

POLICY SECTIONS

[DISCLAIMER](#) | [POLICY DESCRIPTION](#) | [OVERVIEW](#) | [RELATED POLICIES](#) | [DEFINITIONS](#) | [INDICATIONS AND/OR LIMITATIONS OF COVERAGE](#) | [EXCLUSION CRITERIA](#) | [OPTIONAL SERVICES](#) | [MEDICATION MANAGEMENT](#) | [ATTACHMENTS](#) | [APPLICABLE CPT / HCPCS PROCEDURE CODES](#) | [APPROVAL HISTORY](#) | [REFERENCES](#) | [APPENDIX](#)

DISCLAIMER

This Molina Clinical Policy (MCP) is intended to facilitate the Utilization Management process. Policies are not a supplementation or recommendation for treatment; Providers are solely responsible for the diagnosis, treatment and clinical recommendations for the Member. It expresses Molina's determination as to whether certain services or supplies are medically necessary, experimental, investigational, or cosmetic for purposes of determining appropriateness of payment. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered (e.g., will be paid for by Molina) for a particular Member. The Member's benefit plan determines coverage – each benefit plan defines which services are covered, which are excluded, and which are subject to dollar caps or other limits. Members and their Providers will need to consult the Member's benefit plan to determine if there are any exclusion(s) or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and a member's plan of benefits, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of a State, the Federal government or CMS for Medicare and Medicaid Members. CMS's Coverage Database can be found on the CMS website. The coverage directive(s) and criteria from an existing National Coverage Determination (NCD) or Local Coverage Determination (LCD) will supersede the contents of this MCP and provide the directive for all Medicare members. References included were accurate at the time of policy approval and publication.

POLICY DESCRIPTION

The purpose of this policy is to provide general information applicable to the review and appropriateness of Radiation Therapy services. Although a service, supply or procedure may be medically necessary, it may be subject to limitations and/or exclusions under a member's benefit plan. If a service, supply, or procedure is not covered and the member proceeds to obtain the service, supply or procedure, the member may be responsible for the cost. Decisions regarding treatment and treatment plans are the responsibility of the physician. This policy is not intended to direct the course of clinical care a physician provides to a member, and it does not replace a physician's independent professional clinical judgment or duty to exercise special knowledge and skill in the treatment of members. MOLINA is not responsible for, does not provide, and does not hold itself out as a provider of medical care. The physician remains responsible for the quality and type of health care services provided to a member. Regarding Medicare cases, the applicable LCD or NCD will determine coverage of the treatment requested. If an LCD or NCD approves coverage of a treatment but does not specify the number of appropriate radiation fractions (treatments), the determination of the number of appropriate fractions will be made according to the guidance in the corresponding section of the Molina policy. In Medicare cases where there is no LCD or NCD, the determination of coverage and the appropriate number of radiation fractions will be made according to the guidance in the corresponding section of the MOLINA policy.

OVERVIEW

Radiation Oncology is the specialty of medicine that utilizes high-energy ionizing radiation in the treatment of malignant neoplasms and certain non-malignant conditions. Radiation Oncology uses several distinct therapeutic modalities: Teletherapy or, 2D external beam radiation therapy (EBRT), 3D external beam radiation therapy (EBRT), electron beam therapy, intensity modulated radiation therapy (IMRT), brachytherapy, hyperthermia, proton beam therapy, carbon ion therapy, neutron beam therapy and stereotactic radiation.

Radiation Therapy Treatment Process:

- A. Consultation
- B. Simulation
- C. Treatment Planning
- D. Treatment Delivery

DEFINITIONS

Bite Block: A restraining device generally used in the oral cavity often attached to an outside source for patient stability.

Block: A device fabricated of an energy-absorbing material such as lead or Cerrobend (Wood's metal) to shape or delineate the treatment portal to match the configuration of the desired area and to shield or protect normal structures.

Bolus: A tissue equivalent material used to change the surface deposition of a radiation beam.

Boost: The 2nd phase of a course of radiation treatment when the physician narrows down the treatment from a large area (i.e., the whole breast) to a smaller area of the body (i.e., the lumpectomy cavity).

Brachytherapy: A type of radiation therapy that utilizes radioactive isotopes (radioactive metals) for treatment of malignancies or benign conditions by placing the isotope directly on the target surface, into a body cavity (intracavitary), within the body tissues (interstitial) or near the tumor or target tissue.

Breast Separation: The distance between the entrance points of the medial and lateral tangential beams entering at the breast isocenter point plane.

Centigray (cGy): unit of ionizing radiation dose in the International System of Units (SI). A gray is the energy absorption of 1 joule per kg of irradiated material. 1 Gy is equivalent to 100 centigray/or rad. 1 centigray is equivalent to 1 rad (radiation absorbed dose).

Compensator: An irregularly shaped beam-modifying device utilized to reconfigure the beam intensity to match irregular tissue contours.

Collimator: A beam shaping device attached to the head of the treatment machine to define the initial configuration (the length and width) of the treatment portal.

Distant Metastatic: Metastatic spread of cancer to any area outside of the regional lymph nodes. (The regional lymph nodes for each specific cancer type are defined in the AJCC Cancer Staging Manual).

Dosimetry: The calculation of the radiation dose distribution within a treatment beam.

Fiducial Markers: or fiducial is an object placed in the field of view of an imaging system which appears in the image produced, for use as a point of reference or a measure. It may be either something placed into or on the imaging subject, or a mark or set of marks in the reticle of an optical instrument.

Fraction: The number of treatment sessions administered. Administration of the total dose of radiation is spread out over time and delivered to the patient in a number of even parts (fractions) or treatment sessions.

Gray (Gy): unit of ionizing radiation dose in the International System of Units (SI). It is defined as the absorption of one joule of radiation energy per kilogram of matter.

Hydrogel: A water-based material that is placed within the patient to provide separation and therefore protection of an organ which is adjacent to a target region or planned target volume (PTV).

Hyperfractionation: Radiation therapy delivered more than once per day.

Hypofractionation: Radiation therapy delivered over a shorter period of time (fewer days or weeks) compared to standard radiation therapy.

IMRT (Intensity Modulated Radiation Therapy): An advanced, noninvasive radiation treatment that uses a linear accelerator to safely deliver precise radiation to a tumor while minimizing the dose to surrounding normal

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023
Next Review Due: August 2024

tissue.

Intraoperative Radiation Therapy (IORT): An intensive radiation treatment that is administered during surgery.

Isodose: A plotting of lines or a series of lines following paths of the same dose distribution within a treatment beam.

Mold: A patient-restraining device usually constructed of plaster or thermosetting plastic that fits to the contour of the patient and restricts the motion of the patient during treatment.

Partial Mastectomy: A lumpectomy

PTV (planned target volume): A region to be targeted with radiation which may consist of gross tumor volume (GTV) or a clinical target volume (CTV) plus a margin of surrounding tissue to account for potential motion.

Port, Portal: These words are synonymous and refer to the site on the skin where the radiation beam enters the body. Field, often used as a synonym for port, will not be used in this policy.

Portal Verification: Any means of verifying the placement and configuration of the treatment portal.

RAD (radiation absorbed dose): unit used to measure the amount of radiation absorbed by an object or person, known as the “absorbed dose,” which reflects the amount of energy that radioactive sources deposit in materials through which they pass. The radiation-absorbed dose (rad) is the amount of energy (from any type of ionizing radiation) deposited in any medium (e.g., water, tissue, air). The related international system unit is the gray (Gy), where 1 Gy is equivalent to 100 rad.

Simulation: Part of the planning process that happens prior to treatment when a simulator, usually a CT, PET/CT, or MRI, is used to acquire images that will be used to plan the radiation treatments.

Stereotactic Radiosurgery (SRS) and Stereotactic Body Radiation Therapy (SBRT): are advanced, noninvasive radiation treatments that administer high-dose radiotherapy to discreet tumor foci in cranial or extracranial locations respectively in 1 to 5 treatments.

Teletherapy or External Beam Radiation Therapy (EBRT): The delivery of electromagnetic energy from a treatment machine at some distance from the treatment area. External beam radiation is commonly delivered by a linear accelerator, which can deliver photons (x-rays) or electrons to the targeted area.

Volume of Interest: This phrase refers to that volume within the body to which the radiation therapy is directed. In this policy, volume of interest is never synonymous with port and is preferred to other terms with (presumably) the same meaning because it is the phrase most commonly used by radiation oncologists. Treatment volume is accurate but less often used. Area of interest, used in the AMA's CPT manual, suggests a two-dimensional configuration and is, in this geometric sense, inaccurate. Target site seems to point to just the tumor itself and excludes the surrounding volume of tissue that might be of interest and other times to mean port. It should be discarded.

Wedge: A treatment beam modifying device acting to change the intensity of the treatment beam in a graduated fashion across the width or length of the treatment portal.

INDICATIONS and/or LIMITATIONS OF COVERAGE

BREAST CANCER (INVASIVE CANCERS AND DCIS)

A. Post-Mastectomy

Indications for Use/Inclusion Criteria

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416

Last approved: 8/9/2023

Next Review Due: August 2024



1. **3D External Beam Radiation Therapy** treatment is considered medically necessary for:
 - a. The treatment of the chest wall and regional lymph nodes with up to 33 total fractions total (28 fractions and 5 boost fractions).
 - b. Palliative treatment of the chest wall (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions total.
 - c. Treatment of the chest wall in patients with distant metastatic cancer with up to 15 fractions total.
2. **Intensity Modulated Radiation Therapy (IMRT)*** treatment (with inverse planning only and when the Required Documentation is submitted) is considered medically necessary with up to 33 total fractions total (28 fractions and 5 boost fractions) when ANY of the following apply:
 - a. The planned treatment area includes the Internal Mammary Lymph Node Chain OR
 - b. The patient's breast separation is 25cm or greater (see Definitions section for "breast separation").

Exclusion Criteria

1. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.
2. **Brachytherapy** is not considered medically necessary
3. **Stereotactic Radiosurgery (SRS) or Stereotactic Body Radiation Therapy (SBRT)** are not considered medically necessary

B. Post-Lumpectomy and Lymph Node Negative Patients

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy** treatment is considered medically necessary for:
 - a. Treatment of the whole breast following a lumpectomy with up to 21 fractions total (16 fractions and 5 boost fractions). Recent studies have demonstrated equivalent tumor control and cosmetic outcome in specific patient populations (i.e., lymph node negative patients) with shorter courses of therapy.^{1,4}
 - b. 3D Accelerated Partial Breast Irradiation (APBI) with up to 10 fractions total in patients who meet the following criteria:
 - i. Invasive ductal carcinoma – in patients that are greater or equal to 50 years of age AND have negative margins AND have tumors that are less than or equal to 2 cm in size.
 - ii. DCIS – in patients that have negative margins AND have tumors that are less than or equal to 2.5 cm in size AND are grade 1 or 2.
 - c. Palliative treatment of the breast (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions total.
 - d. Treatment of the breast in patients with distant metastatic cancer with up to 15 fractions total.
2. **Intensity Modulated Radiation Therapy (IMRT)*** treatment of the whole breast (with invasive planning only and when the Required Documentation is submitted) is considered medically necessary with up to 33 total fractions total (28 fractions and 5 boost fractions) when ANY of the following apply:
 - a. The patient's breast separation is 25cm or greater (see Definitions section for "breast separation").
 - b. IMRT Accelerated Partial Breast Irradiation (APBI) with 5 fractions OR 10 fractions total are indicated for patients who meet the following criteria:
 - i. Invasive ductal carcinoma – in patients that are greater or equal to 50 years of age AND have negative margins AND have tumors that are less than or equal to 2 cm in size.
 - ii. DCIS – in patients that have negative margins AND have tumors that are less than or equal to 2.5 cm in size AND are grade 1 or 2.
3. **Brachytherapy** treatment is considered medically necessary for:
 - a. Accelerated Partial Breast Irradiation (APBI) with brachytherapy with 10 fractions total is indicated for patients who meet the following criteria:

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023
Next Review Due: August 2024

- i. Invasive ductal carcinoma – in patients that are greater or equal to 50 years of age AND have negative margins AND have tumors that are less than or equal to 2 cm in size.
 - ii. DCIS – in patients that have negative margins AND have tumors that are less than or equal to 2.5 cm in size AND are grade 1 or 2.
(The use of Electronic Brachytherapy³ and AccuBoost® are considered investigational and not medically necessary)
4. **Intra-Operative Radiation Therapy (IORT)**³- Requires Clinical Review by a MOLINA Physician

Exclusion Criteria

1. **Stereotactic Radiosurgery (SRS) or Stereotactic Body Radiation Therapy (SBRT)** are not considered medically necessary
2. **Intensity Modulated Radiation Therapy (IMRT), Brachytherapy and Intra-Operative Radiation Therapy (IORT)** are not considered medically necessary in patients with distant metastatic cancer.

C. Post-Lumpectomy and Lymph Node Positive Patients

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy** treatment is considered medically necessary for:
 - a. Treatment of the whole breast and the supraclavicular/axillary lymph nodes following a lumpectomy with up to 33 total fractions total (28 fractions and 5 boost fractions) when an additional field is needed to cover the supraclavicular/axillary lymph nodes.⁴
 - b. Palliative treatment of the breast (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions total.
 - c. Treatment of the breast in patients with distant metastatic cancer with up to 15 fractions total.
2. **Intensity Modulated Radiation Therapy (IMRT)*** treatment of the whole breast (with inverse planning only and when the Required Documentation is submitted) is considered medically necessary with up to 33 total fractions total (28 fractions and 5 boost fractions) when ANY of the following apply:
 - a. The planned treatment area includes the Internal Mammary Lymph Node Chain OR
 - b. The patient's breast separation is 25cm or greater (see Definitions section for "breast separation").

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary
2. **Stereotactic Radiosurgery (SRS) or Stereotactic Body Radiation Therapy (SBRT)** are not considered medically necessary
3. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

D. Male Breast Cancer

1. Indications for radiation treatment after breast surgery in men with breast cancer are the same as for women with breast cancer

CENTRAL NERVOUS SYSTEM TUMORS (CNS)

A. Primary Brain and Spinal Cord Cancers^{5,6}

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary in the treatment of CNS tumors including:

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023
Next Review Due: August 2024

- a. Low grade glioma (grades 1 and 2) with up to 30 fractions of 3D or IMRT, includes pilocytic astrocytoma, astrocytoma, oligodendroglioma, and oligoastrocytoma.
 - b. High grade glioma (grades 3 and 4) with up to 30 fractions of 3D or IMRT, includes high grade anaplastic astrocytoma, anaplastic oligodendroglioma, anaplastic oligoastrocytoma, and glioblastoma multiforme (GBM).
 - c. Primary CNS lymphoma with up to 25 fractions of 3D or IMRT
 - d. Adult Medulloblastoma with up to 31 fractions of 3D or IMRT
 - e. Meningioma with up to 30 fractions of 3D or IMRT
 - f. Pituitary tumors with up to 27 fractions of 3D or IMRT
 - g. Ependymoma with up to 33 fractions of 3D or IMRT for intracranial sites
 - h. Other primary spinal cord tumors with up to 33 fractions of 3D or IMRT
(For the treatment of Brain Metastases, see Section XIII Metastatic Cancer, C. Brain Metastases).
2. **Stereotactic Radiosurgery (SRS)** with 1-5 fractions is considered medically necessary:
- a. For the treatment of meningiomas OR
 - b. For the treatment of pituitary tumors

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary

B. Benign Brain Lesions^{7,8,9}

Including Arteriovenous Malformations (AVM), Acoustic Neuromas or Schwannoma, and Trigeminal Neuralgia

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)**- Requires Clinical Review by an MOLINA Physician
2. **Stereotactic Radiosurgery (SRS)** with 1-5 fractions is considered medically necessary for an AVM, Acoustic Neuroma or Schwannoma, and Trigeminal Neuralgia

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary

C. Prophylactic Cranial Irradiation (PCI) of the Brain¹⁰

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy** - treatment is considered medically necessary to attempt to prevent brain metastases from small cell lung cancer with up to 10 fractions of whole brain radiation.
2. **Intensity Modulated Radiation Therapy (IMRT)** treatment is considered medically necessary to attempt to prevent brain metastases from small cell lung cancer with up to 10 fractions, only when using a hippocampal sparing whole brain planning technique.

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary
2. **Stereotactic Radiosurgery (SRS) or Stereotactic Body Radiation Therapy (SBRT)** treatment is not considered medically necessary

GASTROINTESTINAL CANCERS

Indications for Use/Inclusion Criteria

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416

Last approved: 8/9/2023
Next Review Due: August 2024



- A. 3D External Beam Radiation Therapy** treatment is considered medically necessary in the treatment of gastrointestinal cancers including:
1. **Rectal cancer**, for pre-operative or post-operative with up to 28 fractions.^{11,12}
 2. **Anal cancer**, for definitive treatment with up to 30 fractions.^{13,14}
 3. **Cholangiocarcinoma/Gallbladder cancer**, for definitive or post-operative treatment with up to 30 fractions.¹⁵
 4. **Esophageal cancer**, for pre-operative, post-operative and definitive treatment with up to 28 fractions.^{16,17}
 5. **Cervical Esophageal cancer**, for pre-operative, post-operative, and definitive treatment with up to 33 fractions.
 6. **Hepatocellular cancer**, with up to 33 fractions.
 7. **Gastric cancer**, for pre-operative and post-operative with up to 28 fractions.¹⁸
 8. **Pancreatic cancer**, for pre-operative or post-operative with up to 28 fractions and for definitive treatment up to 30 fractions.¹⁹
 9. **For palliative treatment of GI cancers** any Gastrointestinal (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
 10. **Colon cancer**, for inoperable and T4 tumors with up to 28 fractions.
- B. 3D External Beam Radiation Therapy** is considered medically necessary in the treatment of any Gastrointestinal cancers in patients with distant metastatic cancer with up to 15 fractions total
- C. Intensity Modulated Radiation Therapy (IMRT)** is indicated for the treatment of:
1. Rectal cancer when lymph node positive with up to 28 fractions
 2. Cervical Esophageal cancer with up to 33 fractions
 3. Upper Third, Middle Third, and Lower Third Esophageal cancer with up to 28 fractions
 4. Gastric cancer with up to 28 fractions
 5. Pancreatic Cancers for pre-operative and post-operative treatment with up to 28 fractions for definitive treatment with up to 30 fractions
 6. Colon cancer when inoperable or T4 disease with up to 28 fractions
- D. Intensity Modulated Radiation Therapy (IMRT)** is indicated in the treatment for pre-operative rectal cancer with 5 fractions.
- E. Intensity Modulated Radiation Therapy (IMRT)** is indicated in the treatment of anal cancers with 30 fractions.
- F. Intensity Modulated Radiation Therapy (IMRT)** is indicated in the treatment of Cholangiocarcinoma/Gallbladder cancer with 15 to 30 fractions.
- G. Intensity Modulated Radiation Therapy (IMRT)** is indicated in the treatment of Hepatocellular cancer with 15 to 33 fractions.
- H. Intra-Operative Radiation Therapy (IORT)** requires Clinical Review by a MOLINA Physician for Rectal and Pancreatic cancer.
- I. Stereotactic Radiosurgery (SRS) or Stereotactic Body Radiation Therapy (SBRT)** treatment with 1-5 fractions is considered medically necessary for the treatment of Pancreatic Cancer ONLY when the pancreatic cancer is surgically inoperable.²²
- J. Stereotactic Radiosurgery (SRS) or Stereotactic Body Radiation Therapy (SBRT)** treatment with 1-5 fractions is considered medically necessary for the treatment of Cholangiocarcinoma/Gallbladder cancer.

- K. Stereotactic Radiosurgery (SRS) or Stereotactic Body Radiation Therapy (SBRT)** treatment with 1-5 fractions is considered medically necessary for the treatment of Hepatocellular cancer.

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Stereotactic Radiosurgery (SRS) or Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary for the treatment of Rectal, Anal, Esophageal cancer, Gastric cancers.
3. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

GENITOURINARY CANCERS

- A. Low-Risk Prostate Cancer**^{23,24,25}
(Stage T1c-T2a AND Gleason Score \leq 6 AND PSA < 10)

Indications for Use/Inclusion Criteria

1. **Brachytherapy** is considered medically necessary:
 - a. For treatment in low-risk prostate cancer with 1 LDR radiation seed implantation
 - b. For treatment in low-risk prostate cancer with 2 HDR brachytherapy treatments
2. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically necessary:
 - a. For treatment in low-risk prostate cancer with 28 fractions of IMRT (moderate hypofractionation)
 - b. For treatment in low-risk prostate cancer with 40 fractions of IMRT in patients excluded from hypofractionation due to a prostate of 90 grams or larger OR a history of inflammatory bowel disease OR a history of superficial bladder cancer
3. **Stereotactic Body Radiation Therapy (SBRT)** is considered medically necessary with 1-5 fractions for treatment of low-risk prostate cancer.

- B. Favorable Intermediate-Risk Prostate Cancer**^{23,24,25}
(Stage T2b-c OR Gleason Score = 7 OR PSA level between 10 – 20)

*Favorable and Unfavorable Intermediate risk are defined by the treating physician.

Indications for Use/Inclusion Criteria

1. **Brachytherapy** is considered medically necessary:
 - a. For treatment in favorable intermediate-risk with 1 LDR radiation seed implantation
 - b. For treatment in favorable intermediate risk with 2 HDR brachytherapy treatments
2. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically necessary:
 - a. For treatment in favorable intermediate risk prostate cancer with 28 fractions of IMRT (moderate hypofractionation)
 - b. For treatment in favorable intermediate risk prostate cancer with 40 fractions of IMRT in patients excluded from hypofractionation due to a prostate of 90 grams or larger OR a history of inflammatory bowel disease OR a history of superficial bladder cancer
3. **Stereotactic Body Radiation Therapy (SBRT)** with 1-5 fractions is considered medically necessary for the treatment of favorable intermediate-risk prostate cancer.

- C. Unfavorable Intermediate-Risk Prostate Cancer**^{23,24,25}
(Stage T2b-c OR Gleason Score = 7 OR PSA level between 10 – 20)

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416

Last approved: 8/9/2023

Next Review Due: August 2024



*Favorable and Unfavorable Intermediate risk are defined by the treating physician.

Indications for Use/Inclusion Criteria

1. **Brachytherapy** is considered medically necessary:
 - a. For treatment in unfavorable intermediate-risk with 1 LDR radiation seed implantation when combined with 28 IMRT treatments
 - b. For treatment in unfavorable intermediate-risk with 2 HDR brachytherapy treatments when combined with 28 IMRT treatments
2. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically necessary:
 - a. For treatment in unfavorable intermediate risk prostate cancer with 28 fractions of IMRT (moderate hypofractionation)
 - b. For treatment in unfavorable intermediate risk prostate cancer with 40 fractions of IMRT in patients excluded from hypofractionation due to a prostate of 90 grams or larger OR a history of inflammatory bowel disease OR a history of superficial bladder cancer
3. **Stereotactic Body Radiation Therapy (SBRT)** with 1-5 fractions is considered medically necessary for the treatment of unfavorable intermediate-risk prostate cancer.

D. High-Risk Prostate Cancer^{23,24,25}
(Stage T3 OR Gleason Score = 8–10 OR PSA level greater than 20)

Indications for Use/Inclusion Criteria

1. **Brachytherapy** is considered medically necessary:
 - a. For treatment in high-risk prostate cancer with 1 LDR radiation seed implantation when combined with 28 IMRT treatments
 - b. For treatment with high-risk prostate cancer with 2 HDR brachytherapy treatments when combined with 28 IMRT treatments
2. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically necessary:
 - a. For treatment in high-risk prostate cancer with 28 fractions of IMRT (moderate hypofractionation)
 - b. For treatment in high-risk prostate cancer with 40 fractions of IMRT in patients excluded from hypofractionation due to a prostate of 90 grams or larger OR a history of inflammatory bowel disease OR a history of superficial bladder cancer OR when the treatment field includes treating the bilateral pelvic lymph nodes.
3. **Stereotactic Body Radiation Therapy (SBRT)** with 1-5 fractions is considered medically necessary for the treatment of high-risk prostate cancer.

E. Prostate Cancer with Positive Regional Lymph Nodes (N1)^{23,24,25}

Indications for Use/Inclusion Criteria

1. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically necessary in the treatment of prostate cancer with positive lymph nodes (N1):
 - a. For treatment of lymph node positive prostate cancer with 40 fractions of IMRT

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary.

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416

Last approved: 8/9/2023
Next Review Due: August 2024



F. Prostate Cancer with Low Volume Metastatic Disease²⁶

Indications for Use/Inclusion Criteria

1. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically necessary in the treatment of the prostate in patients with a low volume of distant metastatic disease with 20 fractions only if ALL of the following conditions are met:
 - a. There is a total of 3 or fewer metastatic bone lesions AND
 - b. No visceral metastases (i.e., no metastases in the lungs, brain, or liver) AND
 - c. Documentation of the extent of the metastatic disease has been provided through a recent full body PET/CT scan report OR through reports of recent CT scans of the Chest, Abdomen, and Pelvis.
2. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of prostate cancer in patients with distant metastatic disease who have 4 or more bone lesions or visceral metastases.

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary
3. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary for distant metastatic cancer in patients with 4 or more metastatic bone lesions or in patients with visceral metastases.

G. Post-Prostatectomy Radiation for Prostate Cancer²³

Indications for Use/Inclusion Criteria

1. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically necessary in the treatment of post-prostatectomy prostate cancer with 36 fractions when ANY of the following apply:
 - a. Pathological T3 disease
 - b. Seminal vesical invasion
 - c. Positive surgical margin
 - d. PSA that remains detectable after prostatectomy
 - e. PSA that begins rising in 2 post-prostatectomy measurements

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary.

H. Prostate Cancer/Prophylactic Breast Radiation

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy** for prophylactic breast radiation in men receiving Androgen Deprivation Therapy (to prevent gynecomastia) is considered medically necessary with up to 3 fractions.

I. Bladder Cancer²⁷

Indications for Use/Inclusion Criteria

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023
Next Review Due: August 2024

1. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary in the treatment of bladder cancer:
 - a. For definitive treatment (bladder conservation) with up to 33 fractions.
 - b. For post-operative treatment with negative margins with up to 25 fractions.
 - c. For post-operative treatment with positive margins with up to 30 fractions.
2. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of bladder cancer (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
3. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of the bladder in patients with distant metastatic disease with up to 15 treatments.

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary B
2. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary
3. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

J. Urethral Cancer

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary in the treatment of urethral cancer:
 - a. For definitive treatment (organ conservation) with up to 35 fractions.
 - b. For post-operative treatment with negative margins with up to 25 fractions.
 - c. For post-operative treatment with positive margins with up to 30 fractions.
 - d. For post-operative treatment with positive margins AND gross residual disease with up to 35 fractions.
 - e. For recurrent AND gross disease with up to 37 fractions.
2. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of urethral cancer (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
3. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of urethral cancer in patients with distant metastatic disease with up to 15 fractions.

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary.
3. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

K. Penile Cancer

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary in the treatment of penile cancer:
 - a. For definitive treatment with up to 35 fractions
 - b. For post-operative treatment following a penectomy with positive margins with up to 30 fractions.

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416

Last approved: 8/9/2023

Next Review Due: August 2024



2. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of penile cancer (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
3. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of penile cancer in patients with distant metastatic disease with up to 15 treatments.
4. **Brachytherapy** may be considered medically necessary for definitive treatment OR with post-operative treatment following a penectomy (Requires Clinical Review by an MOLINA Physician)

Exclusion Criteria

1. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary.
2. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

GYNECOLOGICAL CANCERS

A. Cervical Cancer²⁸

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary for non-surgical definitive treatment:
 - a. In combined modality therapy of cervical cancer with 28 fractions AND a brachytherapy boost of 2 LDR insertions
 - b. In combined modality therapy of cervical cancer with 28 fractions AND a brachytherapy boost of 5 HDR insertions
2. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)²⁸** are considered medically necessary for post-hysterectomy treatment:
 - a. In combined modality therapy of cervical cancer with 28 fractions AND a brachytherapy boost of up to 3 HDR vaginal cylinder insertions
3. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of cervical cancer (to slow progression of the local disease or to palliative symptoms) with up to 15 fractions.
4. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of cervical cancer in patients with distant metastatic disease with up to 15 treatments.
5. **Brachytherapy** is considered medically necessary in combined modality therapy (see above)

Exclusion Criteria

1. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary
2. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

B. Endometrial Cancer^{29,30}

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary for post-hysterectomy treatment of endometrial cancer with:
 - a. 28 fractions of 3D or IMRT

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023

Next Review Due: August 2024

- b. Combined modality therapy with 28 fractions AND a brachytherapy boost with up to 5 HDR vaginal cylinder insertions
2. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary for non-surgical definitive treatment of endometrial cancer with:
 - a. Combined modality therapy with 28 fractions AND a brachytherapy boost with up to 3 HDR insertions
3. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary for pre-operative treatment of endometrial cancer with:
 - a. Combined modality therapy with 28 fractions AND a brachytherapy boost with up to 2 HDR insertions
4. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of endometrial cancer (to slow progression of the local disease or to palliative symptoms) with up to 15 fractions.
5. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of endometrial cancer in patients with distant metastatic disease with up to 15 treatments.
6. **Brachytherapy** is considered medically necessary:
 - a. When brachytherapy is combined with 3D or IMRT treatments (see above)
 - b. For post-hysterectomy treatment of endometrial cancer with up to 5 HDR insertions as stand-alone radiation treatment
 - c. For non-surgical definitive treatment of endometrial cancer with up to 5 HDR insertions as stand-alone radiation treatment

Exclusion Criteria

1. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary
2. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

C. Vulvar Cancer³¹

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary for post-operative treatment of vulvar cancer with:
 - a. 28 fractions with 3D or IMRT
 - b. Combined modality therapy with 28 fractions AND a brachytherapy boost with up to 5 HDR treatments
2. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary for non-surgical definitive treatment of vulvar cancer with:
 - a. 36 fractions with 3D or IMRT
3. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of vulvar cancer (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
4. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of vulvar cancer in patients with distant metastatic disease with up to 15 treatments.
5. **Brachytherapy** is considered medically necessary:
 - a. When brachytherapy is combined with 3D or IMRT treatments (see above)

Exclusion Criteria

1. **Stereotactic Body Radiation Therapy (SBRT)** is not considered to be medically necessary.

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023
Next Review Due: August 2024

2. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

D. Vaginal Cancer

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary for post-operative treatment of vaginal cancer with:
 - a. 28 fractions with 3D or IMRT
2. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary for non-surgical definitive treatment of vaginal cancer with:
 - a. 35 fractions with 3D or IMRT
 - b. Combined modality therapy with 35 fractions AND a brachytherapy boost with up to 5 HDR treatments
3. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of vaginal cancer (so slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
4. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of vaginal cancer in patients with distant metastatic disease with up to 15 treatments.
5. **Brachytherapy** is considered medically necessary:
 - a. When brachytherapy is combined with 3D or IMRT treatments (see above)

Exclusion Criteria

1. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary
2. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

HEAD AND NECK CANCERS

A. Oral Cavity Cancer^{32,33,34}

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary in the treatment of cancers of the oral cavity:
 - a. For non-surgical definitive treatment with up to 35 fractions
 - b. For post-operative treatment with up to 33 fractions
 - c. In combination with brachytherapy (see below) with up to 25 fractions of 3D or IMRT
2. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of oral cavity cancer (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
3. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of oral cavity cancer in patients with distant metastatic disease with up to 15 treatments.
4. **Brachytherapy** is considered medically necessary in selected patients:
 - a. As a boost of 7 HDR brachytherapy treatments in combination with 25 fractions of 3D or IMRT
 - b. As a boost of 1 LDR brachytherapy treatment in combination with up to 25 fractions 3D or IMRT
 - c. As sole treatment with up to 10 HDR brachytherapy treatments
 - d. As sole treatment with 1 LDR brachytherapy treatment

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023
Next Review Due: August 2024

Exclusion Criteria

1. [Stereotactic Body Radiation Therapy \(SBRT\)](#) is not considered medically necessary
2. [Intensity Modulated Radiation Therapy \(IMRT\)](#) is not considered medically necessary in patients with distant metastatic cancer.

B. Oropharynx Cancer^{32,33,34}

Indications for Use/Inclusion Criteria

1. [3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy \(IMRT\)](#) are considered medically necessary in the treatment of cancers of the oropharynx:
 - a. For non-surgical definitive treatment with up to 35 fractions
 - b. For post-operative treatment with up to 33 fractions
2. [3D External Beam Radiation Therapy](#) is considered medically necessary for the palliative treatment of oropharynx cancer (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
3. [3D External Beam Radiation Therapy](#) is considered medically necessary in the treatment of oropharynx cancer in patients with distant metastatic disease with up to 15 treatments.

Exclusion Criteria

1. [Brachytherapy](#) is not considered medically necessary
2. [Stereotactic Body Radiation Therapy \(SBRT\)](#) is not considered medically necessary
3. [Intensity Modulated Radiation Therapy \(IMRT\)](#) is not considered medically necessary in patients with distant metastatic cancer.

C. Hypopharynx Cancer^{32,33,34}

Indications for Use/Inclusion Criteria

1. [3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy \(IMRT\)](#) are considered medically necessary in the treatment of cancers of the hypopharynx:
 - a. For non-surgical definitive treatment with up to 35 fractions
 - b. For post-operative treatment with up to 33 fractions
2. [3D External Beam Radiation Therapy](#) is considered medically necessary for the palliative treatment of hypopharynx cancer (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
3. [3D External Beam Radiation Therapy](#) is considered medically necessary in the treatment of hypopharynx cancer in patients with distant metastatic disease with up to 15 treatments.

Exclusion Criteria

1. [Brachytherapy](#) is not considered medically necessary
2. [Stereotactic Body Radiation Therapy \(SBRT\)](#) is not considered medically necessary
3. [Intensity Modulated Radiation Therapy \(IMRT\)](#) is not considered medically necessary in patients with distant metastatic cancer.

D. Nasopharynx Cancer^{32,33,34}

Indications for Use/Inclusion Criteria

1. [3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy \(IMRT\)](#) are considered medically necessary in the treatment of cancers of the nasopharynx:

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416

Last approved: 8/9/2023

Next Review Due: August 2024



- a. For non-surgical definitive treatment with up to 39 fractions
2. [3D External Beam Radiation Therapy](#) is considered medically necessary for the palliative treatment of nasopharynx cancer (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
3. [3D External Beam Radiation Therapy](#) is considered medically necessary in the treatment of nasopharynx cancer in patients with distant metastatic disease with up to 15 treatments.

Exclusion Criteria

1. [Brachytherapy](#) is not considered medically necessary.
2. [Stereotactic Body Radiation Therapy \(SBRT\)](#) is not considered medically necessary.
3. [Intensity Modulated Radiation Therapy \(IMRT\)](#) is not considered medically necessary in patients with distant metastatic cancer.

E. Supraglottic Larynx Cancer^{32,33,34}

Indications for Use/Inclusion Criteria

1. [3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy \(IMRT\)](#) are considered medically necessary in the treatment of cancers of the supraglottic larynx:
 - a. For non-surgical definitive treatment with up to 35 fractions
 - b. For post-operative treatment with up to 33 fractions
2. [3D External Beam Radiation Therapy](#) is considered medically necessary for the palliative treatment of supraglottic larynx cancer (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
3. [3D External Beam Radiation Therapy](#) is considered medically necessary in the treatment of supraglottic larynx cancer in patients with distant metastatic disease with up to 15 treatments.

Exclusion Criteria

1. [Brachytherapy](#) is not considered medically necessary.
2. [Stereotactic Body Radiation Therapy \(SBRT\)](#) is not considered medically necessary.
3. [Intensity Modulated Radiation Therapy \(IMRT\)](#) is not considered medically necessary in patients with distant metastatic cancer.

F. Glottic Larynx Cancer^{32,33,34}

Indications for Use/Inclusion Criteria

1. [3D External Beam Radiation Therapy](#) is considered medically necessary in the treatment of cancers of the glottic larynx:
 - a. For non-surgical definitive treatment of early stage T1N0 with up to 28 fractions with hypofractionation
 - b. For non-surgical definitive treatment of early stage T2N0 with up to 29 fractions with hypofractionation
 - c. For non-surgical definitive treatment of any stage (except metastatic Stage IV patients) with up to 35 treatments
 - d. For post-laryngectomy treatment of any stage (except metastatic Stage IV patients) with up to 33 treatments
2. [3D External Beam Radiation Therapy](#) is considered medically necessary for the palliative treatment of glottic larynx cancer (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
3. [3D External Beam Radiation Therapy](#) is considered medically necessary in the treatment of glottic larynx cancer in patients with distant metastatic disease with up to 15 treatments.

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023
Next Review Due: August 2024

4. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically necessary in the treatment of cancers of the glottic larynx:
 - a. For non-surgical definitive treatment of only stage III and non-metastatic Stage IVA and Stage IVB patients who do not have distant metastatic disease with up to 35 treatments.
 - b. For post-laryngectomy treatment of any stage, non-metastatic patient with up to 33 treatments.

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary.
3. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary for stage I-II glottic larynx cancer and in patients with distant metastatic cancer.

G. Salivary Gland Cancer^{32,33,34}

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary in the treatment of cancers of the salivary glands:
 - a. For non-surgical definitive treatment with up to 35 fractions
 - b. For post-operative treatment with up to 33 fractions
2. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of salivary gland cancer (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
3. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of salivary gland cancer in patients with distant metastatic disease with up to 15 treatments.

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary.
3. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

H. Maxillary Sinus Cancer^{32,33,34}

Indications for Use/Inclusion Criteria

1. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically necessary in the treatment of non-metastatic cancers of the maxillary sinus:
 - a. For non-surgical definitive treatment with up to 35 fractions
 - b. For post-operative treatment with up to 33 fractions
2. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of maxillary sinus cancer (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
3. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of maxillary sinus cancer in patients with distant metastatic disease with up to 15 treatments.

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary.
3. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

I. Cancers of the Lip^{32,33,34}

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary in the treatment of cancers of the lip:
 - a. For non-surgical definitive treatment with up to 35 fractions
 - b. For post-operative treatment with up to 33 fractions
 - c. In combination with brachytherapy (see below) with up to 25 fractions of 3D or IMRT
2. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of lip cancer (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
3. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of lip cancer in patients with distant metastatic disease with up to 15 treatments.
4. **Brachytherapy** is considered medically necessary in selected patients:
 - a. As a boost of 7 HDR brachytherapy treatments in combination with 25 fractions of 3D or IMRT
 - b. As a boost of 1 LDR brachytherapy treatment in combination with up to 25 fractions 3D or IMRT
 - c. As sole treatment with up of 10 HDR brachytherapy treatments
 - d. As sole treatment with 1 LDR brachytherapy treatment

Exclusion Criteria

1. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary
2. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

J. Occult/Unknown Primary Head and Neck Cancer^{32,33,34}

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary in the treatment of occult/unknown primary cancers:
 - a. For non-surgical definitive treatment with up to 35 fractions
 - b. For post-operative treatment with up to 33 fractions
2. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of occult/unknown primary head and neck cancer (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
3. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of occult/unknown primary head and neck cancer in patients with distant metastatic disease with up to 15 treatments.

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary
2. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary
3. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

K. Re-irradiation of a Head and Neck Cancer^{32,33,34}

Indications for Use/Inclusion Criteria

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416

Last approved: 8/9/2023
Next Review Due: August 2024



1. [3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy \(IMRT\)](#) are considered medically necessary in the re-irradiation treatment of recurrent head and neck cancers:
 - a. For non-surgical definitive treatment with up to 35 fractions
 - b. For post-operative treatment with up to 33 fractions

Exclusion Criteria

1. [Brachytherapy](#) is not considered medically necessary.
2. [Stereotactic Body Radiation Therapy \(SBRT\)](#) is not considered medically necessary.

LUNG CANCERS

A. Early Stage I-II Non-Small Cell Lung Cancer (NSCLC - definitive treatment)

Indications for Use/Inclusion Criteria

1. [3D External Beam Radiation Therapy](#) is considered medically necessary with up to 35 fractions
2. [Intensity Modulated Radiation Therapy \(IMRT\)](#) is considered medically necessary with up to 10 fractions
3. [Stereotactic Body Radiation Therapy \(SBRT\)](#) is considered medically necessary with up to 5 fractions in patients that have stage I OR stage IIA (for tumors greater than 5 cm OR tumors with positive lymph nodes, SBRT is not considered medically necessary).

Exclusion Criteria

1. [Brachytherapy](#) is not considered medically necessary.
2. [Intensity Modulated Radiation Therapy \(IMRT\)](#) for more than 10 fractions is not considered medically necessary.

B. Stage III NSCLC (definitive and pre-operative treatment)

Indications for Use/Inclusion Criteria

1. [3D External Beam Radiation Therapy](#) is considered medically necessary with up to 35 fractions OR
2. [Intensity Modulated Radiation Therapy \(IMRT\)](#) is considered medically necessary with up to 35 fractions.

Exclusion Criteria

1. [Brachytherapy](#) is not considered medically necessary.
2. [Stereotactic Body Radiation Therapy \(SBRT\)](#) is not considered medically necessary.

C. Stage I-III NSCLC (postoperative OR local recurrence)

Indications for Use/Inclusion Criteria

1. [3D External Beam Radiation Therapy](#) is considered medically necessary with up to 35 fractions
2. [Intensity Modulated Radiation Therapy \(IMRT\)](#) is considered medically necessary with up to 35 fractions

Exclusion Criteria

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023

Next Review Due: August 2024

1. [Brachytherapy](#) is not considered medically necessary.
2. [Stereotactic Body Radiation Therapy \(SBRT\)](#) is not considered medically necessary.

D. Palliative Treatment and Treatment of Patients with Distant Metastatic Disease

1. [3D External Beam Radiation Therapy](#) is considered medically necessary for the palliative treatment of NSCLC (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions
2. [3D External Beam Radiation Therapy](#) is considered medically necessary in the treatment of NSCLC in patients with distant metastatic disease with up to 15 treatments.

Exclusion Criteria

1. [Intensity Modulated Radiation Therapy \(IMRT\)](#) is not considered medically necessary in patients with distant metastatic cancer.

E. Limited Stage Small Cell Lung Cancer (SCLC)

Indications for Use/Inclusion Criteria

1. [3D External Beam Radiation Therapy](#) is considered medically necessary with up to 35 fractions given one fraction per day.
2. [Intensity Modulated Radiation Therapy \(IMRT\)](#) is considered medically necessary with up to 35 fractions given once per day.
3. [Intensity Modulated Radiation Therapy \(IMRT\)](#) is considered medically necessary for 30 fractions given twice per day (BID).
4. [Stereotactic Body Radiation Therapy \(SBRT\)*](#) is considered medically necessary with up to 5 fractions in patients that have limited stage SCLC with tumors 5 cm or smaller (for tumors greater than 5 cm OR tumors with positive lymph nodes, SBRT is not considered medically necessary).

Exclusion Criteria

1. [Brachytherapy](#) is not considered medically necessary.

F. Extensive Stage SCLC (Distant Metastatic Disease – Stage IV)

1. [3D External Beam Radiation Therapy](#) is considered medically necessary for the palliative treatment of extensive stage SCLC (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions

Exclusion Criteria

1. [Intensity Modulated Radiation Therapy \(IMRT\)](#) is not considered medically necessary in patients with distant metastatic cancer.

G. Prophylactic Cranial Irradiation (PCI)^{39,40}

Indications for Use/Inclusion Criteria

1. [3D External Beam Radiation Therapy](#) - treatment is considered medically necessary to attempt to prevent brain metastases from small cell lung cancer with up to 10 fractions of whole brain radiation.
2. [Intensity Modulated Radiation Therapy \(IMRT\)](#) treatment is considered medically necessary to attempt to prevent brain metastases from small cell lung cancer with up to 10 fractions, only when using a hippocampal sparing whole brain planning technique.

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023
Next Review Due: August 2024

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Stereotactic Radiosurgery (SRS) or Stereotactic Body Radiation Therapy (SBRT)** treatment is not considered medically necessary.

LYMPHOMAS

A. Hodgkin's Lymphoma^{41,42}

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy** is considered medically necessary with 10 to 18 fractions in Hodgkin's lymphoma.
2. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically necessary with 10 to 18 fractions for Hodgkin's lymphoma in the:
 - a. Head & Neck region
 - b. Mediastinal region

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary.
3. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

B. Non-Hodgkin's Lymphoma^{41,43,44}

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy** is considered medically necessary with 10 to 18 fractions in Non-Hodgkin's lymphoma.
2. **3D External Beam Radiation Therapy** is considered medically necessary for palliative treatment with 2 fractions.
3. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically necessary with 10 to 18 fractions for Non-Hodgkin's lymphoma in the:
 - a. Head & Neck region
 - b. Mediastinal region

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary.
3. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

METASTATIC CANCER

A. Body Metastases (any metastatic area except for Bone and Brain Metastases)

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy** is considered medically necessary with up to 15 fractions to any treatment site except bone or brain metastases.
2. **3D External Beam Radiation Therapy** is considered medically necessary for the treatment of metastatic spread to the Bone (i.e., femur, spinal bones, skull, pelvis, etc.) with either 1, 5 or 10

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023
Next Review Due: August 2024

fractions.^{48,49}

3. Stereotactic Body Radiation Therapy (SBRT) is considered medically necessary for the treatment of Oligometastatic (OM) spread or Oligoprogressive (OP) spread with up to 5 fractions of SBRT. All SBRT requests for treatment of Oligometastatic Spread or Oligoprogressive spread require Clinical Review by a Medical Director.
4. Oligometastatic Spread (OM)^{45,46,47} is defined as “limited metastatic disease” in a patient with a total of 1-3 metastatic tumors present at the time of the initial cancer diagnosis or within 3 months of the initial treatment when:

The primary tumor is controlled with no progression at the primary site AND

Sufficient documentation of the extent of the metastatic disease has been provided to MOLINA (either with a PET/CT scan report OR with CT scan reports of the Chest, Abdomen, & Pelvis). These scans provide a recent evaluation of the extent of the patient’s metastatic disease and therefore must be performed no more than 2 months prior to the Treatment Start Date (TSD).

Oligoprogressive (OP) Spread is defined as the development of limited metastatic tumor progression, generally but not always limited to 1-5 metastases when:

- a. These new metastases developed after an initially successful course of systemic therapy was given to a patient with metastatic disease AND
- b. The primary tumor is controlled with no progression at the primary site AND
- c. Sufficient documentation of the extent of the metastatic disease has been provided to MOLINA (either with a PET/CT scan report OR with CT scan reports of the Chest, Abdomen, & Pelvis). These scans provide a recent evaluation of the extent of the patient’s metastatic disease and therefore must be performed no more than 2 months prior to the Treatment Start Date (TSD).

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary.

B. Brain Metastases^{50,51,52,53}

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy** - treatment is considered medically necessary with up to 10 fractions.
2. **Intensity Modulated Radiation Therapy (IMRT)** treatment with up to 10 fractions is considered medically necessary ONLY:
 - a. When using a hippocampal sparing whole brain planning technique
3. **Stereotactic Radiosurgery (SRS) or Stereotactic Body Radiation Therapy (SBRT)** treatment in 1-5 fractions is considered medically necessary when ALL of the following apply:
 - a. When the patient has a performance status of 0, 1, or 2
 - b. When all lesions can be treated in a single treatment plan in a single fraction (for SRS) OR with 2 to 5 fractions (of SBRT)

Exclusion Criteria

1. **Brachytherapy** is not considered to be medically necessary.

MYELOMA

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416

Last approved: 8/9/2023

Next Review Due: August 2024



A. Solitary Plasmacytoma⁵⁴

Indications for Use/Inclusion Criteria

3. [3D External Beam Radiation Therapy](#) is considered medically necessary with up to 25 fractions for solitary plasmacytomas.

Exclusion Criteria

3. [Brachytherapy](#) is not considered medically necessary.
4. [Intensity Modulated Radiation Therapy \(IMRT\)](#) is not considered medically necessary.
5. [Stereotactic Body Radiation Therapy \(SBRT\)](#) is not considered medically necessary.

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416

Last approved: 8/9/2023
Next Review Due: August 2024



B. Multiple Myeloma⁵⁴

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy** is considered medically necessary with up to 10 fractions for multiple myeloma.

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary.
3. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary.

PEDIATRIC MALIGNANCIES

Indications for Use/Inclusion Criteria

- A. MOLINA recommends that pediatric cancer patients (18 years or younger) who require radiation treatment, should be treated by Radiation Oncologists who have considerable clinical experience treating pediatric patients. Radiation Oncologists who specialize in this patient population will have the discretion to choose the treatment modality AND the appropriate number of fractions that are needed to treat pediatric patients (including 3D conformal external beam, Intensity Modulated Radiation Therapy (IMRT), Stereotactic Body Radiation Therapy (SBRT/SRS) or Brachytherapy). Requests for the ancillary CPT codes (i.e., for treatment planning, imaging, immobilization, physics, etc.) that are submitted in each case will require review by a First Level Reviewer (FLR) and only ancillary CPT codes submitted in the appropriate quantities will be approved. Requests for Proton Beam Radiation Therapy (PBRT) treatment will require review by a physician Clinical Reviewer (CR).

RE-IRRADIATION

Re-irradiation is defined as a request for radiation treatment to an area of the body that has already received prior radiation to that same area. It does not apply to a situation where a patient has received radiation treatment to one area of the body (i.e. the lung) and now requires radiation to a completely separate area of the body (i.e. the femur). In general, treatments such as IMRT and SRS/SBRT in the context of re-irradiation are considered medically necessary since the organs at risk in the previously treated area are usually at or near their maximum tolerance levels. Greater treatment accuracy with IMRT or SRS/SBRT is therefore required.

- A. Intensity Modulated Radiation Therapy (IMRT) is considered medically necessary.
- B. Stereotactic Radiosurgery (SRS) or Stereotactic Body Radiation Therapy (SBRT) are considered medically necessary.

SARCOMA

A. Soft Tissue Sarcoma of an Extremity/Body Wall/Head and Neck (Pre-operative)⁵⁷

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy** is considered medically necessary in the pre-operative treatment of a soft tissue sarcoma with up to 25 fractions.
2. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of sarcoma (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions
3. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of sarcoma in patients with distant metastatic disease with up to 15 treatments.
4. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically necessary in the pre-operative

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416

Last approved: 8/9/2023
Next Review Due: August 2024



treatment of a soft tissue sarcoma with up to 25 fractions as sole treatment.

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary.
3. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

B. Soft Tissue Sarcoma of an Extremity/Body Wall/Head and Neck (Post-operative)⁵⁷

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy** is considered medically necessary in the post-operative treatment of a soft tissue sarcoma:
 - a. With up to 25 treatments followed by a brachytherapy boost
 - b. With up to 35 fractions as sole treatment
2. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of sarcoma (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions
3. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of sarcoma in patients with distant metastatic disease with up to 15 treatments.
4. **Brachytherapy** is considered medically necessary as a post-operative boost in combination with 3D or IMRT treatments (see above):
 - a. With 1 LDR brachytherapy boost treatment combined with up to 25 treatments of 3D or IMRT radiation
 - b. With 10 HDR brachytherapy boost treatments combined with up to 25 treatments of 3D or IMRT radiation
5. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically necessary in the post-operative treatment of a soft tissue sarcoma with up to 35 fractions as sole treatment.

Exclusion Criteria

1. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary
2. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

C. Retroperitoneal/Abdominal Sarcoma^{58,59}

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy** is considered medically necessary in the pre-operative or post-operative treatment of a retroperitoneal/abdominal sarcoma with up to 25 fractions.
2. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of sarcoma (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions
3. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of sarcoma in patients with distant metastatic disease with up to 15 treatments.
4. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically in the pre-operative or post-operative treatment of a retroperitoneal/abdominal sarcoma with up to 25 fractions as sole treatment.

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary.

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023
Next Review Due: August 2024

3. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

D. Desmoid Tumors (Aggressive Fibromatosis)

Indications for Use/Inclusion Criteria

1. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of desmoid tumors with up to 25 fractions.

Exclusion Criteria

1. **Brachytherapy** is not considered medically necessary.
2. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary.
3. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary.

SKIN CANCERS^{60,61,62,63,64}

Indications for Use/Inclusion Criteria

- A. **2D or 3D External Beam Radiation Therapy** is considered medically necessary in the treatment of:
 1. **Basal Cell and Squamous Cell Carcinoma** – For tumors less than 2 cm with up to 20 fractions
 2. **Basal Cell and Squamous Cell Carcinoma** – For tumors greater than 2 cm with up to 30 fractions
 3. **Melanoma** – with up to 35 fractions
 4. **Merkel Cell Carcinoma** – with up to 30 fractions
 5. **Dematofibrosarcoma Protuberans (DFSP)** – with up to 30 fractions
- B. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of skin cancers (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions
- C. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of skin cancers in patients with distant metastatic disease with up to 15 treatments.
- D. **Brachytherapy** is considered medically necessary for the treatment of Basal Cell and Squamous Cell Carcinomas with up to 10 fractions of HDR (radioisotope based). The use of Electronic Brachytherapy is considered investigational and not medically necessary.
- E. **Intensity Modulated Radiation Therapy (IMRT)** is considered medically necessary in the treatment of Squamous cell, Melanoma, or Merkel cell cancers only when:
 1. Treatment includes treating a lymph node chain when lymph node spread is suspected with up to 35 fractions.
- F. **Superficial Radiation or Orthovoltage Radiation** is considered medically necessary for the treatment of Basal Cell and Squamous Cell Carcinomas with up to 18 fractions.

Exclusion Criteria

- A. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary
- B. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416

Last approved: 8/9/2023
Next Review Due: August 2024



THYMOMA/THYMIC CANCERS^{65,66}

Indications for Use/Inclusion Criteria

- A. **3D External Beam Radiation Therapy OR Intensity Modulated Radiation Therapy (IMRT)** are considered medically necessary in the treatment of thymoma and thymic tumors with up to 35 fractions.
- B. **3D External Beam Radiation Therapy** is considered medically necessary for the palliative treatment of a thymoma or thymic tumor (to slow progression of the local disease or to palliate symptoms) with up to 15 fractions.
- C. **3D External Beam Radiation Therapy** is considered medically necessary in the treatment of thymoma or thymic tumor in patients with distant metastatic disease with up to 15 treatments.

Exclusion Criteria

- A. **Brachytherapy** is not considered medically necessary
- B. **Stereotactic Body Radiation Therapy (SBRT)** is not considered medically necessary
- C. **Intensity Modulated Radiation Therapy (IMRT)** is not considered medically necessary in patients with distant metastatic cancer.

OPTIONAL SERVICES

A. Image-Guided Radiation Therapy (77387, 77014, G6002, G6017)

Indications - IGRT is indicated when ANY of the following apply:

- 1. When Intensity Modulated Radiation Therapy (IMRT) is being utilized
- 2. When Proton Beam Radiation Therapy (PBRT) is being utilized
- 3. When the patient has had prior radiation and the current treatment field abuts the previously irradiated treatment area
- 4. When a left-sided breast cancer is being treated AND a deep inspiration breath hold technique (DIBH) is being utilized
- 5. When 3D accelerated partial breast irradiation (APBI) is being utilized
- 6. When fiducial markers have been implanted for the purpose of IGRT tracking
- 7. When the patient is morbidly obese (BMI>35) and there is considerable variation in the daily patient set-up affecting treatment accuracy

B. Respiratory Motion Management (77293)

Indications – Respiratory Motion Management is used for the purpose of precisely tracking the movement of a targeted tumor as it moves during the respiratory cycle.

Respiratory Motion Management is indicated when ALL of the following apply:

- 1. When treating lung, thoracic, liver, biliary, or pancreatic cancers which move significantly as the patient is breathing.
- 2. A 4D CT simulation must be performed. The 4D CT captures CT images throughout the entire (inspiration, expiration, and neutral breath positions) respiratory cycle. (Note – This service is not used for treating breast cancer with a Deep Inspiration Breath Hold (DIBH) technique).
- 3. When the patient's respiratory motion is acquired using a respiratory sensors and/or external fiducials and then registered to the 4D CT images.
- 4. When a Radiation Oncologist contours the moving tumor volume and creates an ITV.

C. Special Treatment Procedure (77470)

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023
Next Review Due: August 2024

Indications – The Special Treatment Procedure is indicated when ANY of the following apply:

1. When concurrent chemotherapy is being utilized
2. When brachytherapy is being utilized
3. When proton therapy is being utilized
4. When total body irradiation is being utilized
5. When treating a pediatric cancer patient under anesthesia
6. When hyperthermia is being utilized
7. When the patient has had prior radiation and the current treatment field abuts the previously irradiated treatment field
8. When Stereotactic Body Radiation Therapy (SBRT) or when Stereotactic Radiosurgery (SRS) is being utilized

D. Special Physics Consult (77370)

Indications – The Special Physics Consult is indicated when ANY of the following apply:

1. When brachytherapy is being utilized
2. When image fusion (with a PET, CT, or MRI) is performed during the planning process by a medical physicist
3. When the patient has had prior radiation and the current treatment field abuts the previously irradiated treatment field
4. When analysis of dose to a fetus is required
5. When analysis of dose to a pacemaker/defibrillator is required
6. When Stereotactic Body Radiation Therapy (SBRT) or when Stereotactic Radiosurgery (SRS) is being utilized

E. Simulation (77263), (77280, 77285 or 77290), (77332 or 77334)

Indications – A simulation (i.e., the process of acquiring the images necessary for radiation treatment planning) occurs at the beginning of the planning process for each patient who will be receiving radiation treatment. Since a simulation is a required part of the treatment process, MOLINA automatically approves certain CPT codes when they are appropriately selected during the preauthorization process.

MEDICATION MANAGEMENT

- A. Please refer to the FDA label/package insert for details regarding these topics.

ATTACHMENTS

NONE

APPLICABLE CPT / HCPCS PROCEDURE CODES

CPT (Current Procedural Terminology) Codes

CPT	Description
77306	Teletherapy isodose plan; simple (1 or 2 unmodified ports directed to a single area of interest), includes basic dosimetry calculation(s)
77307	Teletherapy isodose plan; complex (multiple treatment areas, tangential ports, the use of wedges, blocking, rotational beam, or special beam considerations), includes basic dosimetry calculation(s)
77321	Special teletherapy port plan, particles, hemibody, total body

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023
 Next Review Due: August 2024

77331	Special dosimetry (eg, TLD, microdosimetry) (specify), only when prescribed by the treating physician
77401	Radiation treatment delivery, superficial and/or ortho voltage, per day
77402	Radiation treatment delivery, => 1 MeV; simple
77407	Radiation treatment delivery, => 1 MeV; intermediate
77412	Radiation treatment delivery, => 1 MeV; complex
77280	Therapeutic radiology simulation-aided field setting; simple
77285	Therapeutic radiology simulation-aided field setting; intermediate
77290	Therapeutic radiology simulation-aided field setting; complex
77293	Respiratory motion management simulation (List separately in addition to code for primary procedure)
77295	3-dimensional radiotherapy plan, including dose-volume histograms
77261	Therapeutic radiology treatment planning; simple
77262	Therapeutic radiology treatment planning; intermediate
77263	Therapeutic radiology treatment planning; complex
77299	Unlisted procedure, therapeutic radiology clinical treatment planning
77332	Treatment devices, design and construction; simple (simple block, simple bolus)
77333	Treatment devices, design and construction; intermediate (multiple blocks, stents, bite blocks, special bolus)
77334	Treatment devices, design and construction; complex (irregular blocks, special shields, compensators, wedges, molds or casts)
77336	Continuing medical physics consultation, including assessment of treatment parameters, quality assurance of dose delivery, and review of patient treatment documentation in support of the radiation oncologist, reported per week of therapy
77370	Special medical radiation physics consultation
77316	Brachytherapy isodose plan; simple (calculation[s] made from 1 to 4 sources, or remote afterloading brachytherapy, 1 channel), includes basic dosimetry calculation(s)
77317	Brachytherapy isodose plan; intermediate (calculation[s] made from 5 to 10 sources, or remote afterloading brachytherapy, 2-12 channels), includes basic dosimetry calculation(s)
77318	Brachytherapy isodose plan; complex (calculation[s] made from over 10 sources, or remote afterloading brachytherapy, over 12 channels), includes basic dosimetry calculation(s)
77761	Intracavitary radiation source application; simple
77762	Intracavitary radiation source application; intermediate
77763	Intracavitary radiation source application; complex
77767	Remote afterloading high dose rate radionuclide skin surface brachytherapy, includes basic dosimetry, when performed; lesion diameter up to 2.0 cm or 1 channel
77768	Remote afterloading high dose rate radionuclide skin surface brachytherapy, includes basic dosimetry, when performed; lesion diameter over 2.0 cm and 2 or more channels, or multiple lesions
77770	Remote afterloading high dose rate radionuclide interstitial or intracavitary brachytherapy, includes basic dosimetry, when performed; 1 channel
77771	Remote afterloading high dose rate radionuclide interstitial or intracavitary brachytherapy, includes basic dosimetry, when performed; 2-12 channels
77772	Remote afterloading high dose rate radionuclide interstitial or intracavitary brachytherapy, includes basic dosimetry, when performed; over 12 channels
77778	Interstitial radiation source application, complex, includes supervision, handling, loading of radiation source, when performed
77789	Surface application of low dose rate radionuclide source

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023
 Next Review Due: August 2024

77790	Supervision, handling, loading of radiation source
77799	Unlisted procedure, clinical brachytherapy
77338	Multi-leaf collimator (MLC) device(s) for intensity modulated radiation therapy (IMRT), design and construction per IMRT plan
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
77387	Guidance for localization of target volume for delivery of radiation treatment, includes intrafraction tracking, when performed
32701	Thoracic target(s) delineation for stereotactic body radiation therapy (SRS/SBRT), (photon or particle beam), entire course of treatment
77373	Stereotactic body radiation therapy, treatment delivery, per fraction to 1 or more lesions, including image guidance, entire course not to exceed 5 fractions
77435	Stereotactic body radiation therapy, treatment management, per treatment course, to 1 or more lesions, including image guidance, entire course not to exceed 5 fractions
77371	Radiation treatment delivery, stereotactic radiosurgery (SRS), complete course of treatment of cranial lesion(s) consisting of 1 session; multi-source Cobalt 60 based
77372	Radiation treatment delivery, stereotactic radiosurgery (SRS), complete course of treatment of cranial lesion(s) consisting of 1 session; linear accelerator based
61796	Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); 1 simple cranial lesion
61797	Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); each additional cranial lesion, simple (List separately in addition to code for primary procedure)
61798	Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); 1 complex cranial lesion
61799	Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); each additional cranial lesion, complex (List separately in addition to code for primary procedure)
61800	Application of stereotactic headframe for stereotactic radiosurgery (List separately in addition to code for primary procedure)
63620	Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); 1 spinal lesion
63621	Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); each additional spinal lesion (List separately in addition to code for primary procedure)
19294	Preparation of tumor cavity, with placement of a radiation therapy applicator for intraoperative radiation therapy (IORT) concurrent with partial mastectomy (List separately in addition to code for primary procedure)
77424	Intraoperative radiation treatment delivery, x-ray, single treatment session
77425	Intraoperative radiation treatment delivery, electrons, single treatment session
77469	Intraoperative radiation treatment management
77427	Radiation treatment management, 5 treatments
77431	Radiation therapy management with complete course of therapy consisting of 1 or 2 fractions only
77432	Stereotactic radiation treatment management of cranial lesion(s) (complete course of treatment consisting of 1 session)
77470	Special treatment procedure (eg, total body irradiation, hemibody radiation, per oral or endocavitary irradiation)
77499	Unlisted procedure, therapeutic radiology treatment management
77014	Computed tomography guidance for placement of radiation therapy fields
0735T	Preparation of tumor cavity, with placement of a radiation therapy applicator for intraoperative radiation therapy (IORT) concurrent with primary craniotomy (List separately in addition to code for primary procedure)

HCPCS (Healthcare Common Procedure Coding System) Codes

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023
 Next Review Due: August 2024

HCPCS	Description
G6003	Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks: up to 5 mev
G6004	Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks: 6-10 mev
G6005	Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks: 11-19 mev
G6006	Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks: 20 mev or greater
G6007	Radiation treatment delivery, two separate treatment areas, three or more ports on a single treatment area, use of multiple blocks: up to 5 mev
G6008	Radiation treatment delivery, two separate treatment areas, three or more ports on a single treatment area, use of multiple blocks: 6-10 mev
G6009	Radiation treatment delivery, two separate treatment areas, three or more ports on a single treatment area, use of multiple blocks: 11-19 mev
G6010	Radiation treatment delivery, two separate treatment areas, three or more ports on a single treatment area, use of multiple blocks: 20 mev or greater
G6011	Radiation treatment delivery, three or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; up to 5 mev
G6012	Radiation treatment delivery, three or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; 6-10 mev
G6013	Radiation treatment delivery, three or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; 11-19 mev
G6014	Radiation treatment delivery, three or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; 20 mev or greater
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
C9726	Placement and removal (if performed) of applicator into breast for intraoperative radiation therapy, add-on to primary breast procedure
G6017	Intra-fraction localization and tracking of target or patient motion during delivery of radiation therapy(e.g.,3-D positional tracking, gating, 3-D surface tracking), each fraction of treatment
G6002	Stereoscopic x-ray guidance for localization of target volume for the delivery of radiation therapy

CODING DISCLAIMER. Codes listed in this policy are for reference purposes only and may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement. Listing of a service or device code in this policy does not guarantee coverage. Coverage is determined by the benefit document. Molina adheres to Current Procedural Terminology (CPT®), a registered trademark of the American Medical Association (AMA). All CPT codes and descriptions are copyrighted by the AMA; this information is included for informational purposes only. Providers and facilities are expected to utilize industry standard coding practices for all submissions. When improper billing and coding is not followed, Molina has the right to reject/deny the claim and recover claim payment(s). Due to changing industry practices, Molina reserves the right to revise this policy as needed.

APPROVAL HISTORY

- 08/09/2023** Updated references.
- 06/14/2023** Removed the requirement for two DVH comparison plans and dose criteria, comparison plans require a practice to create two plans instead of one, other criteria exist to decide patient eligibility for IMRT. For cervical and endometrial cancer, allowed fractions increased by three to include a commonly prescribed total fraction number. Clarified that lymph node positive rectal cancer is eligible for IMRT. Clarified that the entire esophagus is eligible for IMRT. Clarified that all pancreatic cancers are eligible for IMRT. Added IMRT for stage I and II NSCLC with more than ten fractions is not considered medically necessary.
- 08/10/2022** Adopted NCH policy and retired MCP.

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416

Last approved: 8/9/2023
Next Review Due: August 2024



REFERENCES

1. Agrawal S, Kane III JM, Guadagnolo BA, et al. The benefits of adjuvant radiation therapy after therapeutic lymphadenectomy for clinically advanced, high-risk, lymph node-metastatic melanoma. *Cancer*. 2009 Dec 15; 115(24):5836-5844.
2. Alani S, Soyfer V, Strauss N, et al. Limited advantages of intensity-modulated radiotherapy over 3D conformal radiation therapy in the adjuvant management of gastric cancer. *Int J Radiat Oncol Biol Phys*. 2009 Jun 1; 74(2):562-566.
3. American Society for Radiation Oncology (ASTRO). 2013 Choosing Wisely Campaign, <https://www.astro.org/>.
4. American Society for Radiation Oncology (ASTRO). 2021 Radiation Oncology Coding Resource, pgs. 84-85.
5. Andrews DW, Scott CB, Sperduto PW, et al. Whole brain radiation therapy with or without stereotactic radiosurgery boost for patients with one to three brain metastases: phase III results of RTOG 9508 randomized trial. *Lancet*. 2004 May 22; 363(9422):1665-1672.
6. Aupérin A, Arriagada R, Pignon JP, et al. for the Prophylactic Cranial Irradiation Overview Collaborative Group. Prophylactic cranial irradiation for patients with small-cell lung cancer in complete remission. *N Engl J Med*. 1999 Aug 12; 341(7):476-484. Belderbos J, Phd M, Ruyscher DD, Jaeger KD, et al. OC-0503 Phase III trial of Prophylactic Cranial Irradiation with or without Hippocampus Avoidance in SCLC. *Radiotherapy and Oncology*. 2019; 133(Supplement 1):S259. doi:10.1016/s0167-8140(19)30923-5.
7. Belderbos J, Phd M, Ruyscher DD, Jaeger KD, et al. OC-0503 Phase III trial of Prophylactic Cranial Irradiation with or without Hippocampus Avoidance in SCLC. *Radiotherapy and Oncology*. 2019; 133(Supplement 1):S259. doi:10.1016/s0167-8140(19)30923-5.
8. Bernier J, Dommange C, Ozsahin M, et al. Postoperative irradiation with or without concomitant chemotherapy for locally advanced head and neck cancer. *N Engl J Med*. 2004 May 6; 350(19):1945-1952.
9. Bhatnagar, A, Deutsch, M. The role for intensity modulated radiation therapy (IMRT) in pediatric population. *Technol Cancer Res Treat*. 2006;5(6):591-5.
10. Bradley J, Schild, Bogart, J, et al. RTOG 0617/NCCTG N0628/CALGB 30609/ECOG R0617. A randomized phase III comparison of standard-dose (60 Gy) versus high-dose (74 Gy) conformal radiotherapy with concurrent and consolidation carboplatin/paclitaxel +/- cetuximab (IND #103444) in patients with Stage IIIA/IIIB non-small cell lung cancer. *NRG Oncology*. Study Team 1/19/16.
11. Bradley JD, Paulus R, Komaki R, et al. Standard-dose versus high-dose conformal radiotherapy with concurrent and consolidation carboplatin plus paclitaxel with or without cetuximab for patients with stage IIIA or IIIB non-small cell lung cancer (RTOG 0617): a randomized, two-by-two factorial phase 3 study. *Lancet Oncol*. 2015 Feb; 16(2):187-199.
12. Burmeister BH, Henderson MA, Ainslie J, et al. Adjuvant radiotherapy versus observation alone for patients at risk of lymph-node field relapse after therapeutic lymphadenectomy for melanoma: a randomised trial. *Lancet Oncol*. 2012 Jun; 13(6):589-597.
13. Cabrera, AR, Kirkpatrick, JP, Fiveash, JB, et al. Radiation therapy for glioblastoma: Executive summary of an American Society for Radiation Oncology evidence-based clinical practice guideline. *Pract Radiat Oncol*. 2016;6(4):217-25.
14. Chang DT, Amdur RJ, Morris CG, et al. Adjuvant radiotherapy for cutaneous melanoma: comparing hypofractionation to conventional fractionation. *Int J Radiat Oncol Biol Phys*. 2006 Nov 15; 66(4):1051-1055.
15. Chuong, MD, Freilich, JM, Hoffe, SE, et al. Intensity-Modulated Radiation Therapy vs. 3D Conformal Radiation Therapy for Squamous Cell Carcinoma of the Anal Canal. *Gastrointest Cancer Res*. 2013;6(2):39-45.
16. Gaffney DK, King B, Viswanathan AN, Barkati M, Beriwal S, Eifel P, Erickson B, Fyles A, Goulart J, Harkenrider M, Jhingran A, Klopp A, Koh WJ, Lim K, Petersen I, Portelance L, Small W Jr, Stewart A, Wiebe E, Wolfson A, Yashar C, Bosch W. Consensus Recommendations for Radiation Therapy Contouring and Treatment of Vulvar Carcinoma. *Int J Radiat Oncol Biol Phys*. 2016 Jul 15;95(4):1191-200. doi: 10.1016/j.ijrobp.2016.02.043. Epub 2016 Feb 21.
17. Germano, IM, Sheehan, J, Parish, J, et al. Congress of Neurological Surgeons systematic review and evidence-based guidelines on the role of radiosurgery and radiation therapy in the management of patients with vestibular schwannomas. *Neurosurgery*. 2018;82(2):E49-E51.
18. Goda JS, Gospodarowicz M, Pintilie M, et al. Long-term outcome in localized extranodal mucosa-associated lymphoid tissue lymphomas treated with radiotherapy. *Cancer*. 2010; 116(16):3815-3824.
19. Gondi V, Pugh SL, Tome WA, et al. Preservation of memory with conformal avoidance of the hippocampal neural stem-cell compartment during whole-brain radiotherapy for brain metastases (RTOG 0933): a phase II multi-institutional trial. *J Clin Oncol*. 2014 Dec 1;32(34):3810-3816.
20. Gondi, V, Pugh, SL, Mehta, MP, et al. NRG Oncology CC003: a randomized phase III/III trial of prophylactic cranial irradiation with or without hippocampal avoidance for small cell lung cancer. *J Clin Oncol*. 2019;37(15 Suppl):abstract TPS8578.
21. Herman JM, Chang DT, Goodman KA, et al. Phase 2 multi-institutional trial evaluating Gemcitabine and stereotactic body radiotherapy for patients with locally advanced unresectable pancreatic adenocarcinoma. *Cancer*. 2015 Apr 1; 121(7):1128-1137.
22. Hypofractionated Radiation Therapy for Localized Prostate Cancer: Executive Summary of an ASTRO, ASCO, and AUA Evidence-Based Guideline - Practical Radiation Oncology (2018) 8, 354-360.
23. Kocher M, Soffiotti R, Abacioglu U, et al. Adjuvant whole-brain radiotherapy versus observation after radiosurgery or surgical resection of one to three cerebral metastases: results of the EORTC 22952-26001 study. *J Clin Oncol*. 2011 Jan10; 29(2):134-141.
24. Kondziolka, D, Perez, B, Flickinger, JC, et al. Gamma knife radiosurgery for trigeminal neuralgia: results and expectations. *Arch Neurol*. 1998;55(12):1524-9.
25. Korst RJ, Bezjak A, Blackmon S, et al. Neoadjuvant chemoradiotherapy for locally advanced thymic tumors: A phase II, multi-institutional clinical trial. *J Thorac Cardiovasc Surg*. 2014 Jan;147(1):36-46.e1.
26. Kraybill WG, Harris J, Spiro IJ, et al. Phase II study of neoadjuvant chemotherapy and radiation therapy in the management of high-risk, high-grade, soft tissue sarcomas of the extremities and body wall: Radiation Therapy Oncology Group Trial 9514. *J Clin Oncol*. 2006 Feb 1; 24(4):619-625.
27. *Lancet*. 2018 Dec 1;392(10162):2353-2366 - Radiotherapy to the primary tumour for newly diagnosed, metastatic prostate cancer (STAMPEDE): a randomised controlled phase 3 trial
28. Likhacheva M, Awan M, Barker C, et al. Definitive and Postoperative Radiation Therapy for Basal and Squamous Cell Cancers of the Skin: Executive Summary of an American Society for Radiation Oncology Clinical Practice Guideline. *Practical Radiation Oncology*. 2020 January -February; 10(1), pp.8-20.
29. Long-term outcomes in treatment of retroperitoneal sarcomas: A 15 year single-institution evaluation of prognostic features, *J Surg Oncol*

Molina Clinical Policy

External Beam/Teletherapy, Brachytherapy, IMRT, SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023

Next Review Due: August 2024

- 2016 Jul;114(1):56-64.doi: 10.1002/jso.24256. Epub 2016 Apr 13.
30. Lunsford, LD, Kondziolka, D, Flickinger, JC, et al. Stereotactic radiosurgery for arteriovenous malformations of the brain. *J Neurosurg.* 1991;75(4):512-24.
 31. Lutz S, Balboni T, Jones J, et al. Palliative radiation therapy for bone metastases: Update of an ASTRO Evidence-Based Guideline. *Pract Radiat Oncol.* 2017;7(1):4-12.
 32. Macdonald DM, Lin LL, Biehl K, et al. Combined intensity-modulated radiation therapy and brachytherapy in the treatment of cervical cancer. *Int J Radiat Oncol Biol Phys.* 2008 Jun 1; 71(2):618-624.
 33. Mak RH, Hunt D, Shipley WU, et al. Long-term outcomes in patients with muscle-invasive bladder cancer after selective bladder-preserving combined-modality therapy: A pooled analysis of Radiation Therapy Oncology Group protocols 8802, 8903, 9506, 9706, 9906, and 0233. *J Clin Oncol.* 2014 Dec 1; 32(34):3801-3809.
 34. Minniti, G, Amichetti, M, Enrici, RM. Radiotherapy and radiosurgery for benign skull base meningiomas. *Radiat Oncol.* 2009;4:42.
 35. National Comprehensive Cancer Network (NCCN). Guidelines Version 1.2023 Prostate cancer. https://www.nccn.org/guidelines/category_1.
 36. NCQA UM 2023 Standards.
 37. Nguyen-Tan P, Zhang Q, Ang K, et al. Randomized phase III trial to test accelerated versus standard fractionation in combination with cisplatin for head and neck carcinomas in the Radiation Therapy 6 J.T. Parsons and B.D. Greene Practical Radiation Oncology: Month 2015 Oncology Group 0129 Trial: Long-term report of efficacy and toxicity. *J Clin Oncol.* 2014;32:3858-3867
 38. NRG Oncology/RTOG 0529: Long-Term Outcomes of Dose-Painted Intensity Modulated Radiation Therapy, 5-Fluorouracil, and Mitomycin-C in Anal Canal Cancer. [https://www.redjournal.org/article/S0360-3016\(17\)31209-9/fulltext](https://www.redjournal.org/article/S0360-3016(17)31209-9/fulltext)
 39. Onsrud M, Cvancaraova M, Hellebust, et al. Long-term outcomes after pelvic radiation for early stage endometrial early-stage endometrial cancer. *J Clin Oncol.* 2013 Nov 1;31(31):3951-3956.
 40. Opendijk V, van der Gaast A, van Lanschot JJB, et al. Patterns of recurrence after surgery alone versus preoperative chemoradiotherapy and surgery in the CROSS trials. *J Clin Oncol.* 2014 Feb 10; 32(5):385-391.
 41. Palma DA, Olson R, Harrow S, Gaede S, Louie AV, Haasbeek C, Mulroy L, Lock M, Rodrigues GB, Yaremko BP, Schellenberg D, Ahmad B, Griffioen G, Senthil S, Swaminath A, Kopek N, Liu M, Moore K, Currie S, Bauman GS, Warner A, Senan S. Stereotactic ablative radiotherapy versus standard of care palliative treatment in patients with oligometastatic cancers (SABR-COMET): A randomised, phase 2, open-label trial. *Lancet.* 2019 May 18;393(10185):2051-2058.
 42. Phan J, Mazloom A, Medeiros LJ, et al. Benefit of consolidative radiation therapy in patients with diffuse large Bcell lymphoma treated with R-CHOP chemotherapy. *J Clin Oncol.* 2010 Sep 20; 28(27):4170-4176.
 43. Pignon JP, Arriagada R, Ihde DC, et al. A meta-analysis of thoracic radiotherapy for small-cell lung cancer. *N Engl J Med.* 1992 Dec 3; 327(23):1618-1624.
 44. Quon, H, Vapiwala, N, Forastiere, A, et al. Radiation therapy for oropharyngeal squamous cell carcinoma: American Society of Clinical Oncology endorsement of the American Society for Radiation Oncology evidence-based clinical practice guideline. *J Clin Oncol.* 2017;35(36):4078-90.
 45. Scholten AN, van Putten WLJ, Beerman H, et al. Postoperative radiotherapy for stage 1 endometrial carcinoma: long-term outcome of the randomized PORTEC trial with central pathology review. *Int J Radiat Oncol Biol Phys.* 2005 Nov 1; 63(3) 834-838.
 46. Shah C, Vicini F, Shaitelman, et al. The American Brachytherapy Society consensus statement for accelerated partial-breast irradiation. *Brachytherapy.* 2018 Jan-Feb;17(1):154-170 –“Intraoperative radiation therapy and electronic brachytherapy should not be offered regardless of technique outside of clinical trial.”
 47. 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 May - Jun;8(3):145-152.
 48. Specht L, Yahalom J, Illidge T, et al. Modern radiation therapy for Hodgkin lymphoma: Field and dose guidelines from the International Lymphoma Radiation Oncology Group (ILROG). *Int J Radiat Oncol Biol Phys.* 2014 Jul 15; 89(4):854-862.
 49. Sperduto PW, Shanley R, Luo X, et al. Secondary analysis of RTOG 9508, a phase 3 randomized trial of whole brain radiation therapy versus WBRT plus stereotactic radiosurgery in patients with 1-3 brain metastases; poststratified by the graded prognostic assessment (GPA). *Int J Radiat Oncol Biol Phys.* 2014 Nov 1;90(3):526- 31.
 50. Sterzing, F, Stoiber, EM, Nill, S, et al. Intensity modulated radiotherapy (IMRT) in the treatment of children and adolescents--a single institution's experience and a review of the literature. *Radiat Oncol.* 2009;4(37)
 51. Straus DJ, Portlock CS, Qin J, et al. Results of a prospective randomized clinical trial of doxorubicin, bleomycin, vinblastine, and dacarbazine (ABVD) followed by radiation therapy (RT) versus ABVD alone for stages I, II, and IIIA nonbulky Hodgkin disease. *Blood.* 2004 Dec 1; 104(12):3483-3489.
 52. Sun, Z, Adam, MA, Kim, J, et al. Intensity-modulated radiation therapy is not associated with perioperative or survival benefit over 3D-conformal radiotherapy for rectal cancer. *J Gastrointest Surg.* 2017;21(1):106-11.
 53. Sutura, P, Clump, DA, Kalash, R, et al. Initial results of a multicenter phase 2 trial of stereotactic ablative radiation therapy for oligometastatic cancer. *Int J Radiat Oncol Biol Phys.* 2019;103(1):116-22.
 54. Tao R, Krishnan S, Bhosale PR, et al. Ablative radiotherapy doses lead to a substantial prolongation of survival in patients with inoperable intrahepatic cholangiocarcinoma: A retrospective dose response analysis. *J Clin Oncol.* 2016 Jan 20; 34(3):219-226.
 55. Ten-Year Update of a Randomized, Prospective Trial of Conventional Fractionated Versus Moderate Hypofractionated Radiation Therapy for Localized Prostate Cancer - *J Clin Oncol.* 2020 May 20;38(15):1676-1684.
 56. Timmerman R, McGarry R, Yiannoutsos C, et al. Excessive toxicity when treating central tumors in a phase II study of stereotactic body radiation therapy for medically inoperable early-stage lung cancer. *J Clin Oncol.* 2006 Oct 20, 24(30): 4833-4839.
 57. Tom MC, Hepel JT, et al. The American Brachytherapy Society consensus statement for electronic brachytherapy. *Brachytherapy.* 18 (2019) 292-298. “In light of a randomized trial in breast showing higher rates of recurrence and the lack of prospective data with mature follow up with other sites, as well as concerns regarding dosimetry, it is not recommended that EB be utilized for accelerated partial breast irradiation, nonmelanomatous skin cancers, or vaginal cuff brachytherapy outside prospective clinical trials at this time.”
 58. Treatment modalities and outcomes in patients with advanced invasive thymoma or thymic carcinoma. *Am J Clin Oncol.* 2016 Apr;39(2):120-125.
 59. Treatment of retroperitoneal sarcoma: current standards and new developments, *Curr Opin Oncol.* 2017 Jul;29(4):260-267. doi: 10.1097/CCO.0000000000000377.
 60. Tsang RW, Campbell BA, Goda JS, et al. Radiation therapy for solitary plasmacytoma and multiple myeloma: Guidelines from the

Molina Clinical Policy
External Beam/Teletherapy, Brachytherapy, IMRT,
SBRT/SRS, IORT, and IGRT Policy Number: 416



Last approved: 8/9/2023

Next Review Due: August 2024

International Lymphoma Radiation Oncology Group. Int J Radiat Oncol Biol Phys. 2018 Jul 15;101(4):794-808.

61. Tsao MN, Ven LI, Cheung P, et al. Stereotactic body radiation therapy for extracranial oligometastatic non-small-cell lung cancer: a systematic review. Clin Lung Cancer. 2020;21(2):95-105
62. Turrisi AT, Kim K, Blum R, et al. Twice daily compared to once-daily thoracic radiotherapy in limited small-cell lung cancer treated concurrently with cisplatin and etoposide. N Engl J Med. 1999 Jan 28; 340(4): 265-271.
63. Two-year outcomes of RTOG 0529: A phase II evaluation of dose-painted IMRT in combination with 5-fluorouracil and mitomycin-C for the reduction of acute morbidity in carcinoma of the anal canal. https://ascopubs.org/doi/abs/10.1200/jco.2011.29.4_suppl.368
64. Van Gijn W, Marijnen CAM, Nagtegaal ID, et al. Preoperative radiotherapy combined with total mesorectal excision for resectable rectal cancer: 12-year follow-up of the multicentre, randomised controlled TME trial. Lancet Oncol. 2011;12:575–82.
65. Van Tienhoven G, Versteijne E, Suker M, et al. Preoperative chemoradiotherapy versus immediate surgery for resectable and borderline resectable pancreatic cancer (PREOPANC-1): A randomized, controlled, multicenter phase III trial. American Society of Clinical Oncology (ASCO) 2018. Presented June 4, 2018. Abstract LBA4002.
66. Wee CW, Kang HC, Wu HG, et al. Intensity-modulated radiotherapy versus three-dimensional conformal radiotherapy in rectal cancer treated with neoadjuvant concurrent chemoradiation: a meta-analysis and pooled-analysis of acute toxicity. Jpn J Clin Oncol. 2018;48(5):458-66.