



*National Imaging Associates, Inc.	
Clinical guidelines: GASTRIC CANCER	Original Date: June 2013
Radiation Oncology	Last Revised Date: May 2023
Guideline Number: NIA_CG_130	Implementation Date: January 2024

GENERAL INFORMATION

- *It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.*
- *Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations.*

INDICATIONS FOR RADIATION THERAPY

Three-dimensional conformal radiation therapy (3D-CRT) is considered medically necessary for the following with the following clinical indications¹:

- Pre-operative (Potentially Resectable) T2, T3, or T4 Any N, M0
- OR**
- Primary Therapy (Unresectable/Medically Unfit) Any N, Any T, M0
- OR**
- Post-operative -Surgical Resection T2, T3, T4, Any N or Any T, N+ or Positive margins

Dosage Guidelines:

- 45-50.4 Gy up to 28 fractions
- Higher doses may be used for positive surgical margins in selected cases as a boost to that area.

TREATMENT OPTIONS TO BE REVIEWED ON A CASE-BY-CASE BASIS

Intensity Modulated Radiation Therapy (IMRT)¹

IMRT is not indicated as a standard treatment option and should not be used routinely for the delivery of radiation therapy for gastric cancer. IMRT is strictly defined by the utilization of inverse planning

modulation techniques. IMRT may be appropriate for limited circumstances in which radiation therapy is indicated and 3D conformal radiation therapy (3D-CRT) techniques cannot adequately deliver the radiation prescription without exceeding normal tissue radiation tolerance, the delivery is anticipated to contribute to potential late toxicity or tumor volume dose heterogeneity is such that unacceptable hot or cold spots are created. The role of intensity modulated radiation therapy, according to current National Comprehensive Cancer Network Guidelines may be appropriate in selected cases to reduce dose to normal structures, such as heart, lungs, kidneys, and liver. However, uncertainties from variations in stomach filling and respiratory motion need to be considered.

Clinical rationale and documentation for performing IMRT rather than 2D or 3D-CRT treatment planning and delivery will need to:

- Demonstrate how 3D-CRT isodose planning cannot produce a satisfactory treatment plan (as stated above) via the use of a patient-specific dose volume histograms and isodose plans.
- Provide tissue constraints for both the target and affected critical structures.

Proton Beam Radiation Therapy

Proton beam is not an approved treatment option for gastric cancer. There are limited clinical studies comparing proton beam therapy to 3-D conformal radiation. Overall, studies have not shown clinical outcomes to be superior to conventional radiation therapy.

Stereotactic Body Radiation Therapy

Stereotactic Body Radiation Therapy (SBRT) is not an approved treatment option for the treatment of gastric cancer.

BACKGROUND

For patients with resectable gastric cancer, radiation therapy has been used both in the pre-operative and post-operative settings. External beam radiation therapy alone is of limited use for patients with locally unresectable gastric cancer with no evidence of improved survival. Combined chemoradiation, however, does result in improved survival, and thus combined modality treatment is typically supported. The role of IMRT (intensity modulated radiation therapy) may be appropriate in selected cases to reduce dose to normal structures, such as heart, lungs, kidneys, and liver, but should be considered on a case-by-case basis.

The goal of these guidelines is to delineate appropriate indications of the employment of radiation therapy in the treatment of gastric cancer and to define suitable methods of delivery of radiation therapy for these indications.

REFERENCES

1. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines): Gastric Cancer Version 2.2022. National Comprehensive Cancer Network (NCCN). Updated January 11, 2022. Accessed December 2, 2022. https://www.nccn.org/professionals/physician_gls/pdf/gastric.pdf

POLICY HISTORY

Date	Summary
May 2023	<ul style="list-style-type: none">• Added to dosage guidelines: Higher doses may be used for positive surgical margins in selected cases as a boost to that area• Deleted Additional Resources• Heading changed from “Treatment Options Requiring Physician Review” to “Treatment Options to be reviewed on a case-by-case basis”
January 2022	No significant changes

Reviewed / Approved by NIA Clinical Guideline Committee

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