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Note: Consider Clinical Trials as treatment options for eligible patients. Consider referral to a Comprehensive Cancer Center.

INITIAL EVALUATION

- Multidisciplinary evaluation
- Nutrition consult as clinically indicated
- History and physical
- CBC with differential and chemistry profile
- CT chest, abdomen and pelvis with oral and IV contrast
- Esophagogastroduodenoscopy (EGD) and biopsy
- PET/CT scan (if clinically indicated)
- Endoscopic ultrasound (optional)
- H. pylori test, treat if positive
- Microsatellite (MS) status
- *HER2-neu* evaluation by immunohistochemistry (IHC)¹ and *PD-L1* in patients with advanced, metastatic cancer (not localized cancer)
- Additional biomarkers as clinically indicated¹
- Lifestyle risk assessment²

CLINICAL STAGE

ADDITIONAL EVALUATION

POST LAPAROSCOPY STAGING

PRIMARY TREATMENT

cTis or cT1a

Medically fit³?

Yes
No

- Endoscopic resection (ER) **or**
- Surgery

ER

Medically fit³ and potentially resectable (consider laparoscopy staging)

cT1b, M0, cT2 or greater **or** N+, but M0

- Surgery **or**
- Preoperative chemotherapy **or**
- Chemoradiation (45 Gy)
- Discuss Goal Concordant Care (GCC) with patient⁶ or if clinically indicated, with Surrogate-Decision Maker (SDM)

Medically fit³ and unresectable^{4,5} (consider laparoscopy staging)

M0

- Discuss GCC with patient⁶ or if clinically indicated, with SDM
- Chemoradiation (45 Gy) **or**
- Chemotherapy

Medically unfit

M0

- Discuss GCC with patient⁶ or if clinically indicated, with SDM
- Radiation therapy (45 Gy) **or**
- Supportive care including Nutrition Services as clinically indicated

Stage IV (M1)

KPS score \geq 60% **or** ECOG performance score \leq 2?

Yes
No

- Discuss GCC with patient⁶ or if clinically indicated, with SDM
- Chemotherapy **or**
- Clinical trial **or**
- Supportive care including Nutrition Services as clinically indicated

- Discuss GCC with patient⁶ or if clinically indicated, with SDM
- Consult to Palliative/Supportive Care as clinically indicated

Post-Primary Treatment Assessment

- CT chest, abdomen and pelvis with oral and IV contrast (if clinically indicated)
- PET/CT scan (if clinically indicated)
- CBC with differential and chemistry profile
- See [Page 2](#) for post-surgical response evaluation

KPS = Karnofsky Performance Status
 ECOG = Eastern Cooperative Oncology Group

¹ Consider *HER2-neu* evaluation initially by IHC and if IHC score 2+, follow-up with FISH test. See [Biomarkers - MD Anderson Approved algorithm](#).

² See [Physical Activity](#), [Nutrition](#), and [Tobacco Cessation](#) algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice

³ Medically fit implies low risk (< 5% chance of mortality) for major surgery

⁴ M0 unresectable refers to an unresectable T4 primary

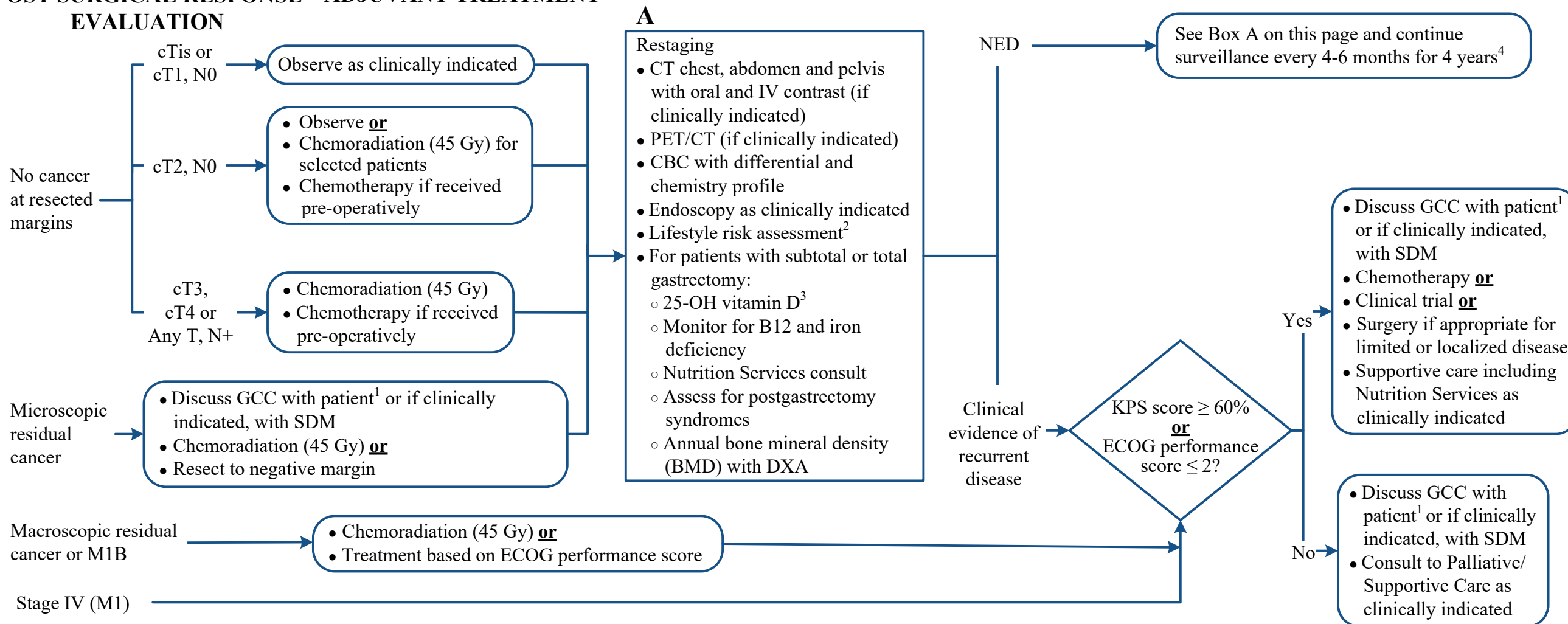
⁵ Medically fit patients with positive cytology in the peritoneal fluid (but no macroscopic cancer) may be re-assessed for surgery after prolonged systemic therapy and chemoradiation

⁶ GCC should be initiated by the Primary Oncologist. If Primary Oncologist is unavailable, Primary Team Attending Physician to initiate GCC discussion and notify Primary Oncologist. Patients or if clinically indicated the SDM should be informed of therapeutic and/or palliative options. GCC discussion should be consistent, timely, and re-evaluated as clinically indicated. The Advance Care Planning (ACP) note should be used to document GCC discussion. Refer to the [GCC home page](#) (for internal use only).

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POST SURGICAL RESPONSE ADJUVANT TREATMENT EVALUATION



ECF = epirubicin, cisplatin and fluorouracil
 DXA = Dual-energy X-ray Absorptiometry

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² See [Physical Activity](#), [Nutrition](#), and [Tobacco Cessation](#) algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice

³ 25-hydroxyvitamin D, also known as 25-hydroxycholecalciferol, calcidiol or abbreviated as 25-OH Vitamin D, the main vitamin D metabolite circulating in plasma

⁴ For patients who are 4 years post-treatment and no evidence of disease (NED), refer to [Survivorship – Gastric Cancer algorithm](#).

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SUGGESTED READINGS

PRINCIPLES OF MULTIDISCIPLINARY TEAM APPROACH FOR GASTROESOPHAGEAL CANCERS

Ajani, J. A., D'Amico, T. A., Bentrem, D. J., Chao, J., Cooke, D., Corvera, C., ... Pluchino, L. A. (2022). Gastric cancer, version 2.2022, NCCN clinical practice guidelines in oncology. *Journal of the National Comprehensive Cancer Network*, 20(2), 167-192. doi:10.6004/jnccn.2022.0008

Macdonald, J. S., Smalley, S. R., Benedetti, J., Hundahl, S. A., Estes, N. C., Stemmermann, G. N., ... Martenson, J. A. (2001). Chemoradiotherapy after surgery compared with surgery alone for adenocarcinoma of the stomach or gastroesophageal junction. *The New England Journal of Medicine*, 345(10), 725-730. doi:10.1056/NEJMoa010187

PRINCIPLES OF GASTRIC CANCER SURGERY

Ikoma, N., Kim, B., Elting, L. S., Shih, Y. C. T., Badgwell, B. D., & Mansfield, P. (2019). Trends in volume – outcome relationship in gastrectomies in Texas. *Annals of Surgical Oncology*, 26(9), 2694-2702. doi: 10.1245/s10434-019-07446-0

Ito, H., Clancy, T. E., Osteen, R. T., Swanson, R. S., Bueno, R., Sugarbaker, D. J., ... Whang, E. E. (2004). Adenocarcinoma of the gastric cardia: What is the optimal surgical approach? *Journal of the American College of Surgeons*, 199(6), 880-886. doi:10.1016/j.jamcollsurg.2004.08.015

Schwarz, R. E., & Smith, D. D. (2007). Clinical impact of lymphadenectomy extent in resectable gastric cancer of advanced stage. *Annals of Surgical Oncology*, 14(2), 317-328. doi:10.1245/s10434-006-9218-2

PRINCIPLES OF SYSTEMIC THERAPY FOR GASTRIC OR GASTROESOPHAGEAL JUNCTION ADENOCARCINOMA

Ajani, J. A., Winter, K., Okawara, G. S., Donohue, J. H., Pisters, P. W. T., Crane, C. H., ... Rich, T. A. (2006). Phase II trial of preoperative chemoradiation in patients with localized gastric adenocarcinoma (RTOG 9904): Quality of combined modality therapy and pathologic response. *Journal of Clinical Oncology*, 24(24), 3953-3958. doi:10.1200/JCO.2006.06.4840

Al-Batran, S., Hartmann, J. T., Hofheinz, R., Homann, N., Rethwisch, V., Probst, S., ... Jäger, E. (2008). Biweekly fluorouracil, leucovorin, oxaliplatin, and docetaxel (FLOT) for patients with metastatic adenocarcinoma of the stomach or esophagogastric junction: A phase II trial of the arbeitsgemeinschaft internistische onkologie. *Annals of Oncology*, 19(11), 1882-1887.

Al-Batran, S., Hartmann, J. T., Probst, S., Schmalenberg, H., Hollerbach, S., Hofheinz, R., ... Arbeitsgemeinschaft Internistische Onkologie. (2008). Phase III trial in metastatic gastroesophageal adenocarcinoma with fluorouracil, leucovorin plus either oxaliplatin or cisplatin: A study of the arbeitsgemeinschaft internistische onkologie. *Journal of Clinical Oncology*, 26(9), 1435-1442. doi:10.1200/JCO.2007.13.9378

Al-Batran, S. E., Homann, N., Pauligk, C., Goetze, T. O., Meiler, J., Kasper, S., ... FLOT4-AIO Investigators. (2019). Perioperative chemotherapy with fluorouracil plus leucovorin, oxaliplatin, and docetaxel versus fluorouracil or capecitabine plus cisplatin and epirubicin for locally advanced, resectable gastric or gastro-oesophageal junction adenocarcinoma (FLOT4): a randomised, phase 2/3 trial. *The Lancet*, 393(10184), 1948-1957.

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SUGGESTED READINGS - continued

PRINCIPLES OF SYSTEMIC THERAPY FOR GASTRIC OR GASTROESOPHAGEAL JUNCTION ADENOCARCINOMA – continued

- Dank, M., Zaluski, J., Barone, C., Valvere, V., Yalcin, S., Peschel, C., ... Bugat, R. (2008). Randomized phase III study comparing irinotecan combined with 5-fluorouracil and folinic acid to cisplatin combined with 5-fluorouracil in chemotherapy naive patients with advanced adenocarcinoma of the stomach or esophagogastric junction. *Annals of Oncology*, 19(8), 1450-1457. doi: 10.1093/annonc/mdn166
- Janjigian, Y. Y., Maron, S. B., Chatila, W. K., Millang, B., Chavan, S. S., Alterman, C., ... & Hechtman, J. F. (2020). First-line pembrolizumab and trastuzumab in HER2-positive oesophageal, gastric, or gastro-oesophageal junction cancer: an open-label, single-arm, phase 2 trial. *The Lancet Oncology*, 21(6), 821-831. doi:10.1016/S1470-2045(20)30169-8
- Kang, Y. K., Kang, W. K., Shin, D. B., Chen, J., Xiong, J., Wang, J., ... Philco-Salas, M. (2009). Capecitabine/cisplatin versus 5-fluorouracil/cisplatin as first-line therapy in patients with advanced gastric cancer: A randomised phase III noninferiority trial. *Annals of Oncology*, 20(4), 666-673. doi:10.1093/annonc/mdn717
- National Comprehensive Cancer Network. (2022). *Gastric Cancer*. (NCCN Guideline Version 2.2022). Retrieved from https://www.nccn.org/professionals/physician_gls/pdf/gastric.pdf
- Van Cutsem, E., Moiseyenko, V. M., Tjulandin, S., Majlis, A., Constenla, M., Boni, C., ... Risse, M. L. (2006). Phase III study of docetaxel and cisplatin plus fluorouracil compared with cisplatin and fluorouracil as first-line therapy for advanced gastric cancer: a report of the V325 Study Group. *Journal of Clinical Oncology*, 24(31), 4991-4997. doi:10.1200/JCO.2006.06.8429
- Van Cutsem, E., Kang, Y., Chung, H., Shen, L., Sawaki, A., Lordick, F., ... Bang, Y. (2009). Efficacy results from the ToGA trial: a phase III study of trastuzumab added to standard chemotherapy in first-line HER2-positive advanced gastric cancer. *Journal of Clinical Oncology*, 27(18)(suppl), LBA4509. doi:10.1016/S0140-6736(10)61121-X

OTHER SUPPORTIVE READINGS

MD Anderson Institutional Policy #CLN1202 - Advance Care Planning Policy
Advance Care Planning (ACP) Conversation Workflow (ATT1925)

Peterson, L. A., Zeng, X., Caufield-Noll, C. P., Schweitzer, M. A., Magnuson, T. H., & Steele, K. E. (2016). Vitamin D status and supplementation before and after bariatric surgery: a comprehensive literature review. *Surgery for Obesity and Related Diseases*, 12(3), 693-702. doi:10.1016/j.soard.2016.01.001

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DEVELOPMENT CREDITS

This practice algorithm is based on majority expert opinion of the Gastrointestinal Center Faculty at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following:

Core Development Team Lead

Jaffer Ajani, MD (GI Medical Oncology)

Workgroup Members

Brian Badgwell, MD (Surgical Oncology)
Tharakeswara Bathala, MD (Abdominal Imaging)
Manoop Bhutani, MBBS (Gastroenterology Hepat & Nutrition)
Mariela Blum Murphy, MD (GI Medical Oncology)
Prajnan Das, MD, MPH (GI Radiation Oncology)
Jeannelyn Santiano Estrella, MD (Anatomical Pathology)
Olga N. Fleckenstein, BS♦
Keith Fournier, MD (Surgical Oncology)
Alexandra Hacker, MSN, APRN, FNP-BC♦
Naruhiko Ikoma, MD (Surgical Oncology)

Jeffrey H. Lee, MD (Gastroenterology Hepat & Nutrition)
Michael Leung, PharmD (Clinical Pharmacy Programs)
Steven Lin, MD, PHD (Radiation Oncology)
Paul Mansfield, MD (Surgical Oncology)
Dipen Maru, MD (Anatomical Pathology)
Bruce Minsky, MD (GI Radiation Oncology)
William A. Ross, MD (Gastroenterology Hepat & Nutrition)
Tara Sagebiel, MD (Abdominal Imaging)
James Welsh, MD (Radiation Oncology)

♦ Clinical Effectiveness Development Team