

Pancreatic 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

Pancreatic cancer is a type of cancer that starts in the pancreas. Pancreatic cancer accounts for about 3% of all cancers in the US and about 7% of all cancer deaths. Pancreatic cancer is the fourth-leading cause of cancer death in the United States. Radiation therapy is one of the therapy types that can be used to treat pancreatic cancer.¹

For pancreatic cancer, patients are best managed by a multidisciplinary team. Radiation therapy can be used in combination with chemotherapy and surgery to eliminate tumors that are contained within the pancreas and any remaining cancer cells and to shrink locally advanced tumors so that surgery can be performed safely. Radiation therapy can also be used to relieve pain and other symptoms of metastatic disease.^{2,3}

Recommendations for radiation therapy for patients with pancreatic cancer are typically based on the following five clinical scenarios⁴:

- Resectable/borderline
- Resectable, resected
- Locally advanced
- Palliative
- Recurrent

In these scenarios, the goal of delivering radiation therapy is to sterilize vessel margins, enhance the likelihood of a margin-negative resection, and/or provide adequate local control to prevent or delay progression or prevent local disease recurrence while minimizing the risk of radiation therapy exposure to the surrounding organs.⁴

Planning, Dose, and Fractionation

3D conformal radiation therapy (3DCRT), intensity-modulated radiation therapy (IMRT), and stereotactic body radiation therapy (SBRT) can be utilized in the definitive management of pancreatic cancer.

Initial experience with single fraction SBRT for unresectable pancreatic cancer resulted in favorable local control rates but high rates of late gastrointestinal complications. Subsequent studies using fractionated SBRT have shown lower rates of late toxicity.⁴

DEFINITIONS

- **Adjuvant radiation therapy** - Additional radiation therapy given after the primary treatment to lower the risk of cancer recurrence.
- **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.
- **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.
- **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.
- **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.
- **Stereotactic body radiation therapy (SBRT)** - Treatment outside the brain is called stereotactic body radiation therapy (SBRT). SBRT may be used for certain lung, spine, and liver tumors.
- **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 pancreatic 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.

Pancreatic Cancer			
	Number of Fractions	Total Dose	Technique
Borderline Resectable	15	36 Gy	IMRT, 3D, IGRT
	25-30	45-54 Gy	IMRT, 3D, IGRT
Adjuvant (Post-Operative)	25-28	45-50.4 Gy	IMRT, 3D, IGRT
Locally Advanced	25-30	45-54 Gy	IMRT, 3D, IGRT
	15	67.5 Gy	IMRT, IGRT
	3-5	25-50 Gy	SBRT
Palliative	1-15	8 -37.5 Gy	3D, IGRT

REFERENCES

1. Key statistics for pancreatic cancer. American Cancer Society. <https://www.cancer.org/cancer/pancreatic-cancer/about/key-statistics.html>. Accessed May 2, 2022.
2. Pancreatic cancer stages. American Cancer Society. <https://www.cancer.org/cancer/pancreatic-cancer/detection-diagnosis-staging/staging.html>. Accessed May 2, 2022.
3. What is pancreatic cancer? American Cancer Society. <https://www.cancer.org/cancer/pancreatic-cancer/about/what-is-pancreatic-cancer.html>. Accessed May 2, 2022.
4. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Pancreatic Adenocarcinoma (Version 1.2022). Available at https://www.nccn.org/professionals/physician_gls/pdf/pancreatic.pdf. ©National Comprehensive Cancer Network, 2022.

Please see all related radiation therapy treatment policies for additional information on the treatment modalities. (3D-CRT, EBRT, IGRT, IMRT, SBRT)

CODING [ICD-10, 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
C25.0 - C25.9	Malignant neoplasm pancreas
G0339	Image-guided robotic linear accelerator-based stereotactic radiosurgery, complete course of therapy in one session or first session of fractionated treatment
G0340	Image-guided robotic linear accelerator-based stereotactic radiosurgery, delivery including collimator changes and custom plugging, fractionated treatment, all lesions, per session, second through fifth sessions, maximum 5 sessions per course of treatment
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
Z51.5	Encounter for palliative care
Z92.3	Personal history of irradiation

REVISION AND REVIEW HISTORY

No.	Description	Metadata
1	Original Effective Date:	5/2022
2	Policy Review Dates:	5/5/2022, 5/6/2022, 5/11/2022, 5/31/2022, 7/20/2022
3	Policy Revision Dates:	5/5/2022, 5/6/2022, 5/11/2022, 5/31/2022, 7/20/2022
4	Department Owner:	Medical Affairs
5	NH Advisory Committee Approval Dates:	5/12/2022, 5/31/2022
6	Revision Changes:	