

Intensity-Modulated Radiation Therapy (IMRT)

Effective: January 1, 2025

<p>Prior Authorization Required If <u>REQUIRED</u>, submit supporting clinical documentation pertinent to service request to the FAX numbers blow.</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>Notification Required IF <u>REQUIRED</u>, concurrent review may apply</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>

<p>Applies to:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> CarePartners of Connecticut Medicare Advantage HMO plans, Fax 857-304-6463 <input checked="" type="checkbox"/> CarePartners of Connecticut Medicare Advantage PPO plans, Fax 857-304-6463
--

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

Intensity-modulated radiation therapy (IMRT) is an advanced form of three-dimensional conformal radiation therapy (3D-CRT). IMRT changes the intensity of radiation in different parts of a single radiation, allowing multiple treated areas to receive different doses. Conformal radiation therapy uses a three-dimensional image, typically CT, MRI or PET, to create a planning target volume and calculate dose distribution to the targeted area. The goal of IMRT is to deliver high radiation dose and conform the radiation dose to the target while avoiding and/or reducing radiation exposure to healthy tissue, limiting the side effects of treatment. IMRT is a treatment option when tumor targets are positioned near sensitive normal tissues and/or critical structures.

NOTE: This medical necessity guidelines applies to Members 18 years of age and older. For Members under the age of 18 IMRT is covered without additional review.

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 and CMS for its Medicare Advantage 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. When CMS and MassHealth do not provide guidance, the Plan’s internally developed medical necessity guidelines are used. CMS coverage guidelines are not established for this service.

For the service of IMRT, evidence is sufficient for coverage. In the past several decades, several advanced radiotherapy techniques, including intensity-modulated radiotherapy (IMRT), have been established to increase the conformal degree of target areas as well as the radiation dose, and to lessen the toxicity to normal organs. Studies have shown that IMRT technique demonstrated a clear advantage in dose coverage, conformity, and homogeneity over three-dimensional conformal radiation therapy.

The use of this criteria will ensure access to clinically appropriate care. See References section below for all evidence accessed in the development of these criteria.

Clinical Guideline Coverage Criteria

1. The Plan considers intensity-modulated radiation therapy, as reasonable and medically necessary for **definitive treatment** (i.e. radiation treatments for cancer with a curative intent³³) of the following neoplasms:
 - a. Head and Neck Cancers
 - i. Oropharyngeal
 - ii. Nasopharyngeal
 - iii. Sinonasal
 - iv. thyroid, salivary glands

- b. Central Nervous System (CNS) tumors (primary, metastatic, or benign) including the brain, brainstem, spinal cord, and ocular tumors
 - c. Breast Cancer
 - d. Gastrointestinal Cancers
 - i. Esophageal
 - ii. Gastric
 - iii. Small-bowel carcinomas
 - iv. Colorectal/Anal
 - v. Gallbladder including bile duct
 - vi. Hepatocellular carcinoma (HCC)
 - vii. Pancreatic
 - e. Thoracic Cancer
 - i. Lung Cancer
 - ii. Mediastinal including thymoma, lymphoma, and thymic cancer
 - iii. Malignant mesothelioma
 - f. Sarcomas
 - g. Primary benign or malignant bone tumors
 - h. Skin Cancers
 - i. Genitourinary Cancers including adrenal, renal, bladder, prostate, ureteral, and penile
 - j. Gynecological malignancies including uterine, cervical, and vulvar
2. Re-irradiation using IMRT is considered medically necessary to limit dose and minimize toxicity of previously irradiated tissue and/or critical structures.
 3. IMRT is appropriate for pediatric patients (age less than 21) to treat all pediatric tumors in which radiation therapy is required.

Limitations

While IMRT may be used during a course of treatment with PBT, the simultaneous use of IMRT and PBT is considered investigational and not covered.

Codes

The following codes require prior authorization:

Table 1:

Code	Description
77385	Intensity modulated radiation treatment delivery (IMRT), includes guidance and tracking, when performed; simple
77386	Intensity modulated radiation treatment delivery (IMRT), includes guidance and tracking, when performed; complex
G6015	Intensity modulated treatment delivery, single or multiple fields/arcs, via narrow spatially and temporally modulated beams, binary, dynamic MLC, per treatment session
G6016	Compensator-based beam modulation treatment delivery of inverse planned treatment using three or more high resolution (milled or cast) compensator, convergent beam modulated fields, per treatment session

References:

1. American Society for Radiation Oncology (ASTRO). ASTRO model policies: Intensity modulated radiation therapy (IMRT). (Updated 06-06-2019). Accessed June 15, 2023. IMRTMP.pdf (astro.org).
2. American College of Radiology (ACR) . Radiation Oncology Resources. Intensity-modulated radiation therapy (IMRT). Updated July 2021(b). <https://www.radiologyinfo.org/en/info.cfm?pg=imrt>. Accessed December 29, 2021.
3. Gondi V, Bauman G, Bradfield L, et al. Radiation Therapy for Brain Metastases: An ASTRO Clinical Practice Guideline. *Pract Radiat Oncol.* 2022;12(4):265-282. doi:10.1016/j.ppro.2022.02.003
4. Halasz LM, Attia A, Bradfield L, et al. Radiation Therapy for IDH-Mutant Grade 2 and Grade 3 Diffuse Glioma: An ASTRO Clinical Practice Guideline. *Pract Radiat Oncol.* 2022;12(5):370-386. doi:10.1016/j.ppro.2022.05.004

5. Mitin T, MD, PhD. Radiation Therapy Techniques in Cancer Treatment. UpToDate. Accessed March 6, 2023. [Radiation therapy techniques in cancer treatment - UpToDate](#)
6. Smith BD, Bellon JR, Blitzblau R, et al. Radiation therapy for the whole breast: Executive summary of an American Society for Radiation Oncology (ASTRO) evidence-based guideline. *Pract Radiat Oncol.* 2018;8(3):145-152. doi:10.1016/j.prro.2018.01.012
7. Eastham JA, Boorjian SA, Kirkby E. Clinically Localized Prostate Cancer: AUA/ASTRO Guideline. *J Urol.* 2022;208(3):505-507. doi:10.1097/JU.0000000000002854
8. Chino J, Annunziata CM, Beriwal S, et al. Radiation Therapy for Cervical Cancer: Executive Summary of an ASTRO Clinical Practice Guideline. *Pract Radiat Oncol.* 2020;10(4):220-234. doi:10.1016/j.prro.2020.04.002
9. Wo JY, Anker CJ, Ashman JB, et al. Radiation Therapy for Rectal Cancer: Executive Summary of an ASTRO Clinical Practice Guideline. *Pract Radiat Oncol.* 2021;11(1):13-25. doi:10.1016/j.prro.2020.08.004
10. Wo JY, Anker CJ, Ashman JB, et al. Radiation Therapy for Rectal Cancer: Executive Summary of an ASTRO Clinical Practice Guideline. *Pract Radiat Oncol.* 2021;11(1):13-25. doi:10.1016/j.prro.2020.08.004
11. Chino J, Annunziata CM, Beriwal S, et al. Radiation Therapy for Cervical Cancer: Executive Summary of an ASTRO Clinical Practice Guideline. *Pract Radiat Oncol.* 2020;10(4):220-234. doi:10.1016/j.prro.2020.04.002
12. Salerno KE, Alektiar KM, Baldini EH, et al. Radiation Therapy for Treatment of Soft Tissue Sarcoma in Adults: Executive Summary of an ASTRO Clinical Practice Guideline. *Pract Radiat Oncol.* 2021;11(5):339-351. doi:10.1016/j.prro.2021.04.005
13. Simone CB 2nd, Bogart JA, Cabrera AR, et al. Radiation Therapy for Small Cell Lung Cancer: An ASTRO Clinical Practice Guideline. *Pract Radiat Oncol.* 2020;10(3):158-173. doi:10.1016/j.prro.2020.02.009
14. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Anal carcinoma. V1.2023. [anal.pdf \(nccn.org\)](#)
15. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Biliary tract cancers. V1.2023. [btc.pdf \(nccn.org\)](#)
16. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Bone cancer. V2.2023. [bone.pdf \(nccn.org\)](#)
17. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Breast cancer. V3.2023. [breast.pdf \(nccn.org\)](#)
18. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Central nervous system cancers. V2.2022. [cns.pdf \(nccn.org\)](#)
19. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Cervical cancer. V1.2023. [cervical.pdf \(nccn.org\)](#)
20. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Esophageal and esophagogastric junction cancers. V2.2023. [esophageal.pdf \(nccn.org\)](#)
21. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Head and neck cancers. V1.2023. [head-and-neck.pdf \(nccn.org\)](#)
22. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Hepatocellular carcinoma. V1.2023. [hcc.pdf \(nccn.org\)](#)
23. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Hodgkin lymphoma. V2.2023. [hodgkins.pdf \(nccn.org\)](#)
24. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Non-small cell lung cancer. V2.2023. [nscl.pdf \(nccn.org\)](#)
25. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Pancreatic adenocarcinoma. V2.2022. [pancreatic.pdf \(nccn.org\)](#)
26. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Pediatric central nervous system cancers. V2.2023. [ped_cns.pdf \(nccn.org\)](#)
27. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Pediatric Hodgkin lymphoma. V2.2023. [ped_hodgkin.pdf \(nccn.org\)](#)
28. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Prostate cancer. V1.2023. [prostate.pdf \(nccn.org\)](#)
29. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Small bowel adenocarcinoma. V1.2023. [small_bowel.pdf \(nccn.org\)](#)
30. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Thymomas and thymic carcinomas. V1.2023. [thymic.pdf \(nccn.org\)](#)
31. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Thyroid carcinoma. V3.2022. [thyroid.pdf \(nccn.org\)](#)
32. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Vulvar cancer. V1.2023. [vulvar.pdf \(nccn.org\)](#)
33. [Landsteiner A, Sowerby C, Ullman K, et al. Hypofractionation radiation therapy for definitive treatment of selected cancers: a systematic review. Washington \(DC\): Department of Veterans Affairs \(US\); 2023 May. PMID: 37769054.](#)

Approval And Revision History

September 19, 2024: Services reviewed and approved by the Joint Medical Policy and Health Care Services Utilization Management Committee for new Prior Authorization effective January 1, 2025

Subsequent endorsement date(s) and changes made:

- October 17, 2024: Reviewed by the Medical Policy Approval Committee (MPAC) effective January 1, 2025
- January 15, 2025: Reviewed and approved by MPAC to remove codes 77387 and G6017; effective January 1, 2025.
- February 5, 2025: Reviewed and approved by MPAC to remove statement regarding conformal 3D documentation. Definition of definitive treatment added. Removed prior authorization from CPT 77301 and CPT 77338; effective January 1, 2025. References updated.

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.

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.