AAVBC

AMERICAN ACADEMY OF VALUE BASED CARE

Gastric Cancer

Quick Reference Guide

2026

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1 CLINICAL SNAPSHOT

Definition: Gastric cancer is a **malignancy of the stomach** in which **adenocarcinoma comprises approximately 95%** of cases.[1] Two anatomic subtypes carry distinct clinical implications: **cardia/gastroesophageal junction (GEJ) tumors**, which behave biologically like esophageal adenocarcinomas, and **noncardia tumors** (fundus, body, antrum, pylorus, lesser curvature, greater curvature), which are more strongly associated with Helicobacter pylori infection and are disproportionately prevalent in racial and ethnic minority populations.[2] The Lauren classification further divides adenocarcinoma into **intestinal type** (well-differentiated, glandular, H. pylori–associated, more likely HER2-overexpressing) and **diffuse type** (poorly cohesive, signet ring cells, CDH1-associated, worse prognosis, no benefit from durvalumab addition in MATTERHORN).[1,3] The TCGA molecular classification identifies **four subtypes: chromosomal instability** (CIN, ~**50%**), **microsatellite instability** (MSI, ~**22%**), **genome stability** (GS, ~**20%**), and **Epstein–Barr virus–positive** (EBV, ~**9%**).[4]

ICD-10 Codes:

Primary tumor: **C16.0** (cardia/GEJ — but tumors with epicenter in the proximal 2 cm crossing the EGJ are staged as esophageal per AJCC 8th Edition); **C16.1** (fundus); **C16.2** (body); **C16.3** (pyloric antrum); **C16.4** (pylorus); **C16.5** (lesser curvature); **C16.6** (greater curvature); **C16.8** (overlapping subsites); **C16.9** (unspecified — avoid when endoscopy specifies location). Precursor lesions: **K31.A0–K31.A29** (gastric intestinal metaplasia, site-specific and dysplasia-graded — use instead of **K29.x** generic gastritis). Etiologic factor: **B96.81** (H. pylori as cause of disease classified elsewhere). Metastatic sites are coded separately and document higher RAF: **C78.7** (liver), **C78.00–C78.02** (lung), **C78.6** (peritoneum), **C79.51** (bone).[5]

Prevalence and Burden: The American Cancer Society projects approximately **31,510** new gastric cancer cases (**17,900** men; **13,610** women) and **10,740** deaths in the United States in 2026, representing roughly **1.5%** of all new cancers.[6] More than **80%** of cases are diagnosed in individuals aged **≥55**,[7] the median age at diagnosis is **68 years**, and approximately **6 in 10** patients are aged **≥65** — placing this firmly in the Medicare population.[8] The overall 5-year relative survival is approximately **38%**; early-stage (Stage I) survival approaches **75%**, while Stage IV survival is approximately **5%**.[7] The late-stage diagnostic pattern — driven by attribution of indigestion, early satiety, and mild epigastric discomfort to GERD or functional dyspepsia — explains the survival gap. PPI therapy at the time of endoscopy is independently associated with missed gastric cancer (**p < 0.001**), and **23%** of US gastric cancer patients experienced diagnostic delay >**90 days** from symptom onset (mean delay **229 days** vs. **30 days** in non-delayed cases); provider knowledge/skills gaps accounted for **44%** of the barrier.[9,10]

HCC/RAF V28 Mapping

ICD-10 CODE(S)	HCC CATEGORY (V28)	RAF (CNA)	DOCUMENTATION REQUIREMENT
C16.0–C16.8 (subsite specified)	HCC 22 — Malignant Neoplasm Without Complications	0.363	**Specify anatomic subsite from endoscopy or pathology** — location (cardia, fundus, body, antrum, pylorus, lesser/greater curvature, overlapping) should always support C16.0 through C16.8

ICD-10 CODE(S)	HCC CATEGORY (V28)	RAF (CNA)	DOCUMENTATION REQUIREMENT
C16.9 (unspecified — avoid)	HCC 22 — Malignant Neoplasm Without Complications	0.363	AVOID: The **most frequent gastric coding error.** Endoscopy and pathology reports almost always specify location — use C16.0–C16.8 whenever location is documented
C78.7 (liver mets)	HCC 17 — Metastatic Cancer (liver, lung)	4.209	Code **separately** from C16.x when hepatic metastases are confirmed — over 10× the RAF of the primary tumor
C78.00/C78.01/ C78.02 (lung mets)	HCC 17 — Metastatic Cancer (liver, lung)	4.209	Each distant lung site coded **individually** — document laterality when known
C78.6 (peritoneum mets)	HCC 18 — Metastatic Cancer (bone, peritoneum)	2.341	Present in numerous of metastatic cases and frequently missed on CT; **may require laparoscopy for detection** — document 'peritoneal metastases' or 'peritoneal carcinomatosis'
C79.51 (bone mets)	HCC 18 — Metastatic Cancer (bone, peritoneum)	2.341	Document the **specific bone site** when available
K31.A0–K31.A29 (gastric intestinal metaplasia)	No HCC	—	**Site-specific and dysplasia-graded subcodes**; K31.A22 = high-grade dysplasia → expedited GI referral for ESD evaluation
B96.81 (H. pylori as cause)	No HCC	—	Code when **H. pylori is confirmed** by breath test (CPT 83013), stool antigen (87338), or biopsy — link to gastric malignancy in documentation
Z85.038 (avoid for active)	No HCC	—	AVOID: Personal history — use only **after treatment completion** with no active disease and no active surveillance for known disease

ABBREVIATIONS: CMS-HCC V28 = Centers for Medicare & Medicaid Services Hierarchical Condition Category Model V28; CNA = Community Non-Dual Eligible, Aged; EGJ = esophagogastric junction; ESD = endoscopic submucosal dissection; GEJ = gastroesophageal junction; HCC = Hierarchical Condition Category; RAF = Risk Adjustment Factor. *Illustrative annual value at 2024 CMS-HCC base rate × CNA RAF coefficient — confirm payment year against current CMS tables[4]. RAF coefficients, HCC mapping, and base rate per CMS CY2026 sources

RAF values represent the Community Non-Dual Eligible Aged (CNA) coefficient from the 2026 CMS-HCC model; values vary across patient populations based on eligibility and care setting

Risk-Adjusted Care Resources per Patient/Year

RAF weight × MA base rate = estimated annual care coordination support per documented HCC

Gastric Cancer (Specified/Unspecified)	Gastric Cancer (Metastatic Cancer, liver, lung)	Gastric Cancer (Metastatic Cancer, bone, peritoneum)
~$3,770	**~$43,700**	**~$24,300**
HCC 22 · RAF 0.363 · per active patient/year	HCC 17 · RAF 4.209 · per active patient/year	HCC 18 · RAF 2.341 · per active patient/year

RAF values represent the Community Non-Dual Eligible Aged (CNA) coefficient from the 2026 CMS-HCC model; values vary across patient populations based on eligibility and care setting

RAF coefficients are CNA segment, 2026 CMS-HCC Model V28. The impact of this condition varies across patient populations, particularly in individuals with disability, dual eligibility, or those receiving care in institutional settings

AAVBC PERSPECTIVE

AAVBC encourages primary care providers to treat persistent dyspepsia of more than 4 weeks' duration in patients ≥50 years as an indication for EGD referral(at an ambulatory surgery center), rather than initiating or extending empiric PPI therapy. ***PPI treatment can mask early symptoms of gastric cancer and create a false sense of clinical reassurance****, delaying diagnosis at a stage when curative-intent treatment remains possible. AAVBC supports proactive H. pylori testing in high-risk patients, including first-generation immigrants from East Asia, Eastern Europe, and Andean Latin America, and individuals with a first-degree relative with gastric cancer, with confirmed eradication using urea breath test or stool antigen at least 4 weeks after treatment completion. Serum antibody testing cannot confirm eradication and should not be used for this purpose. AAVBC also supports use of the ABC risk stratification method as a noninvasive serum-based tool to identify patients requiring endoscopic surveillance. This helps ensure the right patients are identified, evaluated, and entered into appropriate prevention pathways at the right time.*

2 RECOGNITION AND DIAGNOSIS

Diagnostic Tests Covered Under Medicare Part B

TEST	FREQUENCY	CPT/ HCPCS	CLINICAL INDICATION
No population-based screening for gastric cancer[11]	—	—	**No USPSTF screening recommendation**; no Medicare-covered average-risk screening program — risk-stratified screening in high-risk populations only or when medically necessary
EGD with biopsy — diagnostic	At symptom or alarm-feature trigger; persistent dyspepsia >4 weeks in patients ≥50[4]	43239	**Persistent dyspepsia ≥50 unresponsive to PPI**; alarm symptoms (dysphagia, weight loss, melena, hematochezia, IDA); 6–8 biopsies per NCCN v2.2026 for adequate histologic and molecular yield[4]
EGD with submucosal dissection (ESD)	Therapeutic at qualifying threshold	43270	**Favorable early-stage histology** (cTis or cT1a, well/moderately differentiated, ≤2 cm, no lymphovascular invasion)[4]
EUS — locoregional staging[4]	Once at staging	43237/ 43242	**Most accurate T- and N-staging**; EUS sensitivity for T1 is 86% in meta-analysis[12]
Contrast CT chest/abdomen/ pelvis[4]	Once at staging	74177	**Initial cross-sectional staging** and metastatic workup; complementary to EUS and PET/CT[4]
PET/CT — staging[4]	Once at staging of locally advanced or metastatic disease	78816	**Identifies distant metastases** CT alone may miss; particularly relevant before any surgical planning
H. pylori urea breath test (diagnosis + eradication confirmation)[13]	Diagnosis; confirm eradication ≥4 weeks post-treatment	83013	Stop PPIs **2 weeks before testing**; preferred for eradication confirmation

TEST	FREQUENCY	CPT/ HCPCS	CLINICAL INDICATION
H. pylori stool antigen (diagnosis + eradication confirmation)[13]	Diagnosis; confirm eradication ≥4 weeks post-treatment	87338	Alternative to **urea breath test** for eradication confirmation
H. pylori serum antibody (diagnosis only)[13]	Diagnosis only — CANNOT confirm eradication	86677	AVOID: **Remains positive for years after successful treatment** — do not use for eradication confirmation
Advance Care Planning (AWV)	Annually + when goals change	99497/ 99498	**Document directives, surrogate, code status** — relevant when functional status shapes curative-versus-palliative decisions

ABBREVIATIONS: AWV = Annual Wellness Visit; EGD = esophagogastroduodenoscopy; ESD = endoscopic submucosal dissection; EUS = endoscopic ultrasound; GEJ = gastroesophageal junction; IDA = iron deficiency anemia; PCP = primary care provider; PET/CT = positron emission tomography/computed tomography; PPI = proton pump inhibitor; USPSTF = US Preventive Services Task Force

Subtle Early Signs in Older Adults (>65)

SIGN/SYMPTOM	CLINICAL SIGNIFICANCE
Persistent dyspepsia >4 weeks in a patient ≥50, unresponsive to PPI therapy	**The single most important early signal PCPs should act on.** PPI therapy can mask early gastric cancer symptoms — refractoriness in a patient ≥50 requires EGD, not a longer trial of acid suppression[14]
Early satiety or new-onset anorexia	Frequently **misattributed to age-related appetite change or polypharmacy** — combine with risk factors (H. pylori, immigrant background, family history) to expedite EGD[14]
Unintentional weight loss ≥5% in 6 months	**Independent alarm symptom**; weight loss + early satiety + age ≥50 warrants EGD even when no other alarm features are present[14]
Iron deficiency anemia of unclear etiology	Present in approximately **40% of gastric cancer patients** at diagnosis; often the presenting finding in elderly patients[14]
New dysphagia in a patient ≥50	**Late-stage alarm symptom** for gastric and gastroesophageal cancers — requires expedited EGD[14]
Melena, hematochezia, or occult GI bleeding	Alarm symptom — **proceed to EGD** irrespective of other features[14]

SIGN/SYMPTOM	CLINICAL SIGNIFICANCE
Virchow's node (left supraclavicular lymphadenopathy) or Sister Mary Joseph's nodule (periumbilical)	Pathognomonic for **intra-abdominal malignancy with metastatic spread** — document carefully; physical exam findings frequently underdocumented[15]

ABBREVIATIONS: EGD = esophagogastroduodenoscopy; GI = gastrointestinal; IDA = iron deficiency anemia; PPI = proton pump inhibitor

Geriatric Risk Factors

FACTOR	RISK SIGNAL	NOTES
H. pylori infection	Single most important risk factor; present in **~60% of gastric cancer cases**	OR 2.56 (2.18–3.00); RR 3.8–5.8 in meta-analysis. Eradication associated with **46% ↓ incidence and 39% ↓ mortality**[14]
First-generation immigrant from high-incidence region	**Korean Americans ≥50 have up to 14.5× higher noncardia gastric cancer** incidence vs non-Hispanic White;[16] regional/distant stage rates at diagnosis are nearly 2-fold higher in Hispanic (RR 1.87–1.92), API (RR 1.58–2.17), and non-Hispanic Black (RR 1.78–1.80) populations[17]	East Asia, Eastern Europe, Andean Latin America — AGA 2025 recommends **disaggregation by country and region of origin** rather than aggregate ethnic categories[11]
First-degree relative with gastric cancer	**RR 2.71** (2.08–3.53);[18] **OR 1.84** (1.64–2.04)[19]	Triggers proactive **H. pylori screening** per AGA 2025; consider hereditary syndrome workup if multi-generation history
Hereditary syndromes (CDH1, Lynch, FAP, Li-Fraumeni)	Substantially elevated **lifetime gastric cancer risk** per NCCN Genetic/Familial High-Risk Assessment	AGA recommends individualized screening initiation **10 years before** the youngest age at diagnosis in a first-degree relative
Pernicious anemia/Vitamin B12 deficiency	**OR 2.18** (1.94–2.45)[20]	Both a **risk factor** and a **consequence of gastrectomy** — code separately (D51.0/D51.9) from the malignancy
History of gastric ulcer	**OR 3.04** (2.07–4.49)[14]	Pooled analysis (Patel 2026)

FACTOR	RISK SIGNAL	NOTES
Obesity (BMI ≥30)	**RR 1.93** (1.52–2.45); **OR 1.7** (1.5–2.0)[21]	**Stronger for cardia/GEJ adenocarcinoma** than noncardia
Tobacco use (current or remote)	**OR 1.61** (1.49–1.75); **RR 1.53–1.84**[22]	Document pack-years; brief intervention; quitline referral
High dietary salt intake	**OR 1.55** (1.45–1.64); **RR 1.41–1.68**[22]	Salty taste preference: **OR 1.59** (1.25–2.03)
Heavy alcohol use (≥4 drinks/day)	**OR 1.37** (1.19–1.58)[14]	Document **AUDIT-C result**; F10.x coding when use disorder is present
Male sex	Male-to-female ratio **~1.95:1**[22]	Strong demographic risk factor; **female patients with alarm symptoms still warrant the same expedited workup**
Age >50, especially Medicare-age (≥65)	Median age at diagnosis 68 years; **>80%** of cases occur at **age ≥55**; ~6 in 10 patients are ≥65[14]	Cumulative burden of H. pylori, atrophic gastritis, and intestinal metaplasia **increases with age**

ABBREVIATIONS: AUDIT-C = Alcohol Use Disorders Identification Test (Consumption); BMI = body mass index; CDH1 = cadherin-1 gene; FAP = familial adenomatous polyposis; GEJ = gastroesophageal junction; OR = odds ratio; RR = relative risk

Diagnostic Thresholds

TEST/MARKER	DIAGNOSTIC CRITERION	NOTES
EGD with biopsy	NCCN v2.2026 recommends **6–8 biopsies** of suspicious lesions	**Single biopsy has approximately 70% sensitivity**; sensitivity rises to 98% with 7 biopsies along the ulcer margin and base. Endoscopic miss rate for early gastric cancer is approximately **10%**[14]
EUS T-staging	Sensitivity for T1: 86%; specificity for distinguishing T1 from T2: 85–90%[14]	**Essential for determining candidacy** for endoscopic resection vs. surgery
Contrast CT chest/abdomen/pelvis	Initial cross-sectional staging[14]	**Peritoneal metastases (32–46% of metastatic cases) may be missed** — laparoscopy may be required for detection[14]

TEST/MARKER	DIAGNOSTIC CRITERION	NOTES
PET/CT	Locally advanced or metastatic staging[14]	Identifies **distant metastases** CT alone may miss
H. pylori testing	**Urea breath test** (83013) or **stool antigen** (87338) for diagnosis and eradication confirmation[13]	Confirm eradication **≥4 weeks after treatment** and **2 weeks after stopping PPIs**. Serology (86677) cannot confirm eradication
Lauren classification	Intestinal vs. diffuse type — required for treatment planning	**Intestinal type more likely HER2+ and H. pylori–associated**; diffuse type associated with CDH1 mutations and showed no benefit from durvalumab in MATTERHORN[3,14]
Biomarkers — universal testing at advanced diagnosis	HER2, PD-L1 CPS, MSI/MMR, CLDN18.2[14]	**Drives first-line and subsequent therapy decisions**; ASCO 2026 states cost of universal biomarker testing is less than cost of suboptimal treatment
G-8/VES-13 Geriatric Screening (≥65)	G-8 score **≤14** triggers comprehensive geriatric assessment[23]	Functional age — **not chronological age** — drives treatment decisions per NCCN Older Adult Oncology v1.2026 and ASCO 2023 guideline update[4]
ABC risk stratification (PCP serology + pepsinogen)	Combines H. pylori antibody + pepsinogen I/II	**Group A** (Hp−/PG−) — re-test every 5 yrs; **Group B** (Hp+/PG−) — eradicate + scope ≥q3 yrs; **Group C** (Hp+/PG+) — eradicate + scope ≥q2 yrs; **Group D** (Hp−/PG+) — annual scope[24]

ABBREVIATIONS: AJCC = American Joint Committee on Cancer; CDH1 = cadherin-1 gene; CLDN18.2 = claudin 18.2; CPS = combined positive score; EGD = esophagogastroduodenoscopy; EUS = endoscopic ultrasound; G-8 = Geriatric 8 screening; HER2 = human epidermal growth factor receptor 2; Hp = Helicobacter pylori; MMR = mismatch repair; MSI = microsatellite instability; NCCN = National Comprehensive Cancer Network; PD-L1 = programmed death-ligand 1; PG = pepsinogen; TNM = tumor, node, metastasis; VES-13 = Vulnerable Elders Survey-13

Clues to Dig Deeper

CLINICAL CLUE	WHY IT MATTERS	NEXT DIAGNOSTIC STEP
Persistent dyspepsia >4 weeks in patient ≥50, refractory to PPI[14]	**PPI therapy can mask early gastric cancer symptoms**; continued empiric acid suppression is the single most dangerous clinical pattern[1,3]	EGD with biopsy (CPT 43239) — **do not escalate PPI dose**[1]

CLINICAL CLUE	WHY IT MATTERS	NEXT DIAGNOSTIC STEP
First-generation immigrant from East Asia, Eastern Europe, or Andean Latin America	Up to **14.5×** higher noncardia gastric cancer incidence (Korean Americans ≥50);[16] only 11.6% of Medicare patients with gastric cancer had documented H. pylori testing prior to diagnosis[25]	H. pylori test (83013 or 87338); EGD if symptomatic; ABC stratification consideration
First-degree relative with gastric cancer	**RR 2.71** (2.08–3.53) for gastric cancer[19]	H. pylori test; consider familial-based testing of household members **(3-fold higher eradication success; 70% lower recurrence)**; hereditary syndrome workup if multi-generation pattern[11]
Iron deficiency anemia of unclear etiology in any older adult	Present in **~40%** of gastric cancer patients at diagnosis; chronic occult blood loss from luminal tumor[14]	EGD and colonoscopy; iron studies; consider hereditary etiology workup[1]
Pernicious anemia/chronic atrophic gastritis history	OR 2.18 for gastric cancer; **chronic atrophic gastritis is a precursor lesion**[20]	Surveillance EGD per AGA 2025; consider ABC risk stratification
Patient with positive H. pylori test and additional risk factors	Co-occurring risk factors **elevate** post-eradication residual risk	**Refer for EGD rather than treat-and-test alone**; confirm eradication ≥4 weeks post-treatment via urea breath or stool antigen — NOT serology[13]
Biopsy showing high-grade dysplasia (K31.A22)	**Direct precursor to gastric adenocarcinoma**; expedited intervention required[11]	**Expedited GI referral** for ESD evaluation

ABBREVIATIONS: ABC = Antibody/Pepsinogen/Cancer-risk stratification; AGA = American Gastroenterological Association; EGD = esophagogastroduodenoscopy; ESD = endoscopic submucosal dissection; IDA = iron deficiency anemia; OR = odds ratio; PPI = proton pump inhibitor; RR = relative risk

Common Oversights

OVERSIGHT/SHORTCUT	WHY IT MATTERS — WHAT TO DO INSTEAD
Continuing PPI therapy beyond 4 weeks without EGD in patients ≥50[14]	**PPIs mask early gastric cancer symptoms**; continued empiric acid suppression delays diagnosis. Persistent dyspepsia >4 weeks in patients ≥50 requires EGD — not a longer PPI trial

OVERSIGHT/SHORTCUT	WHY IT MATTERS — WHAT TO DO INSTEAD
Confirming H. pylori eradication with serology[13]	**Serum antibody (CPT 86677) remains positive for years** after successful treatment. Use urea breath test (CPT 83013) or stool antigen (CPT 87338) ≥4 weeks after treatment, 2 weeks after stopping PPIs
Omitting Lauren type (intestinal vs. diffuse) from the clinical record[3]	Lauren type drives biomarker testing expectations **(intestinal more likely HER2+)** and treatment planning (diffuse showed no benefit from durvalumab in MATTERHORN)
Using chronologic age as the determinant of treatment intensity[4]	A fit 80-year-old may tolerate doublet chemotherapy similarly to a younger patient; a frail 68-year-old may not. Use G-8, VES-13, and CGA — **not age alone**
Screening malnutrition with BMI alone in elderly gastric cancer patients[26]	The 'obesity paradox' — **obese patients can be malnourished**; BMI is unreliable in this population. **Use MNA** (Mini Nutritional Assessment) and track unintentional weight loss ≥5% over 6 months[4]
Framing palliative care as end-of-life only	**Early interdisciplinary palliative care initiated alongside active treatment** improved median OS from 11.9 to 14.8 months (HR 0.68; p = 0.02) and reduced ED visits (p = 0.03), hospital admissions (p = 0.0002), and inpatient days (p <0.0001)[27]

ABBREVIATIONS: BMI = body mass index; CGA = comprehensive geriatric assessment; CT = computed tomography; ED = emergency department; G-8 = Geriatric 8 screening; HR = hazard ratio; IDA = iron deficiency anemia; MNA = Mini Nutritional Assessment; OS = overall survival; PPI = proton pump inhibitor; VES-13 = Vulnerable Elders Survey-13

CLINICAL PEARL — H. PYLORI: TREATING, CONFIRMING, AND RECOGNIZING RESISTANCE

H pylori is a **major established risk factor** for gastric cancer, particularly non-cardia gastric adenocarcinoma. Empiric first-line treatment should generally use **optimized bismuth quadruple therapy** for 14 days: proton pump inhibitor (PPI) + bismuth + tetracycline + metronidazole. Clarithromycin-based triple therapy should be reserved for patients with **confirmed clarithromycin susceptibility**, because resistance is increasingly common and substantially reduces eradication success.

After treatment, **test-of-cure is required**, but test selection matters. Serum antibody can remain positive for years after successful eradication and cannot confirm clearance; it may read positive in a cured patient. Use **urea breath test** (CPT 83013) or **stool antigen** (CPT 87338), performed ≥4 weeks after completing antibiotics and ≥2 weeks after stopping PPIs, which suppress *H pylori* activity without eradicating infection and may produce false-negative results.

When first-line therapy fails, avoid repeating the same regimen. Switch to a **non-overlapping salvage regimen**, guided by prior antibiotic exposure, and consider susceptibility testing when available, especially after repeated treatment failure

Key Differentials in Elderly

PRESENTATION	DIFFERENTIAL	KEY TESTS
Persistent dyspepsia >4 weeks in patient ≥50[14]	Gastric cancer **vs** PPI-refractory GERD vs functional dyspepsia vs H. pylori gastritis vs gastric ulcer vs gastroparesis vs medication-induced dyspepsia	**EGD with biopsy;** H. pylori test (83013 or 87338); review medication list
Early satiety + weight loss in older adult[14]	Gastric cancer **vs** gastric outlet obstruction vs pancreatic cancer vs depression vs advanced dementia with feeding difficulty	**EGD with biopsy;** CT abdomen; TSH; nutrition assessment
Unintentional weight loss + early satiety[14]	Gastric cancer **vs** esophageal cancer vs pancreatic cancer vs hyperthyroidism vs chronic infection vs depression	**EGD with biopsy;** cross-sectional imaging; TSH; PHQ-9
Iron deficiency anemia of unclear etiology[28]	Luminal GI malignancy (gastric, esophageal, colorectal) **vs** chronic NSAID use vs menstrual loss in younger women vs celiac disease	**EGD and colonoscopy;** iron studies; celiac serologies
Virchow's node or Sister Mary Joseph's nodule[29,30]	Intra-abdominal malignancy with metastatic spread (gastric, pancreatic, ovarian) **vs** lymphoma	Cross-sectional imaging; EGD; **tumor markers per primary suspicion**

PRESENTATION	DIFFERENTIAL	KEY TESTS

ABBREVIATIONS: EGD = esophagogastroduodenoscopy; GERD = gastroesophageal reflux disease; NSAID = nonsteroidal anti-inflammatory drug; PHQ-9 = Patient Health Questionnaire-9; PPI = proton pump inhibitor; TSH = thyroid-stimulating hormone

Comorbidity Screening

CONDITION	PREVALENCE/ASSOCIATION	SCREENING APPROACH
Malnutrition (E44.0/E44.1)/ Cachexia (R64)[26]	Affects up to **60%** of gastric cancer patients; **66%** of elderly gastroesophageal cancer patients malnourished by MNA criteria[26]	MNA-SF (preferred over BMI alone — the 'obesity paradox'); track unintentional weight loss **≥5% over 6 months** per NCCN Older Adult Oncology;[4] dietitian referral at diagnosis
Iron deficiency anemia (D50.0/D50.9)	Present in **40%** of gastric cancer patients at diagnosis[14]	CBC, iron studies; code D50.0 (secondary to blood loss) when GI blood loss is documented — frequently undercoded
Pernicious anemia/B12 deficiency (D51.0/D51.9)[20]	Both a risk factor **(OR 2.18)** and a post-gastrectomy consequence	B12 level; methylmalonic acid if borderline; **lifelong supplementation** post-gastrectomy
Chronic kidney disease (N18.x)[4]	Affects chemotherapy selection — cisplatin contraindicated with CrCl **<60 mL/min**; oxaliplatin preferred with renal impairment	CrCl trending; coordinate with oncology on **dose adjustments**
Cardiovascular disease (I25.x/I50.x)[4]	Trastuzumab **cardiomyopathy risk**; ramucirumab hypertension; fluoropyrimidine coronary vasospasm	Baseline and serial LVEF for HER2-targeted therapy; BP monitoring on ramucirumab
Cognitive impairment/ dementia (F03.x/G30.x)[4]	Affects treatment adherence and oral chemotherapy safety	Mini-Cog or equivalent as part of geriatric assessment
Venous thromboembolism (I82.x/ I26.x)[14,31]	High VTE risk (Khorana score **≥3 high-risk**) compounded by immobility	Symptom screening; thromboprophylaxis per oncology; document laterality
Depression (F32.x/F33.x)[32]	Both a **risk factor** and a **common comorbidit**y affecting treatment adherence and QoL	PHQ-2/PHQ-9; coordinate with behavioral health[18]
Frailty (R54)[4]	Drives **treatment intensity** decisions in Medicare-age patients	G-8 Questionnaire; VES-13; Fried Frailty Criteria; CGA

CONDITION	PREVALENCE/ASSOCIATION	SCREENING APPROACH
Tobacco use (F17.210/ Z87.891)[14]	OR 1.61 (1.49–1.75); RR 1.53–1.84	Document pack-years; brief intervention; quitline referral
Alcohol use disorder (F10.10–F10.20)[14]	Heavy use **≥4 drinks/day**: OR 1.37 (1.19–1.58)	AUDIT-C; brief intervention; specialty referral if severe[1]

ABBREVIATIONS: AUDIT-C = Alcohol Use Disorders Identification Test (Consumption); BMI = body mass index; CGA = comprehensive geriatric assessment; CBC = complete blood count; CrCl = creatinine clearance; G-8 = Geriatric 8 screening; HER2 = human epidermal growth factor receptor 2; LVEF = left ventricular ejection fraction; MNA-SF = Mini Nutritional Assessment Short Form; OR = odds ratio; PHQ-9 = Patient Health Questionnaire-9; QoL = quality of life; RR = relative risk; VES-13 = Vulnerable Elders Survey-13; VTE = venous thromboembolism

⚠ RED FLAG — EMERGENCY/ACTIVATE CRISIS RESPONSE[3]

- Acute upper GI hemorrhage — hematemesis or melena with hemodynamic instability
- Gastric perforation — sudden severe epigastric pain with peritoneal signs (rigid abdomen, rebound tenderness)
- Complete gastric outlet obstruction — intractable vomiting, inability to tolerate oral intake, severe dehydration
- Tumor-related bowel obstruction with signs of strangulation

→ Activate emergency department and surgical/GI on-call

⚠ RED FLAG — URGENT (24–72 HOURS)[3,9,11]

- New dysphagia with weight loss in a patient ≥50 — urgent EGD referral
- Unexplained iron deficiency anemia with GI symptoms in patients from high-risk backgrounds
- Palpable abdominal mass or new ascites
- Virchow's node or Sister Mary Joseph's nodule
- New-onset jaundice in a patient with known gastric cancer (suggests hepatic metastases or biliary obstruction)
- Suspected spinal cord compression — new back pain with neurologic deficits in a patient with known bone metastases
- Biopsy showing high-grade dysplasia (K31.A22) — expedited GI referral for ESD evaluation

3 MEAT DOCUMENTATION ESSENTIALS

Gastric cancer documentation translates clinical complexity into a record that supports continuity, quality measurement, and appropriate care planning. The **most common gaps** are **anatomic subsite under-specification** (defaulting to C16.9 rather than C16.0–C16.8 when endoscopy specifies location), failure to code each metastatic site separately, omission of biomarkers (HER2, PD-L1 CPS, MSI/MMR, CLDN18.2), **missed H. pylori eradication confirmation by appropriate test, and absent geriatric assessment in older adults.** Each gap obscures the patient's real clinical picture and impedes shared decision-making with surgical, medical, and radiation oncology colleagues.

Case vignette: A 71-year-old patient presents with 8 weeks of persistent epigastric discomfort, early satiety, and 4 kg unintentional weight loss. The patient is a first-generation immigrant from South Korea who reports mild dyspepsia for ~6 months treated with over-the-counter omeprazole 20 mg daily. There is no prior H. pylori testing on record. Examination reveals BMI 23 (down from 26), mild epigastric tenderness, and a hemoglobin of 9.8 g/dL with iron studies consistent with deficiency.

MONITOR: Weight 70 kg (down from 74 kg 8 weeks ago; BMI 23, previously 26); hemoglobin 9.8 g/dL with iron studies consistent with deficiency (ferritin low, TIBC elevated); BP 128/78; symptom timeline: 6 months of mild dyspepsia self-treated with OTC omeprazole 20 mg daily, with 8 weeks of progressive early satiety and unintentional weight loss. Functional status: independent in all ADLs; cognitive baseline normal per brief screening. G-8 Geriatric Screening Questionnaire ordered. MNA-SF nutritional screen initiated; dietitian referral placed at this encounter.

EVALUATE: Given persistent dyspepsia **>4 weeks** in a patient **≥50 refractory to PPI**, with alarm symptoms (early satiety, **5.4%** unintentional weight loss, iron deficiency anemia), EGD with biopsy (CPT 43239) ordered within 2 weeks with instructions for **6–8 biopsies** of any suspicious lesion per NCCN v3.2026. H. pylori urea breath test ordered; patient instructed to hold omeprazole for **2 weeks** prior to testing. No prior H. pylori testing on record. Social history notable for first-generation immigrant from **South Korea** (high-risk population for noncardia gastric cancer).

ASSESS: EGD reveals a **4 cm ulcerated mass** at the pyloric antrum. Biopsy confirms moderately differentiated adenocarcinoma, intestinal type (Lauren classification). CT chest/abdomen/pelvis and EUS together stage cT3N1M0 — locally advanced, potentially resectable. PET/CT obtained for metastatic workup. Biomarker results: **HER2 IHC 3+ (positive); PD-L1 CPS 6; MSI stable (pMMR); CLDN18.2 pending. H. pylori urea breath test positive** — eradication therapy initiated with optimized bismuth quadruple therapy (BQT) for 14 days per ACG 2024 guideline. **G-8 score 13** (≤14 threshold) — triggers comprehensive geriatric assessment referral.

TREAT: **Referred to multidisciplinary tumor board at high-volume center** (surgical oncology, medical oncology, radiation oncology, geriatric oncology). Preferred perioperative pathway per NCCN v3.2026 for locally advanced cT3N1M0 gastric adenocarcinoma: **FLOT** (fluorouracil, leucovorin, oxaliplatin, docetaxel) **× 4 cycles preoperatively and 4 cycles postoperatively** (category 1). Given PD-L1 CPS 6 (≥1), FLOT + durvalumab is a category 1 option per NCCN v3.2026 **(MATTERHORN: 2-year EFS 67.4% vs 58.5%; HR 0.71; P<0.001)**. Intestinal histology supports this approach; diffuse type showed no OS advantage with durvalumab addition. HER2-positive status noted for potential postoperative targeted therapy discussion at tumor board. G-8 score 13 with geriatric vulnerability — tumor board to weigh triplet FLOT tolerability vs platinum-fluoropyrimidine doublet with dose adjustment based on comprehensive geriatric assessment results.

Clinical Documentation Elements

- **Document anatomic subsite from endoscopy:** Use the explicit location (cardia, fundus, body, antrum, pylorus, lesser/greater curvature, overlapping) to assign C16.0–C16.8 — defaulting to C16.9 when location is documented is a coding deficiency
- **Document Lauren classification (intestinal vs. diffuse) and AJCC 8th Edition stage type (cTNM, pTNM, ypTNM):** Lauren type drives biomarker expectations and treatment planning; AJCC stage type drives prognosis interpretation
- **Code each metastatic site separately: C78.7** (liver), **C78.00–C78.02** (lung), **C78.6** (peritoneum), **C79.51** (bone)— each separately documented site supports the patient's clinical complexity and care coordination, and documents HCC 17 (RAF 4.209) or HCC 18 (RAF 2.341) appropriately
- **Document biomarker results at diagnosis:** HER2 IHC ± FISH, PD-L1 CPS, MSI/MMR, CLDN18.2. All four tests should be initiated in parallel, not sequentially — ASCO 2026 notes the cost of universal testing is less than the cost of suboptimal treatment
- **Document H. pylori status (B96.81), test type used (urea breath test 83013, stool antigen 87338, or biopsy), treatment regimen, and eradication confirmation method:** Eradication confirmation must be by urea breath test or stool antigen **≥4** weeks after treatment, 2 weeks after stopping PPIs — never by serology (86677)
- **Document the comorbidity burden:** Malnutrition severity (E44.0/E44.1), iron deficiency anemia (D50.0), pernicious anemia/B12 deficiency (D51.0), frailty (R54), depression (F32.x/F33.x), tobacco use disorder (F17.210), alcohol use disorder (F10.10–F10.20), chronic kidney disease (N18.x), and cardiovascular disease
- **Document the geriatric assessment outcome:** G-8 score, comprehensive geriatric assessment summary, CGA-driven treatment modifications (e.g., doublet vs. triplet chemotherapy decisions per Paredero-Pérez 2024; 4Ms framework per NCCN Older Adult Oncology v1.2026)

Reframing Common Documentation Shortcuts

INSTEAD OF…	DOCUMENT…*
'Gastric cancer'	'Moderately differentiated gastric adenocarcinoma, intestinal type per Lauren, of the pyloric antrum **(C16.3)**, clinical stage cT3N1M0; HER2 3+, PD-L1 CPS 6, MSI stable'
'Cancer of the stomach, location not specified'	'Gastric adenocarcinoma of the **[cardia/fundus/body/antrum/pylorus]** (C16.x)' — endoscopy and pathology nearly **always specify location**

INSTEAD OF…	DOCUMENT…*
'Metastatic gastric cancer'	'Gastric adenocarcinoma of the antrum **(C16.3)** with hepatic metastases **(C78.7)** and peritoneal carcinomatosis **(C78.6)**' — **code each site separately**
'H. pylori positive, treated'	'H. pylori infection **(B96.81)** confirmed by urea breath test 04/02/2026; treated with bismuth quadruple therapy 04/05–04/18/2026; eradication confirmed by urea breath test 05/20/2026 (≥4 weeks post-treatment, PPI held 2 weeks prior)'
'On chemotherapy'	'Perioperative FLOT × 4 cycles (cycle 2 day 1; CTCAE grade 2 peripheral neuropathy); ± durvalumab discussion pending PD-L1 CPS confirmation (MATTERHORN regimen)'
'Frail elderly patient'	'G-8 score 13 → comprehensive geriatric assessment completed; 4Ms framework documented (What Matters, Mobility, Medication, Mentation); CGA-guided doublet chemotherapy planned per Paredero-Pérez 2024'
'Weight loss'	'Moderate protein-calorie malnutrition **(E44.1)** — 5.4% unintentional weight loss in 8 weeks; MNA-SF score 9 (at-risk for malnutrition); dietitian-led ONS intervention initiated
'Iron deficiency'	'Iron deficiency anemia secondary to GI blood loss **(D50.0)**, hemoglobin 9.8 g/dL; iron supplementation initiated; resolved blood loss after definitive treatment'

ABBREVIATIONS: CGA = comprehensive geriatric assessment; CTCAE = Common Terminology Criteria for Adverse Events; FLOT = fluorouracil, leucovorin, oxaliplatin, docetaxel; G-8 = Geriatric 8 screening; HER2 = human epidermal growth factor receptor 2; MNA-SF = Mini Nutritional Assessment Short Form; MSI = microsatellite instability; ONS = oral nutritional supplements; PD-L1 = programmed death-ligand 1; PPI = proton pump inhibitor ***Consult FDA labels for the most up-to-date dosage information, contraindications, and drug-drug interactions**

DOCUMENTATION IS COMPREHENSIVE CODING

Every active gastric cancer encounter should document:

- **Anatomic subsite** — C16.0–C16.8
- **Lauren classification** — intestinal vs. diffuse
- **AJCC stage type** — cTNM, pTNM, or ypTNM
- **Biomarker status** — HER2, PD-L1 CPS, MSI/MMR, CLDN18.2
- **H. pylori status** — include confirmation method
- **Current treatment line and cycle**
- **Performance status** — ECOG
- **G-8/CGA findings** — if applicable
- **Comorbidity burden** — malnutrition, iron and B12 deficiencies, frailty, tobacco and alcohol use disorders, cardiovascular and renal status, and depression

4 TREATMENT AND REFERRAL QUICK GUIDE

Treatment in gastric cancer is driven by stage (clinical, pathologic, ypTNM), biomarker status (HER2, PD-L1 CPS, MSI/MMR, CLDN18.2), and functional/geriatric assessment, not chronological age alone. NCCN v2.2026 organizes biomarker-directed algorithms. A fit 80-year-old may tolerate doublet chemotherapy similarly to a younger patient; a frail 68-year-old may not. The PCP's highest-value contributions are recognizing persistent **dyspepsia in patients ≥50 as a referral trigger**, ensuring universal biomarker testing occurs at diagnosis, advocating for multidisciplinary review at a high-volume center, and proactively managing the comorbidity burden, particularly malnutrition, anemia, and frailty that determines treatment tolerability.

Therapy Escalation Criteria

TRIGGER	ACTION*
Persistent dyspepsia >4 weeks in patient ≥50, refractory to PPI[14]	Order **EGD** with biopsy **within 2 weeks** (CPT 43239) — do not continue empiric acid suppression; do not escalate PPI dose
High-risk asymptomatic patient (first-generation immigrant from East Asia/ Eastern Europe/Andean Latin America, or first-degree relative with gastric cancer)[11]	**Proactive H. pylori test** (CPT 83013 or 87338); treat per ACG 2024 if positive; confirm eradication **≥4 weeks** post-treatment; consider ABC risk stratification
EGD confirms gastric cancer[4]	**Order contrast CT chest/abdomen/pelvis and PET/ CT for staging**; refer to high-volume multidisciplinary center for EUS and tumor board review
Newly diagnosed advanced disease[4]	Initiate **universal biomarker testing** in parallel at diagnosis: HER2 (IHC ± FISH), PD-L1 CPS, MSI/MMR, CLDN18.2
Early-stage cTis or cT1a, favorable histology[4]	Endoscopic submucosal dissection (ESD, preferred) or EMR for well/moderately differentiated tumors **≤2 cm** without lymphovascular invasion; gastrectomy for unfavorable histology or incomplete endoscopic resection[4]
Locally advanced resectable (Stage II–III)[4]	Perioperative FLOT (category 1); FLOT + durvalumab for PD-L1 CPS ≥1 (category 1); postoperative capecitabine + oxaliplatin after D2 dissection (category 1); for MSI-H/ dMMR: neoadjuvant nivolumab + ipilimumab consideration
Metastatic HER2+, PD-L1 CPS ≥1[14]	Fluoropyrimidine + platinum + trastuzumab + pembrolizumab

TRIGGER	ACTION*
Metastatic HER2-negative, PD-L1 CPS ≥1 or ≥5[14]	Fluoropyrimidine + platinum + nivolumab preferred in the U.S. on cost-effectiveness grounds[7]
Metastatic CLDN18.2-positive, HER2-negative[14]	Fluoropyrimidine + platinum + zolbetuximab
Metastatic MSI-H/dMMR (~5%)[14]	Pembrolizumab monotherapy or nivolumab + ipilimumab — **immunotherapy without chemotherapy**; the **highest-value option** for elderly/frail patients
Second-line, advanced disease	Ramucirumab + paclitaxel (RAINBOW: OS 9.6 vs 7.4 months, category 1); fam-trastuzumab deruxtecan-nxki for HER2+ (DESTINY-Gastric01: OS 12.5 vs 8.4 months, category 1)[14]
G-8 ≤14 or established frailty in older adult	**Comprehensive geriatric assessment**; consider platinum-fluoropyrimidine doublet rather than triplet FLOT; oxaliplatin preferred over cisplatin in elderly with renal impairment[14]
Confirmed metastatic disease on PET/CT or laparoscopy (including peritoneal carcinomatosis)	Re-staging discussion at tumor board; surgery is generally **not appropriate** for M1 disease[4] — pivot to systemic therapy with early palliative care integration[4,14]

ABBREVIATIONS: ABC = Antibody/Pepsinogen/Cancer-risk stratification; ACG = American College of Gastroenterology; CGA = comprehensive geriatric assessment; CLDN18.2 = claudin 18.2; CPS = combined positive score; dMMR = deficient mismatch repair; EMR = endoscopic mucosal resection; ESD = endoscopic submucosal dissection; EFS = event-free survival; FLOT = fluorouracil, leucovorin, oxaliplatin, docetaxel; G-8 = Geriatric 8 screening; HER2 = human epidermal growth factor receptor 2; ICER = incremental cost-effectiveness ratio; IHC = immunohistochemistry; MSI-H = microsatellite instability-high; OS = overall survival; pCR = pathologic complete response; PCP = primary care provider; PPI = proton pump inhibitor; QALY = quality-adjusted life year; TAP = tumor area positivity ***Consult FDA labels for the most up-to-date dosage information, contraindications, and drug-drug interactions**

NCCN-Aligned Treatment by Stage, Biomarker, and Patient Profile

STAGE/SETTING[4,14]	PREFERRED REGIMEN(S)*[4,14]	KEY NOTES[4,14]
Early (cTis or cT1a, favorable histology)	ESD (preferred) or EMR; gastrectomy for unfavorable histology or incomplete resection	**5-year relative survival ~75%**; curative intent; favorable = well/moderately differentiated, ≤2 cm, no lymphovascular invasion

STAGE/SETTING[4,14]	PREFERRED REGIMEN(S)*[4,14]	KEY NOTES[4,14]
Locally Advanced Resectable (Stage II–III)	Perioperative FLOT (category 1); FLOT + durvalumab for PD-L1 CPS ≥1 or TAP ≥1% (MATTERHORN: 2-year EFS 67.4% vs 58.5%, category 1); MSI-H/dMMR: neoadjuvant nivolumab + ipilimumab (NEONIPIGA: pCR 58.6%)	**5-year OS** with perioperative treatment + surgery **~45%**; postoperative capecitabine + oxaliplatin (category 1) after D2 dissection; diffuse-type histology: no benefit from durvalumab in MATTERHORN
Metastatic — HER2+, PD-L1 CPS ≥1	Fluoropyrimidine + platinum + trastuzumab + pembrolizumab (KEYNOTE-811: OS 20.1 vs 15.7 months, category 1)	ICER $88,508/QALY in the U.S. — **cost-effective**; HER2 testing (IHC ± FISH) required at diagnosis
Metastatic — HER2-negative, PD-L1 CPS ≥1 or ≥5	Fluoropyrimidine + platinum + nivolumab (CheckMate 649: OS 14.4 vs 11.1 months for CPS ≥5, category 1)	Nivolumab + chemotherapy preferred over pembrolizumab + chemotherapy in the U.S. on cost-effectiveness grounds
Metastatic — CLDN18.2-positive, HER2-negative	Fluoropyrimidine + platinum + zolbetuximab (SPOTLIGHT: OS 18.2 vs 15.5 months, category 1)	**CLDN18.2 testing required at diagnosis**
Metastatic — MSI-H/dMMR (~5%)	Pembrolizumab monotherapy or nivolumab + ipilimumab — immunotherapy without chemotherapy (independent of PD-L1 status)	Highest-value option for **elderly/frail patients**; avoids chemotherapy toxicity
Second-Line	Ramucirumab + paclitaxel (RAINBOW: OS 9.6 vs 7.4 months, category 1); fam-trastuzumab deruxtecan-nxki for HER2+ (DESTINY-Gastric01: OS 12.5 vs 8.4 months, category 1)	**Most second-line targeted therapies are not cost-effective** at $100,000/QALY; single-agent paclitaxel remains cost-effective
Elderly/Frail (G-8 ≤14 or CGA-flagged)	Platinum-fluoropyrimidine doublet with lower dose intensity rather than triplet FLOT; oxaliplatin preferred over cisplatin due to lower renal and thromboembolic risk	**GAP70+ trial:** GA-guided management reduced grade 3–5 chemotherapy toxicity without compromising overall survival
High-risk elderly with hepatic/lung mets (cost-effectiveness perspective)	Biomarker-driven first-line; perioperative chemotherapy is more cost-effective than upfront surgery in locally advanced disease	Outpatient hospital infusions for immunotherapy cost **~80% more** than private office settings — coordinate care delivery site when feasible

STAGE/SETTING[4,14]	PREFERRED REGIMEN(S)*[4,14]	KEY NOTES[4,14]

ABBREVIATIONS: CGA = comprehensive geriatric assessment; CLDN18.2 = claudin 18.2; CPS = combined positive score; dMMR = deficient mismatch repair; EFS = event-free survival; ER = endoscopic resection; ESD = endoscopic submucosal dissection; EMR = endoscopic mucosal resection; FLOT = fluorouracil, leucovorin, oxaliplatin, docetaxel; G-8 = Geriatric 8 screening; GA = geriatric assessment; HER2 = human epidermal growth factor receptor 2; ICER = incremental cost-effectiveness ratio; IHC = immunohistochemistry; MSI-H = microsatellite instability-high; OS = overall survival; pCR = pathologic complete response; PD-L1 = programmed death-ligand 1; QALY = quality-adjusted life year; TAP = tumor area positivity ***Consult FDA labels for the most up-to-date dosage information, contraindications, and drug-drug interactions**

CLINICAL PEARL — STAGING GASTRIC CANCER: LAUREN CLASSIFICATION AND TNM STAGE TYPE

Two staging systems drive treatment selection in gastric cancer and must be documented at diagnosis. The **Lauren classification** divides gastric adenocarcinoma into intestinal and diffuse subtypes. Intestinal-type tumors form recognizable glandular structures, arise on a background of H. pylori-driven atrophic gastritis and intestinal metaplasia, and are more likely to be HER2-positive, making biomarker testing particularly important in this subtype. Diffuse-type tumors are poorly cohesive, spread through the gastric wall, carry a worse prognosis, and as demonstrated in MATTERHORN, do not benefit from durvalumab, histology directly narrows the treatment algorithm.

TNM staging under AJCC 8th edition defines T (depth of wall invasion), N (lymph node involvement), and M (metastasis), but the stage type recorded matters as much as the stage itself. Clinical staging (cTNM) reflects preoperative assessment via EUS, CT, and endoscopy. Pathologic staging (pTNM) is assigned from the surgical specimen after resection. Post-neoadjuvant staging (ypTNM) reflects residual disease after perioperative chemotherapy and carries distinct prognostic weight, a ypT0N0 (pathologic complete response) confers significantly better survival than pTNM alone would predict. Documenting the correct stage type at each encounter is not a coding formality; it determines which prognosis applies and whether additional therapy is warranted.

Non-Pharmacologic Care and Supportive Interventions

INTERVENTION	TARGET/RECOMMENDATION	NOTES
Dietitian referral at diagnosis[34]	**Address malnutrition** (up to 60% of gastric cancer patients; 66% of elderly GE cancer patients malnourished by MNA criteria)	**Low MNA** scores significantly associated with **higher hospitalization rates** (33% vs 3%, p = 0.002); early intervention improves outcomes
High-protein oral nutritional supplements (ONS)[35]	Reduced malnutrition risk from **17.4% to 4.3%** (p = 0.003) in elderly gastric cancer patients receiving neoadjuvant chemotherapy	Improves MNA scores; supports weight maintenance in malnutrition-sarcopenia syndrome (**~20%** of post-gastrectomy patients)

INTERVENTION	TARGET/RECOMMENDATION	NOTES
Home-based exercise + nutritional care[36]	Significantly improved **albumin** (41.8 vs 32.3 g/L, p <0.001), **prealbumin, transferrin, and quality of life** in elderly gastric cancer patients with sarcopenia	Resistance and aerobic components; **coordinate with physical therapy**
Comprehensive geriatric assessment[37]	**G-8 ≤14 triggers full CGA**	GAP70+: GA-guided management reduces **grade 3–5 chemotherapy toxicity** without compromising OS
H. pylori eradication + confirmation[26]	ACG 2024: bismuth quadruple therapy (BQT) first-line — most cost-effective regimen in the US	Confirm eradication **≥4 weeks** post-treatment via urea breath test or stool antigen; stop PPIs 2 weeks before testing; never use serology
Familial-based H. pylori testing[11]	Screening household members of H. pylori-positive individuals	**3-fold higher eradication success** and **70% lower recurrence rates** vs. single-patient treatment
Post-gastrectomy nutritional monitoring[4]	**Lifelong** B12, iron, zinc, calcium, vitamin D; daily multivitamin/mineral **supplementation**	Dumping syndrome **20–50%**; delayed gastric emptying **14–38%**; vitamin D deficiency **29–89%**[4]
Early palliative care integration[38]	Initiated **before** chemotherapy, alongside active treatment[20,21]	Improved median OS from **11.9 to 14.8 months** (HR 0.68, p = 0.02)[20]
Advance care planning[4]	Annual + when goals change[5]	Document directives, surrogate, code status; especially relevant when functional status frames decisions[5,20]

ABBREVIATIONS: BQT = bismuth quadruple therapy; CGA = comprehensive geriatric assessment; ED = emergency department; GA = geriatric assessment; GE = gastroesophageal; G-8 = Geriatric 8 screening; HR = hazard ratio; MNA = Mini Nutritional Assessment; ONS = oral nutritional supplements; OS = overall survival; PPI = proton pump inhibitor

Medication Safety and Key Interactions

DRUG/CLASS	INTERACTION/TOXICITY	CLINICAL ACTION*
FLOT (5-FU, leucovorin, oxaliplatin, docetaxel)[14]	**Grade ≥3 neutropenia**; peripheral neuropathy (oxaliplatin); mucositis (5-FU); fluid retention (docetaxel)	**G-CSF prophylaxis** often required; monitor CBC, CMP; CTCAE grading; consider doublet rather than triplet in elderly with G-8 ≤14
Capecitabine + oxaliplatin (postoperative)[14]	Hand-foot syndrome; peripheral neuropathy; cytopenias	**Dose reductions** for CrCl 30–50 mL/min; capecitabine contraindicated for CrCl <30 mL/min
Cisplatin (advanced disease)	Nephrotoxicity, ototoxicity, peripheral neuropathy	**Contraindicated with CrCl <60 mL/min**; oxaliplatin preferred in elderly patients with renal impairment[4]
Trastuzumab (HER2+)[14]	**Cardiotoxicity** (decreased LVEF); infusion reactions	Baseline LVEF and serial monitoring **every 3 months**; coordinate cardio-oncology if LVEF declines
Checkpoint inhibitors (nivolumab, pembrolizumab)[14]	**Immune-related adverse events:** thyroiditis, pneumonitis, colitis, hepatitis, endocrinopathies	**Baseline labs and symptom-driven workup**; corticosteroid algorithm per institution
Ramucirumab (second-line)[14]	Hypertension; proteinuria; thromboembolism; bleeding	**BP monitoring at every visit;** urine protein screening; balance VTE risk in active malignancy
Fam-trastuzumab deruxtecan-nxki (second-line HER2+)[14]	Interstitial lung disease; cytopenias; nausea	**Pulmonary symptom screen at each visit**; CT chest as indicated
Zolbetuximab (CLDN18.2+)[14]	Nausea/vomiting; infusion reactions	**Prophylactic antiemetics**; infusion-rate management
Bismuth quadruple therapy (H. pylori)[11]	GI upset; black stools (bismuth, expected); rare hepatotoxicity	**Patient counseling** on bismuth-related black tongue/stool; complete the full 14-day course; confirm eradication ≥4 weeks post-treatment
Opioids[39]	Constipation; respiratory depression in advanced disease	**Bowel regimen at initiation**; coordinate palliative care for refractory pain

DRUG/CLASS	INTERACTION/TOXICITY	CLINICAL ACTION*
Corticosteroid antiemetics[40]	Hyperglycemia; mucosal healing delay	Tight glucose monitoring; coordinate diabetes adjustments

ABBREVIATIONS: BP = blood pressure; CBC = complete blood count; CLDN18.2 = claudin 18.2; CMP = comprehensive metabolic panel; CrCl = creatinine clearance; CTCAE = Common Terminology Criteria for Adverse Events; FLOT = fluorouracil, leucovorin, oxaliplatin, docetaxel; G-CSF = granulocyte colony-stimulating factor; HER2 = human epidermal growth factor receptor 2; LVEF = left ventricular ejection fraction; VTE = venous thromboembolism ***Consult FDA labels for the most up-to-date dosage information, contraindications, and drug-drug interactions**

When to Refer

CRITERION[4]	SPECIALIST	URGENCY
Acute upper GI hemorrhage; gastric perforation; complete gastric outlet obstruction	Emergency department/GI/ surgery	**Emergent**
Persistent dyspepsia >4 weeks in patient ≥50, refractory to PPI	GI for EGD (CPT 43239); high-volume multidisciplinary center if cancer confirmed	**Urgent** (EGD within 2 weeks)
Confirmed gastric cancer on biopsy	Multidisciplinary tumor board (surgical, medical, radiation oncology) at high-volume center	**Urgent** (within 1–2 weeks of pathology)
Biopsy showing high-grade dysplasia (K31.A22)	GI for ESD evaluation	**Urgent** (within weeks)
G-8 ≤14 or significant frailty/ multimorbidity	Geriatric oncology/ comprehensive geriatric assessment	**Urgent** (before treatment cycle 1)
Severe malnutrition/ sarcopenia	Registered dietitian; consider physical therapy for sarcopenia	**Urgent** (at diagnosis)
Confirmed metastatic disease (including peritoneal carcinomatosis)	Medical oncology; palliative care; multidisciplinary tumor board	**Urgent** (within 1–2 weeks)
Treatment-related immune adverse events	Endocrinology/pulmonology/GI/ hepatology as indicated	**Urgent** (per organ system involved)
Suspected hereditary syndrome (CDH1, Lynch, FAP, Li-Fraumeni)	Cancer genetics/genetic counseling	Routine (within 4–6 weeks)
End-of-life trajectory; hospice eligible	Hospice (Medicare Hospice Benefit)	When goals align

CRITERION[4]	SPECIALIST	URGENCY

ABBREVIATIONS: CDH1 = cadherin-1 gene; ESD = endoscopic submucosal dissection; EGD = esophagogastroduodenoscopy; FAP = familial adenomatous polyposis; G-8 = Geriatric 8 screening; GI = gastrointestinal; PPI = proton pump inhibitor

CLINICAL PEARL — BIOLOGICAL VS CHRONOLOGICAL AGE

A fit 80-year-old may tolerate doublet chemotherapy similarly to a younger patient; a frail 68-year-old may not. Use validated tools (G-8 Questionnaire, VES-13, Fried Frailty Criteria, CARG chemotherapy toxicity prediction) and the **4Ms framework** — What Matters, Mobility, Medication, Mentation — **rather than age alone**. GAP70+ demonstrated that GA-guided management reduces grade 3–5 chemotherapy toxicity without compromising overall survival. Document the assessment outcome in the chart, this is what drives shared decision-making at tumor board.

Follow-Up Timing

STAGE/CATEGORY	FREQUENCY	LABS/MONITORING
H. pylori eradication confirmation[13]	Once, **≥4 weeks** after treatment completion; PPI held 2 weeks prior	Urea breath test (83013) or stool antigen (87338) — **never serology** (86677)
Gastric intestinal metaplasia surveillance (K31.A0–K31.A29)[11]	**Per AGA 2025 risk-stratified intervals**	Surveillance EGD per dysplasia grade; K31.A22 (high-grade) → expedited ESD evaluation
ABC stratification surveillance[24]	Group A **(Hp−/PG−)** re-test every **5 yrs** Group B **(Hp+/PG−)** eradicate + scope **≥q^3 yrs** Group C **(Hp+/PG+)** eradicate + scope **≥q^2 yrs**; Group D (Hp−/PG+) **annual scope**	Combine H. pylori serology + pepsinogen I/II as a noninvasive screening tool
Locally advanced, perioperative FLOT[4]	Every **2–3 weeks** during therapy; restaging at MDT-defined intervals	CBC, CMP, LFTs; symptom and CTCAE toxicity grading; imaging per oncology protocol[4]
Post-gastrectomy surveillance[4]	Every **3–6 months** for the first **1–2 years**; every **6 months years 3–5**; **annual** thereafter	**Symptom review**; weight; CBC, CMP, LFTs; lifelong B12, iron, zinc, calcium, vitamin D monitoring

STAGE/CATEGORY	FREQUENCY	LABS/MONITORING
Metastatic disease on systemic therapy[4]	Every **2–3 weeks** during cycles	CBC, CMP, LFTs; thyroid function (immunotherapy); LVEF if HER2-targeted
Off active treatment, surveillance[4]	Per oncology plan; PCP every 3–6 months	Weight; symptom review; comorbidity management; depression and ACP review

ABBREVIATIONS: ABC = Antibody/Pepsinogen/Cancer-risk stratification; ACP = advance care planning; CBC = complete blood count; CMP = comprehensive metabolic panel; CTCAE = Common Terminology Criteria for Adverse Events; ESD = endoscopic submucosal dissection; FLOT = fluorouracil, leucovorin, oxaliplatin, docetaxel; HER2 = human epidermal growth factor receptor 2; Hp = Helicobacter pylori; LFT = liver function test; LVEF = left ventricular ejection fraction; MDT = multidisciplinary team; PCP = primary care provider; PG = pepsinogen; PPI = proton pump inhibitor

Comorbidity Management — Primary Care Role

COMORBIDITY[41]	APPROACH	CAUTION*
Malnutrition (E44.0/E44.1)	**Early dietitian referral;** serial weight, albumin, prealbumin; high-protein ONS; jejunostomy if oral intake inadequate	Independent predictor of treatment intolerance and mortality; **60–66%** of elderly patients affected[26]
Iron deficiency anemia (D50.0)	Iron supplementation; investigate GI source; resolve once definitive treatment controls blood loss	Present in **~40%** of gastric cancer patients **at diagnosis** — frequently undercoded[14]
B12/pernicious anemia (D51.0)	**Lifelong B12 supplementation post-gastrectomy**; serial B12 monitoring	Both a **risk factor** (OR 2.18) and a **post-gastrectomy consequence**
Frailty (R54)	**Comprehensive geriatric assessment**; physical therapy; medication review	G-8 ≤14 → CGA; **functional status drives treatment intensity decisions** per NCCN Older Adult Oncology
Chronic kidney disease (N18.x)	Coordinate dose adjustments with oncology; oxaliplatin preferred over cisplatin in renal impairment*	Cisplatin **contraindicated** with **CrCl <60 mL/min**; capecitabine adjustments for CrCl 30–50 mL/min[4]
Cardiovascular disease	Standard secondary prevention; cardio-oncology consultation if HER2-targeted or ramucirumab	Trastuzumab **cardiomyopathy risk**; ramucirumab **hypertension**; fluoropyrimidine **coronary vasospasm**

COMORBIDITY[41]	APPROACH	CAUTION*
Cognitive impairment/ dementia	Mini-Cog or equivalent as part of geriatric assessment; coordinate with caregivers	Affects treatment adherence, informed consent, and **oral chemotherapy safety**
Venous thromboembolism (I82.x/I26.x)	Symptom screening; coordinate with oncology on thromboprophylaxis	Gastric cancer carries **high VTE risk** (Khorana score ≥3 high-risk); document laterality
Depression (F32.x/F33.x)	PHQ-2/PHQ-9 at baseline and during treatment; coordinate with behavioral health	Both a **risk factor and a treatment-adherence factor**; frequently **misattributed to 'poor performance status'** in elderly patients
Alcohol use disorder (F10.10–F10.20)	**AUDIT-C**; specialty referral if severe	Heavy use **≥4 drinks/day**: OR 1.37 (1.19–1.58) for gastric cancer[14]
Tobacco use (F17.210/ Z87.891)	Quitline referral; pharmacotherapy if appropriate	Continued use during treatment increases **toxicity and recurrence**
Polypharmacy in older adults	Medication reconciliation at every visit; deprescribing review per the 4Ms framework	DDI risk increases with chemotherapy and immunotherapy regimens; coordinate with pharmacist

ABBREVIATIONS: AUDIT-C = Alcohol Use Disorders Identification Test (Consumption); CGA = comprehensive geriatric assessment; CrCl = creatinine clearance; DDI = drug–drug interaction; G-8 = Geriatric 8 screening; HER2 = human epidermal growth factor receptor 2; OR = odds ratio; ONS = oral nutritional supplements; PHQ-9 = Patient Health Questionnaire-9; VTE = venous thromboembolism ***Consult FDA labels for the most up-to-date dosage information, contraindications, and drug-drug interactions**

Cost-Smart Options

BRAND (EST. COST)*	GENERIC/ALTERNATIVE	MO. SAVINGS	COST-SMART TIP
Branded checkpoint inhibitor infusion(pembrolizumab ~$15,000/mo; nivolumab ~$12,700/6-mo)[42]	No FDA-approved biosimilars currently available in the U.S.;patient assistance via manufacturer; private-office infusion setting where feasible (outpatient hospital infusions cost **~80%** more)[10]	**Variable**	Confirm coverage tier; pursue manufacturer support; **coordinate care delivery site**

BRAND (EST. COST)*	GENERIC/ALTERNATIVE	MO. SAVINGS	COST-SMART TIP
Branded trastuzumab (Herceptin) (~$2,400/mo Medicare Part B, 2023)[43]	Trastuzumab biosimilars(Kanjinti, Herzuma, Ogivri, Ontruzant, Trazimera, Hercessi) — acquisition cost dropped **72%**from 2020 to 2024; biosimilar share now **87%**	**~$900–1,500/month**	Biosimilar adoption is **87%** nationally; hospital acquisition cost as low as ~$23/unit (2024)
Branded Taxotere (~$610/mL); branded Eloxatin (~$1,395/50mg vial); est. ~$6,500–$7,000/cycle; ~$52,000–$56,000 for 8-cycle course[44]	Generic 5-FU, leucovorin, oxaliplatin, docetaxel available; total chemotherapy cost for a 6-month adjuvant course ranges **~$12,000–$55,000** depending on regimen and setting[4,45]	**~$6,500/cycle**	All FLOT components are off-patent generics;
Upfront surgery for locally advanced disease(~$55,576/patient)[46]	Perioperative chemotherapy then surgery(**~$40,792/patient**)	**$14,784/patient**	Perioperative chemotherapy is more cost-effective with comparable QALYs
Branded H. pylori regimens (Pylera ~$800–1,000 for 10-day course)[47]	BQT separate generic components: bismuth subsalicylate + metronidazole + tetracycline + PPI — ~$30–$85/course total[48]	**~$720–$950**/course (one-time treatment)	ACG 2024 first-line recommendation; confirm eradication ≥4 weeks post-treatment

ABBREVIATIONS: BQT = bismuth quadruple therapy; FLOT = fluorouracil, leucovorin, oxaliplatin, docetaxel; NK1 = neurokinin-1; OS = overall survival; QALY = quality-adjusted life year; PCT = perioperative chemotherapy ***Consult FDA labels for the most up-to-date dosage information, contraindications, and drug-drug interactions**

Patient Education and Adherence

What makes gastric cancer patient education uniquely demanding is the convergence of a **molecularly complex diagnosis, a treatment sequence that begins before surgery, and a patient population already experiencing nutritional compromise and functional decline at the time of presentation**. Unlike many solid tumors, gastric cancer requires patients to understand not only a **multimodal treatment** plan but also why **pre-treatment workup.** Biomarker testing for HER2, PD-L1, MSI/MMR, and CLDN18.2 must be completed before surgical planning begins. Skipping or rushing this step risks misalignment between treatment and tumor biology. For patients with H. pylori-positive disease, eradication therapy and test-of-cure confirmation are a distinct education priority: patients must understand why a **10–14** day antibiotic course is **not optional**, which test confirms clearance (UBT or stool antigen, not serology), and that untreated H. pylori sustains long-term gastric cancer risk even after oncologic treatment.

Beyond diagnosis, the education burden deepens with treatment. **Perioperative chemotherapy, surgical recovery, and post-gastrectomy physiology** (early satiety, dumping syndrome, lifelong B12, iron, and calcium supplementation) all **require structured preparation**. Patients and caregivers need explicit instruction on **what to report between visits**: worsening dyspepsia,

unintentional weight loss, melena, new pain, or fever. Palliative care should be framed as **concurrent** with active treatment, not a transition reserved for disease progression. For older adults with cognitive changes, sensory impairment, or polypharmacy, education strategies should include teach-back confirmation, large-font materials, and caregiver inclusion in all treatment discussions. Document topics covered, confirm patient understanding at each encounter, and involve caregivers per the patient's preference.

DOCUMENTATION

Document the topics covered (diagnosis, treatment plan, H. pylori confirmation, nutrition, what to report, palliative care role), the patient's understanding (teach-back when appropriate), and any teach-back validation. Education documentation supports continuity, quality measurement, and shared decision-making — and signals to other clinicians that the treatment plan is patient-aligned.

Quality Metrics Tie-In

MEASURE[49,50]	STANDARD	APPLICABILITY TO GASTRIC CANCER
HEDIS COA: Care for Older Adults — Medication Review, MIPS #047 (Star C08, MY2026)	**Denominator**: MA SNP enrollees ≥66, continuously enrolled **Numerator**: ≥1 medication review conducted by prescribing practitioner or clinical pharmacist with documented medication list during measurement year **Exclusions:** SNP packages with <30 enrollment; hospice; death	Polypharmacy is common in gastric cancer patients on FLOT, checkpoint inhibitors, and ramucirumab; medication review should reconcile DDI risk across all active agents; post-gastrectomy patients require lifelong B12, iron, and calcium supplementation — these must be reconciled alongside systemic therapy at every encounter
HEDIS COA: Care for Older Adults — Pain Assessment, MIPS #047 (Star C09, MY2026)	**Denominator:** MA SNP enrollees ≥66, continuously enrolled **Numerator:** ≥1 pain assessment documented during measurement year **Exclusions:** SNP packages with <30 enrollment; hospice; death	Chronic pain in gastric cancer is driven by disease progression, post-gastrectomy syndrome, and treatment toxicity; document pain assessment with an alternative management plan — NSAID avoidance is required; untreated pain impairs adherence, nutrition, and functional status

MEASURE[49,50]	STANDARD	APPLICABILITY TO GASTRIC CANCER
HEDIS MRP: Medication Reconciliation Post-Discharge, MIPS #130 (Star C17, MY2026)	**Denominator:** Discharges January 1–December 1 for MA enrollees ≥18 **Numerator:** Medications reconciled date of discharge through 30 days after discharge (31 total days) **Exclusions:** hospice; death	Post-gastrectomy discharges introduce new medications alongside ongoing systemic therapy; FLOT, ramucirumab, and checkpoint inhibitors carry significant DDI profiles requiring active reconciliation at every post-discharge contact; failure to reconcile is a preventable readmission driver
HEDIS PCR: Plan All-Cause Readmissions (Star C18, MY2026)	**Denominator:** Acute inpatient stays for MA enrollees ≥18 **Numerator:** Unplanned acute readmission for any diagnosis within 30 days — **lower is better** **Exclusions:** death during stay; pregnancy; perinatal diagnosis; hospice	Post-gastrectomy readmission driven by malnutrition, dehydration, dumping syndrome, anastomotic complications, and chemotherapy toxicity; PCP follow-up within 7 days of discharge reduces readmission risk; nutritional assessment and dietitian contact must be part of discharge planning
HEDIS CBP: Controlling Blood Pressure, MIPS #236 (Star C14, MY2026)	**Denominator:** MA enrollees 18–85 with hypertension diagnosis **Numerator:** BP <140/90 mm Hg documented **Exclusions:** hospice; death; palliative care; ESRD; pregnancy; I-SNP enrollment; frailty + advanced illness ≥66 years	Ramucirumab causes hypertension requiring active BP monitoring at each visit during treatment; uncontrolled hypertension may necessitate dose modification or treatment interruption — early PCP management prevents oncology delays
HEDIS COL: Colorectal Cancer Screening, MIPS #113 (Star C02, MY2026)	**Denominator:** MA enrollees 50–75; **Numerator:** Appropriate colorectal cancer screening completed; **Exclusions:** hospice; death; prior colorectal cancer; total colectomy; I-SNP; frailty + advanced illness ≥66; palliative care	AGA has recommended considering EGD at time of colonoscopy for high-risk patients (potential future quality target); use colonoscopy encounters as an opportunity to assess gastric cancer risk in patients with H. pylori history, family history of gastric cancer, or high-risk ethnicity

ABBREVIATIONS: ACP = advance care planning; AWV = Annual Wellness Visit; CBP = Controlling High Blood Pressure; CMS = Centers for Medicare & Medicaid Services; COA = Care for Older Adults; COL = Colorectal Cancer Screening; DDI = drug–drug interaction; FLOT = fluorouracil, leucovorin, oxaliplatin, docetaxel; HEDIS = Healthcare Effectiveness Data and Information Set; MRP = Medication Reconciliation Post-Discharge; PCR = Plan All-Cause Readmissions

AAVBC PERSPECTIVE

*AAVBC supports **universal biomarker testing at diagnosis** for all patients with advanced gastric cancer, including HER2, PD-L1 CPS, MSI/MMR status, and CLDN18.2, **initiated in parallel, not sequentially.** Comprehensive biomarker testing is a clinical quality standard that prevents both overtreatment and undertreatment, and its cost is less than the cost of suboptimal therapy. The MSI-H/dMMR pathway, present in approximately 5% of advanced cases, offers immunotherapy monotherapy without chemotherapy and represents the highest-value treatment option for elderly or frail patients in whom chemotherapy toxicity is the primary limiting factor.*

*AAVBC encourages **treatment decisions to be guided by functional status assessment** using G-8 screening and comprehensive geriatric assessment, rather than chronological age, as dose-reduced doublet regimens achieve comparable efficacy to FLOT with reduced toxicity in patients ≥70. AAVBC also supports early integration of interdisciplinary palliative care alongside active treatment, consistent with evidence demonstrating improved survival and reductions in avoidable hospitalizations and emergency department utilization. This helps ensure the right patients receive the right treatment at the right stage of disease.*

QUALITY OUTCOME:

Value-based care begins before cancer develops. Proactive identification and eradication of H. pylori in individuals at elevated risk, including first-generation immigrants from high-incidence regions, those with a family history of gastrointestinal cancers, and populations disproportionately affected by social determinants of health, represents an exceptionally effective opportunity for prevention.

Successful eradication, confirmed by a urea breath test or stool antigen testing ideally prior to the onset of extensive mucosal atrophy, significantly reduces lifetime gastric cancer risk. By addressing both biological risk factors and inequities in access to preventive care, healthcare systems can reduce the future gastric cancer burden, improve health equity, and avoid the substantial clinical and economic costs associated with advanced disease

5 CODING REMINDERS AND CASE EXAMPLES

Coding Specificity

ELEMENT	DOCUMENTATION REQUIREMENT
Anatomic subsite (C16.0–C16.8)	**Specify location from endoscopy or pathology** (cardia, fundus, body, antrum, pylorus, lesser/greater curvature, overlapping) — **never default to C16.9 when location is documented**
Cardia/GEJ tumors (C16.0)	Document **'tumor at the GEJ/cardia'**; note that tumors with epicenter in the proximal **2 cm** crossing the EGJ are staged as esophageal per AJCC 8th Edition—confirm with oncology before coding
Lauren classification	Document explicitly in the clinical record — **intestinal vs. diffuse type** drives biomarker expectations and treatment planning
Each metastatic site coded separately	**C78.7** liver, **C78.00–C78.02** lung, **C78.6** peritoneum, **C79.51** bone — **each documented site reflects clinical complexity**
Stage and stage type	AJCC 8th Edition; document cTNM, pTNM, or ypTNM[4]
Biomarker status	HER2 (IHC ± FISH), PD-L1 CPS, MSI/MMR, CLDN18.2 — **all four initiated in parallel at diagnosis**
H. pylori status (B96.81)	**Document test type used** (urea breath test, stool antigen, biopsy), treatment regimen, eradication confirmation date and method — never confirm by serology (86677)
Gastric intestinal metaplasia (K31.A0–K31.A29)	Use **site-specific** and **dysplasia-graded subcodes** rather than generic K29.x (chronic gastritis) when pathology confirms intestinal metaplasia; K31.A22 = high-grade dysplasia
Performance and geriatric status	ECOG; G-8 score; CGA findings; document treatment modifications and 4Ms framework outcomes
Active vs. personal history	Use **C16.x** while disease **is active** or under surveillance; **Z85.038 only after treatment completion** with no active disease

ELEMENT	DOCUMENTATION REQUIREMENT
Comorbidities — frequently undercoded	Malnutrition **(E44.0/E44.1)**, iron deficiency anemia **(D50.0)**, B12 deficiency/pernicious anemia **(D51.0)**, frailty **(R54)**, depression **(F32.x/F33.x)**, tobacco **(F17.210/Z87.891)**, alcohol use disorder **(F10.10–F10.20)**, CKD **(N18.x)**
Outpatient suspected disease	**AVOID:** 'Rule-out' coding in outpatient settings is prohibited. Code presenting symptoms only (R10.13 epigastric pain, R63.4 abnormal weight loss, D50.0 IDA) until biopsy confirms

ABBREVIATIONS: AJCC = American Joint Committee on Cancer; CGA = comprehensive geriatric assessment; CKD = chronic kidney disease; CLDN18.2 = claudin 18.2; CPS = combined positive score; ECOG = Eastern Cooperative Oncology Group; EGJ = esophagogastric junction; G-8 = Geriatric 8 screening; GEJ = gastroesophageal junction; HER2 = human epidermal growth factor receptor 2; IDA = iron deficiency anemia; IHC = immunohistochemistry; MMR = mismatch repair; MSI = microsatellite instability; PD-L1 = programmed death-ligand 1

Annual Clinical Review and Confirmation

- **Annual review:** Active gastric cancer must be reassessed annually with MEAT documented; in patients on active treatment or surveillance, the diagnosis is current and requires ongoing documentation each year
- **Visit modality:** Face-to-face or synchronous audio-video telehealth qualifies when it supports meaningful clinical evaluation; chart updates without an encounter do not satisfy MEAT
- **Clinical context:** Under CMS-HCC V28, active malignancy maps to HCC 22; each separately documented metastatic site supports additional HCC documentation (HCC 17 for liver/lung; HCC 18 for bone/peritoneum)
- **Avoid rollover:** Do not copy forward last year's note without updating treatment status, current line of therapy and cycle, current stage/biomarker status, H. pylori confirmation, metastatic sites, performance and geriatric status, and the comorbidity burden

Good Documentation — EHR Tips

EHR TIP	WHAT TO INCLUDE
Problem list precision	'Gastric adenocarcinoma, intestinal type, pyloric antrum (C16.3), cT3N1M0; HER2 3+, PD-L1 CPS 6, MSI stable' — **not 'gastric cancer'**

EHR TIP	WHAT TO INCLUDE
Smart phrases/dot phrases	**Build macros for Pre-Treatment Workup Completion** (EGD + biopsy date, EUS date, CT date, PET/CT date),[4] Biomarker Status (HER2, PD-L1 CPS, MSI/MMR, CLDN18.2 with dates), H. pylori Eradication Confirmation (test type, date, ≥4 weeks post-treatment confirmation), and Geriatric Assessment Outcome (G-8 score, 4Ms documentation, CGA summary, treatment modifications)
Lab and imaging linking	**Link** the urea breath test result and **date** to the H. pylori code; link biomarker results and dates to the active cancer code
Active vs. surveillance status	**Use a status field at the top of every note** — 'Active treatment, cycle X of Y' vs. 'Post-treatment surveillance, year X month Y'
Surveillance flags	Recurring reminders for ABC stratification follow-up intervals (Group A: 5 yrs; Group B: ≥3 yrs; Group C: ≥2 yrs; Group D: annual) and post-gastrectomy lifelong nutritional monitoring
Education templates	**Teach-back templates** so the diagnosis, plan, H. pylori confirmation, nutrition, and palliative care role are recorded as patient-understood

ABBREVIATIONS: ABC = Antibody/Pepsinogen/Cancer-risk stratification; CGA = comprehensive geriatric assessment; CLDN18.2 = claudin 18.2; CPS = combined positive score; CT = computed tomography; EGD = esophagogastroduodenoscopy; EUS = endoscopic ultrasound; G-8 = Geriatric 8 screening; HER2 = human epidermal growth factor receptor 2; MMR = mismatch repair; MSI = microsatellite instability; PD-L1 = programmed death-ligand 1; PET/CT = positron emission tomography/computed tomography

- **SMARTPHRASE — .GASTRIC_VISIT** — **Annual visit template:** active gastric cancer (C16._), Lauren type, biomarker status (HER2/PD-L1 CPS/MMR-MSI), current line of systemic therapy, ECOG, weight trajectory and nutrition status, and every coded metastatic site
- **SMARTPHRASE — .GASTRIC_MEAT** — **MEAT block:** Monitor weight/nutrition and CBC; Evaluate response and treatment tolerance; Assess ECOG and goals of care; Treat per tumor-board plan, with link to oncology note
- **ORDER SET — Alarm-feature workup** — EGD with biopsy (CPT 43239), CBC, iron studies, H. pylori testing; fires for new dysphagia, weight loss, or iron-deficiency anemia in adults ≥55
- **ALERT — Annual reconfirmation BPA** — fires when a patient with prior C16.x has no face-to-face gastric-cancer code in the past 12 months and is not documented as in remission
- **ALERT — Biomarker documentation** — prompts documentation of HER2, PD-L1 CPS, and MMR/MSI status at diagnosis, before first-line systemic therapy is selected
- **REFERRAL — Multidisciplinary tumor board/medical oncology** — auto-populates staging, biomarkers, ECOG, and nutrition status for any new or suspected gastric malignancy

- **FILTER — Population filter** — identifies patients with active C16.x on systemic therapy for proactive nutrition, palliative-care, and transition-of-care outreach

Brief Case Examples

SUCCESS — Persistent Dyspepsia Investigation and H. pylori Confirmation

Patient: 71-year-old first-generation Korean American immigrant with 6 months of dyspepsia on OTC omeprazole, 8 weeks of early satiety, 5.4% unintentional weight loss, hemoglobin 9.8 g/dL; no prior H. pylori testing on record.

Documentation: 'Persistent dyspepsia >4 weeks in a patient ≥50 from a high-incidence region (Korean immigrant) — EGD with biopsy ordered within 2 weeks (CPT 43239). H. pylori urea breath test ordered (CPT 83013); PPI held 2 weeks prior. MNA-SF initiated and dietitian referred; G-8 ordered for geriatric vulnerability screen. Universal biomarker testing (HER2, PD-L1 CPS, MSI/MMR, CLDN18.2) to be initiated in parallel if biopsy positive.'

Outcome: Biopsy: moderately differentiated adenocarcinoma, intestinal type, pyloric antrum (C16.3). Staging cT3N1M0; HER2 IHC 3+; PD-L1 CPS 6; MSI stable. H. pylori positive — bismuth quadruple therapy initiated per ACG 2024; eradication confirmed by urea breath test 5 weeks post-treatment, PPI held 2 weeks prior. Multidisciplinary review at high-volume center → perioperative FLOT × 4 pre- and post-op with CGA-guided dose adjustment (G-8 13). Moderate malnutrition (E44.1) treated with high-protein ONS (reduced malnutrition risk 17.4% → 4.3%, p = 0.003); iron deficiency anemia (D50.0) treated with supplementation. R0 resection achieved.

PITFALL — PPI Escalation + Serology-Based H. pylori Confirmation

Documentation as written: '68-year-old patient with chronic dyspepsia. Increased omeprazole to 40 mg BID. H. pylori serum antibody positive — treated with standard triple therapy; repeat serum antibody at 6 months still positive, so retreated. Follow up in 3 months. Gastric cancer (C16.9, unspecified) added to problem list 11 months later when EGD finally performed for melena.'

Consequence: Persistent dyspepsia >4 weeks in any patient ≥50 is the threshold for EGD — not PPI escalation.[1,3] Serum antibody (CPT 86677) remains positive for years after successful treatment and cannot confirm eradication — using it for confirmation led to unnecessary retreatment and missed the underlying malignancy. Coding C16.9 when EGD specified antral location is a separate documentation failure.

RAF Impact: Late-stage diagnosis shifts treatment from potentially curative perioperative therapy to systemic palliative care with poorer outcomes. Each metastatic site coded separately (HCC 17 RAF 4.209 for liver/lung; HCC 18 RAF 2.341 for bone/peritoneum) reflects actual disease burden — peritoneal carcinomatosis (C78.6) is present in 32–46% of metastatic cases and is the most undercoded metastatic site. C16.9 obscures the documentation specificity NCCN treatment algorithms require.

Fix: Order EGD within 2 weeks for any persistent dyspepsia >4 weeks in a patient ≥50, regardless of PPI response. Confirm H. pylori eradication ≥4 weeks post-treatment using urea breath test (83013) or stool antigen (87338) — never serology (86677). Hold PPIs 2 weeks before confirmation testing. Specify C16.0–C16.8 from endoscopy location. Initiate universal biomarker testing (HER2, PD-L1 CPS, MSI/MMR, CLDN18.2) in parallel at diagnosis. Refer to multidisciplinary tumor board promptly.

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