

## Skin Cancer

**Note:** For Medicare members/enrollees, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Please refer to the CMS website at <http://www.cms.gov> for additional information.

**Note:** For Medicaid members/enrollees, circumstances when state Medicaid coverage provisions conflict with the coverage provisions within this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

### DISCUSSION

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Skin cancer is the most commonly diagnosed cancer in the United States. According to the American Cancer Society, 108,480 new cases of skin cancer will be diagnosed in the United States this year.<sup>1</sup>

Several studies have estimated that non-melanoma skin cancer (NMSC), including Basal cell carcinoma (BCC) and Squamous cell carcinoma (SCC), affects more than three million Americans a year.<sup>2</sup> Cutaneous melanoma affects approximately 70-80,000 patients a year. Surgical excision is the preferred therapy for skin cancer, with a reported < 5% local recurrence rate.<sup>2</sup> But other loco-regional approaches such as radiotherapy (RT), cryotherapy, and photodynamic therapy are also available.<sup>2</sup> The primary goal of treatment includes complete removal of the tumor and preservation of function of cosmesis.

Radiotherapy, both external beam and brachytherapy (BT), may be considered as the primary definitive treatment in patients who are unfit for surgery (locally advanced disease, comorbidities, or refused surgery) or when curative surgery is not possible due to a significant risk of poor aesthetic outcome.<sup>2</sup> When excision is incomplete and re-excision is not feasible, adjuvant RT is considered an option.<sup>2</sup>

Brachytherapy, through the superficial deposition of dose within the tumor, has been reported to have an excellent cosmetic outcome.<sup>2</sup> High dose rate (HDR) BT is a highly tailored treatment for lesions ≤ 5 mm deep; otherwise, interstitial BT is preferred. Patients treated with HDR-BT for non-melanoma skin malignancies show 85–100% of local control.<sup>2</sup>

Protracted fractionation schedules are associated with improved cosmetic results and should be utilized for poorly vascularized areas. 3D conformal radiation therapy techniques are considered medically necessary for the majority of skin cancers. In certain circumstances, such as treatment of regional nodes in the head and neck location, intensity modulated radiation therapy may be considered to lower toxicities. There is insufficient evidence and safety data to support use of electronic brachytherapy. Daily imaging is not necessary in the treatment of superficial skin cancers.

### DEFINITIONS

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- **Adjuvant radiation therapy** - Additional radiation therapy given after the primary treatment to lower the risk of cancer recurrence.
- **Actinic Keratosis** - A condition which causes scaly patches on the skin from exposure to the sun over the years. It is commonly found on face, lips, ears, neck, back of the hand and forearms.
- **Basal cell carcinoma (BCC)** - Basal cell carcinoma is a type of skin cancer. BCC begins in the basal cells, a type of cell within the skin that produces new skin cells as old ones die off. BCC often appears as a slightly transparent bump on the skin, though it can take other forms. BCC occurs most often on areas of the skin that are exposed to the sun, such as your head and neck.

- **Brachytherapy (BT)** - Brachytherapy is a procedure that involves placing radioactive material inside your body. Brachytherapy is sometimes called internal radiation.
- **Definitive radiation therapy** - Radiation therapy used with curative intent.
- **External beam radiation therapy (EBRT)** - External radiation (or external beam radiation) is the most common type of radiation therapy used for cancer treatment. A machine is used to aim high-energy rays (or beams) from outside the body into the tumor.
- **Fractions** - A way of dividing a total dose of radiation into separate doses to be administered over a period of time.
- **Gray (Gy)** - One of the two units used to measure the amount of radiation absorbed by an object or person, known as the absorbed dose. One gray (Gy) is the international system of units (SI) equivalent of 100 rads, which is equal to an absorbed dose of 1 Joule/kilogram.
- **High-dose-rate (HDR)** - High-dose-rate (HDR) is an advanced cancer treatment that delivers a highly concentrated dose of radiation near or in the tumor, while sparing the surrounding health tissue.
- **Image-guided radiation therapy (IGRT)** - Image-guided radiation therapy (IGRT) is the use of imaging during radiation therapy to improve the precision and accuracy of treatment delivery. IGRT is used to treat tumors in areas of the body that move, such as the lungs. Radiation therapy machines are equipped with imaging technology to allow your doctor to image the tumor before and during treatment. By comparing these images to the reference images taken during simulation, the patient's position and/or the radiation beams may be adjusted to more precisely target the radiation dose to the tumor. To help align and target the radiation equipment, some IGRT procedures may use fiducial markers, ultrasound, MRI, X-ray images of bone structure, CT scan, 3D body surface mapping, electromagnetic transponders, or colored ink tattoos on the skin.
- **Intensity-modulated radiotherapy (IMRT)** - Intensity-modulated radiation therapy (IMRT) is an advanced mode of high-precision radiotherapy that uses computer-controlled linear accelerators to deliver precise radiation doses to a malignant tumor or specific areas within the tumor. IMRT allows the radiation dose to conform more precisely to the three-dimensional shape of the tumor by controlling the intensity of the radiation beam in multiple small volumes. IMRT also allows higher radiation doses to be focused to regions within the tumor while minimizing the dose to surrounding normal critical structures.
- **Local control (LC)** - Local control (LC) is a local treatment modality employed in cancer to reduce local recurrence following surgery.
- **National Comprehensive Cancer Network® (NCCN)** - An alliance of 32 leading cancer centers devoted to patient care, research, and education. The NCCN guidelines are utilized for Radiation Therapy and Medical Oncology standards. NCCN consensus clinical standards are periodically updated and NantHealth, Inc. reviews these and updates its policies within a timely manner.
- **Non-melanoma Skin Cancer (NMSC)** - Nonmelanoma skin cancer refers to all the types of cancer that occur in the skin that are not melanoma.
- **Palliative Radiation Therapy** - 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. Palliative therapy may be given with other treatments from the time of diagnosis until the end of life.
- **Radiotherapy (RT)** - Radiation therapy (also called radiotherapy) is a cancer treatment that uses high doses of radiation to kill cancer cells and shrink tumors.
- **Squamous cell carcinoma (SCC)** - Squamous cell carcinoma of the skin is a common form of skin cancer that develops in the squamous cells that make up the middle and outer layers of the skin. Squamous cell carcinoma of the skin is usually not life-threatening, though it can be aggressive. Untreated, squamous cell carcinoma of the skin can grow large or spread to other parts of your body, causing serious complications.
- **Three dimensional conformal radiation therapy (3D-CRT)** - A procedure that uses a computer to create a three dimensional picture of the tumor. This allows doctors to give the highest possible dose of radiation to the tumor, while sparing the normal tissue as much as possible.

## POLICY

The following table outlines the criteria that must be met for the number of fractions and dosing relative to skin cancer radiation treatments. This dosing table represents evidence-based doses and fractions for the designated type of cancer treatment. Variations outside of the ranges may indicate a deviation from standard treatment.

External Beam Radiation Therapy			
	Number of Fractions	Total Dose	Technique
Definitive Radiation	30-35	60-70 Gy	3D
	15-20	50-55 Gy	3D
	10	40 Gy	3D
	5	30 Gy	3D
Adjuvant Radiation	20-35	50-70 Gy	3D
Palliative Radiation	1-15	8 Gy – 50 Gy	3D

High Dose Rate Brachytherapy			
	Number of Fractions	Total Dose	Technique
Definitive Radiation	8-15	40–45 Gy	Brachytherapy

## REFERENCES

1. Skin cancer. ASTRO Web site. <https://rtanswers.org/Cancer-Types/Skin-Cancer>. Accessed April 12, 2022.
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3. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Squamous Cell Skin Cancer (Version 2.2022). Available at [https://www.nccn.org/professionals/physician\\_gls/pdf/squamous\\_blocks.pdf](https://www.nccn.org/professionals/physician_gls/pdf/squamous_blocks.pdf). ©National Comprehensive Cancer Network, 2022.
4. Sen S, Bandyopadhyay A, Pal JK, Ghosh AK, Deb AR. A dosimetric study of electron beam therapy vs. high-dose-rate mould brachytherapy in adjuvant treatment of non-melanoma skin carcinomas of the head and neck region. *Journal of Contemporary Brachytherapy*. 2019;11(6):547-553.
5. Bath-Hextall F, Bong J, Perkins W, Williams H. Interventions for basal cell carcinoma of the skin: systematic review. *BMJ*. 2004;329(7468):705.
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8. Likhacheva A, Awan M, Barker CA, et al. Definitive and Postoperative Radiation Therapy for Basal and Squamous Cell Cancers of the Skin: Executive Summary of an American Society for Radiation Oncology Clinical Practice Guideline. *Pract Radiat Oncol*. 2020;10(1):8-20.

**Please see all related radiation therapy treatment policies for additional information on the treatment modalities. (3D-CRT, BT and EBRT)**

## CODING [ICD-10 AND HCPCS]\*

\*Procedure codes appearing in medical policy documents are only included as a general reference. This list may not be all-inclusive and is subject to updates. In addition, codes listed are not a guarantee of payment. CPT codes are available through the AMA.

Code	Description
C43.0 - C43.9	Malignant melanoma
C44.0 – C44.99	Other and unspecified malignant neoplasm of skin

Code	Description
G6003	Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks: up to 5 MeV
G6004	Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks: 6-10 MeV
G6005	Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks: 11-19 MeV
G6006	Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks: 20 MeV or greater
G6007	Radiation treatment delivery, 2 separate treatment areas, 3 or more ports on a single treatment area, use of multiple blocks: up to 5 MeV
G6008	Radiation treatment delivery, 2 separate treatment areas, 3 or more ports on a single treatment area, use of multiple blocks: 6-10 MeV
G6009	Radiation treatment delivery, 2 separate treatment areas, 3 or more ports on a single treatment area, use of multiple blocks: 11-19 MeV
G6010	Radiation treatment delivery, 2 separate treatment areas, 3 or more ports on a single treatment area, use of multiple blocks: 20 MeV or greater
G6011	Radiation treatment delivery, 3 or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; up to 5 MeV
G6012	Radiation treatment delivery, 3 or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; 6-10 MeV
G6014	Radiation treatment delivery, 3 or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; 20 MeV or greater
G6015	Intensity modulated Treatment delivery, single or multiple fields/arcs, via narrow spatially and temporally modulated beams, binary, dynamic MLC, per treatment session
G6016	Compensator-based beam modulation treatment delivery of inverse planned treatment using 3 or more high resolution (milled or cast) compensator convergent beam modulated fields, per treatment session
Z85.820	Personal history of malignant melanoma

## REVISION AND REVIEW HISTORY

No.	Description	Metadata
1	Original Effective Date:	5/2022
2	Policy Review Dates:	4/26/2022, 4/27/2022, 5/4/2022, 5/5/2022, 5/26/2022, 5/27/2022, 6/2/2022, 7/20/2022
3	Policy Revision Dates:	4/26/2022, 4/27/2022, 5/4/2022, 5/5/2022, 5/26/2022, 5/27/2022, 6/2/2022, 7/20/2022
4	Department Owner:	Medical Affairs
5	NH Advisory Committee Approval Dates:	5/27/2022, 6/2/2022
6	Revision Changes:	8/8/22- Dosing change for External Beam – Adjuvant from 25-35 Fractions to 20-35 fractions