Overview Statement

The purpose of these clinical guidelines is to assist healthcare professionals in selecting the medical service that may be appropriate and supported by evidence to improve patient outcomes. These clinical guidelines neither preempt clinical judgment of trained professionals nor advise anyone on how to practice medicine. The healthcare professionals are responsible for all clinical decisions based on their assessment. These clinical guidelines do not provide authorization, certification, explanation of benefits, or guarantee of payment, nor do they substitute for, or constitute, medical advice.

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Radiation Therapy Utilizing 2D-3D for the Breast

Delivery of radiation therapy utilizing 2D-3D (Two-Dimensional/Three-Dimensional) for the breast may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 4913  Radiation therapy utilizing 2D-3D for ductal carcinoma in situ (DCIS) may be reasonable and appropriate when the patient's Eastern Cooperative Oncology Group (ECOG) Performance Status Grade is less than one (1) OR Karnofsky Performance Status (KPS) Grade is greater than or equal to eighty (80) and the patient's medical record demonstrates ANY of the following:

- Treatment to be delivered consists of twenty (20) fractions or less;
- Treatment to be delivered consists of 21-28 fractions for patient who is 69 years of age or younger; and ANY of the following:
  - Pathology report shows lymphovascular invasion (LVI); 6
  - Tumor is estrogen receptor negative;
  - Tumor is high grade; 5
  - Tumor is greater than 2 cm; 4, 5
  - Surgical resection margins are less than 5 mm; 4, 5
- Treatment to be delivered consists of 29-33 fractions with delivery of a boost for patient who is 69 years of age or younger; and ANY of the following:
  - Pathology report shows lymphovascular invasion (LVI); 6
β Tumor is estrogen receptor negative;
β Tumor is high grade;
β Tumor is greater than 2 cm; 4, 5
β Surgical resection margins are less than 5 mm. 4, 5

Ind. 4915 Radiation therapy utilizing 2D-3D for breast metastasis and palliation may be reasonable and appropriate when the patient’s medical record demonstrates ANY of the following: 2

- Daily cone beam CT will be used; 2
- Daily motion management will be used; 2
- Special Physics Consult has been ordered;
- Treatment to be delivered consists of 10 fractions or less and the patient is receiving treatment for ANY of the following: 2
  - Bone metastasis; 7
  - Pain control;
  - Airway obstruction;
  - GI bleeding;
  - Palliative care with an ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80). 2, 7

Ind. 4916 Radiation therapy utilizing 2D-3D for breast post mastectomy may be reasonable and appropriate when the patient’s ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and the patient’s medical record demonstrates the following:
Treatment to be delivered consists of 28 fractions or less, patient is 75 years of age or younger; and ANY of the following:

- Tumor is 5 cm in diameter or larger; 5
- Four (4) or more positive axillary nodes (either clinically or pathologically);
- High-risk patient with a high grade, estrogen receptor negative tumor, pathology report shows lymphovascular invasion; and ANY of the following:
  - Tumor is less than 5 cm in diameter; 5
  - One (1)-three (3) positive lymph nodes; 4
  - Lymph node negative.

Ind. 4914 Radiation therapy utilizing 2D-3D for Stage I or II breast cancer following a lumpectomy may be reasonable and appropriate when the patient's ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and the patient's medical record demonstrates ANY of the following:

Treatment to be delivered consists of 20 fractions or less and EITHER of the following:

- Patient is 70 years of age or older
- Patient is 69 years of age or younger

Treatment to be delivered consists of 21-28 fractions for patient who is 69 years of age or younger; and ANY of the following:

- Pathology report shows lymphovascular invasion (LVI); 36 Tumor is estrogen receptor negative; 3 Tumor is high grade; 3, 5 Tumor is greater than 2 cm; 3, 4, 5 Surgical resection margins are less than 5 mm; 3, 4, 5

Treatment to be delivered consists of 29-33 fractions with delivery of a boost for patient who is 69 years of age or younger; and ANY of the following:
Pathology report shows lymphovascular invasion (LVI); Tumor is estrogen receptor negative; Tumor is high grade; Tumor is greater than 2 cm; Surgical resection margins are less than 5 mm.

Ind. 4917 Radiation therapy utilizing 2D-3D for Stage III breast cancer may be reasonable and appropriate when the patient’s ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and the patient’s medical record demonstrates the following:

- Treatment to be delivered consists of 20 fractions or less;
- Treatment to be delivered consists of 21-28 fractions for a patient who is 69 years of age or younger; and ANY of the following:
  - Pathology report shows lymphovascular invasion (LVI); Tumor is estrogen receptor negative; Tumor is high grade; Tumor is greater than 2 cm; Surgical resection margins are less than 5 mm;
  - Treatment to be delivered consists of 29-36 fractions with delivery of a boost for a patient who is 69 years of age or younger; and ANY of the following:
    - Pathology report shows lymphovascular invasion (LVI);
    - Tumor is estrogen receptor negative; Tumor is high grade; Tumor is greater than 2 cm; Surgical resection margins are less than 5 mm.
REFERENCES

7. Westhoff, P.G. Quality of life in painful bone metastases: results from the Dutch bone metastasis study, 2018-02-21
Radiation Therapy Utilizing Brachytherapy/MammoSite/SAVI/Contura for the Breast

Delivery of radiation therapy for Brachytherapy/MammoSite/SAVI/Contura for the breast may be medically appropriate and supported by evidence to improve patient outcomes for the following indications. Unless otherwise stated, patients should demonstrate physical capability and appropriate clinical status as evidenced by either an ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

Ind. 4918  Radiation therapy utilizing Brachytherapy/MammoSite/SAVI/Contura for ductal carcinoma in situ (DCIS) may be reasonable and appropriate when the patient's medical record demonstrates the **ALL** of the following:

- Treatment to be delivered consists 10 fractions or less; 1,4,6
- Age is 46 years or older; 1
- Tumor is 3 cm or less; 3,5,6
- Surgical margins are negative. 2, 3, 4, 5, 6

Ind. 4919  Radiation therapy utilizing Brachytherapy/MammoSite/SAVI/Contura for Stage I or II breast cancer following a lumpectomy may be reasonable and appropriate when the patient's medical record demonstrates **ALL** of the following:

- Treatment to be delivered consists 10 fractions or less; 3,4,6
- Age is 46 years or older; Tumor is 3 cm or less; 3,6
- Surgical margins are negative. 2, 3, 4, 6
REFERENCES:


Radiation Therapy Utilizing IMRT for the Breast

Delivery of Radiation therapy utilizing IMRT (Intensity-Modulated Radiation Therapy) for the breast may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 4923 Radiation therapy utilizing IMRT for ductal carcinoma in situ (DCIS) may be reasonable and appropriate when the patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and the patient’s medical record demonstrates the following: Patient who is 69 years of age or younger with breast cancer of the left breast; and EITHER of the following:

β Treatment to be delivered consists of 28 fractions or less; and ANY of the following: 4

• Patient is high risk with V20 of the lungs that is greater than 35% with a 3D plan, IMRT plan will improve the v20 by greater than 10%; 1,2,3
• Chest wall separation is greater than 20 cm; 2
• 10cc or more of the contoured heart will receive 25 Gy using 3DCRT, the dose to the heart will be reduced by greater than 20% if IMRT is used compared to 3D; 1,2,3,5
• The 3D plan resulted in hot spots greater than 115% of the prescription dose and IMRT will reduce these hot spots by at least 20%; 2,5

β Treatment to be delivered consists 29-33 fractions; and ALL of the following:
A boost is to be given as part of this requested treatment course; V20 of the lungs is GREATER than 35% with a 3D plan; 2, 3
- IMRT plan will improve the v20 by greater than 10%.

Ind. 4924 Radiation therapy utilizing IMRT for early stage breast cancer may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 36 fractions or less; and ALL of the following:
  - Patient has cancer of the left breast; 1
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
  - Patient is high risk;
  - Age is 75 years or younger; and ANY of the following:
    - An IMRT plan will improve the v20 by greater than 10%; 2
    - V20 of the lungs is greater than 35% with a 3D plan; 2, 3
    - Chest wall separation is greater than 20 cm; 2
    - 10cc or more of the contoured heart will receive 25 Gy using 3DCRT and the dose to the heart be reduced by greater than 20% if IMRT is used compared to 3D; 1, 2, 3, 5
    - The 3D plan resulted in hot spots greater than 115% of the prescription dose and IMRT will reduce these hot spots by at least 20%; 2, 5

- Treatment to be delivered consists of 36 fractions or less; and ALL of the following:
  - Patient has left or right breast cancer; Internal mammary (IM) nodes are being contoured and treated; and ANY of the following: 1
• Patient has pathologically enlarged IM nodes on CT/MRI/PET; IM nodes are positive on biopsy; Patient has four (4) or more positive axillary nodes (either clinically or pathologically); 1Tumor is in the medial quadrant. 1

Ind. 4926  Radiation therapy utilizing IMRT for breast post mastectomy may be reasonable and appropriate when the patient's medical record demonstrates **EITHER** of the following:

- Treatment to be delivered consists of 36 fractions or less for a patient who is 75 years of age or younger, Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and **BOTH** of the following:  
  - Patient has breast cancer of the left breast; 4Patient is high risk; and **ANY** of the following:
    - An IMRT plan will improve the v20 by greater than 10%;2, 7V20 of the lungs is greater than 35% with a 3D plan; 2, 3, 7Chest wall separation is greater than 20 cm; 2, 710cc or more of the contoured heart will receive 25 Gy using3DCRT and the dose to the heart will be reduced by greater than 20% if IMRT is used compared to 3D; 2, 3, 5, 7The 3D plan will result in hot spots greater than 115% of the prescription dose and IMRT will reduce these hot spots by at least 20%; 2, 5
  
- Treatment to be delivered consists of 36 fractions or less for a patient who is 75 years of age or younger; and **BOTH** of the following:  
  - Patient has left or right breast cancer; 6  
  - Internal mammary (IM) nodes are being contoured and treated; and **ANY** of the following: 6
    - Patient has pathologically enlarged IM nodes on CT/MRI/PET; 7
• IM nodes are positive on biopsy; 6
• Patient has four (4) or more positive axillary nodes (either clinically or pathologically); 7
• Tumor is in the medial quadrant of the breast.

Ind. 4927 Radiation therapy utilizing IMRT for Stage III breast cancer may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 36 fractions or less for a patient who is 75 years of age or younger; and ALL of the following:
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); Patient has cancer of the left breast; 1,4 Patient is high risk; and ANY of the following:
    - An IMRT plan will improve the v20 by greater than 10%; 2
    - V20 of the lungs is greater than 35% with a 3D plan; 2, 3
    - Chest wall separation is greater than 20 cm; 2
    - 10cc or more of the contoured heart will receive 25 Gy using 3DCRT and the dose to the heart will be reduced by greater than 20% if IMRT is used compared to 3D; 1, 2, 3, 5
    - The 3D plan will result in hot spots greater than 115% of the prescription dose and IMRT will reduce these hot spots by at least 20%; 2, 5
- Treatment to be delivered consists of 36 fractions or less; and BOTH of the following:
  - Patient has right or left breast cancer; Internal mammary (IM) nodes are being contoured and treated; and ANY of the following: 1
    - Patient has pathologically enlarged IM nodes on CT/MRI/PET; 1
• IM nodes are positive on biopsy; 1
• Patient has four (4) or more positive axillary nodes (either clinically or pathologically); 1
• Tumor is in the medial quadrant. 1
REFERENCES

Radiation Therapy Utilizing IORT for the Breast

Delivery of radiation therapy utilizing IORT (Intraoperative Radiation Therapy) for the breast may be medically appropriate and supported by evidence to improve patient outcomes for the following indications. Unless otherwise stated, patients should demonstrate physical capability and appropriate clinical status as evidenced by either an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

**Ind. 4928** Radiation therapy utilizing IORT for ductal carcinoma in situ (DCIS) may be reasonable and appropriate when the patient's medical record demonstrates **ALL** of the following:

- Age is 46 years or older;  
- Surgical margins are negative;  
- Patient will receive a single fraction during surgery;  
- Tumor is 3.5 cm or less.

**Ind. 4929** Radiation therapy utilizing IORT for Stage I or II breast cancer following a lumpectomy may be reasonable and appropriate when the patient's medical record demonstrates **ALL** of the following:

- Age is 46 years or older;  
- Surgical margins are negative;  
- Electronic brachytherapy is being used;  
- Patient will receive a single fraction during surgery;  
- Tumor is 3.5 cm or less.
REFERENCES


5. Candace Correa, MD, Eleanor Harris, MD, Maria Leonardi, Benjamin Smith MD, Alphonse Taghian, MD, Alastair Thompson, MD, Julia White, MD, Jay Harris, MD. Accelerated Partial Breast Irradiation: Executive summary for the update of an ASTRO Evidence-Based Consensus Statement. Practical Radiation Oncology, March-April 2017, Volume 7, Issue 2, Pages 73-79.


Radiation Therapy Utilizing 2D-3D for the Lung

Delivery of radiation therapy utilizing 2D-3D (Two-Dimensional/Three-Dimensional) for the lung may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 5060  Radiation therapy utilizing 2D-3D for Stage I or II non-small cell lung cancer (NSCLC) may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

0. Treatment to be delivered consists of 10 fractions or less for patient who is being treated under palliative care; 1, 4

Ind. 5065  Radiation therapy utilizing 2D-3D for Stage III NSCLC may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

0. Treatment to be delivered consists of 10 fractions or less for a patient who is being treated under palliative care; 1, 4
Ind. 5070  Radiation therapy utilizing 2D-3D for lung cancer palliation may be reasonable and appropriate for delivery of 10 fractions or less when the patient’s medical record demonstrates ANY of the following:

- Patient is being treated under palliative care; 1, 2, 3, 4
- The purpose of the radiation is to relieve airway obstruction 3, 4
- The purpose of the radiation is to relieve hemoptysis; 2, 3, 4
- Patient is being treated for metastatic disease to the bone. 3, 4

Ind. 5075  Radiation therapy utilizing 2D-3D for limited stage small cell lung cancer (SCLC) may be reasonable and appropriate when the patient’s medical record demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less for a patient who is being treated under palliative care; 4
- Treatment to be delivered consists of 35 fractions or less with an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
- Treatment to be delivered consists of 10 fractions or less for prophylactic cranial radiation. 6

Ind. 5080  Radiation therapy utilizing 2D-3D for extensive stage SCLC may be reasonable and appropriate when the patient’s medical record demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less for a patient who is being treated under palliative care; 4
- Treatment to be delivered consists of 35 fractions or less with an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
- Treatment to be delivered consists of 10 fractions or less for prophylactic cranial radiation. 6
Radiation therapy utilizing 2D-3D for mesothelioma of the lung may be reasonable and appropriate when the patient’s medical record demonstrates **EITHER** of the following:

- Treatment to be delivered consists of 10 fractions or less for a patient who is being treated under palliative care; 5, 6
- Treatment to be delivered consists of 35 fractions or less with an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80). 7
REFERENCES

Radiation Therapy Utilizing Brachytherapy for the Lung

Delivery of radiation therapy utilizing Brachytherapy for the lung may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 5064 Radiation therapy utilizing Brachytherapy for Stage I or II non-small cell lung cancer (NSCLC) may be reasonable and appropriate when the patient's medical record demonstrates the following:

- Treatment to be delivered consists of 8 fractions or less; and EITHER of the following:
  - Patient will receive 2D-3D as part of this treatment course; 2, 4
  - Wedge section is being performed prior to brachytherapy, 1, 2, 3, and EITHER of the following:
    - Patient has received radiation therapy within the last 6 months; 5
    - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).
REFERENCES


Radiation Therapy Utilizing IMRT for the Lung

Delivery of radiation therapy utilizing IMRT (Intensity-Modulated Radiation Therapy) for the lung may be medically appropriate and supported by evidence to improve patient outcomes for the following indications. Unless otherwise stated, patients should demonstrate physical capability and appropriate clinical status as evidenced by either an Eastern Cooperative Oncology Group (ECOG) Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

**Ind. 5061** Radiation therapy utilizing IMRT for Stage I or II non-small cell lung cancer (NSCLC), may be reasonable and appropriate when the patient’s medical record demonstrates the following:

- Treatment to be delivered consists of 35 fractions or less; and **EITHER** of the following:
  - Patient is high risk;
  - Radiation therapy requested is being used for curative intent, a 3D plan has been performed and compared to the IMRT plan and when compared to a non-IMRT would substantially decrease normal tissue toxicity; and **EITHER** of the following: 4, 7
    - The same area or an immediately adjacent area received previous external radiation therapy (XRT); 4
    - There has been some form of motion management implemented (either 4D CT, respiratory gating or breath hold technique; and **ANY** of the following: 4, 7
      - With a 3D plan, the spinal cord receives greater than 50 Gy to a point dose; 7
With a 3D plan, there are hot spots greater than 115% of the prescription dose and IMRT reduces these hotspots by greater than 15%;

There is a reduction of the V20 of at least 10% with the IMRT plan over the 3D plan with a 3D plan, the V20 is greater than 35%.4, 7

Ind. 5066 Radiation therapy utilizing IMRT for Stage III NSCLC may be reasonable and appropriate when the patient’s medical record demonstrates the following:

- Treatment to be delivered consists of 35 fractions or less7; and EITHER of the following:
  - Patient is high risk;
  - Radiation therapy requested is being used for curative intent, a 3D plan has been performed and compared to the IMRT plan and when compared to a non-IMRT would substantially decrease normal tissue toxicity; and the following: 4, 7
  - There has been some form of motion management implemented (either 4D CT, respiratory gating or breath hold technique; 7 and ANY of the following:
    - With a 3D plan, the spinal cord receives greater than 50 Gy to a point dose; 7
    - With a 3D plan, there are hot spots greater than 115% of the prescription dose and IMRT reduces these hotspots by greater than 15%; 7
    - There is a reduction of the V20 of at least 10% with the IMRT plan over the 3D plan with a 3D plan, the V20 is greater than 35%.4, 5, 7
    - Has the same or immediately adjacent area received previous radiation therapy. 4
Radiation therapy utilizing IMRT for limited stage small cell lung cancer (SCLC) may be reasonable and appropriate when the patient's medical record demonstrates the following:

- Treatment to be delivered consists of 35 fractions or less; and EITHER of the following:
  - Patient is high risk;
  - Radiation therapy requested is being used for curative intent, a 3D plan has been performed and compared to the IMRT plan and when compared to a non-IMRT would substantially decrease normal tissue toxicity; and the following: 4, 8
  - There has been some form of motion management implemented (either 4D CT, respiratory gating or breath hold technique; and ANY of the following: 4, 8
    - With a 3D plan, the spinal cord receives greater than 50 Gy to a point dose;
    - With a 3D plan, there are hot spots greater than 115% of the prescription dose and IMRT reduces these hotspots by greater than 15%;
    - There is a reduction of the V20 of at least 10% with the IMRT plan over the 3D plan with a 3D plan, the V20 is greater than 35%. 4, 8

Has the same or immediately adjacent area received previous radiation therapy. 4 Ind. 5081

Radiation therapy utilizing IMRT for extensive stage SCLC may be reasonable and appropriate when the patient's medical record demonstrates that the treatment to be delivered consists of 35 fractions or less, radiation therapy requested is being used for curative intent, a 3D plan has been performed and compared to the IMRT plan and when compared to a non-IMRT would substantially decrease normal tissue toxicity; and there has been some form of
motion management implemented (either 4D CT, respiratory gating or breath hold technique; and ANY of the following): 4, 6

○ With a 3D plan, the spinal cord receives greater than 50 Gy to a point dose; With a 3D plan, there are hot spots greater than 115% of the prescription dose and IMRT reduces these hotspots by greater than 15%; There is a reduction of the V20 of at least 10% with the IMRT plan over the 3D plan with a 3D plan, the V20 is greater than 35%; 4, 6

○ Has the same or immediately adjacent area received previous radiation therapy. 4

Ind. 5093 Radiation therapy utilizing IMRT for mesothelioma of the lung 3 may be reasonable and appropriate when the patient's medical record demonstrates the following:

○ Treatment to be delivered consists of 35 fractions or less; 9 and EITHER of the following:
  ○ Patient is high risk;
  ○ Radiation therapy requested is being used for curative intent, a 3D plan has been performed and compared to the IMRT plan and when compared to a non-IMRT would substantially decrease normal tissue toxicity; and the following: 4, 10
  • There has been some form of motion management implemented (either 4D CT, respiratory gating or breath hold technique; and ANY of the following): 9, 10
    ○ With a 3D plan, the spinal cord receives greater than 50 Gy to a point dose; 9, 10
With a 3D plan, there are hot spots greater than 115% of the prescription dose and IMRT reduces these hotspots by greater than 15%. 9, 10

There is a reduction of the V20 of at least 10% with the IMRT plan over the 3D plan with a 3D plan, the V20 is greater than 35%. 9, 10

Has the same or immediately adjacent area received previous radiation therapy 4
REFERENCES


Radiation Therapy Utilizing SBRT for the Lung

Delivery of radiation therapy utilizing SBRT (Stereotactic Body Radiation Therapy) may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

**Ind. 5063** Radiation therapy utilizing SBRT for Stage I or II non-small cell lung cancer (NSCLC) may be reasonable and appropriate\(^2\) when the patient’s medical record demonstrates **EITHER** of the following:

- Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); Patient is high risk, is enrolled in a clinical protocol and is receiving chemotherapy during the course of the treatment;
  - Treatment to be delivered consists of 5 fractions or less; and **ANY** of the following\(^5, 7, 8\)
  - Patient is enrolled in a clinical protocol;\(^5, 8\)
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and **ANY** of the following:
    - This is for definitive/curative therapy, motion management is being used\(^2\) and high risk;\(^5, 7, 8\)
    - This is for definitive/curative therapy, motion management is being used\(^2\) and tumor is 5 cm or less;\(^1, 5, 7, 8\)
    - Tumor is 5 cm or less, motion management is being used\(^2\) and area being treated is the only known site of disease.\(^5\)
Ind. 5068 Radiation therapy utilizing SBRT for Stage III NSCLC may be reasonable and appropriate when the patient's medical record demonstrates EITHER of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and Motion management will be used; and ANY of the following:
  - Patient received radiation therapy to this location previously;
  - Patient is being treated for an isolated recurrence;
  - This is for definitive/curative therapy.

Ind. 5072 Radiation therapy utilizing SBRT for lung cancer palliation may be reasonable and appropriate when the patient's medical record demonstrates EITHER of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and Motion management will be used; and ANY of the following:
  - Patient received radiation therapy to this location previously;
  - Patient is being treated for an isolated recurrence;
  - This is for definitive/curative therapy.
Ind. 5079  Radiation therapy utilizing SBRT for limited stage small cell lung cancer (SCLC) may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and Motion management will be used; and ANY of the following:
  - Patient received radiation therapy to this location previously;
  - Patient is being treated for an isolated recurrence;
  - This is for definitive/curative therapy.

Ind. 5084  Radiation therapy utilizing SBRT for extensive stage SCLC may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and Motion management will be used; and ANY of the following:
  - Patient received radiation therapy to this location previously;
  - Patient is being treated for an isolated recurrence;
  - This is for definitive/curative therapy.
Ind. 5094 Radiation therapy utilizing SBRT for mesothelioma of the lung may be reasonable and appropriate when the patient’s medical record demonstrates **EITHER** of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and Motion management will be used; and **ANY** of the following:
  - Patient received radiation therapy to this location previously; 1,6
  - Patient is being treated for an isolated recurrence; 6
  - This is for definitive/curative therapy.
REFERENCES

Radiation Therapy Utilizing 2D-3D for Head and Neck

Delivery of radiation therapy utilizing 2D-3D (Two-Dimensional/Three-Dimensional) for the head and neck may be medically appropriate and supported by evidence to improve patient outcomes for the following indications. Unless otherwise stated, patients should demonstrate physical capability and appropriate clinical status as evidenced by either an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

Ind. 5141 Radiation therapy utilizing 2D-3D for nasopharyngeal cancer (any stage) of the head and neck may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for patient who is receiving palliative care; and treatment to be deliver consists of 11-35 fractions; and EITHER of the following:
  - Concurrent chemo is being used; 2,5, 8
  - Patient is high risk.

Ind. 5146 Radiation therapy utilizing 2D-3D for cancer of the oral cavity (includes tongue, floor of mouth, hard palate, buccal mucosa, or mandible cancer, any stage) may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for patient who is receiving palliative care; and treatment to be deliver consists of 35 fractions or less; and EITHER of the following:
Concurrent chemo is being used; 2, 3, 8
Patient is high risk.

Ind. 5151 Radiation therapy utilizing for cancer originating in the oropharynx (base of tongue, tonsil, or epiglottis) may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for patient who is receiving palliative care; 1, 2
- Treatment to be deliver consists of 35 fractions or less; and EITHER of the following:
  - Concurrent chemo is being used; 2, 3, 4, 7, 8
  - Patient is high risk.

Ind. 5156 Radiation therapy utilizing 2D-3D for cancer originating in the larynx or hypopharynx may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for patient who is receiving palliative care; 1, 2
- Treatment to be deliver consists of 35 fractions or less; and EITHER of the following:
  - Concurrent chemo is being used; 2, 8
  - Patient is high risk.

Ind. 5161 Radiation therapy utilizing 2D-3D for cancer originating in the salivary gland (parotid, submandibular, or minor salivary glands) may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for patient who is receiving palliative care; 1, 2
- Treatment to be deliver consists of 35 fractions or less; and EITHER of the following:
  - Concurrent chemo is being used; 2, 8
β Patient is high risk.

**Ind. 5165** Radiation therapy utilizing 2D-3D for cancer originating in the sinuses may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for patient who is receiving palliative care; 1, 2
- Treatment to be delivered consists of 35 fractions or less; and EITHER of the following:
  - Concurrent chemo is being used; 2, 8
  - Patient is high risk.

**Ind. 5175** Radiation therapy utilizing 2D-3D for head and neck cancer of any origin that has metastasized may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for patient who is receiving palliative care; 1, 2
- Patient is high risk;

**Ind. 5180** Radiation therapy utilizing 2D-3D for squamous cell cancer that has spread to the neck lymph nodes with no known primary, may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for patient who is receiving palliative care; 1, 2
- Treatment to be delivered consists of 35 fractions or less; and EITHER of the following:
  - Concurrent chemo is being used; 2, 6, 8
  - Patient is high risk. 6

**Ind. 5170** Radiation therapy utilizing 2D-3D for thyroid cancer may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:
- Treatment to be delivered consists of 10 fractions or less for patient who is receiving palliative care; \(1,2\) Treatment to be deliver consists of 30 fractions or less; and **EITHER** of the following:
  - **B** Concurrent chemo is being used; \(2,8\)
  - **B** Patient is high risk.
REFERENCES


3. Shlomo A. Koyfman, MD1; Nofisat Ismaila, MD2; Doug Crook, MS3; Anil D'Cruz, DNB4; Cristina P. Rodriguez, MD5; David J. Sher, MD6; Damian Silbermins, MD7; Erich M. Sturgis, MD8; Terance T. Tsue, MD9; Jared Weiss, MD10; Sue S. Yom, MD, PhD11; and F. Christopher Holsinger, MD12. Management of the Neck in Squamous Cell Carcinoma of the OIral Cavity and Oropharynx: ASCO Clinical Practice Guideline. Published at jco.org on February 27,2019: DOI https://doi.org/10.1200/JCO.18.01921.


Radiation Therapy Utilizing Brachytherapy for the Head and Neck

Delivery of radiation therapy utilizing Brachytherapy for the head and neck may be medically appropriate and supported by evidence to improve patient outcomes for the following indications. Unless otherwise stated, patients should demonstrate physical capability and appropriate clinical status as evidenced by either an Eastern Cooperative Oncology Group (ECOG) Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

Ind. 5145 Radiation therapy utilizing Brachytherapy for nasopharyngeal cancer (any stage) being administered for a recurrence may be reasonable and appropriate when the patient’s medical record demonstrates the ALL of following:

- Treatment to be delivered consists of 5 fractions or less for recurrence; A boost is to be given as part of this requested treatment course; Brachytherapy is going to use a high dose rate source; and EITHER of the following:
  - The patient will also receive 2D-3D as part of this treatment course;
  - The patient will also receive IMRT therapy as part of this treatment course (25 fractions or less).

Ind. 5150 Radiation therapy utilizing Brachytherapy for any stage of cancer of the oral cavity (including tongue, floor of mouth, hard palate, buccal mucosa, or mandible) being administered for a recurrence may be reasonable and appropriate when the patient’s medical record demonstrates the ALL of following:
Treatment to be delivered consists of 5 fractions or less for recurrence; A boost is to be given as part of this requested treatment course; Brachytherapy is going to use a high dose rate source; and EITHER of the following:

- The patient will also receive 2D-3D as part of this treatment course;
- The patient will also receive IMRT therapy as part of this treatment course (25 fractions or less).

**Ind. 5155** Radiation therapy utilizing Brachytherapy for cancer originating in the oropharynx (base of tongue, tonsil, or epiglottis) being administered for a recurrence may be reasonable and appropriate when the patient's medical record demonstrates the ALL of the following:

- Treatment to be delivered consists of 5 fractions or less in a high risk patient for recurrence; A boost is to be given as part of this requested treatment course; Brachytherapy is going to use a high dose rate source; and EITHER of the following:
  - The patient will also receive 2D-3D as part of this treatment course;
  - The patient will also receive IMRT therapy as part of this treatment course (25 fractions or less).

**Ind. 5160** Radiation therapy utilizing Brachytherapy for cancer originating in the larynx or hypopharynx being administered for a recurrence may be reasonable and appropriate when the patient's medical record demonstrates the ALL of the following:

- Treatment to be delivered consists of 5 fractions or less in a high risk patient for recurrence; A boost is to be given as part of this requested treatment course; Brachytherapy is going to use a high dose rate source; and EITHER of the following:
The patient will also receive 2D-3D as part of this treatment course; 5

The patient will also receive IMRT therapy as part of this treatment course (25 fractions or less). 5
REFERENCES


4. Nabil F. Saba, MD,1* Joseph K. Salama, MD,2 Jonathan J. Beitler, MD, MBA,3 Paul M. Busse, MD, PhD,4 Jay S. Cooper, MD,5 Christopher U. Jones, MD,6 Shlomo Koyfman, MD,7 Harry Quon, MD, MS,8 John A. Ridge, MD, PhD,9 Farzan Siddiqui, MD, PhD,10 Francis Worden, MD,11 Min Yao, MD, PhD,12Sue S. Yom, MD, PhD. ACR Appropriateness Criteria for nasopharyngeal carcinoma. Published online 30 April 2016 in Wiley Online Library (wileyonlinelibrary.com). DOI 10.1002/hed.24423. HEAD & NECK—DOI 10.1002/HED JULY 2016


Radiation Therapy Utilizing IMRT for the Head and Neck

Delivery of radiation therapy utilizing IMRT (Intensity-Modulated Radiation Therapy) of the head and neck may be medically appropriate and supported by evidence to improve patient outcomes for the following indications. Unless otherwise stated, patients should demonstrate physical capability and appropriate clinical status as evidenced by either an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

Ind. 5142 Radiation therapy utilizing IMRT for nasopharyngeal cancer (any stage) \(^3,5\) may be reasonable and appropriate when a 3D plan has been performed and compared to the IMRT plan \(^8\), when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 35 fractions or less\(^1,5,9\) to the same or immediately adjacent area received previous XRT and patient is considered high risk. \(^4,9\)Treatment to be delivered consists of 35 fractions or less\(^1,5,9\) and when compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity; \(^4\) and ANY of the following:
  - Patient will receive any other type of radiation as part of this treatment course; \(^1,2,7\)
  - With a 3D plan the Dmax to the mandible is greater than 60 Gy; \(^2,9\)
  - With a 3D plan the D50 to the ipsilateral parotid is greater than 30 Gy; \(^2,7,9\)
  - With a 3D plan the D50 to the contralateral parotid is greater than 24Gy; \(^2,7,9\)
§ With a 3D plan does the optic chiasm receive greater than 45Gy; 2, 9
§ With a 3D plan, the spinal cord will receive greater than 45Gy. 2

Ind. 5147 Radiation therapy utilizing IMRT for cancer of any stage to the oral cavity (including tongue, floor of mouth, hard palate, buccal mucosa, or mandible) 3 may be reasonable and appropriate when a 3D plan has been performed and compared to the IMRT plan 8, when the patient's medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 35 fractions or less to the same or immediately adjacent area received previous XRT and patient is considered high risk. 5 Treatment to be delivered consists of 35 fractions or less and when compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity; and ANY of the following:
  - Patient will receive any other type of radiation as part of this treatment course; 2, 7
  - With a 3D plan the Dmax to the mandible is greater than 60 Gy; 2, 7
  - With a 3D plan the D50 to the ipsilateral parotid is greater than 30 Gy; 2, 7
  - With a 3D plan the D50 to the contralateral parotid is greater than 24Gy; 2, 7
  - With a 3D plan does the optic chiasm receive greater than 45Gy; 2
  - With a 3D plan, the spinal cord will receive greater than 45Gy. 2

Ind. 5152 Radiation therapy utilizing IMRT for cancer originating in the oropharynx (base of tongue, tonsil or epiglottis) 3 may be reasonable and appropriate when a 3D plan has been performed and compared to the IMRT plan 8, when the patient's medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 35 fractions or less to the same or immediately adjacent area received previous XRT and patient is considered...
high risk. Treatment to be delivered consists of 35 fractions or less and when compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity; and ANY of the following:

- With a 3D plan the Dmax to the mandible is greater than 60 Gy; 2, 7
- With a 3D plan the D50 to the ipsilateral parotid is greater than 30 Gy; 2, 7
- With a 3D plan the D50 to the contralateral parotid is greater than 24 Gy; 2, 7
- With a 3D plan does the optic chiasm receive greater than 45 Gy; 2
- With a 3D plan, the spinal cord will receive greater than 45 Gy. 2

Ind. 5157 Radiation therapy utilizing IMRT for cancer originating in the larynx or hypopharynx may be reasonable and appropriate when a 3D plan has been performed and compared to the IMRT plan when the patient's medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 35 fractions or less to the same or immediately adjacent area received previous XRT and patient is considered high risk. Treatment to be delivered consists of 35 fractions or less and when compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity; and ANY of the following:
  - Patient will receive any other type of radiation as part of this treatment course; 3, 7
  - With a 3D plan the Dmax to the mandible is greater than 60 Gy; 2, 7
  - With a 3D plan the D50 to the ipsilateral parotid is greater than 30 Gy; 2, 7
  - With a 3D plan the D50 to the contralateral parotid is greater than 24 Gy; 2, 7
  - With a 3D plan does the optic chiasm receive greater than 45 Gy; 2
  - With a 3D plan, the spinal cord will receive greater than 45 Gy. 2
Ind. 5162  Radiation therapy utilizing IMRT for cancer originating in the salivary glands (parotid, submandibular, or minor salivary glands) may be reasonable and appropriate when a 3D plan has been performed and compared to the IMRT plan, when the patient’s medical record demonstrates \textbf{EITHER} of the following:

- Treatment to be delivered consists of 35 fractions or less to the same or immediately adjacent area received previous XRT and patient is considered high risk. \textsuperscript{9} Treatment to be delivered consists of 35 fractions or less and when compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity, and \textbf{ANY} of the following:
  - With a 3D plan the Dmax to the mandible is greater than 60 Gy; \textsuperscript{2,7}
  - With a 3D plan the D50 to the ipsilateral parotid is greater than 30 Gy; \textsuperscript{2,7}
  - With a 3D plan the D50 to the contralateral parotid is greater than 24 Gy; \textsuperscript{2,7}
  - With a 3D plan does the optic chiasm receive greater than 45 Gy; \textsuperscript{2}
  - With a 3D plan the spinal cord will receive greater than 45 Gy. \textsuperscript{2}

Ind. 5166  Radiation therapy utilizing IMRT for cancer originating in the sinuses may be reasonable and appropriate when a 3D plan has been performed and compared to the IMRT plan, when the patient’s medical record demonstrates \textbf{EITHER} of the following:

- Treatment to be delivered consists of 35 fractions or less to the same or immediately adjacent area received previous XRT and patient is considered high risk. \textsuperscript{5} Treatment to be delivered consists of 35 fractions or less and when compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity, and \textbf{ANY} of the following:
  - With a 3D plan the Dmax to the mandible is greater than 60 Gy; \textsuperscript{2,7}
  - With a 3D plan the D50 to the ipsilateral parotid is greater than 30 Gy; \textsuperscript{2,7}
With a 3D plan the D50 to the contralateral parotid is greater than 24Gy;  
2, 7

With a 3D plan does the optic chiasm receive greater than 45Gy; 2

With a 3D plan, the spinal cord will receive greater than 45Gy. 2

Ind. 5176  Radiation therapy utilizing IMRT for head and neck cancer of any origin that has metastasized may be reasonable and appropriate when a 3D plan has been performed and compared to the IMRT plan8, when the patient's medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 20 fractions or less 3 to the same or immediately adjacent area received previous XRT and patient is considered high risk. Treatment to be delivered consists of 20 fractions or less and when compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity; and ANY of the following:
  - With a 3D plan the Dmax to the mandible is greater than 60 Gy; 2, 7
  - With a 3D plan the D50 to the ipsilateral parotid is greater than 30 Gy; 2.
  7
  - With a 3D plan the D50 to the contralateral parotid is greater than 24Gy;  
2, 7
  - With a 3D plan does the optic chiasm receive greater than 45Gy; 2
  - With a 3D plan, the spinal cord will receive greater than 45Gy. 2

Ind. 5181  Radiation therapy utilizing IMRT for squamous cell cancer that has spread to the neck lymph nodes3, 6 with no known primary may be reasonable and appropriate when a 3D plan has been performed and compared to the IMRT plan 8, when the patient's medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 35 fractions or less to the same or immediately adjacent area received previous XRT and patient is considered...
high risk. Treatment to be delivered consists of 35 fractions or less and when compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity; and ANY of the following:

β With a 3D plan the Dmax to the mandible is greater than 60 Gy; 2,7
β With a 3D plan the D50 to the ipsilateral parotid is greater than 30 Gy; 2,7
β With a 3D plan the D50 to the contralateral parotid is greater than 24Gy; 2,7
β With a 3D plan does the optic chiasm receive greater than 45Gy; 2
β With a 3D plan, the spinal cord will receive greater than 45Gy. 2

Ind. 5171 Radiation therapy utilizing IMRT for cancer of the thyroid may be reasonable and appropriate when a 3D plan has been performed and compared to the IMRT plan when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 35 fractions or less to the same or immediately adjacent area received previous XRT and patient is considered high risk. Treatment to be delivered consists of 35 fractions or less and when compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity; and ANY of the following:
  - With a 3D plan the Dmax to the mandible is greater than 60 Gy; 2,7
  - With a 3D plan the D50 to the ipsilateral parotid is greater than 30 Gy;
  - With a 3D plan the D50 to the contralateral parotid is greater than 24Gy;
  - With a 3D plan, the spinal cord will receive greater than 45Gy. 2


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1. Nabil F. Saba, MD,1* Joseph K. Salama, MD,2 Jonathan J. Betler, MD, MBA,3 Paul M. Busse, MD, PhD,4 Jay S. Cooper, MD,5 Christopher U. Jones, MD,6 Shlomo Koyfman, MD,7 Harry Quon, MD, MS,8 John A. Ridge, MD, PhD,9 Farzan Siddiqui, MD, PhD,10 Francis Worden, MD,11 Min Yao, MD, PhD,12 Sue S. Yom, MD, PhD. ACR Appropriateness Criteria for nasopharyngeal carcinoma. Published online 30 April 2016 in Wiley Online Library (wileyonlinelibrary.com). DOI 10.1002/hed.24423. HEAD & NECK—DOI 10.1002/HED JULY 2016


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Radiation Therapy Utilizing SBRT for the Head and Neck

Delivery of radiation therapy utilizing SBRT (Stereotactic Body Radiation Therapy) for the head and neck may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 5144  Radiation therapy utilizing SBRT for nasopharyngeal cancer (any stage) may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and ANY of the following:
  - Patient is being treated for an isolated recurrence;
  - This is for definitive/curative therapy.

Ind. 5149  Radiation therapy utilizing SBRT for cancer of any stage of the oral cavity (including tongue, floor of mouth, hard palate, buccal mucosa, or mandible) may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a
KPS Grade of greater than or equal to eighty (80) and Motion management will be used; and BOTH of the following:

- Patient is being treated for an isolated local recurrence; 1, 3, 4
- This is for definitive/curative therapy. 3

**Ind. 5154** Radiation therapy utilizing SBRT for cancer originating in the oropharynx (base of tongue, tonsil, or epiglottis) may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and Motion management will be used; and BOTH of the following:
  - Patient is being treated for an isolated recurrence; 1, 3, 4, 5
  - This is for definitive/curative therapy. 3

**Ind. 5159** Radiation therapy utilizing SBRT for cancer originating in the larynx or hypopharynx may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and Motion management will be used; and BOTH of the following:
  - Patient is being treated for an isolated recurrence; 1, 3, 4, 5
  - This is for definitive/curative therapy. 3
Ind. 5178  Radiation therapy utilizing SBRT for head and neck cancer of any origin that has metastasized may be reasonable and appropriate when the patient's medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and Motion management will be used; and EITHER of the following:
  - Patient received radiation therapy to this location previously and this is for definitive/curative therapy;
  - Patient is being treated for an isolated recurrence;

Ind. 5228  Radiation therapy utilizing SBRT for primary sarcoma of the head and neck may be reasonable and appropriate when the patient's medical record demonstrates ANY of the following:

- The patient has four (4) or more lesions being treated;
- Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and ANY of the following:
  - Patient is being treated for an isolated recurrence;
  - This is for definitive/curative therapy;
  - Patient received radiation therapy to this location previously.
Ind. 5140  Radiation therapy utilizing SBRT for treatment of Trigeminal Neuralgia or Facial pain may be reasonable and appropriate when the patient's medical record demonstrates ANY of the following:

- The patient's trigeminal neuralgia pain is intractable to pain medications;
- This is a repeat procedure;
- Surgery has been attempted previously
REFERENCES

3. Dawn Owen, MD, PhD, Fawaad Iqbal, MD, Bruce E. Pollock, MD, Michael J. Link, MD, Kathy Stien, RN, Yolanda I. Garces, MD, Paul D. Brown, MD, Robert L. Foote, MD. Long Term Follow-up of Stereotactic Radiosurgery for Head and Neck Malignancies. Published online 1 August 2014 in Wiley Online Library (wileyonlinelibrary.com). DOI 10.1002/hed.23798
Radiation Therapy Utilizing 2D-3D for the Gastrointestinal System

Delivery of radiation therapy utilizing 2D-3D (Two-Dimensional/Three-Dimensional) for the gastrointestinal (GI) system may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 5270  Radiation therapy utilizing 2D-3D for esophageal cancer may be reasonable and appropriate when the patient's Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) \(^1\) and their medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care;\(^2\)
- Treatment to be delivered consists of 11-28 fractions; and ANY of the following:
  - Treatment is being delivered postoperatively (adjuvant); \(^2\)

Treatment being delivered is neoadjuvant (prior to planned surgery); \(^2\)\(^,\)\(^10\)\(^,\)\(^11\) Ind. 5290  Radiation therapy utilizing 2D-3D for gastric cancer may be reasonable and appropriate when the Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and their medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care; \(^2\)
- Treatment to be delivered consists of 11-28 fractions; and ANY of the following:
Ind. 5285  Radiation therapy utilizing 2D-3D for rectal cancer may be reasonable and appropriate when the patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and their medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care;  
- Treatment to be delivered consists of 11-28 fractions; and ANY of the following:
  - Treatment is being delivered postoperatively (adjuvant); 2, 4, 15
  - Treatment being delivered is neoadjuvant (prior to planned surgery); 2, 3, 13, 15

- Treatment to be delivered consists of 29-33 fractions for definitive treatment. 2

Ind. 5255  Radiation therapy utilizing 2D-3D for anal cancer may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care when the patient has an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);  
- Treatment to be delivered consists of 30 fractions or less for definitive treatment. 2, 14
Ind. 5275  Radiation therapy utilizing 2D-3D for Liver cancer may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care; when the patient has an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); or Treatment to be delivered consists of 30 fractions or less; and EITHER of the following:
  - Treatment is being delivered postoperatively (adjuvant); 2, 7

Treatment is definitive. Ind. 5280  Radiation therapy utilizing 2D-3D for pancreatic cancer may be reasonable and appropriate when the patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty and their medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care; 2, 8 Treatment to be delivered consists of 11-28 fractions; and ANY of the following:
  - Treatment is being delivered postoperatively (adjuvant); 2, 5, 8, 16
  - Treatment being delivered is neoadjuvant (prior to planned surgery); 2, 8
  - Treatment to be delivered consists of 29-33 fractions for definitive therapy. 8

Ind. 5260  Radiation therapy utilizing 2D-3D for biliary tree cancer (gallbladder or Klatskin’s tumor) may be reasonable and appropriate when the patient’s medical record demonstrate the following:
Treatment to be delivered consists of 10 fractions or less for palliative care; 2, 7
Treatments to be delivered consists of 30 fractions or less with an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and EITHER of the following:

- This is for definitive treatment; 2, 7, 17
- Treatment is being delivered postoperatively (adjuvant) 2, 3, 7, 17

Ind. 5265 Radiation therapy utilizing 2D-3D for colon cancer may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care; 2, 9
- Treatment to be delivered consists of 30 fractions or less with an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and EITHER of the following:
  - Staging and pathology of the tumor is T4; 9
  - Positive tumor margins are present. 9

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Radiation Therapy Utilizing Brachytherapy for the Gastrointestinal System

Delivery of radiation therapy utilizing Brachytherapy for the gastrointestinal (GI) system may be medically appropriate and supported by evidence to improve patient outcomes for the following indications. Unless otherwise stated, patients should demonstrate physical capability and appropriate clinical status as evidenced by either an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

Ind. 5261 Radiation therapy utilizing Brachytherapy for biliary cancer (gallbladder or Klatskin’s tumor) may be reasonable and appropriate when the patient’s medical records demonstrate BOTH of the following:

- Treatment to be delivered consists of 5 fractions or less; A boost is to be given as part of this requested treatment course using HDR.
REFERENCES

Radiation Therapy Utilizing IMRT for the Gastrointestinal System

Delivery of radiation therapy utilizing IMRT (Intensity-Modulated Radiation Therapy) for the gastrointestinal (GI) system may be appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 5272 Radiation therapy utilizing IMRT for esophageal cancer may be reasonable and appropriate when the patient's medical records demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care;
- Treatment to be delivered consists of 28 fractions or less and the patient has an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and ALL of the following:
  - A 3D plan has been performed and compared to the IMRT plan and when compared to a non-IMRT technique; 1, 2, 3, 10
  - IMRT would substantially decrease normal tissue toxicity and patient has received radiation treatment to this site or an adjacent site; 3
  - When compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity and patient has received radiation treatment to this site or an adjacent site; and EITHER of the following:
    - The IMRT plan results in reduction of radiation volume to the spinal cord of at least 10% and the 3D plan would result in delivery to the spinal cord of a 50Gy point dose; 3, 10, 11
There is a reduction of the V20 of at least 15% with the IMRT plan over the 3D plan. 3, 10, 11

- Treatment to be delivered consists of 28 fractions or less the patient has an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and BOTH of the following

- When compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity and patient has received radiation treatment to this site or an adjacent site; 3, 11

- Patient has received radiation treatment to this site or an adjacent site. 3, 11

Ind. 5292 Radiation therapy utilizing IMRT for gastric cancer may be reasonable and appropriate when the patient's medical records demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care; Treatment to be delivered consists of 30 fractions or less and 12, 13 the patient has an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); 13; and BOTH of the following:

- A 3D plan has been performed and compared to the IMRT plan; 3, 4

- When compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity and patient has received radiation treatment to this site or an adjacent site; and EITHER of the following: 3, 4

- The IMRT plan results in reduction of radiation volume to the spinal cord of at least 10% and the 3D plan would result in delivery to the spinal cord of a 50Gy point dose; 3, 4

- There is a reduction of the V20 of at least 15% with the IMRT plan over the 3D plan; 3, 4, 13
o Treatment to be delivered consists of 30 fractions or less and the patient has an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and **BOTH** of the following:
  - When compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity and patient has received radiation treatment to this site or an adjacent site;
  - Patient has received radiation treatment to this site or an adjacent site.

**Ind. 5287** Radiation therapy utilizing IMRT for rectal cancer may be reasonable and appropriate when the patient’s medical record demonstrates **EITHER** of the following:

  - Treatment to be delivered consists of 10 fractions or less to a previous radiation site or an adjacent site for palliative care,
  - Treatment to be delivered consists of 30 fractions or less and the patient has an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and **ANY** of the following:
    - This is definitive treatment;
    - This is post-operative treatment;
    - A 3D plan been performed and compared to the IMRT plan;
    - The IMRT plan results in reduction of radiation volume to the small bowel of at least 20%.

**Ind. 5257** Radiation therapy utilizing IMRT for anal cancer may be reasonable and appropriate when the patient's medical record demonstrates **EITHER** of the following:

  - Treatment to be delivered consists of 10 fractions or less for palliative care,
  - Treatment to be delivered consists of 30 fractions or less and the patient
has an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and both of the following:

- A 3D plan has been performed and compared to the IMRT plan; 15
- When compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity 6 and patient has received radiation treatment to this site or an adjacent site; and either of the following:
  - The IMRT plan results in reduction of radiation volume to the small bowel of at least 20%; 3, 15 Patient is high risk and has received radiation treatment to this site or an adjacent site.

**Ind. 5277** Radiation therapy utilizing IMRT for liver cancer may be reasonable and appropriate when the patient’s medical record demonstrates either of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care; 7 Treatment to be delivered consists of 30 fractions or less 7 and when compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity and any of the following:
  - The patient is high risk;
  - 3D plan has been performed and compared to the IMRT plan and the IMRT plan results in reduction of the small bowel by at least 20%; 3
  - Patient has received radiation treatment to this site or an adjacent site. 3

**Ind. 5282** Radiation therapy utilizing IMRT for pancreatic cancer may be reasonable and appropriate when the patient’s medical record demonstrates either of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care; Treatment to be delivered consists of 30 fractions or less and when...
compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity and ANY of the following:

- The patient is high risk;
- 3D plan has been performed and compared to the IMRT plan and the IMRT plan results in reduction of the small bowel by at least 20%;
- Patient has received radiation treatment to this site or an adjacent site.

Ind. 5262 Radiation therapy utilizing IMRT for biliary tree cancer (gallbladder or Klatskin’s tumor) cancer may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care; Treatment to be delivered consists of 30 fraction or less and when compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity and ANY of the following:
  - The patient is high risk;
  - 3D plan has been performed and compared to the IMRT plan and the IMRT plan results in reduction of the small bowel by at least 20%;
  - Patient has received radiation treatment to this site or an adjacent site.

Ind. 5267 Radiation therapy utilizing IMRT for colon cancer may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care; Treatment to be delivered consists of 30 fraction or less and when compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity and ANY of the following:
  - The patient is high risk;
3D plan has been performed and compared to the IMRT plan and the IMRT plan results in reduction of the small bowel by at least 20%;

Patient has received radiation treatment to this site or an adjacent site.
REFERENCES


3. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019


Radiation Therapy Utilizing SBRT for the Gastrointestinal System

Delivery of radiation therapy utilizing SBRT (Stereotactic Body Radiation Therapy) for the gastrointestinal (GI) system may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

**Ind. 5274** Radiation therapy utilizing SBRT for esophageal cancer may be reasonable and appropriate when the patient’s medical record demonstrates **EITHER** of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and Motion management will be used; and **ALL** of the following:
  - Patient is being treated for an isolated recurrence
  - This is for definitive/curative therapy.

**Ind. 5294** Radiation therapy utilizing SBRT for gastric cancer may be reasonable and appropriate when the patient’s medical record demonstrates **EITHER** of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS
Grade of greater than or equal to eighty (80) and Motion management will be used; and **ALL** of the following:

- Patient is being treated for an isolated recurrence;
- This is for definitive/curative therapy.

**Ind. 5289** Radiation therapy utilizing SBRT for rectal cancer may be reasonable and appropriate when the patient’s medical record demonstrates **EITHER** of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and Motion management will be used; and **ALL** of the following:
  - Patient is being treated for an isolated recurrence;
  - This is for definitive/curative therapy.

**Ind. 5259** Radiation therapy utilizing SBRT for anal cancer may be reasonable and appropriate when the patient’s medical record demonstrates **EITHER** of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and Motion management will be used; and **ALL** of the following:
  - Patient is being treated for an isolated recurrence;
  - This is for definitive/curative therapy.
Ind. 5279  Radiation therapy utilizing SBRT for liver cancer may be reasonable and appropriate when the patient's medical record demonstrates **EITHER** of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient \textsuperscript{2}, \textsuperscript{3}, \textsuperscript{6} with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) \textsuperscript{3} and Motion management \textsuperscript{3} will be used; and **EITHER** of the following:
  - Patient is being treated for an isolated recurrence; \textsuperscript{6}
  - This is for definitive/curative therapy.

Ind. 5284  Radiation therapy utilizing SBRT for pancreatic cancer may be reasonable and appropriate when the patient's medical record demonstrates **EITHER** of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less \textsuperscript{2} to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) \textsuperscript{3} and Motion management \textsuperscript{3} will be used; and **EITHER** of the following:
  - Patient is being treated for an isolated recurrence; \textsuperscript{3}
  - This is for definitive/curative therapy.

Ind. 5264  Radiation therapy utilizing SBRT for biliary cancer (gallbladder or Klatskin’s tumor) cancer may be reasonable and appropriate when the patient’s medical record demonstrates **EITHER** of the following:

- The patient has four (4) or more lesions being treated;
- Treatment to be delivered consists of 5 fractions or less \textsuperscript{2} to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative
Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and Motion management will be used; and EITHER of the following:

- Patient is being treated for an isolated recurrence;
- This is for definitive/curative therapy.

Ind. 5269 Radiation therapy utilizing SBRT for colon cancer may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- The patient has four (4) or more lesions being treated; Treatment to be delivered consists of 5 fractions or less to treat three (3) lesions or less in an area of 3 cm or less for patient with Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and Motion management will be used; and EITHER of the following:
  - Patient is being treated for an isolated recurrence;
  - This is for definitive/curative therapy.
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Radiation Therapy Utilizing 2D-3D for Genitourinary System

Delivery of radiation therapy utilizing 2D-3D (Two-Dimensional/Three-Dimensional) for the genitourinary (GU) system may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

**Ind. 5300** Radiation therapy utilizing 2D-3D for low-risk or early stage prostate cancer (Gleason score of less than or equal to 6, and PSA less than 10) may be reasonable and appropriate when the patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and their medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care.
- Treatment to be delivered consists of 11-28 fractions to patient who is 69 years of age or younger.

**Ind. 5301** Radiation therapy utilizing 2D-3D for prostate cancer (intermediate/high-risk, Gleason score of greater than or equal to 7 and/or PSA greater than 10) may be reasonable and appropriate when the patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and their medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care.
- Treatment to be delivered consists of 40 fractions or less and EITHER of the following:
Patient is 75 years of age or younger;
Patient is 76 years of age or older with a life expectancy of greater than 6 months.

Ind. 5302  Radiation therapy utilizing 2D-3D for prostate cancer (metastatic) may be reasonable and appropriate when the patient’s medical record demonstrates **EITHER** of the following:

- Treatment to be delivered consists of 10 fractions or less; and **ANY** of the following:
  - Patient is being treated under palliative care; 1,3,10
  - Metastatic disease to the spine;
  - Metastatic disease to the lung;
  - Metastatic disease to the brain;
  - Metastatic disease to the bone (outside of spine); 10
- Treatment to be delivered consists of 11-15 fractions for metastatic disease to the spine.

Ind. 5303  Radiation therapy utilizing 2D-3D for prostate cancer, post prostatectomy may be reasonable and appropriate when the patient’s medical record demonstrates **ANY** of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care. 1
- Treatment to be delivered consists of 36 fractions or less 1; and **EITHER** of the following:
  - Patient is 75 years of age or younger;
  - Patient is 76 years of age or older with a life expectancy greater than 6 months;
- Treatment to be delivered consists of 36 fractions or less 1; and **BOTH** of the following:
Patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);

Patient has a life expectancy greater than 6 months.

Ind. 5295  Radiation therapy utilizing 2D-3D for bladder cancer (any stage) may be reasonable and appropriate\(^{6, 13}\) when the patient’s medical record demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care.\(^{3, 11, 13}\)
- Treatment to be delivered consists of 30 fractions or less for definitive therapy in a patient who is 75 years of age or younger.\(^{15}\)
- Treatment to be delivered consists of 25 fractions or less preoperatively.\(^{15}\)

Ind. 5320  Radiation therapy utilizing 2D-3D for kidney cancer (any stage) may be reasonable and appropriate\(^{7}\) when the patient’s medical record demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care.\(^{3, 15, 16}\)
- Treatment to be delivered consists of 30 fractions or less for definitive therapy in a patient who is 75 years of age or younger; Treatment to be delivered consists of 25 fractions or less preoperatively.

Ind. 5325  Radiation therapy utilizing 2D-3D for testicular cancer (any stage) may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care.\(^{2, 3}\)
- Treatment to be delivered consists of 20 fractions or less following orchiectomy; and ANY of the following:
  - Patient has Stage TI disease or greater;\(^{2, 12}\)
- Patient has rete testes involvement; 12
- Patient has involvement of the spermatic cord.
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3. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019
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Radiation Therapy Utilizing Brachytherapy for the Genitourinary System

Radiation therapy utilizing Brachytherapy for the genitourinary (GU) system may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 5304  Radiation therapy utilizing Brachytherapy for prostate cancer (low risk/early stage: Gleason score of less than or equal to 6, and PSA less than 10) may be reasonable and appropriate when the patient’s medical record demonstrates the following:

- Treatment to be delivered will consist of one (1) fraction with a life expectancy of greater than six (6) months, and an ECOG PS of 0-1 or a KPS of 80 or more, and ANY of the following:
  - Patient is high risk for recurrence, HDR is being used, along with a boost
  - This request is for monotherapy, with permanent seeds in a patient who is 75 years old or younger;

Patient is 75 years of age or younger, HDR is being used, and the request is for monotherapy.Ind. 5305  Radiation therapy utilizing Brachytherapy for Prostate cancer (intermediate/high risk, Gleason score of greater than or equal to 7 and/or PSA greater than 10) may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:
Treatment to be delivered will consist of one (1) fraction or less with a boost and use of HDR 2,5, in a patient with a life expectancy of greater than 6 months and an ECOG PS of 0-1 or a KPS of 80 or more; and either of the following:

- Patient is high risk for recurrence 1,2;
- The patient is 75 years old or younger;
REFERENCES


2. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019


4. C. Parker, on behalf of the ESMO Guidelines Committee, S. Gillessen, on behalf of the ESMO Guidelines Committee, A. Heidenreich, on behalf of the ESMO Guidelines Committee, A. Horwich, on behalf of the ESMO Guidelines Committee, Cancer of the prostate: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up, Annals of Oncology, Volume 26, Issue suppl_5, September 2015, Pages v69–v77, https://doi.org/10.1093/annonc/mdv222

Radiation Therapy Utilizing IMRT for the Genitourinary System

Delivery of radiation therapy utilizing IMRT (Intensity-Modulated Radiation Therapy) for the genitourinary (GU) system may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

**Ind. 5308** Radiation therapy utilizing IMRT for low-risk or early stage prostate cancer (Gleason score of less than or equal to 6, and PSA less than 10) for a patient who has a life expectancy of greater than 6 months, may be reasonable and appropriate when the patient's medical record demonstrates the following:

- Treatment to be delivered consists of 28 fractions or less to patient who 69 years of age or younger; and **ANY** of the following:
  - An assessment of the patient's life expectancy is classified as “healthy” (please see SIOG guidelines);
  - An assessment of the patient's life expectancy is classified as “vulnerable with a reversible problem” (please see SIOG guidelines);
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and **ANY** one of the following:
    - The IMRT plan reduces small bowel toxicity by greater than 20%;
    - The IMRT plan reduces rectal toxicity by greater than 20%;
    - The IMRT plan reduces bladder toxicity by greater than 20%.

**Ind. 5309** Radiation therapy utilizing IMRT for prostate cancer (intermediate or high risk, Gleason score of ≥7 and/or PSA >10) for a patient who has a life expectancy of...
greater than 6 months, may be reasonable and appropriate when the patient's medical record demonstrates the following:

- Treatment to be delivered consists of 45 fractions or less; and ANY of the following:
  - Per International Society of Geriatric Oncology (SIOG) guidelines the patient is classified as healthy; and ANY of the following:
    - The IMRT plan reduces small bowel toxicity by greater than 20%;
    - The IMRT plan reduces rectal toxicity by greater than 20%;
    - The IMRT plan reduces bladder toxicity by greater than 20%;
  - Per International Society of Geriatric Oncology (SIOG) guidelines the patient is classified as “vulnerable” with a reversible problem; and ANY of the following:
    - The IMRT plan reduces small bowel toxicity by greater than 20%;
    - The IMRT plan reduces rectal toxicity by greater than 20%;
    - The IMRT plan reduces bladder toxicity by greater than 20%;
  - Patient is 75 years of age or younger with a high risk for recurrence, an Eastern Cooperative Oncology Group (ECOG) Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) with a live expectancy of six (6) months or greater; and ANY of the following:
    - The IMRT plan reduces small bowel toxicity by greater than 20%;
    - The IMRT plan reduces rectal toxicity by greater than 20%;
    - The IMRT plan reduces bladder toxicity by greater than 20%;

**Ind. 5310** Radiation therapy utilizing IMRT for prostate cancer (metastatic cancer) may be reasonable and appropriate when the patient's medical record demonstrates ANY of the following:
Treatment to be delivered consists of 10 fractions or less; and **EITHER** of the following:

- Patient is being treated under palliative care 6, 7, 8;
- Patient is being treated for brain metastasis 6;

Treatment to be delivered consists of 10 fractions or less6, 7 for a patient who is 75 years of age or younger6 with a high risk for recurrence, has an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) with a live expectancy of six (6) months or greater; and **ANY** of the following:

- Patient is being treated for metastasis to the spine, 7, 8;
- Patient is being treated for metastasis to the lung and IMRT plan will reduce lung toxicity by greater than 20%;
- Patient is being treated for metastasis to the bone (other than spine) 1, 6, 8;

Treatment to be delivered consists of 11-15 fractions6, 7; and **ALL** of the following

- Patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
- Patient is 75 years of age or younger6, 7;
- Patient’s life expectancy is 6 months or greater;
- Patient is being treated for metastasis in the spine 6, 7, 8.

**Ind. 5311** Radiation therapy utilizing IMRT for prostate cancer (post prostatectomy) 3 may be reasonable and appropriate when the patient’s medical record demonstrates **ALL** of the following:

- Treatment to be delivered consists of 36 fractions or less;
o Patient is 75 years of age or younger; Patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); Patient’s life expectancy is 6 months or greater; and EITHER of the following:

- Per International Society of Geriatric Oncology (SIOG) guidelines the patient is classified as healthy; and ANY one of the following:
  - PSA has remained detectable a minimum of 6 months after surgery;
  - PSA remained detectable post operatively AND increased on 2 or more labs;
  - The final pathology of the specimen Stage T3b or T4;
  - There were positive margins on the post-operative pathology.

- Per International Society of Geriatric Oncology (SIOG) guidelines the patient is classified as vulnerable, with a reversible problem; and ANY one of the following:
  - PSA has remained detectable a minimum of 6 months after surgery;
  - PSA remained detectable post operatively AND increased on 2 or more labs;
  - The final pathology of the specimen Stage T3b or T4;
  - There were positive margins on the post-operative pathology.

o Patient is 75 years of age or younger; and ALL of the following:

- Patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
- Patient is high risk for recurrence;
- Patient’s life expectancy is 6 months or greater, and EITHER of the following:
  - IMRT plan reduces small bowel toxicity by greater than 20%;
  - IMRT plan reduces rectal toxicity by greater than 20%;
IMRT plan reduces bladder toxicity by greater than 20%\textsuperscript{9} . Radiation therapy utilizing IMRT for bladder cancer (any stage) may be reasonable and appropriate when the patient's medical record demonstrates the following:

- Treatment to be delivered consists of 30 fractions or less; has a life expectancy of six (6) months or greater and **EITHER** of the following:
  - Patient is high risk for recurrence;
  - The treatment plan is for definitive treatment (no planned surgery); and **ANY** of the following:
    - IMRT plan reduces bladder toxicity by greater than 20%\textsuperscript{9};
    - IMRT plan reduces small bowel toxicity by greater than 20%\textsuperscript{9} and patient has an Eastern Cooperative Oncology Group (ECOG) Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
    - IMRT plan reduces rectal toxicity by greater than 20%\textsuperscript{9}; and patient has an Eastern Cooperative Oncology Group (ECOG) Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

- Treatment to be delivered consists of 25 fractions or less; and **BOTH** of the following:
  - Age is 75 years or younger\textsuperscript{9};
  - Eastern Cooperative Oncology Group (ECOG) Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and **ANY** of the following:
    - IMRT plan reduces rectal toxicity by greater than 20%\textsuperscript{9};
    - IMRT plan reduces bladder toxicity by greater than 20%\textsuperscript{9};
    - Another radiation modality will be used during the course of this treatment.
Ind. 5322  Radiation therapy utilizing IMRT for kidney cancer (any stage) may be reasonable and appropriate when the patient's medical record demonstrates **ANY** of the following:

- Treatment to be delivered consist of 30 fractions or less; and **ALL** of the following:
  - **Any** Patient’s life expectancy is 6 months or greater;
  - **Any** Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
  - **Any** This is for definitive therapy (no planned surgery); and **ANY** of the following:
    - IMRT plan reduces small bowel toxicity by greater than 20%; 3
    - IMRT plan reduces rectal toxicity by greater than 20%; 3
    - IMRT plan reduces bladder toxicity by greater than 20%;
- Treatment to be delivered consists of 30 fractions or less the patient is high risk with a life expectancy of greater than 6 months. Treatment to be delivered consists of 25 fractions or less for a patient who is 75 years of age or less and **ANY** of the following:
  - **Any** Another radiation modality will be utilized during the course of this treatment;
  - **Any** IMRT plan reduces bladder toxicity by greater than 20%; 3
  - **Any** IMRT plan reduces rectal toxicity by greater than 20%; 3

Ind. 5327  Radiation therapy utilizing IMRT for testicular cancer (any stage) may be reasonable and appropriate when the patient's medical record demonstrates the following:

- Treatment to be delivered consists of 20 fractions or less, post orchiectomy and **EITHER** of the following:

  1. IMRT plan reduces small bowel toxicity by greater than 20%; 3
  2. IMRT plan reduces rectal toxicity by greater than 20%; 3
  3. IMRT plan reduces bladder toxicity by greater than 20%; 3

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IMRT plan reduces small bowel toxicity by greater than 20\% \textsuperscript{10}, and \textbf{ANY} of the following:

- Patient has TI disease or greater \textsuperscript{2};
- Patient has extracapsular extension (ECE);
- Patient has improvement of the spermatic cord.

IMRT plan results in greater than a 20\% reduction in kidney toxicity; and \textbf{ANY} of the following, \textsuperscript{10}:

- Patient has TI disease or greater\textsuperscript{2} ;
- Patient has ECE;
- Patient has improvement of the spermatic cord.
REFERENCES

3. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019
Radiation Therapy Utilizing SBRT for the Genitourinary System

Delivery of radiation therapy utilizing SBRT (Stereotactic Body Radiation Therapy) for the genitourinary (GU) system may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 5316  Radiation therapy utilizing SBRT for prostate cancer (early stage, Gleason less than or equal to 6 and PSA less than 10) may be reasonable and appropriate when the patient’s medical record demonstrates the following:

- Treatment to be delivered consists of 5 fractions or less 2, 3, 4, 5 and BOTH of the following:
  - Motion management will be utilized;
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and EITHER of the following:
    - This is for definitive therapy 2;
    - Patient has received radiation therapy to this location previously and is being treated for an isolated local recurrence 3.

Ind. 5317  Radiation therapy utilizing SBRT for prostate cancer (Intermediate or high risk with Gleason score of greater than or equal to 7 and/or PSA greater than 10) may be reasonable and appropriate when the patient’s medical record demonstrates ALL of the following:

- Treatment to be delivered consists of 5 fractions or less 2, 3, 4, 5; Motion management will be utilized; Gleason score of 7 4, 5; PSA of less than 20 4, 5;
Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and EITHER of the following:
- This is for definitive therapy 2;
- Patient has received radiation therapy to this location previously and is being treated for an isolated local recurrence 3.

Ind. 5318 Radiation therapy utilizing SBRT for prostate cancer (metastatic) may be reasonable and appropriate when the patient's medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 5 fractions or less6, 7; and ALL of the following:
  - This is for definitive/curative therapy 6;
  - Motion management will be utilized 7;
  - The patient has three (3) lesions or less that are being treated 7;
  - The area being treated is 3 cm or less;
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) 6, 7;
  - Patient is being treated for an isolated recurrence.
- The patient has four (4) lesions or more that are being treated. 6

Ind. 5324 Radiation therapy utilizing SBRT for kidney cancer (any stage) may be reasonable and appropriate when the patient's medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 5 fractions or less 8, 9, 10; and ALL of the following:
  - The patient has three (3) lesions or less that are being treated 10;
- The area being treated is 3 cm or less;
- Eastern Cooperative Oncology Group (ECOG) Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80), and EITHER of the following:
- Patient is being treated for an isolated recurrence.
- This is for definitive/curative therapy.
- The patient has four (4) lesions or more that are being treated.
REFERENCES

2. NCCN Clinical Practice Guidelines in Oncology: Prostate Cancer V2.2019, National Comprehensive Cancer Network.,
3. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019
Stereotactic Body Radiation Therapy for Clinically Localized Prostate Cancer. DOI:10.3389/fonc.2017.00227
radiation therapy for low and intermediate risk prostate cancer: Results from a multi-institutional clinical trial. European
Journal of Cancer, 59, 142e151.
Oligometastatic Prostate Cancer. International Journal of Radiation Oncology, Biology, Physics, 95(2), 696–702.
doi:10.1016/j.ijrobp.2016.01.032
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17(1), 453.
Observer and Inter-Modality Variability of Cone-Beam Computed Tomography (CBCT) and Ultrasound (US) in
Stereotactic Body Radiotherapy for Kidney Cancer. Oncology, 6, 392-400.
Radiation Therapy Utilizing 2D-3D for the Gynecological System

Delivery of radiation therapy utilizing 2D-3D (Two-Dimensional/Three-Dimensional) for the gynecological system may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 5185  Radiation therapy utilizing 2D-3D for cervical cancer (any stage) may be reasonable and appropriate when the patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care 2, 7;
- Treatment to be delivered consists of 30 fractions or less 1,7; and ANY of the following:
  - Patient will receive IMRT as part of this treatment course 1;
  - Patient will also receive Brachytherapy as part of this treatment course 1, 7;
  - This is for definitive treatment 1, 2, 7;
  - This is for postoperative treatment 1.

Ind. 5190  Radiation therapy utilizing 2D-3D for cancer of the endometrium (any stage) may be reasonable and appropriate when the patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and the patient’s medical record demonstrates EITHER of the following:
Treatment to be delivered consists of 10 fractions or less for palliative care; 2
Treatment to be delivered consists of 30 fractions or less 3, 8; and ANY of the following:
- Patient will also receive Brachytherapy as part of this treatment course; 3,
- This is for definitive treatment; 2, 6;
- This is for postoperative treatment. 3, 8

Ind. 5195  Radiation therapy utilizing 2D-3D for ovarian cancer may be reasonable and appropriate when the patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care; 4,
- Treatment to be delivered consists of 30 fractions or less; and ANY of the following:
  - Patient will also receive Brachytherapy as part of this treatment course;
  - This is for definitive treatment; 4;
  - This is for postoperative treatment. 4, 9.

Ind. 5200  Radiation therapy utilizing 2D-3D for cancer of the vagina or vulva (any stage) may be reasonable and appropriate when the patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care; 2,
- Treatment to be delivered consists of 30 fractions or less 5; and ANY of the following:
- Patient will also receive Brachytherapy as part of this treatment course.\(^5\), \(^6\);
- This is for definitive treatment.\(^2\);
- This is for postoperative treatment.\(^5\).
- Patient will also receive IMRT therapy as part of this treatment course.\(^5\)
REFERENCES

2. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019
8. Ann Klopp, MD, PhD a, Benjamin D. Smith, MDa, Kaled Alektiar, MDba, Alvin Cabrera, MDb, Antonio L. Darnato, PhD, Beth Erickson, MDe, Gini Fleming, MDF, David Gaffney, MD g, Kathryn Greven, MDh, Karen Lu, MDi, David Miller, MDj, David Moore, MDk, Daniel Petereil, MDl, Tracey Schefter, MDM, William Small Jr., MDn, Catheryn Yashar, MD, Akila N. Viswanathan, MD, MPH. The Role of Postoperative Radiation Therapy for Endometrial Cancer: An ASTRO Evidence-Based Guideline. Practical Radiation Oncology (2014). https://www.practicalradonc.org/cms/10.1016/j.prro.2014.01.003/attachment/59d673e4-8590-4027-bf44194458bd161/mmc1.pdf
Radiation Therapy Utilizing Brachytherapy for the Gynecological System

Delivery of radiation therapy utilizing Brachytherapy for the gynecological system may be medically appropriate and supported by evidence to improve patient outcomes for the following indications. Unless otherwise stated, patients should demonstrate physical capability and appropriate clinical status as evidenced by either an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

Ind. 5189  Radiation therapy utilizing Brachytherapy for cervical cancer (any stage) may be reasonable and appropriate when the patient’s medical record demonstrates ALL of the following:

- Treatment to be delivered consists of 5 fractions or less; Brachytherapy will be given as a boost following pelvic radiation; Patient has received external beam radiation therapy within the last 6 months; and ANY of the following:
  - The implant is interstitial;
  - The implant is tandem and ring;
  - The implant is tandem and ovoid.

Ind. 5194  Radiation therapy utilizing Brachytherapy for endometrial cancer (any stage) may be reasonable and appropriate when the patient’s medical record demonstrates ANY of the following:
- Treatment to be delivered consists of 3 fractions or less and Brachytherapy will be given as definitive therapy 4, 6;

- Treatment to be delivered consists of 3 fractions or less 4, 6; and BOTH of the following: Brachytherapy will be given as a boost following pelvic radiation 4, 5, 6; AND

- Patient has received external beam radiation therapy within the last 6 months; and ANY of the following:
  - Patient has Stage IB disease and is high risk 5, 6; Patient has Stage II disease 5;
  - Patient has Stage III disease 5.

**Ind. 5204** Radiation therapy utilizing Brachytherapy for cancer of the Vagina or Vulva (any stage) may be reasonable and appropriate when the patient's medical record demonstrates ALL of the following:

- Treatment to be delivered consists of 5 fractions or less 4, 8; Brachytherapy will be given as a boost following pelvic radiation 2, 5, 8; Patient has received external beam radiation therapy within the last 6 months; and ANY of the following:
  - The implant is interstitial and the patient is high risk;
  - The implant is tandem and ring;
  - The implant is tandem and ovoid.
REFERENCES

3. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019
6. Ann Klopp, MD, PhD a, Benjamin D. Smith, MD, Kaled Alektiar, MD b, Alvin Cabrera, MD c, Antonio L. Damato, PhD d, Beth Erickson, MD e, Gini Fleming, MD f, David Gaffney, MD g, Kathryn Greven, MD h, Karen Lu, MD i, David Miller, MD j, David Moore, MD k, Daniel Peterleit, MD l, Tracey Schefter, MD m, William Small Jr., MD n, Catheryn Yashar, MD o, Akila N. Viswanathan, MD, MPH. The Role of Postoperative Radiation Therapy for Endometrial Cancer: An ASTRO Evidence-Based Guideline. Practical Radiation Oncology (2014). https://www.practicalradonc.org/cms/10.1016/j.prro.2014.01.003/attachment/59d673e4-8590-4027-bf44194458b161/mnc1.pdf
Radiation Therapy Utilizing IMRT for the Gynecological System

Delivery of radiation therapy utilizing IMRT (Intensity-Modulated Radiation Therapy) for the gynecological system may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 5186 Radiation therapy utilizing IMRT for cervical cancer (any stage) may be reasonable and appropriate when the patient’s medical records demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less to a previous radiated site or an adjacent site for palliative care; and
- Treatment to be delivered consists of 30 fractions or less; and
- BOTH of the following:
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
  - When compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity; and
- EITHER of the following:
  - Patient is high risk;
  - A 3D plan has been performed and compared to the IMRT plan; and
  - ANY of the following:
    - IMRT shows a reduction of the small bowel volume of greater than 20% when compared to the 3D plan;
    - Para-aortic nodes are being included in this treatment volume.
IMRT results in reduction of the mean dose to either kidney by at least 20%,

- Patient to receive Brachytherapy as part of this treatment course.

**Ind. 5191** Radiation therapy utilizing IMRT for endometrial cancer (any stage) may be reasonable and appropriate when the patient's medical record demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less to a previous radiated site or an adjacent site for palliative care.
- Treatment to be delivered consists of 30 fractions or less and BOTH of the following:
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
  - When compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity; and EITHER of the following:
    - Patient is high risk;
    - A 3D plan has been performed and compared to the IMRT plan; and ANY of the following:
      - IMRT shows a reduction of the small bowel volume of greater than 20% when compared to the 3D plan;
      - Para-aortic nodes are being included in this treatment volume;
      - IMRT results in reduction of the mean dose to either kidney by at least 20%.

**Ind. 5196** Radiation therapy utilizing IMRT for ovarian cancer (any stage) may be reasonable and appropriate when the patient's medical records demonstrates ANY of the following:
Treatment to be delivered consists of 10 fractions or less to a previous radiated site or an adjacent site for palliative care. \textsuperscript{9}Treatment to be delivered consists of 30 fractions or less \textsuperscript{6,8}; and BOTH of the following:

- Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);

- When compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity; and EITHER of the following \textsuperscript{6,8}:
  - Patient is high risk;
  - A 3D plan has been performed and compared to the IMRT plan \textsuperscript{6,8}; and ANY of the following:
    - IMRT shows a reduction of the small bowel volume of greater than 20\% when compared to the 3D plan \textsuperscript{6,8};
    - Para-aortic nodes are being included in this treatment volume \textsuperscript{8};
    - IMRT results in reduction of the mean dose to either kidney by at least 20\% \textsuperscript{8}.

- Patient to receive Brachytherapy as part of this treatment course.

**Ind. 5201** Radiation therapy utilizing IMRT for cancer of the vagina or vulva (any stage) may be reasonable and appropriate \textsuperscript{5} when the patient's medical record demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less to a previous radiated site or an adjacent site for palliative care. \textsuperscript{9}

- Treatment to be delivered consists of 30 fractions or less \textsuperscript{3,6,7,8}; and BOTH of the following:
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
When compared to a non-IMRT technique, IMRT would substantially decrease normal tissue toxicity \(^3, 6, 7, 8\) and **EITHER** of the following:

- Patient is high risk;
- A 3D plan has been performed and compared to the IMRT plan \(^3, 6, 7, 8\); and **ANY** of the following:
  - IMRT shows a reduction of the small bowel volume of greater than 20% when compared to the 3D plan \(^3, 6, 7, 8\);
  - Para-aortic nodes are being included in this treatment volume \(^8\);
  - IMRT results in reduction of the mean dose to either kidney by at least 20\% \(^8\).
REFERENCES

5. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019
Radiation Therapy Utilizing SBRT for the Gynecological System

Delivery of radiation therapy utilizing SBRT (Stereotactic Body Radiation Therapy) for the gynecological system may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 5188  Radiation therapy utilizing SBRT for cervical cancer (any stage) may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 5 fractions 1, 3, 4, 5, 6, 7 or less; and ALL of the following:
  - This is for definitive/curative therapy 7;
  - Motion management will be utilized 4, 5;
  - The patient has three (3) lesions or less that are being treated 4, 6, 7;
  - The area being treated is 3 cm or less;
  - Eastern Cooperative Oncology Group (ECOG) Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) 4, 6; and EITHER
    - Patient is being treated for an isolated local recurrence 1, 7,
    - Patient has received radiation therapy to this location previously 2, 3, 6, 7
- The patient has four (4) lesions or more that are being treated.

Ind. 5193  Radiation therapy utilizing SBRT for endometrial cancer (any stage) may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:
Treatment to be delivered consists of 5 fractions or less and ALL of the following:
- This is for definitive/curative therapy;
- Motion management will be utilized;
- The patient has three (3) lesions or less that are being treated;
- The area being treated is 3 cm or less;
- Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
- Patient is being treated for an isolated local recurrence.

The patient has four (4) lesions or more that are being treated.

Radiation therapy utilizing SBRT for ovarian cancer (any stage) may be reasonable and appropriate when the patient's medical record demonstrates EITHER of the following:

Treatment to be delivered consists of 5 fractions or less and ALL of the following:
- This is for definitive/curative therapy;
- Motion management will be utilized;
- The patient has three (3) lesions or less that are being treated;
- The area being treated is 3 cm or less;
- Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
- Patient is being treated for an isolated local recurrence.
- Patient has received radiation therapy to this location previously.

The patient has four (4) lesions or more that are being treated.
Ind. 5203 Radiation therapy utilizing SBRT for cancer of the vagina or vulva (any stage) may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 5 fractions or less \(3, 4, 5, 6\) and ALL of the following:
  - This is for definitive/curative therapy;
  - Motion management will be utilized \(4, 5\);
  - The patient has three (3) lesions or less that are being treated \(4, 6\);
  - The area being treated is 3 cm or less;
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) \(4, 6\); and EITHER of the following:
    - Patient is being treated for an isolated recurrence.
    - Patient has received radiation therapy to this location previously \(2, 3, 6\)
- The patient has four (4) lesions or more that are being treated.
REFERENCES

2. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019
Radiation Therapy Utilizing 2D-3D for Hematologic Cancer

Delivery of radiation therapy utilizing 2D-3D (Two-Dimensional/Three-Dimensional) for hematologic cancer may be medically appropriate and supported by evidence to improve patient outcomes for the following indications. Unless otherwise stated, patients should demonstrate physical capability and appropriate clinical status as evidenced by either an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

Ind. 5205 Radiation therapy utilizing 2D-3D for multiple myeloma or Plasmacytoma cancer may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less;\(^1,5,7\); and ANY of the following:
  - Patient is being treated under palliative care;\(^1,5,8\);
  - This is for total body irradiation (TBI);\(^7\);
  - The requested XRT is for consolidation after a bone marrow transplant;
  - Multiple Myeloma treatment is to a single site;
- Treatment to be delivered consists of 35 fractions or less for solitary Plasmacytoma.\(^4,7\)

Ind. 5210 Radiation therapy utilizing 2D-3D for Leukemia may be reasonable and appropriate when the patient’s medical record demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less\(^16\) for EITHER of the following:
§ Patient is being treated for palliative care. This is for total body irradiation.13, 16
  o Treatment to be delivered consists of 25 fractions or less 6, 13; and ANY of the following:
    § The requested XRT is for consolidation after a bone marrow transplant;
    § Site requested is a lymph node region;
    § The site treated is the eye 6, 12, the stomach or the mediastinum;
    § This is for a cutaneous lymphoma. 14

Ind. 5215 Radiation therapy utilizing 2D-3D for Hodgkin’s lymphoma may be reasonable and appropriate 2 when the patient's medical record demonstrates EITHER of the following:

  o Treatment to be delivered consists of 10 fractions or less 2, 10; and EITHER of the following:
    § Patient is being treated under palliative care 2, 10;
    § This is for TBI.
  o Treatment to be delivered consists of 25 fractions or less 2, 3, 8; and ANY of the following:
    § The requested XRT is for consolidation after a bone marrow transplant;
    § Site requested is a lymph node region 8;
    § The site treated is the eye 12, the stomach or the mediastinum;
    § This is for a cutaneous lymphoma 2, 9.

Ind. 5220 Radiation therapy utilizing 2D-3D for non-Hodgkin's lymphoma may be reasonable and appropriate 2 when the patient's medical record demonstrates EITHER of the following:
- Treatment to be delivered consists of 10 fractions or less; and **EITHER** of the following:
  - Patient is being treated under palliative care;
  - This is for TBI.
- Treatment to be delivered consists of 25 fractions or less \(^{3,11,15}\); and **ANY** of the following:
  - The requested XRT is for consolidation after a bone marrow transplant\(^{15}\);
  - Site requested is a lymph node region \(^{11}\);
  - The site treated is the eye, the stomach or the mediastinum;
  - This is for a cutaneous lymphoma \(^{9}\).
REFERENCES


4. Bart Barlogie, John Shaughnessy, Guido Tricot, Joth Jacobson, Maurizio Zangari, Elias Anaissie, Ron Walker, and John Crowley. Treatment of Multiple Myeloma. BLOOD, 1 JANUARY 2004 _ VOLUME 103, NUMBER 1


Radiation Therapy Utilizing IMRT for Hematologic Cancer

Delivery of radiation therapy utilizing IMRT (Intensity-Modulated Radiation Therapy) or Proton for hematologic cancer may be medically appropriate and supported by evidence to improve patient outcomes for the following indications. Unless otherwise stated, patients should demonstrate physical capability and appropriate clinical status as evidenced by either an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

Ind. 5216  Radiation therapy utilizing IMRT for Hodgkin’s lymphoma may be reasonable and appropriate when the patient’s medical record demonstrates the following:

  - Treatment to be delivered consists of 25 fractions or less \(1, 2, 3, 5\); and **ANY** of the following:
    - Request is for treatment of the eye;
    - IMRT will reduce the V20 to the lungs by greater than 20% and request is for treatment of the mediastinum \(1, 2, 3, 5\);
    - IMRT will reduce the dose to the spinal cord by at least 20% \(1, 3, 5\);
    - IMRT will reduce the dose to the kidneys by at least 20% \(1\);
    - IMRT will reduce the dose to the liver by at least 20% \(1, 2, 3, 5\);
    - Request is for treatment of the mediastinum \(1, 2, 3, 6\).

Ind. 5221  Radiation therapy utilizing IMRT for non-Hodgkin’s lymphoma (NHL) may be reasonable and appropriate when the patient’s medical record demonstrates the following:
• Treatment to be delivered consists of 25 fractions or less; and ANY of the following:
  ▶ Request is for treatment of the eye;
  ▶ IMRT will reduce the V20 to the lungs by greater than 20% and request is for treatment of the mediastinum;
  ▶ IMRT will reduce the dose to the spinal cord by at least 20%;
  ▶ IMRT will reduce the dose to the kidneys by at least 20%;
  ▶ IMRT will reduce the dose to the liver by at least 20%;
  ▶ IMRT will reduce the dose to the heart by at least 20%;
  ▶ Request is for treatment of the mediastinum.
REFERENCES


6. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019
Radiation Therapy Utilizing SBRT for Hematologic Cancer

Delivery of radiation therapy utilizing SBRT (Stereotactic Body Radiation Therapy) for lymphatic cancer may be medically appropriate and supported by evidence to improve patient outcomes for the following indications...

**Ind. 5223** Radiation therapy utilizing SBRT for non-Hodgkin’s lymphoma (NHL), in any stage and in any location, may be reasonable and appropriate when the patient’s medical records demonstrates **EITHER** of the following:

- Treatment to be delivered consists of 5 fractions or less; and **ALL** of the following
  - This is for definitive/curative therapy for an isolated, local recurrence;
  - Motion management will be utilized;
  - The patient has three (3) lesions or less that are being treated;
  - The area being treated is 3 cm or less;
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and **EITHER** of the following:
    - Patient is being treated for disease in the head and neck;
    - Patient is being treated for disease in the lung;
- The patient has four (4) lesions or more that are being treated.
REFERENCES

1. Timothy D. Solberg, Ph.D., James M. Balter, Ph.D., Stanley H. Benedict, Ph.D., Benedick A. Fraass, Ph.D., Brian Kavanagh, M.D., Curtis Miyamoto, M.D., Todd Pauicki, Ph.D., Louis Potters, M.D., Yoshiya Yamada, M.D.
Radiation Therapy Utilizing 2D-3D for the Central Nervous System

Delivery of radiation therapy utilizing 2D-3D (Two-Dimensional/Three-Dimensional) for the central nervous system (CNS) may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 5115 Radiation therapy utilizing 2D-3D for the treatment of a benign brain tumor (meningioma, acoustic neuroma, pituitary adenoma, craniopharyngioma, schwannoma, or chordoma) may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less; and ALL of the following:
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
  - Patient is 69 years of age or younger;
  - Patient is being treated under palliative care.

- Treatment to be delivered consists of 30 fractions or less; and BOTH of the following:
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
  - Patient is 69 years of age or younger; and ANY of the following:
    - The tumor is inoperable;
    - Patient is not a good surgical candidate;
• The tumor is causing symptoms in the patient;
  Patient is 18 years of age or younger

Ind. 5116  Radiation therapy utilizing 2D-3D for the treatment of low-grade glioma
  (astrocytoma, ganglioglioma, oligodendroglioma’s, pilocytic tumor,
  medulloblastoma, and JPA) may be reasonable and appropriate when the patient's
  medical record demonstrates EITHER of the following:

  o  Treatment to be delivered consists of 10 fractions or less; and ALL of the
     following:
    β  Eastern Cooperative Oncology Group ECOG Performance Status Grade
       of less than or equal to one (1) OR a KPS Grade of greater than or equal
       to eighty (80) ;
    β  Patient is being treated under palliative care.
  o  Treatment to be delivered consists of 30 fractions or less ; the Eastern
     Cooperative Oncology Group ECOG Performance Status Grade of less than
     or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) ;
     and ANY of the following:
    β  The tumor is inoperable; Patient is not a good surgical candidate; The
       tumor is causing symptoms in the patient; Patient is 18 years of age or
       younger.

Ind. 5118  Radiation therapy utilizing 2D-3D for a high-grade glioma (glioblastoma multiforme,
  anaplastic astrocytoma, or brainstem glioma) may be reasonable and appropriate
  when the patient's medical record demonstrates ANY of the following:

  o  Treatment to be delivered consists of 10 fractions or less; and  the Patient is
     being treated under palliative care.
    β
Treatment to be delivered consists of 21-33 fractions\textsuperscript{2,3}; and ANY of the following:

- Patient is 18 years of age or younger.

- Patient is 69 years of age or younger \textsuperscript{3}; and ANY of the following:
  - The tumor is inoperable;
  - Patient is not a good surgical candidate;
  - The tumor is causing symptoms in the patient;

**Ind. 5119** Radiation therapy utilizing 2D-3D for brain metastasis from any primary site may be reasonable and appropriate when the patient’s medical record demonstrates the following:

- Treatment to be delivered consists of 10 fractions or less\textsuperscript{2} for palliative care\textsuperscript{1}.

**Ind. 5117** Radiation therapy utilizing 2D-3D for a tumor located inside the eye\textsuperscript{1} may be reasonable and appropriate when the patient’s medical record demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care\textsuperscript{4}.

- Treatment to be delivered consists of 30 fractions or less\textsuperscript{4} for patient who is 69 years of age or younger; and ANY of the following:
  - The tumor is inoperable;
  - Patient is not a good surgical candidate;
  - The tumor is causing symptoms in the patient;

- Treatment to be delivered consists of 30 fractions or less who is 18 years or younger
REFERENCES

1. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019
## Radiation Therapy Utilizing Brachytherapy for the Central Nervous System

Delivery of radiation therapy utilizing Brachytherapy for the central nervous system (CNS) may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

**Ind. 5121** Radiation therapy utilizing Brachytherapy for a high-grade glioma (glioblastoma multiforme, anaplastic astrocytoma, or brainstem glioma) may be reasonable and appropriate when the patient’s medical record demonstrates the following:

- Brachytherapy is being requested. ²  ³

**Ind. 5123** Radiation therapy utilizing Brachytherapy for a tumor located inside the eye may be reasonable and appropriate when the patient’s medical record demonstrates **ALL** of the following:

- Patient is being treated for uveal/choroidal melanoma; ¹ An episcleral plaque being used.
- Treatment to be delivered is 1 fraction
REFERENCES

1. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019
Radiation Therapy Utilizing IMRT for the Central Nervous System

Delivery of radiation therapy utilizing IMRT (Intensity-Modulated Radiation Therapy) for the central nervous system (CNS) may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 5125 Radiation therapy utilizing IMRT for benign brain tumor (meningioma, acoustic neuroma, pituitary adenoma, craniopharyngioma, schwannoma, or chordoma) may be reasonable and appropriate when the patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and their medical record demonstrates **ANY** of the following:

- Treatment to be delivered consists of 10 fractions and **EITHER** of the following:
  - Patient has received radiation to a side that has previously been radiated\(^1\) or an adjacent site for palliative care;
  - Patient is high risk
- Treatment to be delivered consists of 30 fractions or less \(^2\); and **ANY** of the following:
  - The IMRT plan results in a reduction to the brainstem of at least 10%; \(^5, 6\)
  - The IMRT plan results in a reduction of the mean brain dose of at least 10%; \(^5, 6\)
  - The IMRT plan results in a reduction to the cochlea of at least 10%;
The IMRT plan results in a reduction to the optic chiasm of at least 10\%\textsuperscript{5, 6}.

The patient received previous radiation to this location.\textsuperscript{1}

Ind. 5127 Radiation therapy utilizing IMRT for low-grade glioma (astrocytoma, ganglioglioma, oligodendroglioma, pilocytic tumor, medulloblastoma, or JPA) may be reasonable and appropriate when the patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80)\textsuperscript{1} and their medical record demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions to a side that has previously been radiated or an adjacent site for palliative care.
- Treatment to be delivered consists of 30 fractions or less\textsuperscript{2}; and ANY of the following:
  - The IMRT plan results in a reduction to the brainstem of at least 10\%\textsuperscript{5, 6}
  - The IMRT plan results in a reduction of the mean brain dose of at least 10\%\textsuperscript{5, 6}
  - The IMRT plan results in a reduction to the cochlea of at least 10\%\textsuperscript{6}
  - The IMRT plan results in a reduction to the optic chiasm of at least 10\%\textsuperscript{5, 6}
- The patient received previous radiation to this location.\textsuperscript{1}
- Patient is high risk and tumor is less than 3 cm.

Ind. 5126 Radiation therapy utilizing IMRT for high-grade glioma (glioblastoma multiforme, anaplastic astrocytoma, or brainstem glioma) may be reasonable and appropriate when the patient’s medical record demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care.
o Treatment to be delivered consists of 11-20 fractions for inoperable tumor 10, patient has an Eastern Cooperative Oncology Group ECOG Performance Status Grade of greater than or equal to two (2) OR a KPS Grade of less than seventy (70) 1.

o Treatment to be delivered consists of 21-33 fractions2, 7, 8 for a patient who is 69 years of age or younger  with an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); 1 and ANY of the following:
  - There was an image complete resection;
  - The tumor is inoperable 10;
  - The patient is not a good surgical candidate.

Ind. 5129 Radiation therapy utilizing IMRT for brain metastasis from any primary site may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

  o Treatment to be delivered consists of 10 fractions or less 2,4, 9; and ALL of the following:
    - Patient is being treated under palliative care; 9
    - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); 1, 9
    - Patient received previous radiation to this location. 1
  
  o Treatment to be delivered consists of 10 fractions or less 2,4, 9; and ANY of the following:
    - The IMRT plan results in a reduction to the brainstem of at least 10%;5, 6
    - The IMRT plan results in a reduction of the mean brain dose of at least 10%;5, 6
    - The IMRT plan results in a reduction to the cochlea of at least 10%; 6
The IMRT plan results in a reduction to the optic chiasm of at least 10\%\textsuperscript{5,6},

Patient is high risk and there are four (4) or fewer metastatic brain lesions;\textsuperscript{9}

The patient has received radiation to this site previously.\textsuperscript{1}

Ind. 5128 Radiation therapy utilizing IMRT for a tumor located inside the eye may be reasonable and appropriate when the patient’s medical record demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care.
- Treatment to be delivered consists of 30 fractions or less with an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and ANY of the following:
  - The IMRT plan results in a reduction to the brainstem of at least 10\%\textsuperscript{5,6}
  - The IMRT plan results in a reduction to the cochlea of at least 10\%\textsuperscript{6}
  - The IMRT plan results in a reduction to the lens of at least 10\%\textsuperscript{5,6}
- Treatment to be delivered consists of 30 fractions or less; and BOTH of the following:
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
  - Patient is high risk; and EITHER of the following:
    - The IMRT plan results in a reduction of the mean brain dose of at least 10\%\textsuperscript{5,6}
    - The IMRT plan results in a reduction to the optic chiasm of at least 10\%\textsuperscript{5,6}
REFERENCES

1. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019
Radiation Therapy Utilizing SBRT/SRS for the Central Nervous System

Delivery of radiation therapy utilizing SBRT (Stereotactic Body Radiation Therapy) or SRS (Stereotactic Radiosurgery) for the central nervous system (CNS) may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 5136  Radiation therapy utilizing SBRT for a benign brain tumor (meningioma, acoustic neuroma, pituitary adenoma, craniopharyngioma, schwannoma, or chordoma) may be reasonable and appropriate when the patient's medical record demonstrates EITHER of the following:

- Patient is being treated under palliative care and the tumor is causing symptoms in the patient and the treatment to be delivered to the patient is 1 fraction ;
- Treatment to be delivered consists of 5 fractions or less ; and ANY of the following:
  - This is for definitive/curative therapy;
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and the patient is being treated for an isolated local recurrence
  - This is being requested as a boost for initial course of treatment
  - There is not active disease except for this area of local recurrence
  - Patient has received radiation to this site previously.
Ind. 5138  Radiation therapy utilizing SBRT for a low-grade glioma (astrocytoma, ganglioglioma, oligodendroglioma, pilocytic tumor, medulloblastoma, or JPA) may be reasonable and appropriate when the patient's medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 1 fraction, patient is being treated under palliative care and the tumor is causing symptoms in the patient, and Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);
- Treatment to be delivered consists of 1 fraction and EITHER of the following:
  - This treatment is being requested as a boost for the initial treatment course
  - There is no active disease except for the area of local recurrence
- Treatment to be delivered consists of 1 fraction, Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and ANY of the following:
  - This is for definitive/curative therapy;
  - Treatment is for a recurrent tumor;
  - Patient is being treated for an isolated local recurrence;

Patient has received radiation to this site previously;

Ind. 5137  Radiation therapy utilizing SBRT for a high grade glioma (glioblastoma multiforme, anaplastic astrocytoma, or brainstem glioma) may be reasonable and appropriate when the patient's medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 1 fraction for palliative care where the tumor is causing symptoms. Treatment to be delivered consists of 1 fraction, and ANY of the following:
§ Patient has received radiation to this site previously; 1
§ This is for definitive/curative therapy; 12
§ There is no active disease except for this area of local recurrence 1,6;
§ This treatment is being requested as a boost for the initial course of treatment. 12

- Treatment to be delivered consists of 1 fraction1, 5, 9, Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80);1 and EITHER of the following:
  - The treatment is for a recurrent tumor 1, 5;
  - This is treatment for an isolated local recurrence, 4, 6.

Ind. 5139  Radiation therapy utilizing SBRT for brain metastasis from any primary site may be reasonable and appropriate for a patient who has 4 brain metastases or less when the patient’s medical record demonstrates the following:

- Treatment to be delivered consists of 1 fraction2, 7, 9 where the patient has four (4) metastatic lesions to the brain or less 7, 8, 9; and EITHER of the following:
  - This is for definitive/curative therapy; 8
  - Patient has received radiation to this site previously1, 8

- Treatment to be delivered consists of 1 fraction2, 9 where the patient has four (4) metastatic lesions to the brain or less 7, Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) 1, 7 and EITHER of the following:
  - This is treatment for an isolated local recurrence;8
  - The treatment is for a recurrent tumor 8
o Treatment to be delivered consists of 1 fraction for palliative care where the patient has four (4) metastatic lesions to the brain or less and tumor is causing symptoms.9

o The patient has five (5) metastatic lesions to the brain or less;

o Treatment to be delivered consists of 1 fraction and EITHER of the following:
  β This is being requested as a boost for the initial course of treatment; 8, 9
  β There is no active disease except for this area of local recurrence 9

**Ind. 5135** Radiation therapy utilizing SRS/SBRT for a tumor located inside the eye may be reasonable and appropriate for a patient who has four (4) brain metastases or less when the patient’s medical record demonstrates the following:

o Treatment to be delivered consists of 5 fractions or less where the patient has four (4) metastatic lesions to the brain or less; and **EITHER** of the following:
  β This is for definitive/curative therapy;
  β Patient has received radiation to this site previously 1

o Treatment to be delivered consists of 5 fractions or less where the patient has four (4) metastatic lesions to the brain or less and the Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) **EITHER** of the following:
  β This is treatment for an isolated local recurrence;
  β The treatment is for a recurrent tumor

o Treatment to be delivered consists of 5 fractions or less where the patient has four (4) metastatic lesions to the brain or less, and the treatment is for palliative care where the tumor is causing symptoms.
Ind. 5140  Radiation therapy utilizing SRS for trigeminal neuralgia or facial pain may be reasonable and appropriate when the patient’s medical record demonstrates **ANY** of the following:

- Patients trigeminal neuralgia is intractable to pain medications; 3, 1
- This is a repeat procedure; 4, 1
- Surgery was attempted previously. 3
REFERENCES

1. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019
Radiation Therapy Utilizing 2D-3D for Sarcoma

Delivery of radiation therapy utilizing 2D-3D (Two-Dimensional/Three-Dimensional) for sarcoma may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

Ind. 5225 Radiation therapy utilizing 2D-3D for sarcoma that has originated in the head and neck region may be reasonable and appropriate when the patient's Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and their medical record demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care;
- Treatment to be delivered consists of 35 fractions or less and EITHER of the following:
  - Concurrent chemotherapy is being used;
  - Patient is at a high risk for recurrence.

Ind. 5230 Radiation therapy utilizing 2D-3D for sarcoma that has originated from an extremity or a bone may be reasonable and appropriate when the patient's Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and their medical record demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care;
Ind. 5235  Radiation therapy utilizing 2D-3D for sarcoma that has originated from the abdominal cavity or thoracic cavity may be reasonable and appropriate when the patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and their medical record demonstrates ANY of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care;
- Treatment to be delivered consists of 35 fractions or less; and EITHER of the following:
  - Concurrent chemotherapy is being used;  
  - Patient is at a high risk for recurrence.

Ind. 5245  Radiation therapy utilizing 2D-3D for sarcoma that has metastasized to another part of the body may be reasonable and appropriate when the patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and their medical record demonstrates that the treatment to be delivered consists of 5 fractions or less for palliative care.

Ind. 5250  Radiation therapy utilizing 2D-3D for a primary bone tumor may be reasonable and appropriate when the patient’s Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) and their medical record demonstrates the following:
- Treatment to be delivered consists of 10 fractions or less for palliative care.12,14
REFERENCES

2. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019
Radiation Therapy Utilizing Brachytherapy for Sarcoma

Delivery of radiation therapy utilizing Brachytherapy for sarcoma may be medically appropriate and supported by evidence to improve patient outcomes for the following indications. Unless otherwise stated, patients should demonstrate physical capability and appropriate clinical status as evidenced by either an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

Ind. 5234  Radiation therapy utilizing Brachytherapy for sarcoma that has originated from an extremity or bone may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 8 fractions or less with a boost in a high risk patient. 1, 2
- Treatment to be delivered consists of 8 or more fractions with a boost and 2D/3D delivered as part of this treatment for a high risk patient. 1, 3, 4, 5
UPDATED REFERENCES

4. Alektia, Kaled, MD, Brennan, Murray F, MD, Singer, Samuel, MD. Local control comparison of adjuvant brachytherapy to
   intensity-modulated radiotherapy in primary high-grade sarcoma of the extremity.
5. Leachman, B. K., & Galloway, T. J. (2016). The Role for Radiation Therapy in the Management of Sarcoma. The Surgical clinics of
   North America, 96(5), 1127-1139.
6. Williard WC, Hajdu SI, Casper ES, Brennan MF. Comparison of amputation with limb-sparing operations for adult soft tissue
Radiation Therapy Utilizing IMRT for Sarcoma

Delivery of radiation therapy utilizing IMRT (Intensity-Modulated Radiation Therapy) for sarcoma may be medically appropriate and supported by evidence to improve patient outcomes for the following indications. Unless otherwise stated, patients should demonstrate physical capability and appropriate clinical status as evidenced by either an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

Ind. 5226 Radiation therapy utilizing IMRT for sarcoma that has originated in the head and neck region may be reasonable and appropriate when the patient's medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 35 fractions or less 1,7; and BOTH of the following:
  - A 3D planning has been performed and compared to the IMRT 9;
  - IMRT would substantially decrease normal tissue compared to a non-IMRT technique; and ANY of the following:
    - The Dmax to the mandible is greater than 60 Gy with a 3D plan 9;
    - The D50 to the ipsilateral parotid is greater than 30 Gy with a 3D plan 8;
    - The D50 to the contralateral parotid is greater than 24 Gy with a 3D plan 8;
    - The optic chiasm receives greater than 45 Gy with a 3D plan 9;
    - The spinal cord would receive greater than 45 Gy with a 3D plan 9;
• Patient is high risk for recurrence and the same or immediately adjacent area received previous XRT.

Ind. 5237 Radiation therapy utilizing IMRT for sarcoma that has originated from the abdominal cavity or thoracic cavity may be reasonable and appropriate when the patient's medical record demonstrates the following:

  o Treatment to be delivered consists of 35 fractions or less and BOTH of the following:
    ß A 3D planning has been performed and compared to the IMRT;
    ß IMRT would substantially decrease normal tissue compared to a non-IMRT technique, and ANY of the following:
      • The 3D plan would result in the spinal cord receiving a dose of greater than 45 Gy;
      • The 3D plan would result in the heart would receiving a D100 of greater than 40 Gy;
      • The 3D plan would result in 2/3 of the kidney receiving a dose of at least 30 Gy;
      • The 3D plan would result in V20 of the lung greater than 35%.

  o Treatment to be delivered consists of 35 fractions or less and ALL of the following:
    ß 3D planning has been performed and compared to the IMRT;
    ß The patient is high risk;
    ß The same or immediately adjacent area received previous XRT.

  o Treatment to be delivered consists of 35 fractions or less; and BOTH of the following:
    ß A 3D planning has been performed and compared to the IMRT;
IMRT would substantially decrease normal tissue compared to a non-IMRT technique.

Radiation therapy utilizing IMRT for sarcoma has metastasized to another part of the body may be reasonable and appropriate when the patient's medical record demonstrates the following:

- Treatment to be delivered consists of 5 fractions or less; and BOTH of the following:
  - 3D planning has been performed and compared to the IMRT and IMRT would substantially decrease normal tissue compared to a non-IMRT technique; and ANY of the following:
    - The 3D plan would result in the D50 to the contralateral parotid is greater than 24 Gy;
    - The 3D plan would result in the spinal cord receiving greater than 45 Gy;
    - The 3D plan would result in the D50 to the ipsilateral parotid is greater than 30 Gy;
    - The 3D plan would result in the optic chiasm will receive greater than 45 Gy;
    - The 3D plan would result in the Dmax to the mandible is greater than 60 Gy;
    - 3D planning has been performed and compared to the IMRT, the patient is high risk for recurrence and the same or immediately adjacent area received previous XRT.
Radiation Therapy Utilizing SBRT for Sarcoma

Delivery of radiation therapy utilizing SBRT (Stereotactic Body Radiation Therapy) for sarcoma may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

**Ind. 5228** Radiation therapy utilizing SBRT for sarcoma that has originated in the head and neck region may be reasonable and appropriate when the patient's medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 5 fractions or less 4; and ALL of the following:
  - The patient has three (3) lesions or less that are being treated 4;  
  - The area being treated is 3 cm or less 4;  
  - Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) 4; and EITHER of the following:  
    - This is for definitive/curative therapy 4;  
    - Patient has received radiation to this site previously 1  
- This is treatment for an isolated local recurrence 4; The patient has four (4) lesions or more that are being treated 4.

**Ind. 5249** Radiation therapy utilizing SBRT for sarcoma that has metastasized to another part of the body may be reasonable and appropriate when the patient's medical record demonstrates EITHER of the following:
Treatment to be delivered consists of 5 fractions or less \(2,4,5\); and **ALL** of the following:

- The patient has three (3) lesions or less that are being treated \(4\);
- The area being treated is 3 cm or less \(3,4\);
- Eastern Cooperative Oncology Group (ECOG) Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80); and **ANY** of the following \(2,4\):
  - This is for definitive/curative therapy \(2,4\);
  - Patient has received radiation to this site previously \(1,2,3\)
    - This is treatment for an isolated local recurrence \(2,4\);
REFERENCES

1. AIM Clinical Guidelines, Radiation Oncology. Effective date March 9, 2019


Radiation Therapy Utilizing 2D-3D/IMRT/SBRT or Brachytherapy for Skin Cancer

Delivery of radiation therapy utilizing 2D-3D (Two-Dimensional/Three Dimensional) IMRT (Intensity-Modulated Radiation Therapy) SBRT (Stereotactic Body Radiation Therapy) or Brachytherapy for skin cancer may be medically appropriate and supported by evidence to improve patient outcomes for the following indications. Unless otherwise stated, patients should demonstrate physical capability and appropriate clinical status as evidenced by either an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

Ind. 5095  Radiation therapy utilizing 2D-3D for non-melanoma skin cancer may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care.
- Treatment to be delivered consists of 33 fractions or less and an Eastern Cooperative Oncology Group ECOG Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80).

Ind. 5105  Radiation therapy utilizing 2D-3D for melanoma or Merkel cell skin cancer may be reasonable and appropriate when the patient’s medical record demonstrates EITHER of the following:
Treatment to be delivered consists of 10 fractions or less for palliative care.

Treatment to be delivered consists of 33 fractions or less and an Eastern Cooperative Oncology Group (ECOG) Performance Status Grade of less than or equal to one (1) or a Karnovsky Performance Status (KPS) Grade of greater than or equal to eighty (80).

**Ind. 5106** Radiation therapy utilizing IMRT for melanoma or Merkel cell skin cancer may be reasonable and appropriate when the patient’s medical record demonstrates the following:

1. Treatment to be delivered consists of 11-33 fractions, when the patient is receiving treatment for any of the following:
   - Metastasis to the brain;
   - Metastasis to the liver;
   - Metastasis to the lung.

2. Treatment to be delivered consists of 10 fractions or less when the patient is receiving treatment for any of the following:
   - Metastasis to the brain;
   - Metastasis to the liver;
   - Metastasis to the lung.

**Ind. 5108** Radiation therapy utilizing SBRT for melanoma or Merkel cell skin cancer may be reasonable and appropriate when the patient’s medical record demonstrates either of the following:

1. Treatment to be delivered consists of 5 fractions or less and all of the following:
   - Metastasis to the brain;
   - Metastasis to the liver;
   - Metastasis to the lung.
The patient has three (3) lesions or less that are being treated \(^5,\text{6}\); The area being treated is 3 cm or less \(^1,\text{5,6}\) and ANY of the following:
- This is for definitive/curative therapy;
- Patient has received radiation to this site previously; This is treatment for an isolated local recurrence \(^6\).
  - The patient has four (4) lesions or more that are being treated, \(^6\).

**Ind. 5099** Radiation therapy utilizing Brachytherapy for non-melanoma skin cancer may be reasonable and appropriate when the patient’s medical record demonstrates ALL of the following:
  - Treatment to be delivered consists of 8 fractions or less \(^9\);
  - The lesion being treated is less than 3 cm \(^10\);
  - Patient is being treated with traditional brachytherapy (non-electronic) \(^3,4\).

**Ind. 5109** Radiation therapy utilizing Brachytherapy for melanoma or Merkel cell skin cancer may be reasonable and appropriate when the patient’s medical record demonstrates ALL of the following:
  - Treatment to be delivered consists of 4 fractions or less \(^11,12\);
  - The patient is post-operative \(^12\);
  - Electronic brachytherapy will be used \(^12\).
REFERENCES


Radiation Therapy Utilizing 2D-3D for Other Cancer Types

Delivery of radiation Therapy utilizing 2D-3D (Two-Dimensional/Three-Dimensional) for other cancer types may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

**Ind. 5085** Radiation therapy utilizing 2D-3D for thymoma or thymic carcinoma may be reasonable and appropriate when the patient's medical record demonstrates EITHER of the following:

- Treatment to be delivered consists of 10 fractions or less for palliative care 1, 6.
- Treatment to be delivered consists of 35 fractions or less 1, 2, 3, 5 with an Eastern Cooperative Oncology Group (ECOG) Performance Status Grade of less than or equal to one (1) OR a KPS Grade of greater than or equal to eighty (80) 4.
REFERENCES

1. NCCN Clinical Practice Guidelines in Oncology: Thymic V2.2019, National Comprehensive Cancer Network.,

   Outcomes in Patients With Advanced Invasive Thymoma or Thymic Carcinoma: A Retrospective Multicenter Study. American
   journal of clinical oncology, 39(2), 120-125. doi:10.1097/COC.0000000000000024


4. Multidisciplinary Tumor Board Decision Making for Postoperative Radiotherapy in Thymic Epithelial Tumors: Insights from the

   patients at high risk of recurrence of thymoma: efficacy and safety of a three-dimensional conformal radiation therapy
   regimen. OncoTargets and therapy, 8, 1345–1349. doi:10.2147/OTT.S75232

Radiation Therapy: Proton Beam

Delivery of Radiation Therapy utilizing Proton Beam Radiation Therapy (PBRT) for various cancer indications may be medically appropriate and supported by evidence to improve patient outcomes for the following indications and cancer types.

Cancer of the Brain, Primary or Metastatic

- Radiation therapy utilizing PBRT for the treatment of primary or metastatic disease of the brain may be reasonable and appropriate when the patient’s medical record demonstrates that the member is enrolled in a clinical trial.

Cancer of the Eye

- Radiation therapy utilizing PBRT for the treatment of primary or metastatic disease of the brain may be reasonable and appropriate when the patient’s medical record demonstrates that the member is enrolled in a clinical trial.

- PBRT utilization with less than 30 fractions where a non-PBRT approach would increase tissue toxicity in a patient who has an ECOG of 2 or greater or a KPS of 70 or less may be reasonable and appropriate when the patient’s medical record demonstrates ANY of the following:
  - Treatment request for retinoblastoma;
  - Treatment request for uveal melanoma;
  - Treatment request for orbital lymphoma.
Leukemia Treatment

- Radiation therapy utilizing PBRT for the treatment of leukemia may be reasonable and appropriate when the patient's medical record demonstrates that the member is enrolled in a clinical trial.

Multiple Myeloma or Plasmacytoma

- Radiation therapy utilizing PBRT for the treatment of multiple myeloma or plasmacytoma may be reasonable and appropriate when the patient's medical record demonstrates that the member is enrolled in a clinical trial.

Pediatric Application for Cancer Treatment

Delivery of Radiation Therapy utilizing Proton Beam Radiation Therapy (PBRT) for Pediatric Malignancies may be medically appropriate and supported by evidence to improve patient outcomes for the following indications.

- Radiation therapy utilizing PBRT for a pediatric malignancy may be reasonable and appropriate when the patient's medical record demonstrates ALL of the following:
  - Less than 18 years of age;
  - Treatment to be delivered consists of 31 fractions or less;
  - No additional forms of radiation therapy are being utilized;
  - There is a positive tissue diagnosis;
  - The current stage is T1-T2.

All other application of PBRT not previously noted above will require review by the Medical Director and/or individual health plan to determine medical appropriateness.
### ONCOLOGY

#### RADIATION THERAPY

<table>
<thead>
<tr>
<th>CODES:</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>77401</td>
<td>Radiation treatment delivery, superficial and/or ortho voltage, per day</td>
</tr>
<tr>
<td>77402</td>
<td>Radiation treatment delivery, &gt;1 MeV; simple</td>
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<tr>
<td>77407</td>
<td>Radiation treatment delivery, &gt;1 MeV; intermediate</td>
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<tr>
<td>77412</td>
<td>Radiation treatment delivery, &gt;1 MeV; complex</td>
</tr>
<tr>
<td>G6003</td>
<td>Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks: up to 5MeV</td>
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<tr>
<td>G6004</td>
<td>Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks: 6-10MeV</td>
</tr>
<tr>
<td>G6005</td>
<td>Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks: 11-19MeV</td>
</tr>
<tr>
<td>G6006</td>
<td>Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks: 20MeV or greater</td>
</tr>
<tr>
<td>G6007</td>
<td>Radiation treatment delivery, 2 separate treatment areas, 3 or more ports on a single treatment area, use of multiple blocks: up to 5MeV</td>
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<td>G6008</td>
<td>Radiation treatment delivery, 2 separate treatment areas, 3 or more ports on a single treatment area, use of multiple blocks: 6-10MeV</td>
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<td>G6009</td>
<td>Radiation treatment delivery, 2 separate treatment areas, 3 or more ports on a single treatment area, use of multiple blocks: 11-19MeV</td>
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<tr>
<td>G6010</td>
<td>Radiation treatment delivery, 2 separate treatment areas, 3 or more ports on a single treatment area, use of multiple blocks: 20MeV or greater</td>
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<tr>
<td>G6011</td>
<td>Radiation treatment delivery, 3 or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; up to 5MeV</td>
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<tr>
<td>G6012</td>
<td>Radiation treatment delivery, 3 or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; 6-10MeV</td>
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Radiation treatment delivery, 3 or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; 11-19MeV

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Radiation treatment delivery, 3 or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; 20MeV or greater

<table>
<thead>
<tr>
<th>CODES:</th>
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<td>G6014</td>
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### Brachytherapy

<table>
<thead>
<tr>
<th>Description</th>
<th>CODES:</th>
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<tbody>
<tr>
<td>Intraoperative radiation treatment delivery, x-ray, single treatment session</td>
<td>77424</td>
</tr>
<tr>
<td>Intraoperative radiation treatment delivery, electrons, single treatment session</td>
<td>77425</td>
</tr>
<tr>
<td>Infusion or instillation of radioelement solution (includes 3 months follow-up care)</td>
<td>77750</td>
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<tr>
<td>Intracavitary radiation source application; simple</td>
<td>77761</td>
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<tr>
<td>Intracavitary radiation source application; intermediate</td>
<td>77762</td>
</tr>
<tr>
<td>Intracavitary radiation source application; complex</td>
<td>77763</td>
</tr>
<tr>
<td>Remote afterloading high dose rate radionuclide skin surface brachytherapy, includes basic dosimetry, when performed; lesion diameter up to 2.0 cm or 1 channel</td>
<td>77767</td>
</tr>
<tr>
<td>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</td>
<td>77768</td>
</tr>
<tr>
<td>Remote afterloading high dose rate radionuclide interstitial or intracavitary brachytherapy, includes basic dosimetry, when performed; 1 channel</td>
<td>77770</td>
</tr>
<tr>
<td>Remote afterloading high dose rate radionuclide interstitial or intracavitary brachytherapy, includes basic dosimetry, when performed; 2-12 channels</td>
<td>77771</td>
</tr>
<tr>
<td>Remote afterloading high dose rate radionuclide interstitial or intracavitary brachytherapy, includes basic dosimetry, when performed; over 12 channels</td>
<td>77772</td>
</tr>
<tr>
<td>Interstitial radiation source application, complex, includes supervision, handling, loading of radiation source, when performed</td>
<td>77778</td>
</tr>
<tr>
<td>Surface application of low dose rate radionuclide source</td>
<td>77789</td>
</tr>
<tr>
<td>Description</td>
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<tr>
<td>-----------------------------------------------------------------------------</td>
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<tr>
<td>High dose rate electronic brachytherapy, skin surface application, per fraction, includes basic dosimetry, when performed</td>
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</tr>
<tr>
<td>High dose rate electronic brachytherapy, interstitial or intracavitary treatment, per fraction, includes basic dosimetry, when performed</td>
<td>0395T</td>
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<tr>
<td>Low dose rate (LDR) prostate brachytherapy services, composite rate</td>
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<tr>
<td><strong>IMRT</strong></td>
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<tr>
<td>Intensity modulated radiation treatment delivery (IMRT), includes guidance and tracking, when performed; simple</td>
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</tr>
<tr>
<td>Intensity modulated radiation treatment delivery (IMRT), includes guidance and tracking, when performed; complex</td>
<td>77386</td>
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<tr>
<td>Intensity modulated treatment delivery, single or multiple fields/arcs, via narrow spatially and temporally modulated beams, binary, dynamic MLC, per treatment session</td>
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<tr>
<td>Compensator-based beam modulation treatment delivery of inverse planned treatment using 3 or more high resolution (milled or cast) compensator, convergent beam modulated fields, per treatment session</td>
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<tr>
<td><strong>Neutron Therapy</strong></td>
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<tr>
<td>High energy neutron radiation treatment delivery; 1 or more isocenter(s) with coplanar or non-coplanar geometry with blocking and / or wedge, and / /or compensator(s)</td>
<td>77423</td>
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<tr>
<td><strong>Proton Beam</strong></td>
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<tr>
<td>Proton treatment delivery; simple, without compensation</td>
<td>77520</td>
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<tr>
<td>Proton treatment delivery; simple, with compensation</td>
<td>77522</td>
</tr>
<tr>
<td>Proton treatment delivery; intermediate</td>
<td>77523</td>
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<tr>
<td>Proton treatment delivery; complex</td>
<td>77525</td>
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<tr>
<td><strong>Stereotactic Radiosurgery</strong></td>
<td></td>
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<tr>
<td>Thoracic target(s) delineation for stereotactic body radiation therapy (SRS/SBRT), (photon or particle beam), entire course of treatment</td>
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<tr>
<td>Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); 1 simple cranial lesion</td>
<td>61796</td>
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<tr>
<td>Service Description</td>
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<tr>
<td>------------------------------------------------------------------------------------</td>
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<tr>
<td>Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); 1 complex cranial lesion</td>
<td>61798</td>
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<tr>
<td>Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); 1 spinal lesion</td>
<td>63620</td>
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<tr>
<td>Radiation treatment delivery, stereotactic radiosurgery (SRS), complete course of treatment of cranial lesion(s) consisting of 1 session; multi-source Cobalt 60 based</td>
<td>77371</td>
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<tr>
<td>Radiation treatment delivery, stereotactic radiosurgery (SRS), complete course of treatment of cranial lesion(s) consisting of 1 session; linear accelerator based</td>
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<tr>
<td>Stereotactic body radiation therapy, treatment delivery, per fraction to 1 or more lesions, including image guidance, entire course not to exceed 5 fractions</td>
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<tr>
<td>Image guided robotic linear accelerator-based stereotactic radiosurgery, complete course of therapy in one session, or first session of fractionated treatment</td>
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<td>Image guided robotic linear accelerator-based stereotactic radiosurgery, delivery including collimator changes and custom plugging, fractionated treatment, all lesions, per session, second through fifth sessions, maximum five sessions per course of treatment</td>
<td>G0340</td>
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