



## Thalamotomy

<b>LOB(s):</b> <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Medicare <input checked="" type="checkbox"/> Medicaid	<b>State(s):</b> <input checked="" type="checkbox"/> Idaho <input checked="" type="checkbox"/> Montana <input checked="" type="checkbox"/> Oregon <input checked="" type="checkbox"/> Washington <input type="checkbox"/> Other:  <input checked="" type="checkbox"/> Oregon <input type="checkbox"/> Washington
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## Enterprise Policy

PacificSource is committed to assessing and applying current regulatory standards, widely-used treatment guidelines, and evidenced-based clinical literature when developing clinical criteria for coverage determination. Each policy contains a list of sources (references) that serves as the summary of evidence used in the development and adoption of the criteria. The evidence was considered to ensure the criteria provide clinical benefits that promote patient safety and/or access to appropriate care. Each clinical policy is reviewed, updated as needed, and readopted, at least annually, to reflect changes in regulation, new evidence, and advancements in healthcare.

Clinical Guidelines are written when necessary to provide guidance to providers and members in order to outline and clarify coverage criteria in accordance with the terms of the Member's policy. This Clinical Guideline only applies to PacificSource Health Plans, PacificSource Community Health Plans, and PacificSource Community Solutions in Idaho, Montana, Oregon, and Washington. Because of the changing nature of medicine, this list is subject to revision and update without notice. This document is designed for informational purposes only and is not an authorization or contract. Coverage determinations are made on a case-by-case basis and subject to the terms, conditions, limitations, and exclusions of the Member's policy. Member policies differ in benefits and to the extent a conflict exists between the Clinical Guideline and the Member's policy, the Member's policy language shall control. Clinical Guidelines do not constitute medical advice nor guarantee coverage.

## Background

Movement disorders are a group of nervous system conditions that affect movement. They can cause either increased movements or reduced or slow movements. These movements may be under the person's control, known as voluntary or the movements may not be under the person's control, known as involuntary.

**Thalamotomy** is a surgical procedure that created lesions in the thalamus, a part of the brain that controls movement and relays sensory and motor signals, for the treatment of various forms of movement disorders such as Parkinson's disease, tremors, and dystonia.

**MRI-guided focused ultrasound (MRgFUS)** uses magnetic resonance (MRI) to locate the affected area of the brain, then uses focused sound waves to destroy the tissue.

## Criteria

### Commercial

**Prior authorization is required**

#### A. MRI-guided focused ultrasound (MRgFUS)

PacificSource considers unilateral thalamotomy using MRI-guided focused ultrasound (MRgFUS) to be medically necessary when the **ALL** of the following criteria is met:

1. Diagnosis of essential tremors or tremor-dominant Parkinson's disease
2. Tremor is moderate to severe
3. Tremor refractory to 3 months or more of standard medication

**Note:** MRgFUS is not approvable for bilateral thalamotomy or staged bilateral thalamotomy

### Medicaid

PacificSource Community Solutions (PCS) follows to the general coverage, limitations, and exclusions outlined in OARs 410-141-3820, 410-141-3825, and 410-120-1200 and Guideline Note 184 of the Health Evidence Review Commission (HERC) Prioritized List of Health Services.

PacificSource Community Solutions (PCS) follows the EPSDT coverage requirements in OAR 410-151-0001 through 410-151-0003 for EPSDT Beneficiaries. Coverage is determined through case-by-case reviews for EPSDT Medical Necessity and EPSDT Medical Appropriateness defined in OAR 410-151-0001. Guideline Note 184 may be used to assist in informing a determination of medical necessity and medical appropriateness during the individual case review

### Medicare

PacificSource Medicare uses Local Coverage Determination L37738 for Magnetic resonance image guided high intensity focused ultrasound (MRgFUS).

### Experimental/Investigational/Unproven

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PacificSource considers unilateral thalamotomy using MRI-guided focused ultrasound (MRgFUS) to be experimental, investigational, or unproven for any other indication.

### Coding Information

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The following list of codes are for informational purposes only and may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

**0398T** Magnetic resonance image guided high intensity focused ultrasound (MRgFUS), stereotactic ablation lesion, intracranial for movement disorder including stereotactic navigation and frame placement when performed

**61715** Magnetic resonance image guided high intensity focused ultrasound (MRgFUS), stereotactic ablation of target, intracranial, including stereotactic navigation and frame placement, when performed

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HCPCS® codes, descriptions and materials are copyrighted by Centers for Medicare and Medicaid Services (CMS).

### Definitions

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**Ataxia** affects the part of the brain that controls coordinated movement.

**Chorea** causes brief, irregular, somewhat rapid, involuntary movements that happen over and over.

**Dystonia** is a condition that involves involuntary muscle contractions that cause twisting, irregular postures, or movements that occur again and again.

**Essential Tremor** is a neurological disorder that causes involuntary shaking or trembling in the body.

**High-intensity focused ultrasound (HIFU)** is a non-invasive therapeutic technique that uses non-ionizing ultrasonic waves to ablate cancer tissue in a focused area. Treatment of recurrent prostate cancer depends on factors such as the primary treatment method, extent of the cancer, and site of recurrence

**Myoclonus** are very quick jerks of a muscle.

**Parkinson's disease** causes tremors, muscle stiffness, slow or decreased movement, or loss of balance. It also can cause symptoms not related to movement.

## Related Policies

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Brain, Spinal Cord, and Peripheral Nerve Stimulators

Epilepsy Treatment

## References

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Bond AE, Shah BB, Huss DS, Dallapiazza RF, Warren A, Harrison MB, Sperling SA, Wang XQ, Gwinn R, Witt J, Ro S, Elias WJ. Safety and Efficacy of Focused Ultrasound Thalamotomy for Patients With Medication-Refractory, Tremor-Dominant Parkinson Disease: A Randomized Clinical Trial. *JAMA Neurol.* 2017 Dec 1;74(12):1412-1418. doi: 10.1001/jamaneurol.2017.3098. PMID: 29084313; PMCID: PMC5822192.

Boutet A, Ranjan M, Zhong J, Germann J, Xu D, Schwartz ML, Lipsman N, Hynynen K, Devenyi GA, Chakravarty M, Hlasny E, Llinas M, Lozano CS, Elias GJB, Chan J, Coblenz A, Fasano A, Kucharczyk W, Hodaie M, Lozano AM. Focused ultrasound thalamotomy location determines clinical benefits in patients with essential tremor. *Brain.* 2018 Dec 1;141(12):3405-3414. doi: 10.1093/brain/awy278. PMID: 30452554.

Ferreira JJ, et al. MDS evidence-based review of treatments for essential tremor. *Movement Disorders* 2019;34(7):950-958. DOI: 10.1002/mds.27700.

Fishman P. S. (2017). Thalamotomy for essential tremor: FDA approval brings brain treatment with FUS to the clinic. *Journal of therapeutic ultrasound*, 5, 19. <https://doi.org/10.1186/s40349-017-0096-9>

Hayes Knowledge Center. (Jan 19, 2024). Health Technology Assessment: Magnetic Resonance-Guided Focused Ultrasound Unilateral Thalamotomy for Essential Tremor <https://evidence.hayesinc.com/report/htb.mrqfusesstremor4408>

MCG- GRG: SG-NS (ISC GRG), Neurosurgery or Procedure GRG, MCG Health, LLC <https://careweb.careguidelines.com/ed28/>

Minsoo, K., Na Young, J., Chang, P., Won, C., Hyun, J., & Jin, C. (2017, August 16). Comparative evaluation of Magnetic Resonance-guided focused ultrasound surgery for essential tremor | stereotactic and Functional Neurosurgery | Karger publishers. *Stereotactic and Functional Neurosurgery*. <https://karger.com/sfn/article-abstract/95/4/279/293599/Comparative-Evaluation-of-Magnetic-Resonance?redirectedFrom=fulltext>

Paff M, Boutet A, Germann J, Elias GJB, Chow CT, Loh A, Kucharczyk W, Fasano A, Schwartz ML, Lozano AM. Focused Ultrasound Thalamotomy Sensory Side Effects Follow the Thalamic Structural Homunculus. *Neurol Clin Pract*. 2021 Aug;11(4):e497-e503. doi: 10.1212/CPJ.0000000000001013. PMID: 34484947; PMCID: PMC8382439.

The Health Evidence Review Commission (HERC) Prioritized List of Health Services  
<https://www.oregon.gov/oha/HSD/OHP/Pages/Prioritized-List.aspx>

Treatments for essential tremor. American Academy of Neurology.  
<https://www.aan.com/globals/axon/assets/2585.pdf>

Oregon Administrative Rules (OARs). Oregon Health Authority. Health Systems: Medical Assistance Programs – Chapter 410  
<https://secure.sos.state.or.us/oard/displayChapterRules.action?selectedChapter=87>

## Appendix

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**Policy Number:**

**Effective:** 11/21/2024

**Next review:** 1/1/2026

**Policy type:** Enterprise

**Author(s):**

**Depts:** Health Services

**Applicable regulation(s):** OARs 410-120-1200, 410-141-3820, 410-141-3825, 410-151-0001, 410-151-0002, 410-151-0003  
Guideline Note 173

**Commercial Ops:** 3/2025

**Government Ops:** 3/2025