Harvard Pilgrim Health Care | TUFTS Health Plan

Medical Necessity Guidelines:

Proton Beam Therapy

Effective: October 1, 2025

Prior Authorization Required If REQUIRED, submit supporting clinical documentation pertinent to service request to the FAX numbers below	Yes ☒ No ☐
Notification Required If REQUIRED, concurrent review may apply	Yes ☐ No ☒

Applies to:

Commercial Products

☒ Harvard Pilgrim Health Care Commercial products; 800-232-0816
☒ Tufts Health Plan Commercial products; 617-972-9409

Public Plans Products

☒ Tufts Health Direct – A Massachusetts Qualified Health Plan (QHP) (a commercial product); 888-415-9055
☒ Tufts Health Together – MassHealth MCO Plan and Accountable Care Partnership Plans; 888-415-9055
☒ Tufts Health RITogether – A Rhode Island Medicaid Plan; 857-304-6404
☒ Tufts Health One Care – A dual-eligible product; 857-304-6304

Senior Products

☐ Tufts Health Plan Senior Care Options (SCO), (a dual-eligible product); 617-972-9409
☐ Tufts Medicare Preferred HMO, (a Medicare Advantage product); 617-972-9409
☐ Tufts Medicare Preferred PPO, (a Medicare Advantage product); 617-972-9409

Note: While you may not be the provider responsible for obtaining prior authorization, as a condition of payment you will need to ensure that prior authorization has been obtained.

Overview

Proton Beam Therapy (PBT) uses a beam of protons that are targeted in a precise manner to irradiate specific diseased tissue while minimizing exposure to surrounding areas.

Clinical Guideline Coverage Criteria

The Plan uses guidance from the Centers for Medicare and Medicaid Services (CMS) and MassHealth for coverage determinations for its Dual Product Eligible plan members. CMS National Coverage Determinations (NCDs), Local Coverage Determinations (LCDs), Local Coverage Articles (LCAs) and documentation included in the Medicare manuals and MassHealth Medical Necessity Determinations are the basis for coverage determinations where available. For **Tufts Health One Care** plan members the following criteria is used: LCD - Proton Beam Therapy (L35075) (cms.gov)

The Plan considers proton beam therapy as medically necessary for the following indications:

- Melanoma of the uveal tract (iris, choroid, or ciliary body)
- Skull based tumors (e.g., chordomas and chondrosarcomas, paranasal sinus, and nasopharyngeal tumors)
- Medulloblastoma
- Brain and spinal cord tumors
- Unresectable hepatocellular carcinoma (HCC)
- Intrahepatic cholangiocarcinoma
- Intracranial arteriovenous malformation (AVM) not amenable to surgical excision or other forms of treatment and/or adjacent to critical structures such as the optic nerve, brain stem or spinal cord.

Proton beam therapy is appropriate for pediatric patients (age less than 21) to treat all pediatric tumors in which radiation therapy is required.

Limitations

The Plan considers proton beam therapy coverage excluded as not the least intensive, most cost-effective service that can safely and effectively be applied for the following indications:

- Prostate cancer
- Vestibular schwannoma
- Lung cancer

The Plan considers proton beam therapy non-covered, investigational for the following indications:

- Age-related macular degeneration
- Bladder cancer
- Breast cancer
- Choroidal hemangioma
- Gastrointestinal cancers, including esophageal and pancreatic
- Gynecological cancers
- Head and neck cancers
- Lymphomas

Note:
The Plan considers simultaneous use of proton beam therapy and intensity-modulated radiation therapy (IMRT) to be noncovered, investigational for any diagnosis

Codes

The following code(s) require prior authorization:

Table 1: CPT/HCPCS Codes

Code	Description
77520	Proton treatment delivery; simple, without compensation
77522	Proton treatment delivery; simple, with compensation
77523	Proton treatment delivery; intermediate
77525	Proton treatment delivery; complex

References:

1. American Society for Radiation Oncology (ASTRO). ASTRO model policies: Proton Beam Therapy (PBT) (IMRT). (Approved June 2022). Accessed July 1, 2025. ASTROPBTModelPolicy.pdf
2. Centers for Medicare & Medicaid Services (CMS). Local Coverage Determination (LCD) L35075: Proton Beam Therapy. Accessed June 14, 2023. LCD - Proton Beam Therapy (L35075) (cms.gov)
3. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Biliary tract cancers. V1.2025. July 2, 2025. https://www.nccn.org/guidelines
4. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Hepatocellular carcinoma. V1.2025. March 20, 2025. https://www.nccn.org/guidelines
5. National Comprehensive Cancer Network (NCCN) Clinical Practice Guidelines in Oncology® Prostate Cancer. (Version 2.2025). April 2025. https://www.nccn.org/guidelines/
6. Allen AM, Pawlicki T, Dong L, et al. An evidence based review of proton beam therapy: the report of ASTRO's emerging technology committee. *Radiother Oncol*. 2012;103(1):8-11. doi:10.1016/j.radonc.2012.02.001
7. Curley SA, MD, FACS, Stuart, KE, MD et. al. Localized hepatocellular carcinoma: Liver-directed therapies for nonsurgical candidates not eligible for local thermal ablation. UpToDate. Accessed March 6, 2023. Radiation therapy techniques in cancer treatment - UpToDate
8. Klein EA, MD, Ciezki JP, MD. Initial approach to low- and very low-risk clinically localized prostate cancer. UpToDate. Accessed March 6, 2023. Radiation therapy techniques in cancer treatment - UpToDate
9. Mitin T, MD, PhD. Radiation Therapy Techniques in Cancer Treatment. UpToDate. Accessed March 6, 2023. Radiation therapy techniques in cancer treatment - UpToDate

10. Singer RJ, MD, Olgilvy CS, MD et. al. Brain arteriovenous malformations. Accessed March 1, 2023. Radiation therapy techniques in cancer treatment - UpToDate
11. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Melanoma: Uveal. V1.2025. uveal.pdf (nccn.org) Approval And Revision History
12. Baumann BC, Mitra N, Harton JG, Xiao Y, Wojcieszynski AP, Gabriel PE, Zhong H, Geng H, Doucette A, Wei J, O'Dwyer PJ, Bekelman JE, Metz JM. Comparative Effectiveness of Proton vs Photon Therapy as Part of Concurrent Chemoradiotherapy for Locally Advanced Cancer. JAMA Oncol. 2020 Feb 1;6(2):237-246. doi: 10.1001/jamaoncol.2019.4889. PMID: 31876914; PMCID: PMC6990870.
13. Chok KSH, Joeng TYT, Poon DMC. Proton beam therapy in the management of hepatocellular carcinoma. Expert Rev Gastroenterol Hepatol. 2025 Apr-May;19(5):495-504. doi: 10.1080/17474124.2025.2495080. Epub 2025 Apr 25. PMID: 40272863.
14. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Central Nervous System Cancers. V1.2025. https://www.nccn.org/professionals/physician_gls/pdf/cns.pdf (nccn.org).
15. Proton Beam Therapy for Treatment of Choroidal Hemangioma; Hayes Evidence Analysis Research Brief. Hayesinc.com/login [via subscription only]. Published November 4, 2024.-Accessed July 1, 2025.
16. Proton Beam Therapy for Esophageal Adenocarcinoma. Hayes Health Technology Annual Review. Hayesinc.com/login [via subscription only]. Published November 26, 2024. Accessed July 1, 2025.
17. Bae SH, Jang WI, Mortensen HR, Weber B, Kim MS, Høyer M. Recent update of proton beam therapy for hepatocellular carcinoma: a systematic review and meta-analysis. J Liver Cancer. 2024 Sep;24(2):286-302. doi: 10.17998/jlc.2024.06.26. Epub 2024 Jul 4. PMID: 38961722; PMCID: PMC11449586.

Revision History

October 21, 2021: Reviewed by the Integrated Medical Policy Advisory Committee (IMPAC). Renewed without changes. Subsequent endorsement date(s) and changes:

- November 9, 2020: Fax number for Unify updated
- August 25, 2021: References updated
- October 20, 2021: Reviewed by IMPAC, renewed without changes
- November 16, 2022: Reviewed by MPAC, renewed without changes
- December 21, 2022: Reviewed by MPAC renewed without changes
- March 15, 2023: Reviewed by Medical Policy Approval Committee (MPAC) for integration purposes with Harvard Pilgrim Health Care. Unresectable hepatocellular carcinoma, intrahepatic cholangiocarcinoma, AVM not amendable to surgical excision or other forms of treatment and/or adjacent to critical structures such as the optic nerve, brain stem or spinal cord added as medically necessary indications. Limitations updated. Changes effective April 1, 2023
- June 21, 2023: Reviewed by MPAC. Clarification of MNG limitation. Cover PBT for melanoma of uveal tract if metastasized and/or has extra-scleral extension, effective August 1, 2023
- November 2023: Rebranded Unify to One Care and updated One Care criteria effective January 1, 2024
- August 2024: Reviewed by MPAC renewed without changes, effective October 1, 2024
- October 17, 2024: Reviewed by MPAC. Added paranasal sinus, and nasopharyngeal tumors under skull based tumors. Added pediatric patients statement. Effective date December 1, 2024.
- August 20, 2025: Reviewed by MPAC for annual review, renewed without changes effective October 1, 2025. References updated.
- September 15, 2025: Fax number for Senior Care Options, Tufts Medicare Preferred HMO and Tufts Medicare Preferred PPO updated; language for Carelink removed; June 18, 2025: Harvard Pilgrim Health Care Stride Medicare Advantage removed as an applicable product from the template
- September 17, 2025: Reviewed by the UM Committee, renewed without changes effective October 1, 2025.

Background, Product and Disclaimer Information

Medical Necessity Guidelines are developed to determine coverage for benefits and are published to provide a better understanding of the basis upon which coverage decisions are made. We make coverage decisions using these guidelines, along with the Member’s benefit document, and in coordination with the Member’s physician(s) on a case-by-case basis considering the individual Member's health care needs.

Medical Necessity Guidelines are developed for selected therapeutic or diagnostic services found to be safe and proven effective in a limited, defined population of patients or clinical circumstances. They include concise clinical coverage criteria based on current literature review, consultation with practicing physicians in our service area who are medical experts in the particular field, FDA and other government agency policies, and standards adopted by national accreditation organizations. We revise and update Medical Necessity Guidelines annually, or more frequently if new evidence becomes available that suggests needed revisions.

For self-insured plans, coverage may vary depending on the terms of the benefit document. If a discrepancy exists between a Medical Necessity Guideline and a self-insured Member's benefit document, the provisions of the benefit document will govern. For Tufts Health Together (Medicaid), coverage may be available beyond these guidelines for pediatric members under age 21 under the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefits of the plan in accordance with 130 CMR 450.140 and 130 CMR 447.000, and with prior authorization.

Treating providers are solely responsible for the medical advice and treatment of Members. The use of this guideline is not a guarantee of payment, or a final prediction of how specific claim(s) will be adjudicated. Claims payment is subject to eligibility and benefits on the date of service, coordination of benefits, referral/authorization, utilization management guidelines when applicable, and adherence to plan policies, plan procedures, and claims editing logic.