

Clinical Policy: Intensity Modulated Radiation Therapy (IMRT)

Reference Number: MC.CP.MP.69

Date of Last Revision: 08/23

[Coding Implications](#)

[Revision Log](#)

See [Important Reminder](#) at the end of this policy for important regulatory and legal information.

Description

This policy outlines the medical necessity criteria for intensity modulated radiation therapy (IMRT). This policy criteria is sourced from Local Coverage Determination (LCD) Intensity Modulated Radiation Therapy (IMRT) (L36711) and thus the balance of benefits and risks of harm have been determined by CMS to be favorable.

Note: For criteria applicable to non-Medicare plans, please see CP.MP.69 Intensity Modulated Radiation Therapy (IMRT).

Policy/Criteria

- I. It is the policy of Medicare health plans affiliated with Centene Corporation[®] that *IMRT* is **medically necessary** when highly conformal dose planning is required and all of the following are met:
 - A. One of the following:
 1. An immediately adjacent area has been previously irradiated and abutting portals must be established with high precision;
 2. Dose escalation is planned to deliver radiation doses in excess of those commonly utilized for similar tumors with conventional treatment;
 3. The target volume is concave or convex, and the critical normal tissues are within or around that convexity or concavity;
 4. The target volume is in close proximity to critical structures that must be protected;
 5. The volume of interest must be covered with narrow margins to adequately protect immediately adjacent structures;
 - B. IMRT is requested for one of the following disease sites:
 1. Primary, metastatic or benign tumors of the central nervous system including the brain, the brain stem, and spinal cord;
 2. Primary, or metastatic tumors of the spine where the spinal cord tolerance may be exceeded with conventional treatment or where the spinal cord has previously been irradiated;
 3. Primary metastatic, benign or recurrent head and neck malignancies, including: orbits, sinuses, skull base, aero-digestive tract, and salivary glands;
 4. Thoracic malignancies;
 5. Abdominal malignancies when dose constraints to small bowel or other normal abdominal tissue are exceeded and present administration of a therapeutic dose;
 6. Pelvic malignancies including: prostatic, gynecological and anal carcinoma;
 7. Other pelvic or retroperitoneal malignancies;
 - C. Documented rationale of the advantage of IMRT versus the use of other radiation therapy methods has been provided.

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- II. It is the policy of Medicare health plans affiliated with Centene Corporation that *IMRT* is **not medically necessary** for any of the following:
 - A. Where IMRT does not offer an advantage over conventional or three-dimensional conformal radiation therapy techniques that deliver good clinical outcomes and low toxicity;
 - B. Clinical urgency, such as spinal cord compression, superior vena cava syndrome or airway obstruction;
 - C. Palliative treatment of metastatic disease where the prescribed dose does not approach normal tissue tolerances;
 - D. Inability to accommodate for organ motion, such as for a mobile lung tumor;
 - E. Inability of member/enrollee to cooperate and tolerate immobilization to permit accurate and reproducible dose delivery.

Background

*Centers for Medicare and Medicaid (CMS)*¹

Intensity Modulated Radiation Therapy (IMRT) is a computer-based method of planning for, and delivery of generally narrow, patient specific, spatially and often temporally modulated beams of radiation to solid tumors within a patient. IMRT planning and delivery uses an approach for obtaining the highly conformal dose distributions needed to irradiate complex targets positioned near, or invaginated by, sensitive normal tissues, thus improving the therapeutic ratios. IMRT delivers a more precise radiation dose to the tumor while sparing the surrounding normal tissues by using non-uniform radiation beam intensities that are determined by various computer-based optimization techniques.

The computer-based optimization process is referred to as ‘inverse planning.’ Inverse planning develops a dose distribution based on the input of specific dose constraints for the planned treatment volume (PTV) and nearby clinical structures and is the beginning of the IMRT treatment planning process. The gross tumor volume (GTV), the PTV, and surrounding normal tissues must be identified by a contouring procedure and the optimization must sample the dose with a grid spacing of one centimeter or less.

Coding Implications

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2022, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

CPT® Codes	Description
77385	Intensity modulated radiation treatment delivery (IMRT), includes guidance and tracking, when performed; simple

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77386	Intensity modulated radiation treatment delivery (IMRT), includes guidance and tracking, when performed; complex

HCPCS Codes	Description
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

Reviews, Revisions, and Approvals	Revision Date	Approval Date
Original approval date	08/23	08/23

References

1. Local coverage determination: intensity modulated radiation therapy (L36711). Centers for Medicare and Medicaid Services Web site. <http://www.cms.hhs.gov/mcd/search.asp>. Published December 1, 2016 (revised January 1, 2021). Accessed July 24, 2023.
2. Local coverage article: intensity modulated radiation therapy (A56725). Centers for Medicare and Medicaid Services Web site. <http://www.cms.hhs.gov/mcd/search.asp>. Published July 25, 2019 (revised October 1, 2022). Accessed July 24, 2023.

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

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This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members/enrollees. This clinical policy is not intended to recommend treatment for members/enrollees. Members/enrollees should consult with their treating physician in connection with diagnosis and treatment decisions.

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Note: For Medicaid members/enrollees, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members/enrollees, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <http://www.cms.gov> for additional information.

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