

# UPMC Health Plan POLICY AND PROCEDURE MANUAL

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**SUBJECT:** Intensity Modulated Radiation Therapy (IMRT)  
**INDEX TITLE:** Medical Management  
**ORIGINAL DATE:** November 2006

<b>Commercial:</b>					
HMO ( )		POS ( )		PPO ( )	
Fully Insured ( )		Self-funded/ASO ( )		HSA ( )	
Medicare Select ( )		Medicare Supplement ( )			
<b>DPW-MA:</b>					
Health Choices ( )			Voluntary ( )		All ( X )
<b>CMS-MA:</b>					
HMO ( X )	PPO ( X )	Specialty Needs Plan ( X )	Part D ( )	PFFS ( X )	All ( )
<b>PID-CHIP:</b>					
Free ( )			Sub ( )		All ( X )

## I. POLICY

It is the policy of UPMC Health Plan to cover Intensity Modulated Radiation Therapy (IMRT) when it is medically necessary and covered under the member's benefit plan.

It is the policy of UPMC Health Plan, to recognize IMRT as appropriate and consistent with good medical practice when performed in appropriate clinical situations where precise delivery of radiation, while sparing surrounding normal tissue and limiting the effects of radiation toxicity, is critical.

## II. DEFINITIONS

**Conformal Radiation Therapy** is a technique where the beams of radiation used in treatment are shaped to match the tumor. It uses the targeting information to focus precisely on the tumor while avoiding the healthy surrounding tissue.

**Intensity Modulated Radiation Therapy (IMRT)** is a type of three-dimensional radiation therapy that uses computer-generated images to match radiation to the size and shape of a tumor, with less damage to nearby healthy tissue.

## III. PURPOSE

The purpose of this policy is to define the appropriate indications for the use of Intensity Modulated Radiation Therapy (IMRT).

#### **IV. SCOPE**

This policy applies to various UPMC Health Plan departments as indicated by the Benefit and Reimbursement Committee. These include but are not limited to Medical Management, Benefit Configuration and Claims departments.

#### **V. PROCEDURE**

##### **A. Medical Background**

IMRT is an advanced form of Conformal Radiation Therapy. It uses sophisticated soft and hardware techniques to vary the shape and intensity of radiation delivered to different parts of the treatment area. IMRT delivers radiation more precisely to the tumor while relatively sparing the surrounding normal tissues. Currently, several systems are used to modify the intensity of the radiation beam.

IMRT is minimally invasive and performed daily for 5-8 weeks. IMRT is not a replacement therapy for conventional radiation therapy methods. Therefore, there must be a documented rationale of the advantage of IMRT versus the use of other radiation therapy methods in the medical record of each member for whom IMRT is provided.

##### **B. Indications**

IMRT is considered to be reasonable and necessary when one of the following conditions is present:

- Abdominal malignancies
- Adjuvant therapy of breast cancer
- Adrenal and pituitary tumors
- Brain metastases in members with lesions 3cm in greatest dimensions; and no demonstrable or stable extra cranial activity
- Breast cancers close to critical structures
- Central nervous system tumors
- Head and neck lesions/ cancer, including:
  - Aerodigestive tract
  - Orbits
  - Salivary glands
  - Sinuses
- Localized primary disease for which a definitive approach to the primary site is planned e.g. lobectomy
- Upper abdominal/thoracic sites (with special provision for organ motion)
- Pediatric tumors such as: Ewing Sarcoma, Wilms' Tumor
- Pelvic and retroperitoneal tumors
- Pancreatic cancer
- Primary brain tumors
- Prostate cancer

- Spine, spinal cord and skull base tumors

**AND**

For each of the above conditions, at least one of the following indications must be met:

1. Immediately adjacent volume has been irradiated and abutting portals must be established and sparing the surrounding normal tissue requires high precision.
2. The Gross Tumor Volume (GTV) margins are concave or convex and in close proximity to critical structures that must be protected to avoid unacceptable morbidity.
3. The IMRT techniques would decrease the probability of grade 2 or grade 3 radiation toxicity in greater than fifteen (15) percent of radiated similar cases.
4. The volume of interest is in such a location that its parameters are not assessed by simple, two-dimensional (2-D) imaging techniques, but rather by three-dimensional reconstructions.
5. Tumor tissue lies in areas associated with target motion caused by cardiac and pulmonary cycles, and the IMRT is necessary in order to protect adjacent normal tissues.
6. At least three (3) critical dose-limiting structures adjacent to, but outside the planned target volume (PTV) are sufficiently close as seen on the dose volume histogram (DVH) and require IMRT to assure for safety and morbidity reduction.

**C. Limitations**

1. This procedure is not to be routinely performed each time the member is treated.
2. It is not reasonable and necessary to report this service more than once (1) per port per course of therapy.
3. Documentation in the medical record must justify the frequency and medical necessity of the service and must be signed by the medical radiation physicist and the radiation oncologist.

**Note:** Addressing issues related to tumor mobility prior to treatment (e.g.: Prostate shifts due to stool in the rectum, urine in the bladder) is essential.

**D. Other Issues Related to Billing Procedures:**

1. There must be a prescription written by the radiation oncologist who defines the requirements and goals of the planned treatment, including the specific dose constraints for the target(s), and nearby critical structures. This prescription must include a notation from the prescribing radiation oncologist stating indications, rationale and the medical necessity for IMRT.
2. Special Dosimetry Calculation is performed once (1) per port per course of therapy.
3. The usual frequency of special dosimetry is between one to six (6) services per course of therapy.

4. This use of special radiation, measuring and monitoring devices and other methods for calculating the specific dosage at a given point, is done at the direct request of the radiation oncologist.
5. When the physician either performs the service directly or is directly involved in the design or final selection process and can thoroughly document this involvement, these services are to be submitted as a professional charge by the radiation oncologist. Direct involvement and documentation are the key factors.
6. A signed IMRT Inverse Plan for Medicare members that meets prescribed dose constraints for the planning target volume (PTV) and surrounding normal tissue.
7. When IMRT treatment plan is billed more than once (1) for the same tumor, medical record documentation must support the medical necessity of the additional plan(s) and be available upon request.
8. When reporting more than eight (8) units for treatment device services may require supporting documentation. Examples of acceptable documentation for additional sets of custom devices are:
  - Change in lesion size
  - Patient repositioned
  - Different volume of interest treated (identify each volume of interest)
  - A boost, change in size of the volume of interest, or coned down beam is used.

#### **E. Variations**

N/A

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