

BLUE CROSS OF NORTHEASTERN PA "BCNEPA" MEDICAL POLICY BULLETIN	MANUAL: MEDICAL POLICY
	REFERENCE NO.: MPO-490-0170
EFFECTIVE DATE October 1, 2014	SUBJECT: Intensity-Modulated Radiation Therapy (IMRT)

Blue Cross of Northeastern Pennsylvania ("BCNEPA") Medical Policy

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical policy and claims payment policy are applied. Policies are provided for informational purposes only and are developed to assist in administering plan benefits and do not constitute medical advice.

Treating providers are solely responsible for medical advice and treatment. Policies are based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease.

Medical practices and information are constantly changing and BCNEPA may review and revise its medical policies periodically. Also, due to the rapid pace of changing technology and the advent of new medical procedures, BCNEPA may not have a policy to address every procedure.

In those cases, BCNEPA may review other sources of information including, but not limited to, current medical literature and other medical resources, such as Technology Evaluation Center Assessments (TEC) published by the Blue Cross Blue Shield Association. BCNEPA may also consult with health care providers possessing particular expertise in the services at issue.

DESCRIPTION:

Intensity Modulated Radiation Therapy (IMRT) is an advanced technology utilizing three-dimensional conformal radiation therapy for delivering precise radiation doses to tumors with the potential to maximally spare adjacent normal tissue. Treatment is customized for each patient with careful planning involving computed tomography (CT) images along with computerized dose calculations in order to determine the dose intensity pattern that will best conform to the tumor shape. The treatment is accomplished by delivering multiple intensity-modulated fields sent from varying beam directions which produces a tailored dose that maximizes tumor dose and minimizes the dose to sensitive adjacent structures.

BENEFIT POLICY STATEMENT:

BCNEPA makes decisions on coverage based on Policy Bulletins, benefit plan documents, and the member's medical history and condition. Benefits may vary based on product line, group or contract, therefore, Member benefits must be verified. In the event of a conflict between the Member's benefit plan document and topics addressed in Medical Policy Bulletins (i.e., specific contract exclusions), the Member's benefit plan document always supersedes the information in the Medical Policy Bulletins. BCNEPA determines medical necessity only if the benefit exists and no contract exclusions are applicable.

Benefits are determined by the terms of the Member's specific benefit plan document [i.e., the Fully Insured policy, the Administrative Services Only (ASO) agreement applicable to the Self-Funded Plan Participant, or the Individual Policy] that is in effect at the time services are rendered.

MEDICAL POLICY STATEMENT:

Coverage is subject to the terms, conditions, and limitations of the member's contract.

- A. BCNEPA will provide coverage for Intensity-modulated radiation therapy (IMRT) when medically necessary. IMRT is not a replacement therapy for conventional and three-dimensional conformal radiation therapy methods in every situation. The decision to use IMRT requires a clear understanding of accepted clinical practices that consider the risks and benefits of such therapy when compared to other alternatives.

Indications

- B. Intensity-modulated radiation therapy (IMRT) may be medically necessary for treating tumors in various anatomic areas when sparing the surrounding normal tissue is essential and the patient has at least one of the following conditions:
1. Critical organs and/or tissue adjacent to, but outside the planned treatment volume are sufficiently close and require IMRT to assure increased safety and morbidity reduction.
 2. An immediately adjacent volume has been irradiated and abutting portals must be established with high precision.
 3. Gross tumor volume margins are concave or convex and in close proximity to critical structures that must be protected to avoid unacceptable morbidity.
 4. Non-IMRT techniques would increase the probability of grade 2 or grade 3 radiation toxicity in greater than 15 percent of radiated similar cases.
 5. The volume of interest is in such location that its parameters can only be defined by MRI or CT.
 6. The tumor tissue lies in areas associated with target motion caused by cardiac and pulmonary cycles, and the IMRT is necessary to protect adjacent normal tissues.
 7. The use of concurrent chemotherapy is planned and treatment related toxicity is a concern.
 8. Dose escalation is planned to deliver radiation doses in excess of those commonly utilized for similar tumors with conventional treatment.

Limitations

Breast

- C. Intensity-modulated radiation therapy (IMRT) as a technique to deliver radiation therapy in patients receiving treatment for breast cancer may be considered medically necessary:
1. In left-sided lesions, or,
 2. In patients with large body habitus with large separation $\geq 25\text{cm}$ where dose inhomogeneity may be a significant problem.

- D. Intensity-modulated radiation therapy (IMRT) as a technique to deliver whole breast irradiation in patients receiving treatment for breast cancer after breast-conserving surgery who do not meet above criteria is considered not medically necessary.
- E. Intensity modulated radiation therapy (IMRT) of the breast as a technique of partial breast irradiation after breast-conserving surgery is considered not medically necessary.
- F. Intensity modulated radiation therapy (IMRT) of the chest wall is considered not medically necessary as a technique of postmastectomy irradiation.
- G. Intensity modulated radiation therapy (IMRT) for the treatment of breast cancer for all indications not meeting the criteria above is considered not medically necessary.

Lung

- H. Intensity-modulated radiation therapy (IMRT) as a technique to deliver radiation therapy in patients receiving treatment for lung cancer may be considered medically necessary in select cases of non-small cell lung cancer (NSCLC):
 - 1. When the tumor is fixed to the vertebral body, located at the superior sulcus or involves bilateral mediastinum, or
 - 2. When a large volume of normal lung must be irradiated, or
 - 3. When the tumor is located close to critical structures (i.e. spinal cord), or
 - 4. In locally advanced NSCLC (i.e. Stage III or IV).
- I. Intensity-modulated radiation therapy (IMRT) as a technique to deliver radiation therapy in patients receiving treatment for lung cancer for all other indications is considered not medically necessary.

Note - Stereotactic Body Radiation Therapy (SBRT) for NSCLC is addressed in MPO-490-0069

Prostate

- J. Intensity-modulated radiation therapy (IMRT) as a technique to deliver radiation therapy in patients receiving treatment of localized prostate cancer (see Definitions) at radiation doses of 75 to 80 Gy may be considered medically necessary.
- K. Intensity-modulated radiation therapy (IMRT) as a technique to deliver radiation therapy in patients receiving treatment of localized prostate cancer when the above criteria are not met is considered not medically necessary.

Cancers of the Head and Neck or Thyroid

- L. Intensity-modulated radiation therapy (IMRT) as a technique to deliver radiation therapy in patients receiving treatment of head and neck cancers may be considered medically necessary.

1. Head and neck cancers generally are considered as those arising in the oral cavity and lip, larynx, hypopharynx, oropharynx, nasopharynx, paranasal sinuses and nasal cavity, salivary glands, and occult primaries in the head and neck region.
 2. Cancers generally not considered as head and neck cancers include uveal and choroidal melanoma, cutaneous tumors of the head and neck, esophageal cancer, and tracheal cancer.
- M. Intensity-modulated radiation therapy (IMRT) as a technique to deliver radiation therapy may be considered medically necessary for the treatment of thyroid cancers in close proximity to organs at risk (esophagus, salivary glands, and spinal cord) and 3-D CRT planning is not able to meet dose volume constraints for normal tissue tolerance.
- N. Intensity-modulated radiation therapy (IMRT) as a technique to deliver radiation therapy is considered not medically necessary for the treatment of thyroid cancers for all indications not meeting the criteria above.

Abdomen and Pelvis

- O. Intensity-modulated radiation therapy (IMRT) as a technique to deliver radiation therapy in patients receiving treatment for cancer of the anus/anal canal may be considered medically necessary.

When dosimetric planning with standard 3-D conformal radiation predicts that the radiation dose to an adjacent organ would result in unacceptable normal tissue toxicity, intensity-modulated radiation therapy (IMRT) may be considered medically necessary for the treatment of cancer of the abdomen and pelvis, including but not limited to:

1. stomach (gastric);
 2. hepatobiliary tract;
 3. pancreas;
 4. rectal locations; or
 5. gynecologic tumors (including cervical, endometrial, and vulvar cancers).
- P. Intensity-modulated radiation therapy (IMRT) as a technique to deliver radiation therapy is considered not medically necessary for all other uses in the abdomen and pelvis.

Central Nervous System Tumors

- Q. Intensity-modulated radiation therapy (IMRT) as a technique to deliver radiation therapy may be considered medically necessary for the treatment of tumors of the central nervous system when the tumor is in close proximity to organs at risk (brain stem, spinal cord, cochlea and eye structures including optic nerve and chiasm, lens and retina) and 3-D CRT planning is not able to meet dose volume constraints for normal tissue tolerance.

- R. Intensity-modulated radiation therapy (IMRT) as a technique to deliver radiation therapy is considered not medically necessary for the treatment of tumors of the central nervous system for all indications not meeting the criteria above.

DEFINITIONS:

Localized prostate cancer: Cancer confined to the prostate, or locally advanced cancer that is confined to adjacent structures and/or local lymph nodes.

CODING:

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The five character codes included in the **Blue Cross of Northeastern Pennsylvania's Medical Policy** are obtained from Current Procedural Terminology (CPT*), copyright 2013 by the American Medical Association (AMA). CPT is developed by the AMA as a listing of descriptive terms and five character identifying codes and modifiers for reporting medical services and procedures.

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- **The identification of a code in this section does not denote coverage or separate reimbursement.**
 - Covered procedure codes are dependent upon meeting criteria of the policy and appropriate diagnosis code.
 - The following list of codes may not be all-inclusive, and are subject to change at any time.
 - Benefits are determined by the terms of the Member's specific benefit plan document [i.e., the Fully Insured policy, the Administrative Services Only (ASO) agreement applicable to the Self-Funded Plan Participant, or the Individual Policy] that is in effect at the time services are rendered.
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PROCEDURE CODES

0073T	77301	77338	77418
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SOURCES:

Blue Cross and Blue Shield Association Medical Policy Reference manual, "Intensity-Modulated Radiation Therapy (IMRT): Abdomen and Pelvis" (8.01.49), Section: Therapy, Issue: 12: 2013: 1-24. "Intensity Modulated Radiation Therapy (IMRT) of the Breast and Lung", (8.01.46), Section: Therapy, Issue: 4: 2014: 1-23. "Intensity-Modulated Radiation Therapy (IMRT): Cancer of the Head and Neck or Thyroid", (8.01.48), Section: Therapy, Issue: 6: 2014: 1-14. "Intensity-Modulated Radiation Therapy (IMRT) of the Prostate" (8.01.47), Section: Therapy, Issue: 4: 2014: 1-12. "Intensity Modulated Radiation Therapy (IMRT): Central Nervous System Tumors" (8.01.59), Section: Therapy, Issue: 4: 2014: 1-12.

Highmark Medical Policy: "Intensity Modulated Radiation Therapy (IMRT)" R-11, Effective Date: January 1, 2010. 1-4.

Highmark Medicare Services: "Radiation Therapy Services" (LCD L27515): 04/15/2010: 1-25.

Patient Care Management Committee Minutes: December 16, 2010 and March 17, 2011.

APPROVALS:

Approved by Vice President. Clinical Operations & Chief Medical Officer:



Signature: _____

(Nina M. Taggart, MA, MD, MBA)

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HISTORY:

Medical Policy MPO-490-0170 Intensity-Modulated Radiation Therapy (IMRT) effective May 1, 2011

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