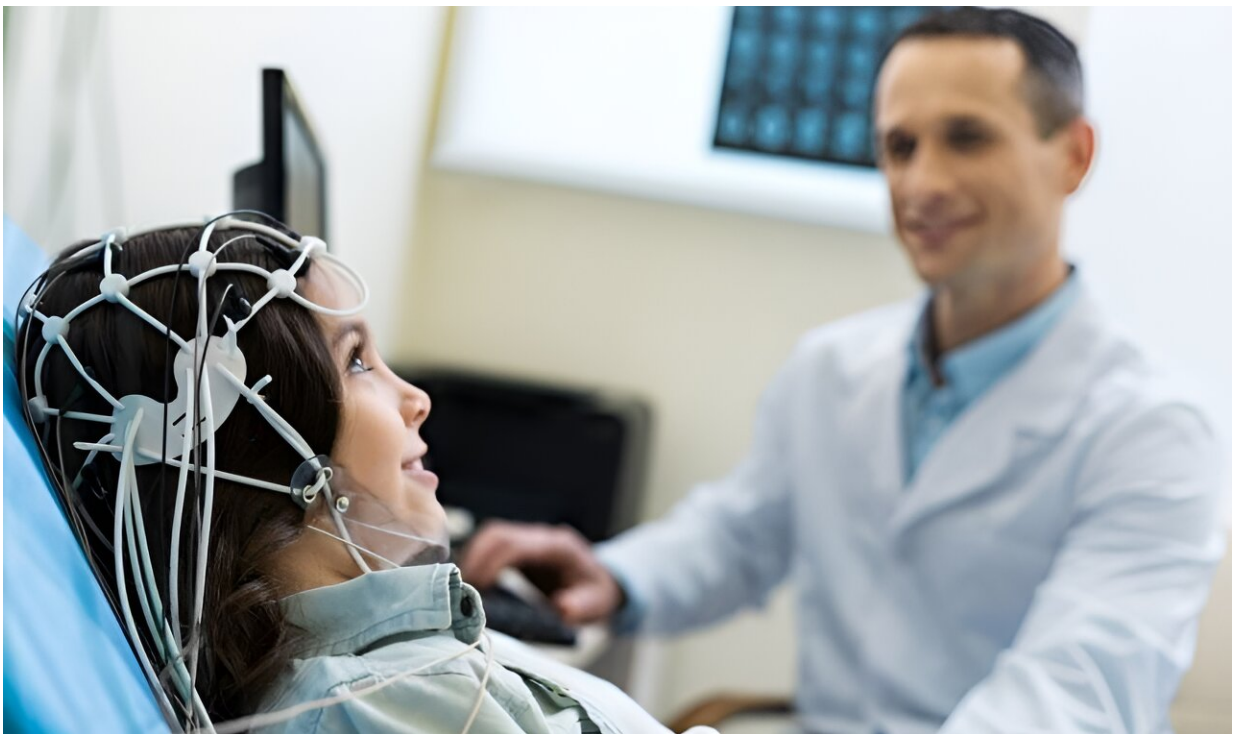


# EEG most beneficial tool for managing CAR T-cell-related neurotoxicity

April 8 2024, by Elana Gotkine

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For patients with immune effector cell-associated neurotoxicity syndrome (ICANS) due to chimeric antigen receptor (CAR) T-cell

therapy, electroencephalogram (EEG) has the greatest therapeutic impact, according to a study [published](#) online March 19 in *Blood Advances*.

Mattéo Mauget, M.D., from the University Hospital of Rennes in France, and colleagues describe the role of magnetic resonance imaging (MRI), [lumbar puncture](#) (LP), and EEG in the management of ICANS in a cohort of real-life patients treated with CAR T-cell therapy. A total of 190 consecutive patients were treated with CAR T-cell therapy between August 2018 and January 2023.

The researchers found that 91 patients (48%) developed ICANS. MRI was performed in 78% of patients with ICANS; despite frequent abnormal findings, a therapeutic impact was only seen in 4% of patients. LP was performed in 47% of patients, leading to preemptive antimicrobial agent use in 7% of patients; no infections were detected. Fifty-one patients (56%) underwent systematic EEG, leading to therapeutic modifications in 16% of patients.

"Our study shows that diagnostic investigations recommended by international guidelines for ICANS management rarely result in therapeutic changes for MRI (4%) and LP (7%, all irrelevant), questioning the need for systematic assessment," the authors write.

"Our results highlight the need for novel ICANS management guidelines, which will limit the use of investigations to situations with a significant therapeutic impact and with an optimal risk-benefit ratio."

Several authors disclosed ties to the [pharmaceutical industry](#).

**More information:** Mattéo Mauget et al, Impact of diagnostic

investigations in the management of CAR T-cell-associated neurotoxicity, *Blood Advances* (2024). DOI: [10.1182/bloodadvances.2023011669](https://doi.org/10.1182/bloodadvances.2023011669)

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