

American Society for Stereotactic and Functional Neurosurgery

<https://www.assfn.org/>

Position Statement on Magnetic resonance image-guided laser interstitial thermal therapy for epilepsy

Magnetic resonance image-guided laser interstitial thermal therapy (MRgLITT) is a tool in the neurosurgical armamentarium for the management of drug-resistant epilepsy. Given the introduction of this technology, the American Society for Stereotactic and Functional Neurosurgery (ASSFN), which acts as the joint section representing the field of stereotactic and functional neurosurgery on behalf of the Congress of Neurological Surgeons and the American Association of Neurological Surgeons, provides here the expert consensus opinion on evidence-based best practices for the use and implementation of this treatment modality. Indications for treatment are outlined, consisting of failure to respond to, or intolerance of, at least 2 appropriately chosen medications at appropriate doses for disabling, localization-related epilepsy in the setting of well-defined epileptogenic foci, or critical pathways of seizure propagation accessible by MRgLITT. Applications of MRgLITT in mesial temporal lobe epilepsy and hypothalamic hamartoma, along with its contraindications in the treatment of epilepsy, are discussed based on current evidence. To put this position statement in perspective, they detailed the evidence and authority on which this ASSFN position statement is based ¹⁾

Position Statement on Deep Brain Stimulation for Medication-Refractory Epilepsy

A persistent underuse of epilepsy surgery exists. Neuromodulation treatments including deep brain stimulation (DBS) expand the surgical options for patients with epilepsy and provide options for patients who are not candidates for resective surgery. DBS of the bilateral anterior nucleus of the thalamus is an Food and Drug Administration-approved, safe, and efficacious treatment option for patients with refractory focal epilepsy. The purpose of this consensus position statement is to summarize evidence, provide recommendations, and identify indications and populations for future investigation in Deep Brain Stimulation for epilepsy. The recommendations of the American Society for Stereotactic and Functional Neurosurgery are based on several randomized and blinded clinical trials with high-quality data to support the use of DBS to the anterior nucleus of the thalamus for the treatment of refractory focal-onset seizures.

Online surveys

Cabrera et al. designed a 51-question online survey comprising Likert-type, multiple-choice, and rank-order questions and distributed it to members of the American Society for Stereotactic and Functional Neurosurgery (ASSFN). Descriptive and inferential statistical analyses were performed on the data.

They received 38 completed surveys. Half ($n = 19$) of responders reported devoting at least a portion of their clinical practice to psychiatric neurosurgery, utilizing DBS and treating obsessive compulsive disorder (OCD) most frequently overall. Respondents indicated that psychiatric neurosurgery is more medically effective (OR 0, $p = 0.03242$, two-sided Fisher's exact test) and has clearer clinical indications for the treatment of OCD than for the treatment of depression (OR 0.09775, $p = 0.005137$, two-sided Fisher's exact test). Seventy-one percent of all respondents ($n = 27$) supported the clinical utility of ablative surgery in modern neuropsychiatric practice, 87% ($n = 33$) agreed that ablative procedures constitute a valid treatment alternative to DBS for some patients, and 61% ($n = 23$) agreed that ablative surgery may be an acceptable treatment option for patients who are unlikely to comply with postoperative care.

This up-to-date account of practices, perceptions, and predictions about psychiatric neurosurgery contributes to the knowledge about evolving attitudes over time and informs priorities for education and further surgical innovation on the psychiatric neurosurgery landscape ²⁾.

Biennial Meetings

2022 AMERICAN SOCIETY FOR STEREOTACTIC AND FUNCTIONAL NEUROSURGERY BIENNIAL MEETING

2016 Biennial Meeting of the American Society for Stereotactic and Functional Neurosurgery, Chicago, IL, USA, June 18-21, 2016: Abstracts ³⁾

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Wu C, Schwalb JM, Rosenow JM, McKhann GM 2nd, Neimat JS; American Society for Stereotactic and Functional Neurosurgeons. The American Society for Stereotactic and Functional Neurosurgery Position Statement on Laser Interstitial Thermal Therapy for the Treatment of Drug-Resistant Epilepsy. Neurosurgery. 2022 Feb 1;90(2):155-160. doi: 10.1227/NEU.0000000000001799. PMID: 34995216.

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Cabrera LY, Courchesne C, Kiss ZHT, Illes J. Clinical Perspectives on Psychiatric Neurosurgery. Stereotact Funct Neurosurg. 2019;97(5-6):391-398. doi: 10.1159/000505080. Epub 2020 Jan 17. PMID: 31955163.

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2016 Biennial Meeting of the American Society for Stereotactic and Functional Neurosurgery, Chicago, IL, USA, June 18-21, 2016: Abstracts. Stereotact Funct Neurosurg. 2017 Jan 16;94 Suppl 2:1-77. doi: 10.1159/000455386. [Epub ahead of print] PubMed PMID: 28092908.

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