

## Corporate Medical Policy

### Intensity Modulated Radiation Therapy (IMRT) for Sarcoma of the Extremities

**File Name:** intensity\_modulated\_radiation\_therapy\_IMRT\_for\_sarcoma\_of\_the\_extremities  
**Origination:** 1/2016  
**Last CAP Review:** 5/2019  
**Next CAP Review:** 5/2020  
**Last Review:** 5/2019

#### Description of Procedure or Service

---

Soft tissue sarcomas (STS) are a heterogeneous group of rare solid tumors that arise from mesenchymal cells at all body sites. The malignant precursor cell(s) can differentiate along one or several lineages, such as muscle, adipose, fibrous, cartilage, nerve, or vascular tissue. These tumors arise most often in the limbs (particularly the lower extremity), followed in order of frequency by the abdominal cavity and retroperitoneum, the trunk/thoracic region, and the head and neck. In treating both primary and recurrent STS of the extremities, the major therapeutic goals are survival, avoidance of a local recurrence, maximizing function, and minimizing morbidity. There is a wide variety of clinical situations that arise due to involvement of different anatomic sites, range of histologies, and variability in grade and tumor size.

Radiation therapy (RT) can be administered in appropriately selected patients as primary treatment or as an adjunct to surgery. RT can be the main treatment for sarcoma in someone whose general health is too poor to undergo surgery and can also be used as palliative treatment to help symptoms of sarcoma when it has spread. A potential advantage of IMRT is its ability to contour a high-dose radiation volume more closely to the target and minimize the volume of high-dose radiation to surrounding normal tissues.

**Related Policies:**

Intensity-Modulated Radiation Therapy (IMRT) of the Prostate  
Intensity-Modulated Radiation Therapy (IMRT) of the Head and Neck  
Intensity-Modulated Radiation Therapy (IMRT) of the Chest  
Intensity-Modulated Radiation Therapy (IMRT) of the Abdomen and Pelvis  
Maximum Units of Service

**\*\*\*Note: This Medical Policy is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.**

#### Policy

---

**BCBSNC will provide coverage for Intensity modulated radiation therapy (IMRT) for sarcoma of the extremities when it is determined to be medically necessary because the medical criteria and guidelines noted below are met.**

#### Benefits Application

---

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit

# Intensity Modulated Radiation Therapy (IMRT) for Sarcoma of the Extremities

design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

## When Intensity-Modulated Radiation Therapy (IMRT) for sarcoma of the extremities is covered

---

Intensity-modulated radiation therapy (IMRT) may be considered medically necessary for the treatment of sarcoma of the extremities when the following criteria are met:

- A. 3D results in  $\geq 25\%$  of the full circumference of the femur or humerus cortex receiving  $\geq 40\text{Gy}$ , **AND**
  - B. IMRT results in a reduction in the absolute percent of the circumference of the bone receiving  $\geq 40\text{Gy}$  of at least 15% (e.g. from 40% to 25% of the bone's circumference).
- OR**
- C. 3D results in  $\geq 25\%$  of the joint spaces (e.g. shoulder, elbow, wrist, hip, knee, ankle) receiving  $\geq 35\text{Gy}$ , **AND**
  - D. IMRT results in a reduction in the absolute percent of the joint space receiving  $\geq 35\text{Gy}$  of at least 15% (e.g. from 40% to 25% of the joint space).

## When Intensity-Modulated Radiation Therapy (IMRT) for sarcoma of the extremities is not covered

---

Intensity modulated radiation therapy (IMRT) is considered not medically necessary and therefore not covered when above criteria are not met.

## Policy Guidelines

---

Soft tissue sarcomas (STS) are uncommon. In the United States, approximately 11,930 cases are diagnosed annually, representing less than 1 percent of all newly diagnosed malignant tumors.

Because IMRT maximizes radiation dose distributions to the target while reducing exposure of adjacent non-target structures, it has been utilized when there is particular concern about damage to an adjacent organ or vital tissue with improvement of treatment outcomes in appropriately selected patients with STS.

CPT 77338 is reported once per IMRT plan and is limited to 3 units per 60 day treatment course.

## Billing/Coding/Physician Documentation Information

---

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at [www.bcbssc.com](http://www.bcbssc.com). They are listed in the Category Search on the Medical Policy search page.

*Applicable service codes: 77301, 77338, 77385, 77386, G6015, G6016*

# Intensity Modulated Radiation Therapy (IMRT) for Sarcoma of the Extremities

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

## Scientific Background and Reference Sources

---

- American Cancer Society. Radiation Therapy for Soft Tissue Sarcomas 2015.  
<http://www.cancer.org/cancer/sarcoma-adultsofttissuecancer/detailedguide/sarcoma-adult-soft-tissue-cancer-treating-radiation-therapy>. Accessed January 25, 2016.
- Leibel SA, Fuks Z, Zelefsky MJ, et al. Intensity-modulated radiotherapy. *Cancer J* 2002; 8:164-176.
- Alektiar KM, Brennan MF, Healey JH, Singer S. Impact of intensity-modulated radiation therapy on local control in primary soft-tissue sarcoma of the extremity. *J Clin Oncol* 2008;26:3440-3444
- Senior Medical Director review 3/2016
- Specialty Matched Consultant Advisory Panel 5/2016
- Specialty Matched Consultant Advisory Panel 5/2017
- Specialty Matched Consultant Advisory Panel 5/2018
- Medical Director review 5/2018
- Specialty Matched Consultant Advisory Panel 5/2019
- Medical Director review 5/2019

## Policy Implementation/Update Information

---

- 4/1/16 New policy issued. Intensity-modulated radiation therapy (IMRT) may be considered medically necessary for the treatment of sarcoma of the extremities when the following criteria are met: 3D results in  $\geq 50\%$  of the full circumference of the femur or humerus cortex receiving  $\geq 40\text{Gy}$ , **AND** IMRT results in a reduction in the absolute percent of the circumference of the bone receiving  $\geq 40\text{Gy}$  of at least 20% (e.g. from 60% to 40% of the bone's circumference); **OR** 3D results in  $\geq 50\%$  of the joint spaces (e.g. shoulder, elbow, wrist, hip, knee, ankle) receiving  $\geq 35\text{Gy}$ , **AND** IMRT results in a reduction in the absolute percent of the joint space receiving  $\geq 35\text{Gy}$  of at least 20% (e.g. from 60% to 40% of the joint space). Senior medical director review 3/2016. Specialty Matched Consultant Advisory Panel review. Notification given 4/1/16 for effective date 5/31/16. (lpr)
- 5/31/16 Specialty Matched Consultant Advisory Panel review 5/25/16. No change to policy statement. (lpr)
- 6/30/17 Specialty Matched Consultant Advisory Panel review 5/31/2017. No change to policy statement. (lpr)
- 6/8/18 Specialty Matched Consultant Advisory Panel review 5/2018. No changes to policy statements. Medical Director review 5/2018. (mco)

# Intensity Modulated Radiation Therapy (IMRT) for Sarcoma of the Extremities

5/28/19 Specialty Matched Consultant Advisory Panel review 5/15/2019. Under When Covered section: changed statement A parameters from 50% to 25%; Statement B bone circumference parameters changed from 20% to 15% (eg. changed from 60% to 40% and 40% to 25%); Statement C parameters changed from 50% to 25%; Statement D percent of joint space changed from 20% to 15% (eg. changed from 60% to 40% and from 40% to 25%). Medical Director review 5/2019. (lpr)

---

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.