

2025 Neutron Beam Radiation Therapy

Radiation Therapy

RT-NEUT-HH
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Neutron Beam Radiation Therapy

Neutron Radiation Therapy Guideline

Neutron Beam Radiation Therapy for cancer:

1. The role of this therapy is uncertain/unclear in the current evidence. Requests for this therapy require review by a physician reviewer, medical director and/or the individual's healthplan.

References: [1] [4] [2] [3]

Neutron Beam Radiation Therapy Procedure Codes

Table 1. Neutron Beam Radiation Therapy Associated Procedure Codes

CODE	DESCRIPTION
77423	High energy neutron radiation treatment delivery, 1 or more isocenter(s) with coplanar or non-coplanar geometry with blocking and/or wedge, and/or compensator(s)

Neutron Beam Radiation Therapy Summary of Changes

Neutron Beam Radiation Therapy guideline from 2024 to 2025 had the following changes:

- Citations updated per the evidence.
- Evidence reviewed and indications remained the same.

Neutron Beam Radiation Therapy Definitions

Neutron beam radiation therapy specializes in treating inoperable, radioresistant tumors occurring anywhere in the body. Neutrons are high linear-energy-transfer (high LET) radiation and the damage is done primarily by nuclear interactions. If a tumor cell is damaged by low LET radiation it has a good chance to repair itself and continue to grow. With high LET radiation the chance for a damaged tumor cell to repair itself is very small.

Neutron Beam Radiation Therapy References

[1] Geiger, J., Ismaila, N., . . . Ha, P., M.D. (2021). Management of Salivary Gland Malignancy: ASCO Guideline. *The American Society of Clinical Oncology Journal*, 17, 1909-1941.

[2] Pfister, D.G., Spencer, S., . . . Zhen, W. (2025). Head and Neck Cancers Version 2.2025. *National Comprehensive Cancer Network*. Retrieved: April 2025. https://www.nccn.org/professionals/physician_gls/pdf/head-and-neck.pdf

- [3] van Herpan, C., Poorten, V.V., . . . Machiels, P. (2024). Salivary gland cancer: ESMO–European Reference Network on Rare Adult Solid Cancers (EURACAN) Clinical Practice Guideline for diagnosis, treatment and follow-up. *ESMO Open*, 7(6), 1-16.
- [4] Wein, R.O. and Weber, R.S. (2021). Malignant Neoplasms of the Oral Cavity. P.W. Flint & H.W. Francis (Eds.). *Cummings Otolaryngology: Head and Neck Surgery* (7), (pp. 1289-1315). Philadelphia, PA: Elsevier Inc.

Disclaimer section

Purpose

The purpose of the HealthHelp's clinical guidelines is to assist healthcare professionals in selecting the medical service that may be appropriate and supported by evidence to safely improve outcomes. Medical information is constantly evolving, and HealthHelp reserves the right to review and update these clinical guidelines periodically. HealthHelp reserves the right to include in these guidelines the clinical indications as appropriate for the organization's program objectives. Therefore the guidelines are not a list of all the clinical indications for a stated procedure, and associated Procedure Code Tables may not represent all codes available for that state procedure or that are managed by a specific client-organization.

Clinician Review

These clinical guidelines neither preempt clinical judgment of trained professionals nor advise anyone on how to practice medicine. Healthcare professionals using these clinical guidelines are responsible for all clinical decisions based on their assessment. All Clinical Reviewers are instructed to apply clinical indications based on individual patient assessment and documentation, within the scope of their clinical license.

Payment

The use of these clinical guidelines does not provide authorization, certification, explanation of benefits, or guarantee of payment; nor do the guidelines substitute for, or constitute, medical advice. Federal and State law, as well as member benefit contract language (including definitions and specific contract provisions/exclusions) take precedence over clinical guidelines and must be considered first when determining eligibility for coverage. All final determinations on coverage and payment are the responsibility of the health plan. Nothing contained within this document can be interpreted to mean otherwise.

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National and Local Coverage Determination (NCD and LCD)



NOTICE

To ensure appropriate review occurs to the most current NCD and/or LCD, always defer to <https://www.cms.gov/medicare-coverage-database/search.aspx>.

Background

National Coverage Determinations (NCD) and Local Coverage Determinations (LCD) are payment policy documents outlined by the Centers for Medicare and Medicaid Services (CMS) and the government's delegated Medicare Audit Contractors (MACs) that operate regionally in jurisdictions.

CMS introduced variation between different jurisdictions/Medicare Audit Contractors (MACs) and their associated covered code lists with the transition to ICD 10. The variation resulted in jurisdictions independently defining how codes are applied for exclusions, limitations, groupings, ranges, etc. for the medical necessity indications outlined in the NCD and LCD. Due to this variation, there is an inconsistent use/application of codes and coverage determinations across the United States between the different MACs.

In addition, **WITHOUT** notice, CMS can change the codes that indicate medical necessity and the format of the coverage determinations/associated documents (eg, Articles). This is an additional challenge for organizations to keep up with ongoing, unplanned changes in covered codes and medical necessity indications.

Medical Necessity Codes

Due to the variation in code application between jurisdictions/MACs and that updates can happen without notification, HealthHelp is not able to guarantee full accuracy of the codes listed for any Coverage Determination, and advises that prior to use, the associated Coverage Determination Articles are reviewed to ensure applicability to HealthHelp's programs and any associated NCDs and LCDs.



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For Internal Use Only:

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