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2025 Intensity Modulated Radiation Therapy (IMRT) Publication

Radiation Therapy

RT-IMRT-MOH

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2025 Intensity-Modulated Radiation Therapy (IMRT) for Blood, Bone and Lymphatic Cancer

Radiation Therapy

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Intensity-Modulated Radiation Therapy (IMRT) for Blood, Bone Marrow and Lymphatic System Cancers

Acute Lymphoblastic Leukemia • Acute Myeloid Leukemia • Chronic Lymphocytic Leukemia • Chronic Myeloid Leukemia • Hairy Cell Leukemia Guideline

Intensity-modulated radiation therapy (IMRT) for acute lymphoblastic leukemia, acute myeloid leukemia, chronic lymphocytic leukemia and chronic myeloid leukemia:

1. The role of this therapy is uncertain/unclear in the current evidence. Requests for this therapy require review by a physician reviewer, medical director and/or the individual's healthplan.

References: [23] [21] [24] [20] [11] [26] [22]

B-Cell Lymphomas (Burkitt • Diffuse Large B-Cell • Follicular • High-Grade • Human Immuno-deficiency (HIV)-Related • Mantle Cell • Marginal Zone • Mediastinal Gray Zone • Post-Transplant Lymphoproliferative Disorders • Primary Mediastinal • Orbital Marginal Zone • Salivary Gland Marginal Zone • Small Lymphocytic) Guideline

IMRT for B-cell lymphomas (burkitt, diffuse large, follicular, high-grade, marginal zone, HIV-related b-cell lymphoma, mantle cell, marginal zone, mediastinal gray zone, post-transplant lymphoproliferative disorders, primary mediastinal, orbital marginal zone, salivary gland marginal zone, small lymphocytic) is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. HIV-related b-cell lymphoma **AND** post-transplant lymphoproliferative disorders:

a. The role of this therapy is uncertain/unclear in the current evidence. Requests for this therapy require review by a physician reviewer, medical director and/or the individual's healthplan.

2. **2 fractions or less** for palliative treatment for **ANY** of the following:
   a. Follicular lymphoma
   b. Mantle cell lymphoma
   c. Marginal zone lymphoma
   d. Small lymphocytic lymphoma
3. **10 fractions or less** for palliative treatment for **ANY** of the following:
   a. Burkitt lymphoma
   b. Diffuse large b-cell lymphoma
   c. High-grade b-cell lymphoma
   d. Mediastinal gray zone lymphoma
   e. Primary mediastinal b-cell lymphoma
4. **ALL** of the following:
   a. Definitive therapy and **ANY** of the following:
      i. **2 fractions or less** for orbital or salivary gland marginal zone lymphoma
      ii. **10 to 18 fractions** in combination with hematopoietic cell transplantation (HCT) for **ANY** of the following:
         A. Diffuse large b-cell lymphoma
         B. High-grade b-cell lymphoma
         C. Mediastinal gray zone lymphoma
         D. Primary mediastinal b-cell lymphoma
      iii. **12 fractions or less** for marginal zone lymphoma
      iv. **12 to 15 fractions** for **ANY** of the following:
         A. Follicular lymphoma
         B. Mantle cell lymphoma consolidation after chemoimmunotherapy, complete response
      v. **13 to 15 fractions** for prophylactic testicular irradiation
      vi. **15 to 18 fractions** for consolidation after chemoimmunotherapy, complete response (Deauville score 1 to 3) for **ANY** of the following:

A. Diffuse large b-cell lymphoma
B. High-grade b-cell lymphoma
C. Mediastinal gray zone lymphoma
D. Primary mediastinal b-cell lymphoma

vii. **16 fractions** for extranodal marginal zone lymphoma of the stomach

viii. **18 fractions** for consolidation after chemotherapy, partial response for mantle cell lymphoma

ix. **18 to 25 fractions** for consolidation after chemoimmunotherapy, partial response (Deauville score 4 to 5) for **ANY** of the following:

A. Diffuse large b-cell lymphoma
B. High-grade b-cell lymphoma
C. Mediastinal gray zone lymphoma
D. Primary mediastinal b-cell lymphoma

x. **20 to 28 fractions** for refractory disease, partial response (Deauville score 4 to 5) for **ANY** of the following:

A. Diffuse large b-cell lymphoma
B. High-grade b-cell lymphoma
C. Mediastinal gray zone lymphoma
D. Primary mediastinal b-cell lymphoma

b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)

c. Physical ability and clinical status of **ANY** of the following:

i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less

ii. Karnofsky performance status (KPS) grade of 70 or more[1]

References: [3] [5] [25]

[1]The Lansky performance status scale can be utilized for ages 16 or less.

Bone Cancer (Chondrosarcoma • Chordoma • Ewing Sarcoma • Giant Cell Tumor • Osteosarcoma) Guideline

IMRT for bone cancer (chondrosarcoma, chordoma, ewing sarcoma, giant cell tumor and osteosarcoma) is considered medically appropriate when the documentation demonstrates **ALL** of the following:

1. **ANY** of the following:
    a. **25 to 30 fractions** for a giant cell tumor that has **NOT** responded to other treatments and **ANY** of the following:
        i. Progressive disease
        ii. Recurrent disease
        iii. Unresectable disease
    b. Chondrosarcoma (clear cell, extracompartmental, high grade) is resectable and **ANY** of the following:
        i. **10 to 25 fractions** for pre-operative therapy
        ii. **35 fractions or less** for R1 resection
        iii. **36 to 39 fractions** for R2 resection
        iv. Treatment for unresectable disease:
            A. The role of this therapy is uncertain/unclear in the current evidence. Requests for this therapy require review by a physician reviewer, medical director and/or the individual's healthplan.
    c. Chordoma, resectable extracranial disease (mobile spine or sacrum) and **ANY** of the following:
        i. **10 to 25 fractions** for pre-operative therapy
        ii. **35 fractions or less** for R1 resection
        iii. **36 to 39 fractions** for R2 resection
        iv. Treatment for unresectable disease:
            A. The role of this therapy is uncertain/unclear in the current evidence. Requests for this therapy require review by a physician reviewer, medical director and/or the individual's healthplan.
    d. Chordoma, resectable cranial (base of skull) and **ANY** of the following:
        i. **10 to 25 fractions** for pre-operative therapy

ii. Treatment for unresectable disease:

A. The role of this therapy is uncertain/unclear in the current evidence. Requests for this therapy require review by a physician reviewer, medical director and/or the individual's healthplan.

e. Ewing sarcoma and **ANY** of the following:

i. **13 fractions or less** for hemithorax irradiation for chest wall primaries with extensive ipsilateral pleural involvement

ii. **23 fractions or less** for **ANY** of the following:

A. Definitive therapy

B. Post-operative therapy for R0, R1 **OR** R2 resection

C. Pre-operative therapy

f. Osteosarcoma and **ANY** of the following:

i. **32 to 34 fractions** for post-operative therapy following an R1 **OR** R2 resection

ii. **30 to 35 fractions** for unresectable disease

2. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
3. Physical ability and clinical status of **ANY** of the following:
   a. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
   b. Karnofsky performance status (KPS) grade of 70 or more[2]

References: [1] [18]

Histiocytic Neoplasms (Langerhans Cell Histiocytosis [LCH]) Guideline

IMRT for histiocytic neoplasms, LCH, is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. Isolated skin disease **AND** single system LCH
   a. The role of this therapy is uncertain/unclear in the current evidence. Requests for this therapy require review by a physician reviewer, medical director and/or the individual's healthplan.
2. **5 to 10 fractions** for isolated bone involvement with limited sites of disease (1 to 3 lesions) and **ALL** of the following:

[2]The Lansky performance status scale can be utilized for ages 16 or less.

a. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)

b. Physical ability and clinical status of **ANY** of the following:

i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less

ii. Karnofsky performance status (KPS) grade of 70 or more[3]

References: [9] [4] [17]

Hodgkin Lymphoma Guideline

IMRT for Hodgkin lymphoma is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **15 fractions or less** for palliative treatment
2. **ALL** of the following:
   a. **ANY** of the following:
      i. Combined modality therapy (CMT) and **ANY** of the following:
         A. **10 to 15 fractions** for non-bulky stage I to II, treated with doxorubicin, bleomycin, vinblastine and dacarbazine (ABVD regimen).
         B. **15 fractions** for non-bulky stage IB to IIB **OR** bulky disease, all stages.
         C. **18 to 23 fractions** for partial response to chemotherapy (Deauville score 4 to 5)
      ii. Radiation therapy alone for **ANY** of the following[4]:
         A. **13 to 15 fractions** for **UNINVOLVED** regions.
         B. **15 to 18 fractions** for involved regions.
   b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
   c. Physical ability and clinical status of **ANY** of the following:
      i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
      ii. Karnofsky performance status (KPS) grade of 70 or more[5]

[3]The Lansky performance status scale can be utilized for ages 16 or less.

[4]Radiation therapy monotherapy is uncommon except in the case of nodular lymphocyte-predominant hodgkin lymphoma (NLPHL).

References: [5] [12]

Myelodysplastic Syndrome, Myeloid/Lymphoid Neoplasms with Eosinophilia and Tyrosine Kinase Gene Fusions, Myeloproliferative Neoplasms, Systemic Light Chain Amyloidosis, Systemic Mastocytosis, Waldenstrom Maculoglobulinemia/Lymphoplasmacytic Lymphoma Guideline

Intensity-modulated radiation therapy (IMRT) for myelodysplastic syndrome, myeloid/lymphoid neoplasms with eosinophilia and tyrosine kinase gene fusions, systemic chain amyloidosis, systemic mastocytosis, waldenstrom maculoglobulinemia/lymphoplasmacytic lymphoma:

1. The role of this therapy is uncertain/unclear in the current evidence. Requests for this therapy require review by a physician reviewer, medical director and/or the individual's healthplan.

References: [10] [15] [8] [16] [7] [6]

Multiple Myeloma • Solitary Plasmacytoma Guideline

IMRT for multiple myeloma or solitary plasmacytoma is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions or less** for palliative treatment for multiple myeloma
2. **ALL** of the following:
    a. **ANY** of the following:
        i. **18 to 20 fractions** for solitary plasmacytoma less than 5 cm in size.
        ii. **20 to 25 fractions** for definitive therapy for solitary plasmacytoma.
    b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
    c. Physical ability and clinical status of **ANY** of the following:
        i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
        ii. Karnofsky performance status (KPS) grade of 70 or more[6]

    References: [5] [14]

[5]The Lansky performance status scale can be utilized for ages 16 or less.
[6]The Lansky performance status scale can be utilized for ages 16 or less.

T-Cell Lymphomas Guideline (Breast Implant Associated Anaplastic Large Cell • NK/T-cell • Peripheral)

IMRT for t-cell lymphomas (breast implant associated anaplastic large cell, peripheral and NK/T-cell) is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **5 to 18 fractions** for palliative treatment
2. **ALL** of the following:
    a. **ANY** of the following:
        i. **12 to 18 fractions** for breast implant associated anaplastic large cell lymphoma for local residual disease
        ii. **10 to 18 fractions** peripheral t-cell lymphoma, for **ANY** of the following:
            A. In combination with HCT
            B. With consolidation after chemotherapy, complete response (CR) (Deauville score 1 to 3)
        iii. **20 to 25 fractions** for peripheral t-cell lymphoma, with consolidation after chemotherapy, partial response (PR) (Deauville score 4-5)
        iv. **20 to 28 fractions** for peripheral t-cell lymphoma and **ANY** of the following:
            A. Chemotherapy is **NOT** appropriate.
            B. Primary treatment is for refractory disease.
        v. **23 to 25 fractions** for NK/T-cell lymphoma and sequential chemoradiation for stage I to II disease.
        vi. **23 to 28 fractions** for NK/T-cell lymphoma in combination with chemotherapy.
        vii. **25 fractions** for NK/T-cell lymphoma in combination with dexamethasone, etoposide, ifosfamide and carboplatin (DeVIC)
        viii. **25 to 27 fractions** for NK/T-cell lymphoma in combination with cisplatin followed by etoposide, ifosfamide, cisplatin and dexamethasone (VIPD).
        ix. **25 to 28 fractions** for NK/T-cell lymphoma and **ANY** of the following:
            a. Primary treatment **AND** chemotherapy is **NOT** appropriate.
            b. Sandwich chemotherapy with gemcitabine, etoposide, pegaspargase and dexamethasone (GELAD).

x. **28 fractions** for NK/T-cell lymphoma and sandwich chemotherapy with pegaspargase, gemcitabine and oxaliplatin (P-GEMOX).

b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)

c. Physical ability and clinical status of **ANY** of the following:

i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less

ii. Karnofsky performance status (KPS) grade of 70 or more[7]

References: [2] [5] [13]

LCD 39553
See also, **LCD 39553 Radiation Therapies** at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

IMRT Blood, Bone and Lymphatic Cancer Summary of Changes

IMRT Blood, Bone and Lymphatic Cancer guideline had the following changes from 2024 to 2025 guideline:

- B-Cell Lymphomas:
  - Added the following based on NCCN evidence:
    - **2 fractions or less** for orbital or salivary gland marginal zone lymphoma
    - **12 to 15 fractions** for consolidation after chemotherapy, complete response for mantle cell lymphoma **OR** follicular lymphoma
    - **13 to 15 fractions** for prophylactic testicular irradiation
    - **18 fractions** for consolidation after chemotherapy, partial response for mantle cell lymphoma
  - Changed the following based on NCCN evidence:
    - **20 fractions** changed to **16 fractions** for EMZL, Orbital MZL, Salivary gland MZL
    - **10 fractions or less** changed to **12 fractions or less** for marginal zone lymphoma
  - Removed the following due to change in NCCN:

[7]The Lansky performance status scale can be utilized for ages 16 or less.

    - **2 fractions** may be considered as an alternative to 20 fractions for orbital or salivary gland marginal zone lymphomas

- Bone Cancer:
  - Added new indications based on NCCN evidence:
    - Chordoma, resectable extracranial disease (mobile spine or sacrum):
      - **10 to 25 fractions** for resectable disease, pre-operative
      - Postoperative after R1 or R2 resection **OR** treatment for unresectable disease
    - Chordoma, cranial (base of skull):
      - **10 to 25 fractions** for pre-operative therapy
  - Changed the following based on NCCN evidence:
    - **25 fractions or less** changed to **23 fractions or less** for Ewing sarcoma post/pre operative
    - **30 fractions or less** changed to **23 fractions or less** for definitive therapy
- Hodgkin Lymphoma change based on NCCN evidence:
  - **15 to 18 fractions** changed to **15 fractions** for bulky disease, all stages.
- T-Cell lymphoma change based on NCCN evidence:
  - **15 to 18 fractions** changed to **10 to 18 fractions or less** for PTCL
- Changed the following:
  - Chemotherapy to chemoimmunotherapy
- Citations updated, evidence review completed.
- Updated ECOG/KPS scoring from 1 to 2 and 80 to 70 respectively.
- Removed the following retired LCDs: L36773, L36711.

IMRT Blood, Bone and Lymphatic Cancer References

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2025 Intensity Modulated Radiation Therapy (IMRT) Breast Cancer

Radiation Therapy

Last Review Date: 07/11/2025
Previous Review Date: 10/03/2024
Guideline Initiated: 06/30/2019

Intensity-Modulated Radiation Therapy (IMRT) for Left-Sided Breast Cancer

IMRT for Left-Sided Breast Cancer Guideline

Intensity-modulated radiation therapy (IMRT) for left-sided breast cancer is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions or less** for palliative treatment
   Reference: [1]
2. **ALL** of the following:
   a. **ANY** of the following:
      i. **5 fractions or less** for partial breast irradiation of ductal carcinoma in situ and **ALL** of the following:
         A. Age is 40 years or more.
         B. Tumor grade is low to intermediate with negative margins.
         C. Tumor size is 2 cm or less.
      ii. Invasive ductal carcinoma and **ANY** of the following:
         A. **5 fractions or less** for partial breast irradiation and **ALL** of the following:
            I. Age is 40 years or more.
            II. Estrogen receptor (ER) positive histology
            III. Grade I to II disease
            IV. Tumor size is 2 cm or less.
            V. **Negative** margins
            VI. **Negative** nodes

VII. **No** lymphovascular space invasion (LVSI)

B. **28 fractions or less** and **ANY** of the following:

I. Locally advanced (stage III)

II. Post-mastectomy

iii. **25 fractions or less** for regional nodes treatment

b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)

c. Physical ability and clinical status of **ANY** of the following:

i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less

ii. Karnofsky performance status (KPS) grade of 70 or more[8]

References: [4] [3] [2] [5]

LCD 39553
See also, **LCD 39553 Radiation Therapies** at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

IMRT Breast Cancer Summary of Changes

IMRT Breast Cancer guideline from 2024 to 2025 had the following changes:

- Added the following based on NCCN evidence:
  - **25 fractions or less** for regional nodes treatment
- Invasive ductal carcinoma:
  - Added the following based on NCCN evidence:
    - **Negative** margins
    - **Negative** nodes
    - **No** lymphovascular space invasion (LVSI)
    - **25 fractions or less** changed to **28 fractions or less** for stage 3 or post mastectomy
- Partial breast irradiation of ductal carcinoma in situ:

[8]The Lansky performance status scale can be utilized for ages 16 or less.

  - Added the following based on NCCN evidence:
    - Negative margins to tumor grade is low to intermediate
  - Changed the following based on NCCN evidence:
    - Age is 40 years or less changed to 40 years or more
  - Removed the following based on NCCN evidence:
    - **20 fractions or less** for early stage (I to II) whole breast
- Removed the following based on NCCN evidence:
  - **20 fractions or less** for early stage (I to II) whole breast
- Citations updated, evidence review completed.
- Updated ECOG/KPS scoring from 1 to 2 and 80 to 70 respectively.
- Removed the following retired LCDs: L36773, L36711.

IMRT Breast Cancer References

[1] Arscott, W.T., Emmett, J., . . . Jones, J.A. (2019). Palliative Radiotherapy. *Hematology/ Oncology Clinics of North America, 34*(1), 253-277.

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2025 Intensity Modulated Radiation Therapy (IMRT) Central Nervous System Cancer

Radiation Therapy

Last Review Date: 07/11/2025

Previous Review Date: 10/03/2024

Guideline Initiated: 06/30/2019

Intensity-Modulated Radiation Therapy (IMRT) for Central Nervous System Cancers

Brain Metastases Guideline

Intensity-modulated radiation therapy (IMRT) for brain metastases:

- The current therapy remains uncertain and requires review by a physician reviewer, medical director and/or individual health plan to determine medical appropriateness.

Reference: [5]

Meningioma Guideline

IMRT for meningioma is considered medically appropriate when the documentation demonstrates **ALL** of the following:

1. **ANY** of the following:
    a. **27 fractions or less** for World Health Organization (WHO) Grade 1 meningiomas
    b. **27-30 fractions** for WHO Grade 2 meningiomas
    c. **30-35 fractions** for WHO Grade 3 meningiomas
2. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
3. Physical ability and clinical status of **ANY** of the following:
    a. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
    b. Karnofsky performance status (KPS) grade of 70 or more[9]

    References: [3] [5]

Metastatic Spine Tumors Guideline

IMRT for metastatic spine tumors is considered medically appropriate when the documentation demonstrates treatment of **10 fractions or less.**
References: [1] [5]

Primary Brain and Spinal Tumors Guideline

IMRT for a primary brain and spinal tumors is considered medically appropriate when the documentation demonstrates **ALL** of the following:

[9]The Lansky performance status scale can be utilized for ages 16 or less.

1. **ANY** of the following:
    a. **10 fractions or less** for recurrent glioblastoma
    b. **20 fractions or less** for craniospinal ependymoma, to the whole brain and spine (to bottom of thecal sac)
    c. **28 fractions or less** for adult medulloblastoma
    d. **30 fractions or less** for **ANY** of the following:
        i. Adult intracranial ependymoma
        ii. Adult spinal ependymoma
        iii. Craniospinal ependymoma, to the primary intracranial site
        iv. Glioma, WHO grade 2 **OR** grade 3
        v. Primary spinal cord tumors at, above or below the conus medullaris
    e. **31 fractions or less** for high grade diffuse glioma **ANY** of the following:
        i. Astrocytoma grade 3
        ii. Brainstem or spinal cord involvement
2. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
3. Physical ability and clinical status of **ANY** of the following:
    a. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
    b. Karnofsky performance status (KPS) grade of 70 or more[10]

References: [4] [5]

LCD 39553
See also, **LCD 39553 Radiation Therapies** at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

IMRT CNS Cancer Summary of Changes

IMRT CNS Cancer guideline from 2024 to 2025 had the following changes:

- Added the following to keep in line with NCCN evidence:
    - **10 fractions or less** for palliative treatment

[10]The Lansky performance status scale can be utilized for ages 16 or less.

  - **31 fractions or less** for high grade diffuse glioma and **ANY** of the following: astrocytoma grade 3, brainstem or spinal cord involvement under primary brain and spinal Tumors.
  - WHO meningioma grading
- Citations updated, evidence review completed.
- Updated ECOG/KPS scoring from 1 to 2 and 80 to 70 respectively.
- Removed the following retired LCDs: L36773, L36711

IMRT CNS Cancer References

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[2] Arscott, W.T., Emmett, J., . . . Jones, J.A. (2019). Palliative Radiotherapy. *Hematology/Oncology Clinics of North America, 34*(1), 253-277.

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2025 Intensity Modulated Radiation Therapy (IMRT) Gastrointestinal Cancer

Radiation Therapy

Last Review Date: 07/11/2025

Previous Review Date: 10/03/2024

Guideline Initiated: 06/30/2019

Intensity-Modulated Radiation Therapy (IMRT) for Gastrointestinal Cancer

Anal Carcinoma Guideline

Intensity-modulated radiation therapy (IMRT) for anal carcinoma is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions or less** for palliative treatment
2. **ALL** of the following:
    a. **ANY** of the following:
        i. **20 to 30 fractions** for nodal disease
        ii. **25 to 33 fractions** for primary disease
        iii. **33 fractions or less** for **ANY** of the following:
            i. N1
            ii. T1 to T2 with residual disease
            iii. T3 to T4
    b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
    c. Physical ability and clinical status of **ANY** of the following:
        i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
        ii. Karnofsky performance status (KPS) grade of 70 or more[11]

    References: [12] [13] [3] [11] [10] [7]

Colon Cancer Guideline

IMRT for colon cancer is considered medically appropriate when the documentation demonstrates **ALL** of the following:

1. **28 fractions or less** for neoadjuvant therapy administered with concurrent chemotherapy for **EITHER** of the following:
    a. Initially unresectable disease
    b. Non-metastatic, T4 disease that is medically inoperable.

[11]The Lansky performance status scale can be utilized for ages 16 or less.

2. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
3. Physical ability and clinical status of **ANY** of the following:
    a. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
    b. Karnofsky performance status (KPS) grade of 70 or more[12]

References: [8] [4]

Esophageal and Esophagogastric Junction Cancers Guideline

IMRT for esophageal and esophagogastric junction cancers is considered medically appropriate when the documentation demonstrates **ALL** of the following:

1. **28 fractions or less** for **ANY** of the following:
    a. Definitive treatment
    b. Post-operative therapy
    c. Pre-operative therapy
2. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
3. Physical ability and clinical status of **ANY** of the following:
    a. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
    b. Karnofsky performance status (KPS) grade of 70 or more[13]

References: [14] [1] [17]

Gastric Cancer Guideline

IMRT for gastric cancer is considered medically appropriate when the documentation demonstrates **ALL** of the following:

1. **28 fractions or less** for pre-operative **OR** post-operative therapy
2. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
3. Physical ability and clinical status of **ANY** of the following:
    a. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
    b. Karnofsky performance status (KPS) grade of 70 or more[14]

References: [9] [2]

[12]The Lansky performance status scale can be utilized for ages 16 or less.
[13]The Lansky performance status scale can be utilized for ages 16 or less.
[14]The Lansky performance status scale can be utilized for ages 16 or less.

Rectal Cancer Guideline

IMRT for rectal cancer is considered medically appropriate when the documentation demonstrates **ALL** of the following:

1. Concurrent chemotherapy and **ANY** of the following:
    a. **5 fractions** for pre-operative, short-course therapy
    b. **25 to 30 fractions** for **ANY** of the following:
        i. Local excision after radiation therapy
        ii. Non-operative management
        iii. Pelvic radiation for resectable disease
    c. **25 to 31 fractions** for neoadjuvant chemoradiation
    d. Unresectable disease:
        i. The role of this therapy is uncertain/unclear in the current evidence. Requests for this therapy require review by a physician reviewer, medical director and/or the individual's healthplan.
2. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
3. Physical ability and clinical status of **ANY** of the following:
    a. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
    b. Karnofsky performance status (KPS) grade of 70 or more[15]

References: [9] [5] [15] [16]

Small Bowel Adenocarcinoma Guideline

IMRT for small bowel adenocarcinoma is considered medically appropriate when the documentation demonstrates **ALL** of the following:

1. **27 fractions or less**
2. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
3. Physical ability and clinical status of **ANY** of the following:
    a. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
    b. Karnofsky performance status (KPS) grade of 70 or more[16]

References: [9] [6]

[15]The Lansky performance status scale can be utilized for ages 16 or less.
[16]The Lansky performance status scale can be utilized for ages 16 or less.

LCD 39553
See also, **LCD 39553 Radiation Therapies** at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

IMRT Gastrointestinal Cancer Summary of Changes

IMRT Gastrointestinal Cancer guideline from 2024 to 2025 had the following changes:

- Anal cancer:
  - Changed the following based on NCCN evidence:
    - **25 fractions or less** changed to **25 to 33 fractions** for primary disease
    - **25 fractions or less** changed to **20 to 30 fractions** for nodal disease
- Rectal cancer:
  - Changed the following based on NCCN evidence:
    - **25 to 28 fractions** changed to **25 to 31 fractions** for neoadjuvant chemoradiation
    - Unresectable disease changed to current therapy uncertain
- Small Bowel Adenocarcinoma:
  - Changed the following based on NCCN evidence:
    - **28 fractions or less** changed to **27 fractions or less**
- Citations updated, evidence review completed.
- Updated ECOG/KPS scoring from 1 to 2 and 80 to 70 respectively.
- Removed the following retired LCDs: L36773, L36711.

IMRT Gastrointestinal Cancer References

[1] Ajani, J.A., D'Amico, T.A., . . . Yoon, H. (2025). Esophageal or Esophagogastric Junction Cancers Version 3.2025. *National Comprehensive Cancer Network*. Retrieved: May 2025. https://www.nccn.org/professionals/physician_gls/pdf/esophageal.pdf

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[4] Benson, A.B., Venook, A.P., . . . Wu, C. (2025). Colon Cancer Version 3.2025. *National Comprehensive Cancer Network*. Retrieved: May 2025. https://www.nccn.org/professionals/physician_gls/pdf/colon.pdf

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[16] Wo, J.Y., Anker, C.J., . . . Das, P. (2024). Radiation Therapy for Rectal Cancer: An ASTRO Clinical Practice Guideline Focused Update. *Practical Radiation Oncology, 15*(2), p124-143.

[17] Worrell, S. G., Goodman, K.A., . . . Willett, C. (2024). STS/ASTRO Updated Guideline on Multimodality Therapy for Locally-Advanced Cancer of the Esophagus or Gastroesophageal Junction. *Practical Radiation Oncology, 14*, 28-46.

2025 Intensity Modulated Radiation Therapy (IMRT) Genitourinary Cancer

Radiation Therapy

Last Review Date: 07/11/2025
Previous Review Date: 10/03/2024
Guideline Initiated: 06/30/2019

Intensity-Modulated Radiation Therapy (IMRT) for Genitourinary Cancer

Bladder Carcinoma Guideline

Intensity-modulated radiation therapy (IMRT) for bladder carcinoma is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions or less** for palliative treatment
2. **ALL** of the following:
    a. **33 fractions or less** to all or part of the bladder, with **OR** without concurrent chemotherapy
    b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
    c. Physical ability and clinical status of **ANY** of the following:
        i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
        ii. Karnofsky performance status (KPS) grade of 70 or more[17]

    References: [11] [7] [4]

Kidney Cancer Guideline

IMRT for kidney cancer:

- The current therapy remains uncertain and requires review by a physician reviewer, medical director and/or individual health plan to determine medical appropriateness.

[17]The Lansky performance status scale can be utilized for ages 16 or less.

References: [2] [3] [6] [13]

Penile Cancer Guideline

IMRT for penile cancer is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions or less** for palliative treatment
2. **ALL** of the following:
    a. **ANY** of the following:
        i. **30 fractions or less** post penectomy and **ALL** of the following:
            A. **NO** gross disease, treating the primary site and scar
            B. Treatment of the inguinal and pelvic lymph nodes if **NO/ INADEQUATE** lymph node dissection
        ii. **35 fractions or less** post circumcision and **ANY** of the following:
            A. Adjuvant therapy for positive inguinal or pelvic lymph nodes
            B. Primary therapy
            C. T1 to 2, N0 disease
            D. T3 to 4 **OR** N+ (surgically unresectable) disease
    b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
    c. Physical ability and clinical status of **ANY** of the following:
        i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
        ii. Karnofsky performance status (KPS) grade of 70 or more[18]

    References: [8] [1] [14]

Prostate Cancer Guideline

IMRT for prostate cancer is considered medically appropriate when the medical documentation demonstrates **ANY** of the following:

1. **5 fractions or less** for palliative treatment
2. **ALL** of the following:
    a. **ANY** of the following:

[18]The Lansky performance status scale can be utilized for ages 16 or less.

i. **36 fractions or less** post prostatectomy and **ANY** of the following:
   A. Adjuvant therapy and **ANY** of the following:
      I. pT3a disease
      II. Positive margins
      III. Seminal vesicle involvement
      IV. Within 1 year of radical prostatectomy **AND** operative side effects have improved/stabilized
   B. Salvage radiation therapy and **ANY** of the following:
      I. Prostate-specific antigen (PSA) remains persistently detectable after radical prostatectomy
      II. Undetectable PSA that becomes detectable **AND** increases on 2 measurements

ii. Prostate cancer and **ALL** of the following:
   i. Clinical condition includes **ANY** of the following:
      A. Favorable intermediate risk
      B. High/very high risk
      C. Unfavorable intermediate risk
   ii. Treatment includes **ANY** of the following:
      A. **7 fractions or less** for ultra-hypofractionation
      B. **28 fractions or less** for moderate hypofractionation
      C. **45 fractions or less** for conventional fractionation

iii. Prostate cancer, low volume M1[a] disease and **ANY** of the following:
   A. **6 fractions or less** for ultra hypo-fractionation
   B. **20 fractions or less** for conventional fractionation

iv. Prostate cancer, regional N1 disease and **ANY** of the following:
   A. **28 fractions or less** for moderate hypofractionation
   B. **45 fractions or less** for conventional fractionation

b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)

c. Physical ability and clinical status of **ANY** of the following:
   i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less

ii. Karnofsky performance status (KPS) grade of 70 or more[19]

References: [5] [15] [16] [12]

Pure Testicular Seminoma Guideline

IMRT for pure testicular seminoma is considered medically appropriate when the documentation demonstrates **ALL** of the following:

1. **ANY** of the following:
    a. **15 fractions or less** for stage IIA and **ALL** of the following:
        i. **NO** history of radiation therapy
        ii. **NO** horseshoe (pelvic) kidney
        iii. **NO** inflammatory bowel disease
        iv. Primary disease treatment
    b. **17 fractions or less** for Stage IA **OR** IB
    c. **18 fractions** for stage IIB and **ALL** of the following:
        i. **NO** history of radiation therapy
        ii. **NO** horseshoe (pelvic) kidney
        iii. **NO** inflammatory bowel disease
        iv. Primary disease treatment
2. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
3. Orchiectomy wound is fully healed
4. Physical ability and clinical status of **ANY** of the following:
    a. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
    b. Karnofsky performance status (KPS) grade of 70 or more[20]

Reference: [9]

Urethral Carcinoma Guideline

IMRT for urethral carcinoma is considered medically appropriate when the documentation demonstrates **ALL** of the following:

1. **ANY** of the following:

[19]The Lansky performance status scale can be utilized for ages 16 or less.
[20]The Lansky performance status scale can be utilized for ages 16 or less.

a. **33 fractions or less** for gross nodal disease of **EITHER** of the following:
   i. cT3 to T4 disease
   ii. Lymph node positive disease
b. **35 fractions or less** for definitive therapy for **ANY** of the following:
   i. cT2 to cN0 disease
   ii. cT3 to T4 disease
   iii. Gross residual disease for post-operative adjuvant treatment
   iv. Lymph node positive disease
c. **37 fractions or less** for recurrent disease

2. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
3. Physical ability and clinical status of **ANY** of the following:
   a. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
   b. Karnofsky performance status (KPS) grade of 70 or more[21]

Reference: [7]

LCD 39553
See also, **LCD 39553 Radiation Therapies** at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

IMRT Genitourinary Cancer Summary of Changes

IMRT Genitourinary Cancer guideline from 2024 to 2025 had the following changes:

- Penile cancer:
  - Changed the following based on NCCN evidence:
    - **33 fractions or less** post penectomy changed to **30 fractions or less**
    - **39 fractions or less** post circumcision changed to **35 fractions or less**
  - Removed the following based on evidence change:
    - Post circumcision, With or **WITHOUT** concurrent chemotherapy
- Testicular Cancer:

[21]The Lansky performance status scale can be utilized for ages 16 or less.

  - Changed the following based on NCCN evidence:
    - **20 fractions or less** for stage IIB changed to **18 fractions or less**
    - **17 fractions or less** for stage IIA changed to **15 fractions or less**
- Urethra Carcinoma:
  - Added the following based on NCCN evidence
    - **37 fractions or less** for recurrent disease
- Citations updated, evidence review completed.
- Updated ECOG/KPS scoring from 1 to 2 and 80 to 70 respectively.
- Removed the following retired LCDs: L36773, L3671.

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2025 Intensity Modulated Radiation Therapy (IMRT) Gynecologic Cancer

Radiation Therapy

Last Review Date: 07/11/2025
Previous Review Date: 10/03/2024
Guideline Initiated: 06/30/2019

Intensity-Modulated Radiation Therapy (IMRT) for Gynecologic Cancer

Cervical Cancer Guideline

Intensity-modulated radiation therapy (IMRT) for cervical cancer is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions or less** for palliative treatment
   References: [1] [15]
2. **ALL** of the following:
   a. **25 fractions or less** for **ANY** of the following:
      i. Definitive therapy for an intact cervix (eg, **NO** surgical intervention)
      ii. Post-hysterectomy adjuvant radiation therapy
      iii. Microscopic lymph node disease
   b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
   c. Physical ability and clinical status of **ANY** of the following:
      i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
      ii. Karnofsky performance status (KPS) grade of 70 or more[22]

   References: [1] [15] [8]

Ovarian Cancer (Including Fallopian Tube Cancer and Primary Peritoneal Cancer) Guideline

IMRT for ovarian cancer (including fallopian tube cancer and primary peritoneal cancer) is considered medically appropriate when the documentation demonstrates **10 fractions for less** for palliative treatment.[23]
References: [5] [7]

Uterine Cancer Guideline

Intensity-modulated radiation therapy (IMRT) for uterine cancer is considered medically appropriate when the documentation demonstrates **ANY** of the following:

[22]The Lansky performance status scale can be utilized for ages 16 or less.

[23]Whole abdominal radiation is rarely used for epithelial ovarian, primary peritoneal and fallopian tube cancers per the National Comprehensive Cancer Network (NCCN), and is not included as a treatment recommendation in the NCCN guidelines for ovarian cancer. Palliative localized radiation therapy is an option for symptom control. [5]

1. **10 fractions or less** for palliative treatment
   References: [7] [2]
2. **ALL** of the following:
   a. **ANY** of the following:
      1. **25 fractions or less** for **ANY** of the following:
         a. Adjuvant therapy
         b. Microscopic disease
         c. Neoadjuvant therapy
      2. **33 fractions or less** for gross nodal disease
      3. **35 fractions or less** for post-operatively gross residual disease
   b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
   c. Physical ability and clinical status of **ANY** of the following:
      i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
      ii. Karnofsky performance status (KPS) grade of 70 or more[24]

   References: [2] [9] [7] [10]

Vaginal Cancer Guideline

Intensity-modulated radiation therapy (IMRT) for vaginal cancer is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **1 fraction** for palliative treatment
   Reference: [12] [3]
2. **ALL** of the following:
   a. **ANY** of the following:
      i. **25 fractions or less** post radical hysterectomy with positive nodes.
      ii. **30 fractions or less** to the postoperative bed with **BOTH** of the following:
         A. EBRT boost is planned.
         B. Margins are close **OR** positive
      iii. **35 fractions or less** for gross nodal involvement

[24]The Lansky performance status scale can be utilized for ages 16 or less.

b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)

c. Physical ability and clinical status of **ANY** of the following:

i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less

ii. Karnofsky performance status (KPS) grade of 70 or more[25]

References: [3] [13] [8] [12]

Vulvar Cancer Guideline

Intensity-modulated radiation therapy (IMRT) for vulvar cancer is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions or less** for palliative treatment
[4] [11]
2. **ALL** of the following:
    a. **ANY** of the following:
        i. Squamous cell **OR** adenocarcinoma of the vulva and **ANY** of the following:
            A. **28 fractions or less** for **ANY** of the following:
                I. Adjuvant treatment
                II. Primary surgical bed, post-operatively **AND** negative margins
                III. Uninvolved inguinofemoral lymph nodes
            B. **31 fractions or less** for positive inguinofemoral lymph nodes and **ANY** of the following:
                I. Gross residual disease
                II. **No** extracapsular extension (ECE)
            C. **33 fractions or less** for primary surgical bed, post-operatively close or positive margins
            D. **36 fractions or less** for **ANY** of the following:
                I. Positive inguinofemoral lymph nodes with **OR** without extracapsular disease
                II. Unresectable disease

[25]The Lansky performance status scale can be utilized for ages 16 or less.

E. **39 fractions or less** for **ANY** of the following:

I. Bulky disease

II. Gross primary vulvar disease

III. Gross residual lymph nodes

IV. Persistent primary disease

V. Unresectable lymph nodes

ii. Vulvar cancer **AND** vulvovaginal melanoma and **ANY** of the following:

A. **25 fractions or less** for unresectable, gross disease, followed by brachytherapy boost.

B. **33 fractions or less** for **ANY** of the following:

I. Adjuvant therapy and **ALL** of the following:

1. Close **OR** positive margins
2. Last surgery was less than 6 weeks ago
3. **NO** adjuvant systemic therapy was received.
4. **NOT** a surgical candidate
5. Recurrent disease

II. Recurrent disease

III. Unresectable, gross disease

b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)

c. Physical ability and clinical status of **ANY** of the following:

i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less

ii. Karnofsky performance status (KPS) grade of 70 or more[26]

References: [4] [11]

LCD 39553
See also, **LCD 39553 Radiation Therapies** at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

[26]The Lansky performance status scale can be utilized for ages 16 or less.

IMRT Gynecologic Cancer Summary of Changes

IMRT Gynecologic Cancer guideline from 2024 to 2025 had the following changes:

- Uterine Cancer:
  - Added new indication based on NCCN evidence:
    - **35 fractions or less** for gross residual disease post-operatively
  - Changed the following based on NCCN evidence:
    - **30 fractions or less** changed to **33 fractions or less** for gross nodal disease
- Vulvar Cancer:
  - Added new indications based on NCCN evidence:
    - **31 fractions or less** for positive inguinofemoral lymph nodes
  - Changed the following indication based on NCCN evidence:
    - **36 fractions or less** changed to **33 fractions or less** for primary surgical bed, post-operatively close or positive margins
- Citations updated, evidence review completed.
- Updated ECOG/KPS scoring from 1 to 2 and 80 to 70 respectively.
- Removed the following retired LCDs: L36773, L36711.

IMRT Gynecologic Cancer References

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2025 Intensity Modulated Radiation Therapy (IMRT) Head and Neck Cancer

Radiation Therapy

Last Review Date: 07/11/2025
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Guideline Initiated: 06/30/2019

Intensity-Modulated Radiation Therapy (IMRT) for Head and Neck Cancer

Glottal • Hypopharyngeal • Laryngeal • Mucosal Melanoma • Nasopharyngeal • Occult • Oral Cavity • Oropharyngeal • Salivary Gland • Secondary Squamous Cell Cancer of the Neck Lymph Glands • Sinus Cavity Tumors Guideline

IMRT for glottal, hypopharyngeal, laryngeal, mucosal melanoma, nasopharyngeal, occult, oral cavity, oropharyngeal, salivary gland, secondary squamous cell cancer of the neck lymph glands and sinus cavity tumors is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **20 fractions or less** for palliative treatment of **ANY** of the following:
    a. Advanced disease, when curative intent treatment is **NOT** appropriate.
    b. Medically is **NOT** suitable for radiation treatment.
    c. Relief or prevention of locoregional symptoms
    d. Widely metastatic disease

    References: [8] [7] [1]
2. **ALL** of the following:
    a. **ANY** of the following:
        i. **30 fractions or less** for post-operative reirradiation, for **ANY** of the following:
            A. Ethmoid sinus tumor
            B. Glottal
            C. Hypopharynx
            D. Maxillary sinus tumor
            E. Mucosal melanoma
            F. Occult primary
            G. Oral cavity

H. Oropharynx

I. Salivary gland

J. Supraglottic larynx

K. Very advanced head and neck cancer

ii. **33 fractions or less** for post-operative therapy for **ANY** of the following:

A. Ethmoid sinus tumor

B. Glottic larynx

C. Hypopharynx

D. Maxillary sinus tumor

E. Mucosal melanoma

F. Occult primary

G. Oral cavity

H. Oropharynx

I. Salivary gland

J. Supraglottic larynx

K. Very advanced head and neck cancer

iii. **35 fractions or less** for concurrent therapy for **ANY** of the following:

A. Ethmoid sinus tumor

B. Glottic larynx

C. Hypopharynx

D. Maxillary sinus tumor

E. Nasopharynx

F. Oropharynx

G. Occult primary

H. Supraglottic larynx

I. Very advanced head and neck cancer

iv. **35 fractions or less** for definitive therapy **OR** reirradiation for **ANY** of the following:

A. Ethmoid sinus tumor

B. Glottic layrynx
C. Hypopharynx
D. Maxillary sinus tumor
E. Mucosal melanoma
F. Nasopharynx
G. Occult primary
H. Oral cavity
I. Oropharynx
J. Salivary gland
K. Supraglottic larynx

v. **36 fractions or less** for definitive therapy of very advanced head and neck cancer

vi. **54 fractions or less** for hyperfractionation of locally advanced nasopharyngeal carcinoma

b. IMRT plan reduces local organ toxicity (eg, heart, kidneys, lungs, stomach)

c. Physical ability and clinical status of **ANY** of the following:

i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less

ii. Karnofsky performance status (KPS) grade of 70 or more[27]

References: [8] [7] [1]

Retinoblastoma Guideline

IMRT for retinoblastoma is considered medically appropriate when the documentation demonstrates **ALL** of the following:

1. **23 fractions or less**
2. IMRT plan reduces local organ toxicity (eg heart, kidneys, lungs, stomach)
3. Physical ability and clinical status of **ANY** of the following:
   a. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
   b. Karnofsky performance status (KPS) grade of 70 or more[28]

[27]The Lansky performance status scale can be utilized for ages 16 or less.
[28]The Lansky performance status scale can be utilized for ages 16 or less.

References: [2] [6]

Thyroid Cancer Guideline

IMRT for anaplastic and non-anaplastic thyroid cancer is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions or less** for palliative treatment for **ANY** of the following:
    a. Anaplastic thyroid cancer for **ANY** of the following:
        i. Bony metastases
        ii. Soft tissue metastases
        iii. Neck metastases
    b. Non-anaplastic thyroid cancer for bony **OR** soft tissue metastases with widely metastatic disease

    References: [4] [3] [5]
2. **15 fractions or less** for palliative treatment of the neck
    References: [4] [3] [5]
3. **ALL** of the following:
    a. **ANY** of the following:
        i. **27 fractions or less** to anaplastic elective nodal regions for **ANY** of the following:
            A. Adjuvant therapy after R0 or R1 resection
            B. Salvage therapy after R2 resection **OR INOPERABLE** tumor
        ii. **28 fractions or less** to non-anaplastic elective nodal regions for **ANY** of the following:
            A. Adjuvant therapy for high risk disease after R1 resection.
            B. Salvage therapy after R2 resection **OR INOPERABLE** tumor
        iii. **33 fractions or less** for **ANY** of the following:
            A. Anaplastic disease of microscopic disease/high risk regions for **ANY** of the following:
                I. Adjuvant therapy after R0 or R1 resection
                II. Salvage therapy after R2 resection **OR INOPERABLE** tumor
            B. Non-anaplastic disease for **ANY** of the following:

I. Adjuvant therapy for high risk, microscopic disease after R1 resection

II. Salvage therapy after R2 resection **OR INOPERABLE** tumor for microscopic disease

iv. **35 fractions or less** for thyroid cancer and **ALL** of the following:

A. Anaplastic disease or non-anaplastic disease

B. Gross disease

C. Salvage therapy after R2 resection **OR INOPERABLE** tumor

b. IMRT plan reduces local organ toxicity (eg heart, kidneys, lungs, stomach)

c. Physical ability and clinical status of **ANY** of the following:

i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less

ii. Karnofsky performance status (KPS) grade of 70 or more[29]

References: [4] [3] [5]

Uveal Melanoma Guideline

IMRT for uveal melanoma:

1. The role of this therapy is uncertain/unclear in the current evidence. Requests for this therapy require review by a physician reviewer, medical director and/or the individual's healthplan.

References: [10] [9]

LCD 39553
See also, **LCD 39553 Radiation Therapies** at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

IMRT Head and Neck Cancer Summary of Changes

IMRT Head and Neck Cancer guideline from 2024 to 2025 had the following changes:

- Added the following indications based on NCCN/ASTRO evidence:
  - **35 fractions or less** for concurrent therapy for oropharyngeal

[29]The Lansky performance status scale can be utilized for ages 16 or less.

  - **35 fractions or less** for very advanced head and neck cancer
  - **36 fractions or less** for definitive therapy of very advanced head and neck cancer
  - **54 fractions or less** for hyperfractionation for locally advanced nasopharyngeal carcinoma
- Changed the following based on NCCN evidence:
  - Palliative care new indications:
    - Medically unsuitable for standard treatment
    - Relief or prevention of locoregional symptoms
  - Palliative care changed from **10 fractions or less** to **20 fractions or less**
  - Rephrased the following:
    - Laryngeal to supraglottic laryngeal
    - "Symptomatic" metastatic disease to "Widely" metastatic disease
  - Sinus cavity subdived into ethmoid sinus tumor and maxillary sinus tumor
- Removed the following due to change in evidence:
  - Secondary squamous cell cancer of the neck glands
- Thyroid cancer:
  - Added the following based on NCCN evidence:
    - Added the term "thyroid cancer" to **35 fractions or less** indication
    - Added new indication: **15 fractions or less** for palliative treatment of the neck
  - Removed the following based on evidence change:
    - Gross disease removed from salvage therapy of non-anaplastic disease
- Removed the following retired LCDs: L36773, L36711.

IMRT Head and Neck Cancer References

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2025 Intensity Modulated Radiation Therapy (IMRT) Hepatobiliary Cancer

Radiation Therapy

Last Review Date: 07/11/2025
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Guideline Initiated: 06/30/2019

Intensity-Modulated Radiation Therapy (IMRT) for Ampullary Adenocarcinoma • Biliary Tract Cancer • Hepatocellular Cancer • Pancreatic Cancer

Ampullary Adenocarcinoma Guideline

IMRT for ampullary adenocarcinoma is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions or less** for palliative treatment
   References: [8] [10]
2. **ALL** of the following:
   a. **EITHER** of the following:
      i. **25 to 28 fractions** for neoadjuvant/adjuvant treatment
      ii. **25 to 30 fractions** for **ANY** of the following:
         A. Locally advanced disease for chemoradiation
         B. Localized disease
         C. Recurrent disease
         D. Unresectable disease
   b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
   c. Physical ability and clinical status of **ANY** of the following:
      i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
      ii. Karnofsky performance status (KPS) grade of 70 or more[30]

   References: [8] [10]

Biliary Tract Cancer Guideline

IMRT for biliary tract cancer is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions for less** for palliative treatment
   References: [2] [10]
2. **ALL** of the following:

[30]The Lansky performance status scale can be utilized for ages 16 or less.

a. Clinical condition includes **ANY** of the following:
    i. Unresectable tumors and **ANY** of the following:
        A. **15 fractions or less** for hypofractionation
        B. **30 fractions or less** for chemoradiation
        C. **35 fractions or less** for conventional fractionation
    ii. **30 fractions or less** for post-operative treatment of extrahepatic cholangiocarcinoma and gallbladder cancer
b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
c. Physical ability and clinical status of **ANY** of the following:
    i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
    ii. Karnofsky performance status (KPS) grade of 70 or more[31]

References: [2] [10]

Hepatocellular Cancer Guideline

IMRT for hepatocellular cancer (HCC) is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions or less** for palliative treatment
   References: [1] [3] [4] [10]
2. **25 to 33 fractions or less** for conventional fractionation and unresectable **OR** inoperable HCC and **ALL** of the following:
    a. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
    b. Physical ability and clinical status of **ANY** of the following:
        i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
        ii. Karnofsky performance status (KPS) grade of 70 or more[32]

    References: [1] [3] [4] [10]

Pancreatic Cancer Guideline

IMRT for pancreatic cancer is considered medically appropriate when the documentation demonstrates **ANY** of the following:

[31]The Lansky performance status scale can be utilized for ages 16 or less.
[32]The Lansky performance status scale can be utilized for ages 16 or less.

1. **10 fractions or less** for palliative treatment
   References: [6] [7] [9] [11] [10]
2. **ALL** of the following:
   a. **25 fractions or less** for **ANY** of the following:
      i. Locally advanced disease
      ii. Recurrent disease
   b. **27 fractions or less** for resectable/borderline resectable disease
   c. **28 fractions or less** for resected disease
   d. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
   e. Physical ability and clinical status of **ANY** of the following:
      i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
      ii. Karnofsky performance status (KPS) grade of 70 or more[33]

   References: [6] [7] [9] [11] [10]

LCD 39553
See also, **LCD 39553 Radiation Therapies** at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

IMRT Hepatobiliary Cancer Summary of Changes

IMRT Hepatobiliary Cancer guideline from 2024 to 2025 had the following changes:

- Changed the following based on NCCN evidence:
  - **28 fractions or less** changed to **30 fractions or less** for chemoradiation under biliary tract cancer
  - **30 fractions or less** changed to **35 fractions or less** for conventional fractionation under biliary tract cancer
  - **28 fractions or less** changed to **25 to 33 fractions** for conventional fractionation and unresectable **OR** inoperable HCC under hepatocellular cancer
  - **27 fractions or less** changed to **25 fraction or less** for locally advanced disease **OR** recurrent disease under pancreatic adenocarcinoma

[33]The Lansky performance status scale can be utilized for ages 16 or less.

  - **27 fractions or less** changed to **28 fractions or less** for resected disease under pancreatic adenocarcinoma

- Citations updated, evidence review completed.
- Updated ECOG/KPS scoring from 1 to 2 and 80 to 70 respectively.
- Removed the following retired LCDs: L36773, L36711.

IMRT Hepatobiliary Cancer References

[1] Apisarnthanarax, S., Aisling, B., . . . Cardenes, H. (2022). External Beam Radiation Therapy for Primary Liver Cancers: An ASTRO Clinical Practice Guideline. *Practical Radiation Oncology, 12*(1), 28-51.

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[10] Williams, G.R., Manjunath, S.H., . . . Jones, J. (2021). Palliative Radiotherapy for Advanced Cancers. *Surgical Oncology Clinics of North America, 30*(3), 1-18.

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2025 Intensity Modulated Radiation Therapy (IMRT) Neuroendocrine and Adrenal Tumors

Radiation Therapy

Last Review Date: 07/11/2025
Previous Review Date: 10/03/2024
Guideline Initiated: 10/03/2024

Intensity-Modulated Radiation Therapy (IMRT) Neuroendocrine and Adrenal Tumors

Neuroendocrine and Adrenal Tumors Guideline

Intensity-modulated radiation therapy (IMRT) for neuroendocrine and adrenal tumors is considered medically appropriate when the documentation demonstrates **10 fractions or less** for palliation.
References: [3] [4] [2] [1]

LCD 39553
See also, **LCD 39553 Radiation Therapies** at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

IMRT Neuroendocrine and Adrenal Tumors Summary of Changes

IMRT Neuroendocrine and Adrenal Tumors guideline from 2024 to 2025 had the following changes:

- Citations updated, evidence review completed.
- Removed the following retired LCDs: L36773, L36711.

IMRT Neuroendocrine and Adrenal Tumors references

[1] Bergsland, E.K., Pasieka, J., . . . Chan, J.A. (2024). NANETS Guidelines, 2024 Edition. *North American Neuroendocrine Tumor Society*. Retrieved: May 2025. https://nanets.net/net-guidelines-library

[2] Bergsland, E., Rose, J. B., . . . Zhen, D.B. (2025). Neuroendocrine and Adrenal Tumors 1.2025. *National Comprehensive Cancer Network*. Retrieved: May 2025. https://www.nccn.org/professionals/physician_gls/pdf/neuroendocrine.pdf

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[4] Eads, J.R., Halfdanarson, T.R., . . .Chan, J.A. (2024). Expert Consensus Practice Recommendations of the North American Neuroendocrine Tumor Society for the management of high grade gastroenteropancreatic and gynecologic neuroendocrine neoplasms. *Endocrine Related Disorders, 30*(8), 17-43.

2025 Intensity Modulated Radiation Therapy (IMRT) Occult Cancer

Radiation Therapy

Last Review Date: 07/11/2025
Previous Review Date: 10/03/2024
Guideline Initiated: 10/03/2024

Intensity Modulated Radiation Therapy (IMRT) Occult Cancer

Occult Cancer Guideline

Intensity-modulated radiation therapy (IMRT) for occult cancer is considered medically appropriate when the documentation demonstrates **ANY** of the following:

I. **10 fractions for less** for palliative therapy
Reference: [2]

II. **ALL** of the following:

A. **27 fractions or less**

B. Adjuvant therapy after lymph node dissection for **EITHER** of the following:

1. Disease is limited to a single nodal site with extranodal extension.

2. Inadequate nodal dissection with multiple positive nodes.

C. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)

D. Physical ability and clinical status of **ANY** of the following:

I. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less

II. Karnofsky performance status (KPS) grade of 70 or more[34]

References: [2] [1]

LCD 39553
See also, **LCD 39553 Radiation Therapies** at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

IMRT Occult Cancer Summary of Changes

IMRT Occult Cancer guideline from 2024 to 2025 had the following changes:

- Citations updated, evidence review completed.
- Updated ECOG/KPS scoring from 1 to 2 and 80 to 70 respectively.
- Removed the following retired LCDs: L36773, L36711.

IMRT Occult Cancer References

[1] Kramer, A., Bochtler, T., . . . Fizzazi, K. (2022). Cancer of unknown primary: ESMO Clinical Practice Guideline for diagnosis, treatment and follow-up☆. *Annals of Oncology, 34*(3), 228-246.

[2] Stevenson, M.M., Bowles, D.W. . . . Wang, S.Y. (2024). Occult Primary (Cancer of Unknown Primary [CUP]) Version 2.2025. *National Comprehensive Cancer Network*. Retrieved: May 2025. https://www.nccn.org/professionals/physician_gls/pdf/occult.pdf

2025 Intensity Modulated Radiation Therapy (IMRT) Pediatric Cancers

Radiation Therapy

Last Review Date: 07/31/2025
Previous Review Date: New
Guideline Initiated: New

[34]The Lansky performance status scale can be utilized for ages 16 or less.

Intensity Modulated Radiation Therapy (IMRT) Pediatric Cancers

Pediatric Cancers Guideline

Intensity-modulated radiation therapy (IMRT) for pediatric (less than or equal to 18 years of age) cancers is considered medically appropriate when the documentation demonstrates **ALL** of the following:

1. **ANY** of the following:
    a. **12 fractions or less** for palliative re-irradation
    b. **30 fractions or less** for glioma and **ANY** of the following:
        i. Diffuse intrinsic pontine glioma
        ii. Diffuse midline glioma
        iii. Pediatric diffuse high-grade glioma, adjuvant treatment **AND** newly diagnosed disease
    c. Pediatric hodgkin lymphoma and **ANY** of the following:
        i. Stage I-II and **ANY** of the following:
            A. **12 fractions or less** for all sites of disease
            B. **15 fractions or less** for sites of slow response
            C. **20 fractions or less** for sites of partial response
        ii. Stage III-IV and **ANY** of the following:
            A. **12 fractions or less** for bulky disease
            B. **15 fractions or less** for sites of slow response
            C. **20 fractions or less** for sites of partial response
        iii. **30 fractions or less** for relapsed/refractory disease
2. Physical ability and clinical status of **ANY** of the following:
    a. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
    b. Karnofsky performance status (KPS) grade of 70 or more[35]

References: [1] [2] [3] [4] [5] [6]

[35]The Lansky performance status scale can be utilized for ages 16 or less.

IMRT Pediatric Cancer Summary of Changes

Pediatric Cancer guideline is a new guideline with the following indications:

- Added the following based on national guidelines:
  - Palliative reirradiation as it has been shown to alleviate symptoms related to tumor progression
  - Diffuse midline glioma **OR** diffuse intrinsic pontine glioma indication as standard fraction for this disease with highly effective nature for symptom management
  - Pediatric diffuse high-grade glioma, adjuvant treatment **AND** newly diagnosed disease: Allows for a more precise delivery of radiation to the tumor while minimizing damage to surrounding healthy tissue, which is especially important in pediatric patients due to the potential for long-term side effects from radiation
  - Pediatric hodgkin lymphoma: Targets the site of the originally involved lymph node. The volume encompasses the original or suspected extent of disease prior to chemotherapy or surgery. However, it spares adjacent uninvolved organs (eg, lungs, bone, muscle, kidney) when lymphadenopathyregresses following chemotherapy.

IMRT Pediatric Cancer References

[1] Barth, M., Xavier, A.C., . . . Weinstein, J. (2025). Pediatric Aggressive Mature B-Cell Lymphomas 2.2025. *National Comprehensive Cancer Network*. Retrieved: July 2025. https://www.nccn.org/professionals/physician_gls/pdf/ped_b-cell.pdf

[2] Gajjar, A., Mahajan, A.,., . . . Zaky, W. (2025). Pediatric Central Nervous System Cancers 2.2025. *National Comprehensive Cancer Network*. Retrieved: July 2025. https://www.nccn.org/professionals/physician_gls/pdf/ped_cns.pdf

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[5] Kelly, K., Hiniker, S.M., . . . Young, K.(2025). Pediatric Hodgkin Lymphoma 2.2025. *National Comprehensive Cancer Network*. Retrieved: July 2025. https://www.nccn.org/professionals/physician_gls/pdf/ped_hodgkin.pdf

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2025 Intensity Modulated Radiation Therapy (IMRT) Peritoneal Mesothelioma

Radiation Therapy

Last Review Date: 07/11/2025
Previous Review Date: 10/03/2024
Guideline Initiated: 10/03/2024

Intensity Modulated Radiation Therapy (IMRT) Peritoneal Mesothelioma

IMRT Peritoneal Mesothelioma Guideline

Intensity-modulated radiation therapy (IMRT) for peritoneal mesothelioma:

1. The role of this therapy is uncertain/unclear in the current evidence. Requests for this therapy require review by a physician reviewer, medical director and/or the individual's healthplan.

Reference: [1]

LCD 39553
See also, **LCD 39553 Radiation Therapies** at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

IMRT Peritoneal Mesothelioma Summary of Changes

Peritoneal Mesothelioma guideline from 2024 to 2025 had the following changes:

- Citations updated, evidence review completed.
- Removed the following retired LCDs: L36773, L36711

IMRT Peritoneal Mesothelioma References

[1] Riely, G. J., Wood, D.E., . . . Yau, E. (2025). Mesothelioma: Peritoneal Version 2.2025. *National Comprehensive Cancer Network*. Retrieved: May 2025. https://www.nccn.org/professionals/physician_gls/pdf/meso_peritoneal.pdf

2025 Intensity Modulated Radiation Therapy (IMRT) Sarcoma

Radiation Therapy

Last Review Date: 07/11/2025
Previous Review Date: 10/03/2024
Guideline Initiated: 06/30/2019

Intensity-Modulated Radiation Therapy (IMRT) for Sarcoma

IMRT Sarcoma Guideline

IMRT for sarcoma is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. Desmoid tumors for **ANY** of the following:
    a. **10 fractions or less** for palliative therapy
    b. **ALL** of the following:
        i. **28 fractions or less** for definitive therapy
        ii. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
        iii. Physical ability and clinical status of **ANY** of the following:
            - Eastern cooperative oncology group (ECOG) performance status grade of 1 or less
            - Karnofsky performance status (KPS) grade of 80 or more[36]

    References: [2] [9] [10] [12] [4]
2. Gastrointestinal stromal tumors (GIST) for **ALL** of the following
    a. **10 fractions or less**
    b. Limited disease progression

[36]The Lansky performance status scale can be utilized for ages 16 or less.

c. Palliative treatment

d. Symptomatic lesion

References: [11] [10]

3. Kaposi sarcoma for **6 fractions or less** for palliative therapy.
References: [7] [14]

4. Sarcoma of the extremity, body wall or head and neck for **ANY** of the following:

   a. **10 fractions or less** for metastases **OR** palliative therapy

   b. **ALL** of the following:

      i. **ANY** of the following:

         A. Adjuvant therapy for **ANY** of the following:

            I. **25 fractions or less** for positive margins (given post brachytherapy)

            II. **30 fractions or less** for R0 resection margins (includes EBRT boost).

            III. **33 fractions or less** for R1 resection margins (includes EBRT boost).

         B. Definitive therapy for **ALL** of the following:

            I. **32 fractions or less**

            II. Non-surgical candidate

            III. Treatment includes a boost

      ii. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)

      iii. Physical ability and clinical status of **ANY** of the following:

         A. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less

         B. Karnofsky performance status (KPS) grade of 70 or more[37]

References: [8] [6] [10]

5. Sarcoma of the retroperitoneal/intra-abdominal cavity and **ANY** of the following:

   a. **10 fractions or less** for palliative therapy

[37]The Lansky performance status scale can be utilized for ages 16 or less.

b. Adjuvant therapy

i. The role of this therapy is uncertain/unclear in the current evidence. Requests for this therapy require review by a physician reviewer, medical director and/or the individual's healthplan.

c. Neoadjuvant therapy and **ALL** of the following:

i. **25 fractions or less**

ii. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)

iii. Physical ability and clinical status of **ANY** of the following:

A. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less

B. Karnofsky performance status (KPS) grade of 70 or more[38]

iv. Risk for local recurrence is high.

References: [8] [1] [10]

LCD 39553
See also, **LCD 39553 Radiation Therapies** at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

IMRT Sarcoma Summary of Changes

IMRT Sarcoma guideline from 2024 to 2025 had the following changes:

- Added the following based on NCCN evidence:
  - Added criteria for retroperitoneal/intra-abdominal sarcoma: adjuvant therapy
- Changed the following based on NCCN evidence:
  - **4 fractions or less** changed to **6 fractions or less** for palliative therapy.
- Removed the following due to change in NCCN evidence:
  - **25 fractions or less** for neoadjuvant therapy of desmoid tumors
- Citations updated, evidence review completed.
- Updated ECOG/KPS scoring from 1 to 2 and 80 to 70 respectively.

[38]The Lansky performance status scale can be utilized for ages 16 or less.

- Removed the following retired LCDs: L36773, L36711.

IMRT Sarcoma References

[1] Arscott, W.T., Emmett, J., . . . Jones, J.A. (2019). Palliative Radiotherapy. *Hematology/ Oncology Clinics of North America, 34*(1), 253-277.

[2] Bektas, M., Bell, T., . . . Oton, A.B. (2023). Desmoid Tumors: A Comprehensive Review. *Advances in Therapy, 40*(1), 3697-3722.

[3] Casali, P.G., Blay, J.Y., . . . Stacchiotti, S. (2022). Gastrointestinal stromal tumours: ESMO–EURACAN–GENTURIS Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Annals of Oncology, 33*(1), 20-33.

[4] Dossa, F. & Gladdy, R.A. (2022). Evidence for the Current Management of Soft-tissue Sarcoma and Gastrointestinal Stromal Tumors and Emerging Directions. *Surgical Oncology Clinics of North America, 32*(1),169-184.

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[6] Gronchi, A., Miah, A.B., . . . Stacchiotti, S. (2021) . Soft tissue and visceral sarcomas: ESMO-EURACAN-GENTURIS Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Annals of Oncology, Volume 32*(11), 1348-1365.

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[9] Shah, N.K., Yegya-Raman, N., . . . Shabason, J.E. (2021). Radiation Therapy in Metastatic Soft Tissue Sarcoma: From Palliation to Ablation. *Cancers, 13*(4775), 1-11.

[10] Van Tine, B.A.(2020). Sarcomas of Soft Tissue. J.E. Niederhuber & J.O. Armitage (Eds.). *Abeloff's Clinical Oncology* (6), (pp. 1655-1693). Philadelphia, PA: Elsevier.

[11] von Mehren, M., Kane, J.M., . . . Zimel, M. (2025). Gastrointestinal Stromal Tumors Version 1.2025. *National Comprehensive Cancer Network*. Retrieved: May 2025. https://www.nccn.org/guidelines/guidelines-detail?category=1&id=1507

[12] von Mehren, M., Kane, J.M., . . . Zimel, M. (2025). Soft Tissue Sarcoma Version 2.2025. *National Comprehensive Cancer Network*. Retrieved: May 2025. https://www.nccn.org/professionals/physician_gls/pdf/sarcoma.pdf

[13] Williams, G.R., Manjunath, S.H., . . . Jones, J. (2021). Palliative Radiotherapy for Advanced Cancers. *Surgical Oncology Clinics of North America, 30*(3), 1-18.

[14] Young, M.R. & Richards, S.W. (2025). Radiotherapy. J.L. Bolognia & J.V. Schaffer (Eds.).*Dermatology* (5), (pp. 2430-2441). Philadelphia, PA: Elsevier.

2025 Intensity Modulated Radiation Therapy (IMRT) Skin Cancer

Radiation Therapy

Last Review Date: 07/11/2025
Previous Review Date: 10/03/2024
Guideline Initiated: 06/30/2019

Intensity-Modulated Radiation Therapy (IMRT) for Skin Cancer

Basal Cell Skin Cancer, Squamous Cell Skin Cancer Guideline

IMRT for basal cell skin cancer and squamous cell skin cancer is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **6 fractions or less** for palliative therapy
2. **ALL** of the following:
    a. Regional disease and **ANY** of the following:
        i. Lymph node regions and **ANY** of the following:
            A. **AFTER** lymph node dissection for **ANY** of the following:
                I. **30 fractions or less** for negative margins and **NO** extranodal extension (ENE).
                II. **33 fractions or less** for positive margins or ENE
            B. **35 fractions or less** with **NO** lymph node dissection and clinically positive nodes.
        ii. **30 fractions or less** for clinically at-risk nerves (eg, facial nerves)
    b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
    c. Physical ability and clinical status of **ANY** of the following:
        i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
        ii. Karnofsky performance status (KPS) grade of 70 or more[39]

References: [1] [7] [10]

[39]The Lansky performance status scale can be utilized for ages 16 or less.

Dermatofibrosarcoma Protuberans Guideline

IMRT for dermatofibrosarcoma protuberans is considered medically appropriate when the documentation demonstrates **ALL** of the following:

1. **ANY** of the following:
    a. **30 fractions or less** for **ANY** of the following:
        i. Adjuvant therapy for indeterminate or positive margins
        ii. Recurrence or metastasis if radiation therapy was **NOT** given previously and further resection is **NOT** feasible.
    b. **33 fractions or less** for gross disease and **ANY** of the following:
        i. Adjuvant therapy
        ii. Recurrent or metastatic disease
2. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
3. Physical ability and clinical status of **ANY** of the following:
    a. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
    b. Karnofsky performance status (KPS) grade of 70 or more[40]

References: [5] [2]

Melanoma (Cutaneous) Guideline

IMRT for melanoma is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **20 fractions or less** for definitive or palliative therapy for regional metastases and **ANY** of the following:
    a. Residual local, satellite or in-transit disease after prior treatment
    b. Unresectable nodal, satellite or in-transit disease

    References: [10] [8]
2. **ALL** of the following:
    a. **ANY** of the following:
        i. **33 fractions or less** for **EITHER** of the following:
            A. Adjuvant therapy for primary disease

[40]The Lansky performance status scale can be utilized for ages 16 or less.

B. Resected regional disease with high risk for recurrence[41].

ii. **35 fractions or less** for definitive therapy of primary disease

b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)

c. Physical ability and clinical status of **ANY** of the following:

i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less

ii. Karnofsky performance status (KPS) grade of 70 or more[42]

References: [10] [8]

Merkel Cell Carcinoma (MCC) Guideline

IMRT for merkel cell skin cancer is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions or less** for palliative therapy
   Reference: [6]
2. **ALL** of the following:
   a. **ANY** of the following:
      i. Adjuvant therapy following resection of primary MCC for **ANY** of the following:
         A. **28 fractions or less** for negative resection margins
         B. **30 fractions or less** for microscopically positive resection margins
         C. **33 fractions or less** for grossly positive resection margins with further resection **NOT** possible.
      ii. **33 fractions or less** for **NO** previous resection of primary MCC and **ANY** of the following:
         A. Refusal of surgery
         B. Surgery would result in significant morbidity
         C. Unresectable disease
      iii. Node dissection status for **ANY** of the following:

[41]Risk factors for regional recurrence include gross and/or histologic extracapsular extension of melanoma in clinically (macroscopic) involved node(s), 1 or more parotid nodes, 2 or more cervical or axillary nodes, 3 or more inguinofemoral nodes, 3 cm or more cervical or axillary node, and/or 4 cm or more inguinofemoral node.
[42]The Lansky performance status scale can be utilized for ages 16 or less.

A. **NO** sentinal lymph node biopsy (SLNB) **OR** lymph node (LN) dissection and **ANY** of the following:

I. **25 fractions or less** for clinically node negative, but at risk for subclinical disease

II. **33 fractions or less** for clinically evident lymphadenopathy

B. **28 fractions or less** and **ALL** of the following:

I. Sentinal lymph node positive

II. SLNB without LN dissection

C. **33 fractions or less** after LN dissection with multiple involved nodes and/or extranodal extension (ENE)

b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)

c. Physical ability and clinical status of **ANY** of the following:

i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less

ii. Karnofsky performance status (KPS) grade of 70 or more[43]

Reference: [6]

LCD 39553
See also, **LCD 39553 Radiation Therapies** at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

IMRT Skin Cancer Summary of Changes

IMRT Skin Cancer guideline from 2024 to 2025 had the following changes:

- Melanoma (Cutaneous):
  - Addition based on NCCN evidence:
    - Definitive to palliative indication
- Citations updated, evidence review completed.
- Updated ECOG/KPS scoring from 1 to 2 and 80 to 70 respectively.
- Removed the following retired LCDs: L36773, L36711.

[43]The Lansky performance status scale can be utilized for ages 16 or less.

IMRT Skin Cancer References

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2025 Intensity Modulated Radiation Therapy (IMRT) Thoracic Cancer

Radiation Therapy

Last Review Date: 07/11/2025
Previous Review Date: 10/03/2024
Guideline Initiated: 06/30/2019

Intensity-Modulated Radiation Therapy (IMRT) for Thoracic Cancers

Pleural Mesothelioma Guideline

IMRT for the treatment of pleural mesothelioma is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions or less** for palliative treatment
2. **ALL** of the following:
    a. **ANY** of the following:
        i. **30 fractions or less** for post-operative treatment after extrapleural pneumonectomy (EPP) **OR** pleurectomy/decortication
        ii. **20 fractions or less** for pain relief from pleural mesothelioma with chest pain
    b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
    c. Physical ability and clinical status of **ANY** of the following:
        i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
        ii. Karnofsky performance status (KPS) grade of 70 or more[44]

References: [4] [11] [9]

Non-Small Cell Lung Cancer Guideline

IMRT for the treatment of non-small cell lung cancer is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. Palliative treatment for **ANY** of the following:
    a. **2 fractions or less** for symptomatic chest disease
    b. **5 fractions or less** for metastasis
    c. **10 fractions or less** for bone metastases with or without soft tissue mass
    d. **15 fractions or less** for obstructive disease (superior vena cava syndrome or obstructive pneumonia) **OR** brain metastasis

References: [13] [10]

[44]The Lansky performance status scale can be utilized for ages 16 or less.

2. **ALL** of the following:
    a. **ANY** of the following:
        i. **27 fractions or less** for pre-operative treatment **OR** post-operative treatment of negative margins
        ii. **30 fractions or less** for post-operative treatment of extracapsular nodal extension or microscopic positive margins
        iii. **35 fractions or less** for **ANY** of the following:
            A. Definitive treatment with or without chemotherapy
            B. Post-operative treatment of gross residual tumor
    b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
    c. Physical ability and clinical status of **ANY** of the following:
        i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
        ii. Karnofsky performance status (KPS) grade of 70 or more[45]

References: [13] [10] [8]

Small-Cell Lung Cancer Guideline

IMRT for the treatment of small-cell lung cancer (SCLC) is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions or less** for palliative treatment
   References: [10] [18] [6]
2. **ALL** of the following:
    a. **ANY** of the following:
        i. **10 fractions or less** for extensive stage SCLC (Stage IV)
        ii. **30 fractions or less** for limited stage SCLC (Stage I to III)
    b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
    c. Physical ability and clinical status of **ANY** of the following:
        i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
        ii. Karnofsky performance status (KPS) grade of 70 or more[46]

[45]The Lansky performance status scale can be utilized for ages 16 or less.

References: [10] [18] [6] [16] [1] [3]

Thymoma/Thymic Cancer Guideline

IMRT for thymoma/thymic cancer is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. **10 fractions or less** for palliative treatment
2. **ALL** of the following:
    a. **ANY** of the following:
        i. Adjuvant treatment for **ANY** of the following:
            A. **25 fractions or less** for clear/close margins
            B. **27 fractions or less** for microscopically positive resection
        ii. **35 fractions or less** for **ANY** of the following:
            A. Unresectable disease
            B. Gross residual disease
    b. IMRT plan reduces important organ toxicity (eg, heart, kidneys, lungs, stomach)
    c. Physical ability and clinical status of **ANY** of the following:
        i. Eastern cooperative oncology group (ECOG) performance status grade of 2 or less
        ii. Karnofsky performance status (KPS) grade of 70 or more[47]

References: [5] [7]

LCD 39553
See also, **LCD 39553 Radiation Therapies** at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

IMRT Thoracic Cancer Summary of Changes

IMRT Thoracic Cancer guideline from 2024 to 2025 had the following changes:

- Citations updated, evidence review completed.

[46]The Lansky performance status scale can be utilized for ages 16 or less.
[47]The Lansky performance status scale can be utilized for ages 16 or less.

- Updated ECOG/KPS scoring from 1 to 2 and 80 to 70 respectively.
- Removed the following retired LCDs: L36773, L36711.

IMRT Thoracic Cancer References

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2026 IMRT Summary of Changes

IMRT guideline from 2025 to 2026 had the following changes:

Table 1. 2026 IMRT Summary of Changes

Date	Type of Change	Summary
01/01/2026	Annual	• The following IMRT codes were retired per the American Medical Association: 77385, 77386, G6015, G6016 • The following IMRT codes were added per the American Medical Association: 77407, 77412

IMRT Associated Procedure Codes

Table 1. Intensity-modulated radiation therapy (IMRT) Associated Procedure Codes

CODE	DESCRIPTION
77407	Radiation treatment delivery; Level 2, single-isocenter (eg, 3D or IMRT), photons, including imaging guidance, when performed
77412	Radiation treatment delivery; Level 3, multiple isocenters with photon therapy (eg, 2D, 3D, or IMRT) or a single-isocenter photon therapy (eg, 3D or IMRT) with active motion management, or total skin electrons, or mixed-electron/photon field(s), including imaging guidance, when performed

IMRT Definitions

Acute lymphoblastic leukemia (ALL) is a type of cancer of the blood and bone marrow where blood cells are made. The disease progresses rapidly and creates immature blood cells. The word "lymphocytic" in ALL refers to the white blood cells called lymphocytes. It is the most common type of cancer in children, and treatments result in a good chance for a cure. ALL can also occur in adults, though the chance of a cure is greatly reduced.

Acute myeloid leukemia (AML) is a malignant neoplasm characterized by the overproduction of immature myeloid precursor cells (blasts) in the bone marrow and peripheral blood, leading to anemia, thrombocytopenia and neutropenia and is diagnosed by the presence of more than 20% myeloid blasts in the peripheral blood or bone marrow.

Accelerated partial breast irradiation (APBI) is a type of radiation therapy given only to the part of the breast that has cancer in it. Accelerated partial-breast irradiation gives a higher dose over a shorter time than is given in standard whole-breast radiation therapy and may be given using internal or external sources of radiation. Also called partial-breast irradiation.

Adenocarcinoma is a malignant tumor originating in glandular epithelium.

Adjuvant treatment refers to enhancing the effectiveness of medical treatment.

Anal cancer is a disease in which malignant (cancer) cells form in the tissues of the anus

Anaplastic is reversion of cells to a more primitive or undifferentiated form.

Basal cell carcinoma (BCC) is a skin cancer derived from and preserving the form of the basal cells of the skin.

B-cell lymphoma is a type of cancer that forms in B-cells (a type of immune system cell). B-cell lymphomas may be either indolent (slow-growing) or aggressive (fast-growing). Most B-cell lymphomas are non-Hodgkin lymphomas. There are many different types of B-cell non-Hodgkin lymphomas. These include Burkitt lymphoma, chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL), diffuse large B-cell lymphoma, follicular lymphoma, and mantle cell lymphoma.

Bladder cancer is cancer that forms in tissues of the bladder (the organ that stores urine).

Boost refers to an additional dose of radiation to a very small component or part of the initial targeted field or body part that is being treated for a tumor.

BRCA BRCA1 and BRCA2 are the first two genes found to be associated with inherited forms of breast cancer and ovarian cancer. People with mutations in either BRCA1 or BRCA2 have a much higher risk for developing breast, ovarian or other types of cancer than those without mutations in the genes. Both BRCA1 and BRCA2 normally act as tumor suppressors, meaning they help to regulate cell division. Most people have two active copies of these genes. When one of the two copies becomes inactive due to an inherited mutation, a person's cells are left with only one copy. If this remaining copy also becomes inactivated, then uncontrolled cell growth results, which leads to breast, ovarian or other types of cancer.

Breast implant-associated anaplastic large cell lymphoma (BIA-ALCL) is a rare type of T-cell lymphoma that can develop in the scar tissue capsule and fluid surrounding a breast implant.

Burkitt lymphoma is a type of non-Hodgkin's lymphoma of B cell origin.

Cervical cancer forms in tissues of the cervix (the organ connecting the uterus and vagina).

Chemotherapy is a treatment that uses drugs to stop the growth of cancer cells, either by killing the cells or by stopping them from dividing. Chemotherapy may be given by mouth, injection, infusion or on the skin depending on the type and stage of the cancer being treated. It may be given alone or with other treatments, such as surgery, radiation therapy or biologic therapy.

Chondrosarcoma is a type of cancer that forms in bone cartilage. It usually starts in the pelvis (between the hip bones), the shoulder, the ribs or at the ends of the long bones of the arms and legs. A rare type of chondrosarcoma called extraskeletal chondrosarcoma does not form in bone cartilage. Instead, it forms in the soft tissues of the upper part of the arms and legs. Chondrosarcoma can occur at any age but is more common in people older than 40 years. It is a type of bone cancer.

Chordoma is a rare, slow-growing bone cancer that can occur in the spine or skull base.

Chronic lymphocytic leukemia (CLL) is the most common type of leukemia in adults. It's a type of cancer that starts in cells that become certain white blood cells (called lymphocytes) in the bone marrow. The cancer (leukemia) cells start in the bone marrow but then moves into the blood.

Chronic myeloid leukemia (CML), also known as chronic myelogenous leukemia, is a type of cancer that starts in certain blood-forming cells of the bone marrow.

Colon cancer is a type of cancer that begins in the large intestine (colon).

Combined modality therapy for cancer is the sequential or simultaneous use of several treatment options, including surgery, radiotherapy, and chemotherapy.

Complete response is the disappearance of all signs of cancer in response to treatment. This does not always mean the cancer has been cured.

Consolidation treatment is treatment that is given after cancer has disappeared following the initial therapy. Consolidation therapy is used to kill any cancer cells that may be left in the body. It may include radiation therapy, a stem cell transplant or treatment with drugs that kill cancer cells.

Deauville score is an internationally-recommended scale for routine clinical reporting and clinical trials using FDG PET-CT in the initial staging and assessment of treatment response in Hodgkin lymphoma (HL) and certain types of non-Hodgkin lymphomas (NHL).
Definitive treatment is the treatment plan for a disease or disorder that has been chosen as the best one for a patient after all other choices have been considered.
Dermatofibrosarcoma protuberans (DFSP) is a rare type of skin cancer that starts in connective tissue cells in the middle layer of the skin (dermis).
Desmoid tumor is a soft tissue tumor that forms in fibrous (connective) tissue, usually in the arms, legs or abdomen. It may also occur in the head and neck. Desmoid tumors are usually benign (not cancer). They often recur (come back) after treatment and spread to nearby tissue, but they rarely spread to other parts of the body.
Diffuse large B-cell lymphoma (DLBCL) is a cancer that starts in white blood cells called lymphocytes. It usually grows in lymph nodes, the pea-sized glands in the neck, groin, armpits and elsewhere that are part of the immune system. It can also show up in other areas of the body.
Ductal carcinoma in situ (DCIS) is any of a histologically variable group of precancerous growths or early carcinomas of the lactiferous ducts that have the potential of becoming invasive and spreading to other tissues.
Eastern Cooperative Oncology Group (ECOG) scale describes an individual's level of functioning in terms of the ability to care for one's self, daily activity and physical ability (eg, walking, working).

Table 1. ECOG Performance Status Scale

Grade	ECOG PERFORMANCE STATUS
0	Fully active, able to carry on all pre-disease performance without restriction
1	Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, e.g., light house work, office work
2	Ambulatory and capable of all selfcare but unable to carry out any work activities; up and about more than 50% of waking hours
3	Capable of only limited selfcare; confined to bed or chair more than 50% of waking hours
4	Completely disabled; cannot carry on any selfcare; totally confined to bed or chair
5	Dead

Source: https://ecog-acrin.org/resources/ecog-performance-status/
Endometrial cancer is a type of cancer that begins in the lining of the uterus.
Ependymoma is a type of brain tumor that begins in the cells lining the spinal cord central canal (fluid-filled space down the center) or the ventricles (fluid-filled spaces of the brain). Ependymomas may also form in the choroid plexus (tissue in the ventricles that makes cerebrospinal fluid).

Esophageal cancer is cancer that forms in tissues lining the esophagus (the muscular tube through which food passes from the throat to the stomach).
Estrogen receptor (ER)-positive cells have a protein that binds to the hormone estrogen; cancer cells that are ER positive may need estrogen to grow.
Ewing sarcoma is a rare type of cancer that occurs in bones or in the soft tissue around the bones. Ewing sarcoma most often begins in the leg bones and in the pelvis.
Extracapsular extension (ECE) is the growth or spread of tumor cells outside of the lymph node.
Extranodal extension is the growth of cancer cells beyone the capsule of a lymph node and into nearby tissues.
Extranodal marginal zone B-cell lymphoma, also called mucosa-associated lymphoid (MALT) lymphoma, is the most common type of lymphoma. It is called "extranodal" because it doesn't start in lymph nodes. Instead, it forms in other lymphatic tissue found throughout the body.
Extranodal NK/T-cell lymphoma is a rare lymphoma associated with Epstein-Barr virus (EBV) infection that usually develops in the nose.
Extranodal site refers to lymphomatous infiltration of anatomic sites other than the lymph nodes. Almost any organ can be affected by lymphoma, with the most common extranodal sites of involvement being the stomach, spleen, Waldeyer ring, central nervous system, lung, bone, and skin.
Extrapleural Pneumonectomy (EPP) is a surgical procedure for treating pleural mesothelioma. It involves the removal of the impacted lung, portions of the diaphragm and the linings of the lung and heart (pleura and pericardium). The surgery is often part of a multimodal treatment plan with chemotherapy and radiation.
Follicular lymphoma (FL) is typically a slow-growing or indolent form of non- Hodgkin lymphoma (NHL) that arises from B-lymphocytes, making it a B-cell lymphoma. This lymphoma subtype accounts for 20 to 30 percent of all NHL cases.
Fraction is the full dose of radiation that is usually divided into a number of smaller doses called fractions. This allows healthy cells to recover between treatments. Fractions are a series of treatment sessions that make up the radiotherapy course.
Gastric cancer also called stomach cancer, is cancer that forms in tissues lining the stomach.
Giant cell tumor is a rare tumor that usually forms in bone, but may also form in cartilage, muscle, fat, blood vessels or other supportive tissue in the body. Most giant cell tumors occur at the ends of the long bones of the arms and legs near a joint (such as the knee, wrist, hip or shoulder). Most are benign (not cancer) but some are malignant (cancer). Giant cell tumors usually occur in young and middle-aged adults.
Glioblastoma multiforme is a fast-growing type of central nervous system tumor that forms from glial (supportive) tissue of the brain and spinal cord and has cells that look very different from normal cells.

Glioma is a type of tumor that occurs in the brain and spinal cord. Gliomas begin in the gluey supportive cells (glial cells) that surround nerve cells and help them function.
Gray zone lymphoma is a rare type of lymphoma, cancer of a part of the immune system called the lymph system. It is called "gray zone" lymphoma because it has features intermediate between classical Hodgkin lymphoma and diffuse large B-cell lymphoma (DLBCL), but cannot be assigned specifically to either type.
Gross disease is used to describe the way tissue looks when examined without a microscope
Hairy cell leukemia is a chronic leukemia that is usually of B-cell origin and is characterized by malignant cells with a ciliated appearance.
Hematopoietic cell transplantation (HCT) is the intravenous infusion of hematopoietic stem and progenitor cells designed to establish marrow and immune function in patients with a variety of acquired and inherited malignant and nonmalignant disorders.
High-grade B-cell lymphoma (HGBL) is a type of aggressive B-cell lymphoma that includes tumors with Burkitt-like or blastoid morphology and cannot be classified as other well-defined lymphoma subtypes.
Histiocytic neoplasm is a group of rare disorders in which too many histiocytes (a type of white blood cell) build up in certain tissues and organs, including the skin, bones, spleen, liver, lungs, and lymph nodes.
Hodgkin lymphoma is a malignant lymphoma marked by the presence of Reed-Sternberg cells and characterized by progressive enlargement of lymph nodes, spleen and liver and progressive anemia.
Human immunodeficiency virus (HIV) associated lymphoma is a hematologic neoplasm that develops from T and B lymphocytes, immune system cells, at various stages of differentiation.
Intensity modulated radiation therapy (IMRT) is a type of three-dimensional radiation therapy that uses computer-generated images to match radiation to the size and shape of a tumor. In IMRT, thousands of tiny radiation beams enter the body from many angles and intersect the tumor. Since the intensity of each beam can be controlled, the radiation dose can wrap around normal tissue, create concave shapes and turn corners. The aim is to deliver a higher radiation dose to a tumor with less damage to nearby healthy tissue.
Invasive Ductal Carcinoma is the most common type of invasive breast cancer. It begins in the lining of the milk ducts (thin tubes that carry milk from the lobules of the breast to the nipple) and spreads outside the ducts to surrounding normal tissue. Invasive ductal carcinoma can also spread through the blood and lymph systems to other parts of the body.
Ipsilateral refers to the same side of the body as another structure or a given point.
Karnofsky performance status (KPS) is an assessment tool for functional impairment. It can be used to compare effectiveness of different therapies and to assess the prognosis in individual patients. In most serious illnesses, the lower the Karnofsky score, the worse the likelihood of survival.

Table 2. KARNOFSKY PERFORMANCE STATUS SCALE

Score	Status
100	Normal, no complaints; no evidence of disease
90	Able to carry on normal activity; minor signs or symptoms of disease
80	Normal activity with effort, some signs or symptoms of disease
70	Cares for self but unable to carry on normal activity or to do active work
60	Requires occasional assistance but is able to care for most of personal needs
50	Requires considerable assistance and frequent medical care
40	Disabled; requires special care and assistance
30	Severely disabled; hospitalization is indicated although death not imminent
20	Very ill; hospitalization and active supportive care necessary
10	Moribund
0	Dead

Source: https://ecog-acrin.org/resources/ecog-performance-status/

Kidney cancer is cancer that forms in tissues of the kidneys.

Langerhans cell histiocytosis (LCH)is a rare disease that begins in LCH cells. LCH cells are a type of dendritic cell that normally helps the body fight infection. Sometimes mutations (changes) develop in genes that control how dendritic cells function. These include mutations of the BRAF, MAP2K1, RAS, and ARAF genes. These mutations may cause too many LCH cells to grow and build up in certain parts of the body, where they can damage tissue or form lesions.

Single-system LCH: LCH is found in one part of an organ or body system or in more than one part of that organ or body system. Bone is the most common single place for LCH to be found.

Multisystem LCH:LCH is found in two or more organs or body systems or may be found throughout the body. Multisystem LCH is less common than single-system LCH.

Lymphadenopathy refers to the swelling of lymph nodes which can be secondary to bacterial, viral or fungal infections, autoimmune disease and malignancy.

Lymphoid neoplasm is a neoplasm composed of a lymphocytic cell population which is usually malignant (clonal) by molecular genetic and/or immunophenotypic analysis. Lymphocytic neoplasms include Hodgkin and non-Hodgkin lymphomas, acute and chronic lymphocytic leukemias, and plasma cell neoplasms.

Lymph node dissection is a surgical procedure in which the lymph nodes are dissected (cut or separated), and a sample of tissue is checked for the presence of malignancy under the microscope.

Lymphoplasmacytic lymphoma, also called Waldenström macroglobulinemia, is indolent (slow-growing) type of non-Hodgkin lymphoma marked by abnormal levels of IgM antibodies in the blood and an enlarged liver, spleen, or lymph nodes.

Lymphovascular invasion (LVI) is the presence of tumor cells within a definite endothelial-lined space (lymphatics or blood vessels) in the breast surrounding invasive carcinoma. The

presence of LVI is associated with an increased risk of axillary lymph node and distant metastases.

Mantle cell lymphoma (MCL) is a type of non-Hodgkin's lymphoma, which is a form of cancer that affects the lymphatic system. Lymphomas are cancers that involve white blood cells and can be divided depending on the type of cell involved, either B-lymphocytes or T-lymphocytes.

Margin is the edge or border of the tissue removed in cancer surgery.

Marginal zone lymphomas (MZLs) are a group of indolent (slow-growing) B-cell non-Hodgkin lymphomas (NHLs), beginning in a part of lymph tissue called the marginal zone, which account for approximately 5 to 10 percent of all NHL cases. The median age at diagnosis is 67 years, and they are slightly more common in men than in women.

Mastectomy is breast cancer surgery that removes the entire breast.

Mediastinal gray zone lymphoma is a type of b-cell lymphoma that is commonly seen in young adult males between the ages of 20-40 and are characterized by a large anterior mediastinal mass with or without supraclavicular lymph node involvement.

Medulloblastoma is fast-growing type of cancer that forms in the cerebellum (the lower, back part of the brain). Medulloblastomas tend to spread through the cerebrospinal fluid to the spinal cord or to other parts of the brain. They may also spread to other parts of the body, but this is rare. Medulloblastomas are most common in children and young adults. They are a type of central nervous system embryonal tumor.

Medulloblastoma is fast-growing type of cancer that forms in the cerebellum (the lower, back part of the brain). Medulloblastomas tend to spread through the cerebrospinal fluid to the spinal cord or to other parts of the brain. They may also spread to other parts of the body, but this is rare. Medulloblastomas are most common in children and young adults. They are a type of central nervous system embryonal tumor.

Melanoma is a highly malignant tumor that starts in melanocytes of normal skin or moles and metastasizes rapidly and widely.

Meningioma is a tumor, usually benign, arising from meningeal tissue of the brain

Merkel cell carcinoma is a very rare disease in which malignant (cancer) cells form in the skin.

Mesothelioma is a usually malignant tumor derived from mesothelial tissue (such as the tissue that lines the peritoneum or pleura).

Metastatic is the spread of cancer from the primary site (place where it started) to other places in the body.

Microscopic margins:

A microscopically negative margin is defined as no tumor at the inked margin.

A microscopically positive margin is defined as tumor present at the inked margin

Multiple myeloma is a blood cancer that develops in plasma cells in the bone marrow. Plasma cells are white blood cells that produce antibodies to protect the body from infection. In multiple myeloma, the plasma cells grow too much, crowding out normal bone marrow cells.

Myelodysplastic syndrome (MDS) is a type of cancer in which the bone marrow does not make enough healthy blood cells (white blood cells, red blood cells, and platelets) and there are abnormal cells in the blood and/or bone marrow. When there are fewer healthy blood cells, infection, anemia, or bleeding may occur.

Myeloid/Lymphoid Neoplasms with Eosinophilia is a stem cell leukemia/lymphoma with rearrangements involving chromosome 8p11 (FGFR1). These are aggressive, rare, pluripotent stem cell disorder with poor prognosis.

Myeloproliferative neoplasm is a group of diseases in which the bone marrow makes too many red blood cells, white blood cells, or platelets.

Negative margin: The edge or border of the tissue removed in cancer surgery. The margin is described as negative or clean when the pathologist finds no cancer cells at the edge of the tissue, suggesting that all of the cancer has been removed.

Neoadjuvant treatment is treatment (such as chemotherapy or hormone therapy) administered before primary cancer treatment (such as surgery) to enhance the outcome of primary treatment.

Neuroendocrine tumor/carcinoma are cancers that begin in specialized cells called neuroendocrine cells, which have traits similar to those of nerve cells and hormone-producing cells They are rare and can occur anywhere in the body.

Non-small cell lung cancer is a group of lung cancers named for the kinds of cells found in the cancer and how the cells look under a microscope. The three main types of non-small cell lung cancer are adenocarcinoma (most common), squamous cell carcinoma and large cell carcinoma. Non-small cell lung cancer is the most common of the two main types of lung cancer (non-small cell lung cancer and small cell lung cancer).

Occult primary tumor is cancer in which the site of the primary (original) tumor cannot be found. Most metastases from occult primary tumors are found in the head and neck.

Osteoradionecrosis is an unusual complication from radiation therapy to the head and neck that unfortunately results in bone death.

Osteosarcoma is a malignant tumor derived from bone or containing bone tissue.

Ovarian cancer is cancer that forms in the tissues of the ovary (one of a pair of female reproductive glands in which the ova or eggs are formed).

Palliative treatment is treatment given to help relieve the symptoms and reduce the suffering caused by cancer or other life-threatening diseases. Palliative therapy may help a person feel more comfortable, but it does not treat or cure the disease.

Pancreatic cancer is cancer that forms in the cells of the pancreas

Partial response is a decrease in the size of a tumor, or in the extent of cancer in the body, in response to treatment.

Penile cancer is a rare cancer that forms in the penis (an external male reproductive organ). Most penile cancers are squamous cell carcinomas (cancer that begins in flat cells lining the penis).

Peripheral T-cell lymphoma is a diverse group of aggressive lymphomas that develop from mature-stage white blood cells called T-cells and natural killer (NK) cells.
Peritoneal mesothelioma is a rare cancer of the peritoneum, the thin layer of tissue that lines the abdominal cavity. As tumors develop and grow on the peritoneum, they put pressure on vital organs and can spread to form new tumors.
Plasmacytoma is a type of cancer that begins in plasma cells (white blood cells that produce antibodies). A plasmacytoma may turn into multiple myeloma.
Pleurectomy and decortication (P/D) is a surgery that treats pleural mesothelioma. Pleurectomy removes the lining around the lung (the pleura). Decortication removes tumors or fibrous tissue from the surface of the lung. P/D is considered a lung-sparing surgery because it preserves the lung.
Post-transplant lymphoproliferative disorders (PTLD) is a group of conditions that may happen after a transplant. It involves the immune system and causes white blood cells (called lymphocytes) to multiply out of control. The seriousness varies from an overgrowth of the lymphocytes that is not harmful, to full-blown lymph node cancer (called lymphoma).
Primary bone cancer is cancer that forms in cells of the bone. Some types of primary bone cancer are chondrosarcoma, Ewing sarcoma, malignant fibrous histiocytoma, and osteosarcoma.
Primary cancer is a term used to describe the original, or first tumor in the body. Cancer cells from a primary cancer may spread to other parts of the body and form new, or secondary, tumors. This is called metastasis. These secondary tumors are the same type of cancer as the primary cancer. Also called primary tumor.
Primary central nervous system lymphoma is a disease in which malignant (cancer) cells form in the lymph tissue of the brain and/or spinal cord.
Primary cutaneous lymphoma are a heterogenous group of lymphoproliferative neoplasms, lymphatic proliferation is limited to the skin with no involvement of lymph nodes, bone marrow or viscera
Primary mediastinal large B-cell lymphoma (PMBL), sometimes called primary thymic mediastinal lymphoma, is a type of non-Hodgkin lymphoma that develops when B-cells become abnormal. The abnormal B-cells (lymphoma cells) usually develop in a part of the lymphatic system called the thymus gland. They then build up in lymph nodes behind the breastbone and between the lungs (mediastinum).
Primary spinal cord tumor is a tumor that originates in the spine. They are relatively rare, typically benign (noncancerous) and represent a small percentage of spinal tumors. Malignant tumors may also originate in the spine, although more often they spread to the spine from elsewhere in the body.
Progressive disease is defined as at least a 20 percent growth in the size of the tumor or spread of the tumor since the beginning of treatment.
Prostate cancer develops when abnormal cells form and grow in the prostate gland. Cancerous growths can spread (metastasize) to nearby organs and tissues such as the bladder or rectum,

or to other parts of the body. If the abnormal growth is removed, it can still grow back. Prostate cancer can be life threatening if it spreads far beyond the prostate (metastatic disease).
Prostate cancer is often grouped into four stages:

- Early stage (stages I & II): The tumor has not spread beyond the prostate. This is often called "early stage" or "localized" prostate cancer.
- Locally advanced (stage III): Cancer has spread outside the prostate, but only to nearby tissues. This is often called "locally advanced" prostate cancer.
- Advanced (stage IV): Cancer has spread outside the prostate to other parts such as the lymph nodes, bones, liver or lungs. This stage is often called "advanced" prostate cancer.

Prostatectomy is a surgical procedure where all or part of the prostate gland is removed. It is primarily used to treat prostate cancer and benign prostatic hyperplasia (BPH), commonly known as an enlarged prostate. There are two main types: simple prostatectomy, which removes only the obstructing portion of the prostate, and radical prostatectomy, which removes the entire prostate and surrounding tissues.
Prostate-specific antigen (PSA) is a protein made by the prostate gland and found in the blood. Prostate-specific antigen blood levels may be higher than normal in men who have prostate cancer, benign prostatic hyperplasia (BPH), or infection or inflammation of the prostate gland.
Pure seminoma is a malignant germ cell tumor that involves most commonly the testicle or less frequently the mediastinum, the retroperitoneum, or other extra-gonadal sites. It is one of the treatable and curable cancers, with a survival rate of over 95% if discovered in early stages.
Rectal cancer is cancer that begins in the rectum
R1 resection indicates the removal of all macroscopic disease, but microscopic margins are positive for tumor.
R2 resection indicates gross residual disease with gross residual tumor that was not resected (primary tumor, regional nodes, and macroscopic margin involvement).
Recurrent disease is characterized by repeated alternations between acute relapse and long remission. Cancer that has recurred (come back), usually after a period of time during which the cancer could not be detected. The cancer may come back to the same place as the original (primary) tumor or to another place in the body. Also called recurrence.
Regional disease describes the body area right around a tumor.
Refractory is defined as resistance to multiple drugs with different mechanisms of action by persistence of physical symptoms and high disease activity, including contributing factors.
Resectable simply means that it is able to be removed with surgery.
Residual disease is cancer cells that are found in the area of the primary tumor and its regional lymph nodes and/or at distant sites following treatment.
Sarcomas are rare cancers that develop in the bones and soft tissues including fat, muscles, blood vessels, nerves, deep skin tissues and fibrous tissues.

Sentinel lymph node biopsy (SLNB) is a procedure in which the sentinel lymph node is identified, removed, and examined to determine whether cancer cells are present. It is used in people who have already been diagnosed with cancer. A negative SLNB result suggests that cancer has not yet spread to nearby lymph nodes or other organs. A positive SLNB result indicates that cancer is present in the sentinel lymph node and that it may have spread to other nearby lymph nodes (called regional lymph nodes) and possibly to other organs. This information can help a doctor determine the stage of the cancer (extent of the disease within the body) and develop an appropriate treatment plan.

Sentinel lymph node the first lymph node to which cancer cells are most likely to spread from a primary tumor. Sometimes, there can be more than one sentinel lymph node.

Small bowel is the specialized tubular structure between the stomach and the large intestine (also called the colon or large bowel) that absorbs nutrition from the food.

Small cell lung cancer is a highly malignant form of cancer that affects the lungs, tends to metastasize to other parts of the body, is characterized by small round or oval cells which resemble oat grains and have little cytoplasm.

Small lymphocytic lymphoma is a slow growing non-Hodgkin lymphoma that affects B cells (also known as B lymphocytes), which are specialized white blood cells that produce immunoglobulins (also called antibodies) that help protect against infection and disease.

Solitary Plasmacytoma is an early-stage plasma cell malignancy that is in between monoclonal gammopathy of undetermined significance (MGUS) and multiple myeloma (MM) along the spectrum of plasma cell disorders

Squamous cell carcinoma (SCC) is carcinoma that is made up of or arises from squamous cells (stratified epithelium that consists at least in its outer layers of small scale like cells) and usually occurs in areas of the body exposed to strong sunlight over many years.

Systemic light chain amyloidosis is a protein misfolding and metabolism disorder in which insoluble fibrils are deposited in various tissues, causing organ dysfunction and eventually death.

Systemic mastocytosis is a rare disease in which too many mast cells (a type of immune system cell) are found in the skin, bones, joints, lymph nodes, liver, spleen, and gastrointestinal tract.

Systemic therapy is treatment using substances that travel through the bloodstream, reaching and affecting cells all over the body.

T-Cell lymphoma is a type of cancer that forms in T-cells (a type of immune system cell). T-cell lymphomas may be either indolent (slow-growing) or aggressive (fast-growing). Most T-cell lymphomas are non-Hodgkin lymphomas. There are many different types of T-cell non-Hodgkin lymphomas. These include mycosis fungoides, anaplastic large cell lymphoma and precursor T-cell lymphoblastic lymphoma.

Thymoma and thymic carcinoma are diseases in which malignant (cancer) cells form on the outside surface of the thymus.

Unresectable disease is disease that is not able to be removed with surgery.

Urethra carcinoma is a very rare cancer that starts in the urethra, the tube that carries urine out of the body
Uterine neoplasm is a malignant tumor that starts in the cells of the uterus.
Vaginal cancer is cancer that forms in the tissues of the vagina (birth canal).
Vulvar cancer is cancer of the vulva (the external female genital organs, including the clitoris, vaginal lips and the opening to the vagina).
Vulvar melanoma is a rare type of vulvar cancer and is the second most common type of vulvar cancer. It develops from the cells in the skin that produce pigment.
Waldenstrom macroglobulinemia is a rare, slow-growing type of non-Hodgkin lymphoma. It's a blood cell cancer that starts in malignant B-cells.

Disclaimer section

Purpose

The purpose of the HealthHelp's clinical guidelines is to assist healthcare professionals in selecting the medical service that may be appropriate and supported by evidence to safely improve outcomes. Medical information is constantly evolving, and HealthHelp reserves the right to review and update these clinical guidelines periodically. HealthHelp reserves the right to include in these guidelines the clinical indications as appropriate for the organization's program objectives. Therefore the guidelines are not a list of all the clinical indications for a stated procedure, and associated Procedure Code Tables may not represent all codes available for that state procedure or that are managed by a specific client-organization.

Clinician Review

These clinical guidelines neither preempt clinical judgment of trained professionals nor advise anyone on how to practice medicine. Healthcare professionals using these clinical guidelines are responsible for all clinical decisions based on their assessment. All Clinical Reviewers are instructed to apply clinical indications based on individual patient assessment and documentation, within the scope of their clinical license.

Payment

The use of these clinical guidelines does not provide authorization, certification, explanation of benefits, or guarantee of payment; nor do the guidelines substitute for, or constitute, medical advice. Federal and State law, as well as member benefit contract language (including definitions and specific contract provisions/exclusions) take precedence over clinical guidelines and must be considered first when determining eligibility for coverage. All final determinations on coverage and

payment are the responsibility of the health plan. Nothing contained within this document can be interpreted to mean otherwise.

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National and Local Coverage Determination (NCD and LCD)

NOTICE
To ensure appropriate review occurs to the most current NCD and/or LCD, always defer to https://www.cms.gov/medicare-coverage-database/search.aspx.

Background

National Coverage Determinations (NCD) and Local Coverage Determinations (LCD) are payment policy documents outlined by the Centers for Medicare and Medicaid Services (CMS) and the government's delegated Medicare Audit Contractors (MACs) that operate regionally in jurisdictions.
CMS introduced variation between different jurisdictions/Medicare Audit Contractors (MACs) and their associated covered code lists with the transition to ICD 10. The variation resulted in jurisdictions independently defining how codes are applied for exclusions, limitations, groupings, ranges, etc. for the medical necessity indications outlined in the NCD and LCD. Due to this variation, there is an inconsistent use/application of codes and coverage determinations across the United States between the different MACs.
In addition, **WITHOUT** notice, CMS can change the codes that indicate medical necessity and the format of the coverage determinations/associated documents (eg, Articles). This is an additional challenge for organizations to keep up with ongoing, unplanned changes in covered codes and medical necessity indications.

Medical Necessity Codes

Due to the variation in code application between jurisdictions/MACs and that updates can happen without notification, HealthHelp is not able to guarantee full accuracy of the codes listed for any Coverage Determination, and advises that prior to use, the associated Coverage Determination

Articles are reviewed to ensure applicability to HealthHelp's programs and any associated NCDs and LCDs.

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