CMS Measure ID/CMS QCDR ID: CAP 35

Measure Title: Cancer Protocol and Turnaround Time for Gastrointestinal Carcinomas: Gastric, Esophageal, Colorectal and Hepatocellular Carcinomas

Measure Specifications

Measure Description	Percentage of all eligible pathology reports for gastric, esophageal, colorectal, and hepatocellular carcinoma specimens for which all required data elements of the gastrointestinal Cancer Protocols are recorded **AND** meet the maximum 4 business day turnaround time (TAT) requirement (Report Date – Accession Date ≤ 4 business days). INSTRUCTIONS: This measure has two performance rates that contribute to the overall performance score: 1. Percent of cases for which required data elements for all cancer protocols are recorded. 2. Percent of cases that meet the maximum 4 business day turnaround time. The overall performance score submitted is a weighted average of: (Performance rate 1 x 70%)+(Performance rate 2 x 30%)
Denominator Statement	All final pathology reports for eligible gastric, esophageal, colorectal, and hepatocellular carcinoma specimens that require the use of a CAP Cancer Protocol CPT®[1]:88307, 88309 **AND** Any of the ICD10: • C18.0: Malignant neoplasm of cecum • C18.2: Malignant neoplasm of ascending colon • C18.3: Malignant neoplasm of hepatic flexure • C18.4: Malignant neoplasm of transverse colon • C18.5: Malignant neoplasm of splenic flexure • C18.6: Malignant neoplasm of descending colon • C18.7: Malignant neoplasm of sigmoid colon • C18.8: Malignant neoplasm of overlapping sites of colon • C18.9: Malignant neoplasm of colon, unspecified • C19: Malignant neoplasm of rectosigmoid junction • C20: Malignant neoplasm of rectum • C22.0: liver cell carcinoma • C22.7: other specific carcinoma of liver • C22.8: malignant neoplasm of liver, primary, unspecified as to type • C22.9: malignant neoplasm of liver, not specified as primary or secondary • C15.3: Malignant neoplasm of upper third of esophagus • C15.4: Malignant neoplasm of middle third of esophagus • C15.5: Malignant neoplasm of lower third of esophagus

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	• C15.8: Malignant neoplasm of overlapping sites of esophagus • C15.9: Malignant neoplasm of esophagus, unspecified • C16.0: Malignant neoplasm of cardia • C16.1: Malignant neoplasm of fundus of stomach • C16.2: Malignant neoplasm of body of stomach • C16.3: Malignant neoplasm of pyloric antrum • C16.4: Malignant neoplasm of pylorus • C16.5: Malignant neoplasm of lesser curvature of stomach, unspecified • C16.6: Malignant neoplasm of greater curvature of stomach, unspecified • C16.8: Malignant neoplasm of overlapping sites of stomach • C16.9: Malignant neoplasm of stomach, unspecified The denominator must be met between 01/01/2021 and 12/26/2021. This is to provide sufficient time for the performance of the numerator to be met within the performance period.
Denominator Exclusions	None
Denominator Exceptions	Biopsy specimens Cytology specimens Lymphoma Sarcoma Resection specimens with no residual tumors Well-differentiated neuroendocrine tumors Hepatoblastoma Gastrointestinal stromal tumor (GIST) Metastatic malignancy to these organs OR Cases requiring intradepartmental or extra-departmental consultation.
Numerator Statement	All eligible cases where the following required elements found in the current CAP Cancer Protocol are recorded: • Procedure • Tumor Site • Tumor Size • Histologic Type • Histologic Grade • Margin status including all applicable required margins • Tumor Extension • Treatment Effect • Tumor Focality (Hepatocellular only) • Macroscopic Tumor Perforation (Colorectal only) • Tumor Deposits (Colorectal only)

	• Perineural Invasion (Colorectal only)
	• Relationship of Tumor to Esophagogastric Junction (Esophageal only)
	• Lymphovascular (Colorectal, Esophageal and Gastric specimens) or vascular (Hepatocellular) invasion
	• Regional Lymph Nodes*
	  ○ Number of Nodes Examined
	  ○ Number of Nodes Involved
	• Pathologic Stage Classification: AJCC 8th Edition
	  ○ TNM Descriptors
	  ○ Primary Tumor (pT)
	  ○ Regional Lymph Nodes (pN)*
	  ○ Distant Metastases (pM)*
	* Required only if appropriate tissue/sample is present, can be omitted if no lymph nodes/distant metastases are provided
	AND
	Final pathology report in the laboratory/hospital information system with result verified by the pathologist and available to the requesting physician(s) within 4 business days.

Numerator Exclusions	None
Guidance	Denominator Definitions: Eligible procedures for gastric carcinoma include: • Partial gastrectomy • Complete gastrectomy Eligible procedures for esophageal carcinoma include: • Esophagectomy • Esophagogastrectomy Eligible procedures for hepatocellular carcinoma include: • Partial hepatic resection • Total or complete hepatic resection Eligible procedures for colorectal carcinoma include: • Partial colectomy/resection • Total colectomy/resection • Segmental colectomy/resection • Low anterior rectal resection • Abdominoperineal resection The numerator of Rate 1 is defined as gastric, esophageal, colorectal, and hepatocellular carcinoma specimens for which all required data elements of the “Colon and Rectum, Resection”, “Esophagus”, “Stomach” and “Hepatocellular Carcinoma” Cancer Protocols are included. If a case does not include one of the required data elements, it may not be included in the Numerator for Rate 1 (including cases that qualify for the GIST, Intrahepatic Bile Ducts and Distal Extrahepatic Bile Ducts Cancer Protocols). A case that

	does not include all required data elements may be included in the Numerator of Rate 2 if the required turnaround time is met. Numerator definitions for Rate 2: 1. Turnaround Time (TAT): The day the specimen is accessioned in the lab to the day the final report is signed out. Business days only. 2. Accession Date: The date recorded in the laboratory/hospital information system that documents when a specimen was received by the laboratory. 3. Report Date: The date recorded in the laboratory/hospital information system that documents when a result is verified and reported by the laboratory and is available to the requesting physician(s) (signed out).
Measure Information	
NQS Domain	Communication and Care Coordination
Meaningful Measures Area(s)	Transfer of Health Information and Interoperability
Meaningful Measure Rationale	The CAP cancer protocols have been thoroughly researched and have been determined to contain all the elements that a clinician would need to appropriately treat a patient with a malignant disease. Therefore, utilizing all the required elements found in a CAP protocol for malignant cases should be the very definition of a high-quality report and serve as a measure of pathologist performance. An accurate and complete diagnosis as would be found in a high-quality pathology report with the CAP cancer template is crucial to successful patient treatment and outcomes. The cancer protocols standardize the collection and reporting of all cancer patient data, facilitates communication between pathologists, clinicians and cancer registrars, and improves and supports information exchange and data interoperability (1). Turnaround time (TAT) is an indicator of efficiency in anatomic pathology and may affect coordination of patient care. Timely pathology reports are one of the most important tools physicians use to adequately manage the quality and safety of patient care. The implication of surgical pathology report delay, as shown in research evidence, is that prolonged turnaround time can play a major role in disease complications, including raising morbidity and mortality rates. Therefore, verifying pathology reports in an appropriate timeframe helps healthcare practitioners with timely diagnosis and more effective treatment planning (2-4). 1. Shi, C. Protocol for the Examination of Specimens From Patients With Carcinoma of the Esophagus v 4.1.0.0 (February 2020) https://documents.cap.org/protocols/cp-giupper-esophagus-20-4100.pdf 2. Alshieban S. and Al-Surimi K. Reducing turnaround time of surgical pathology reports in pathology and laboratory medicine departments. BMJ Qual Improv Rep. 2015 Nov 24;4(1). pii: u209223.w3773. doi: 10.1136/bmjquality.u209223.w3773. eCollection 2015.

	3. Volmar, KE et al. Turnaround Time for Large or Complex Specimens in Surgical Pathology: A College of American Pathologists Q-Probes Study of 56 Institutions. Archives of pathology & laboratory medicine. 139. 171-7. 10.5858/arpa.2013-0671-CP. 2015. 4. Patel, S. et al. Factors that impact turnaround time of surgical pathology specimens in an academic institution. Hum Pathol. 2012 Sep;43(9):1501-5. doi: 10.1016/j.humpath.2011.11.010. Epub 2012 Mar 8.
Measure Type	Process
Data Source	Laboratory Information System; CAP cancer protocols; and pathology reports
Summary of Performance Gap Evidence	For January-1 November 2021, four practices have entered data. The average performance rate to date is 97.62%. Studies have indicated that even among users of CAP Cancer Protocols, significant variability exists in rates of protocol completion, particularly dependent on the method of data capture (electronic cancer checklists versus printed paper forms versus web-based methods)(1). A 2020 study of rectal cancer reporting showed that “The overall adherence rate to the College of American Pathologists guidelines was 73.3%. Notable reporting deficiencies were found in several key pathology characteristics, including tumor histologic grade (reporting rate 77.8%), radial margin (84.6%), distance from the closest margin (47.9%), treatment effect (47.1%), and lymphovascular (73.1%)/perineural invasions (35.4%). Synoptic reporting use and urban hospital settings were associated with better adherence rates, whereas academic status and hospital bed size had no impact. Reporting variations existed not only between institutions, but also within individual hospitals and pathologists.” The authors also stated that “Despite guidelines from the College of American Pathologists, variations in reporting quality continue to exist” (2) Specifically for colorectal cancer cases, a 2021 study found that “Significant variability in the odds of reporting these features was evident even after adjustment for differences in other tumor characteristics”, referring to pT4a category and lymphovascular invasion. Furthermore, “variability persisted in analyses among pathologists within the same site” indicating that true variability exists. This demonstrates the continued and increased need for synoptic reports for colorectal cancer. (3) Recent studies show that checklists are associated with improvement in completeness of surgical pathology reports, although completeness rates do not exceed 90% in most studies (4) 1. Megan A Renshaw, Scott A Renshaw, Mercy Mena-Allauca, Patricia P Carrion, Xiaorong Mei, Arniris Narciandi, Edwin W Gould, Andrew A Renshaw. Performance of a web-based method for generating synoptic reports. J Pathology Informatics. 2017; 8:13.

	2. From Sho S, Yothers G, Colangelo LH, Ganz PA, O'Connell MJ, Beart RW Jr, Hemmelgarn M, Chen FC, Ko CY, Russell MM. Assessing the Quality of Rectal Cancer Pathology Reports in National Surgical Adjuvant Breast and Bowel Project Protocol R-04/NRG Oncology. Dis Colon Rectum. 2020 Aug;63(8):1063-1070. 3. Julia R. Naso, Hui-Min Yang, David F. Schaeffer; Variability in Synoptic Reporting of Colorectal Cancer pT4a Category and Lymphovascular Invasion. Arch Pathol Lab Med 1 March 2021; 145 (3): 343–351. 1. 4. Renshaw AA, Mena-Allauca M, Gould EW, Sirintrapun SJ. Synoptic Reporting: Evidence-Based Review and Future Directions. JCO Clin Cancer Inform. 2018;2:1-9. doi:10.1200/CCI.17.00088
Measure Owner	College of American Pathologists
NQF ID	N/A
Number of Performance Rates	1
Overall Performance Rate	1st Performance Rate
High-priority	Yes
Improvement Notation	Inverse Measure: No **Proportional Measure: Yes (Higher score indicates better quality)** Continuous Variable Measure: No Ratio Measure: No Risk-adjusted: No
Care Setting and Specialty	Care Setting: Other—Laboratories; Telehealth not applicable Specialty: Pathology
Current Clinical Guideline the Measure is Derived From	Guideline: None. Cancer Protocols: Burgart, LJ. Protocol for the Examination of Specimens From Patients With Carcinoma of the Esophagus v 4.2.0.0 (June 2021) https://documents.cap.org/protocols/Esophagus_4.2.0.0.REL_CAPCP.pdf Burgart, LJ Protocol for the Examination of Specimens From Patients With Hepatocellular Carcinoma v 4.2.0.0. (June 2021) https://documents.cap.org/protocols/Liver.HCC_4.2.0.0.REL_CAPCP.pdf Burgart, LJ Protocol for the Examination of Resection Specimens From Patients With Primary Carcinoma of the Colon and Rectum v 4.2.0.0 (June 2021) https://documents.cap.org/protocols/ColoRectal_4.2.0.0.REL_CAPCP.pdf Burgart, LJ. Protocol for the Examination of Specimens From Patients With Carcinoma of the Stomach v 4.2.0.0 (June 2021)

	https://documents.cap.org/protocols/Stomach_4.2.0.0.REL_CAPCP.pdf

Measure Flow

Performance Rate 1