CMS Measure ID/CMS QCDR ID: CAP30

Measure Title: Urinary Bladder Biopsy Diagnostic Requirements For Appropriate Patient Management

Measure Description	Percentage of urinary bladder carcinoma pathology reports that include the procedure, histologic tumor grade, histologic type, presence/absence of muscularis propria, presence/absence of lymphovascular invasion and tumor extent **AND** meet the maximum 2 business day turnaround time (TAT) requirement (Report Date – Accession Date ≤ 2 business days). INSTRUCTIONS: This measure has two performance rates that contribute to the overall performance score: • Stratum 1: Percent of cases for which data elements listed above are included in the urinary bladder carcinoma pathology report. • Stratum 2: Percent of cases that meet the maximum 2 business day turnaround time. The overall performance score is a weighted average of: (Stratum 1 rate x 70%)+(Stratum 2 rate x 30%)
Denominator Statement	Surgical pathology reports for bladder biopsies and transurethral resection of bladder tumor (TURBT) with a pathological diagnosis of carcinoma of the urinary bladder (urothelial carcinoma) CPT: 88305, 88307 AND ICD10: • C67.0 Malignant neoplasm of trigone of bladder • C67.1 Malignant neoplasm of dome of bladder • C67.2 Malignant neoplasm of lateral wall of bladder • C67.3 Malignant neoplasm of anterior wall of bladder • C67.4 Malignant neoplasm of posterior wall of bladder • C67.5 Malignant neoplasm of bladder neck • C67.6 Malignant neoplasm of ureteric orifice • C67.8 Malignant neoplasm of overlapping sites of bladder • C67.9 Malignant neoplasm of bladder, unspecified The denominator must be met between 01/01 and 12/26 of the performance year. This is to provide sufficient time for the performance of the numerator to be met within the performance period.
Denominator Exclusions	Urachal Carcinoma (ICD-10 C67.7)
Denominator Exceptions	Stratum 1 (Pathology Report Data Elements) Only: 1. Specimen contains metastatic carcinoma 2. No residual carcinoma/specimen does not contain cancer

	3. Insufficient tissue provided for analysis 4. Necrotic tissue Stratum 2 (TAT) Only: Cases requiring intra-departmental or extra-departmental consultation Note: Cases requiring intra- or extra-departmental consultation will be evaluated for the required data elements
Numerator Statement	Stratum 1: Urinary bladder biopsy carcinoma pathology reports that include • Procedure • Histologic tumor grade • Histologic type • Presence/absence of muscularis propria • Presence/absence of lymphovascular invasion • Tumor Extent **AND** Stratum 2: Final pathology report that is verified in the laboratory/hospital information system and available to the requesting physician(s) within 2 business days.
Numerator Exclusions	None
Guidance	Numerator definitions: 1. Turnaround Time (TAT): The day the specimen is accessioned in the lab to the day the final report is signed out. Business days counted 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 (i.e. released with a final diagnosis) by the pathologist, reported by the laboratory information system and is available to the requesting physician(s)
Measure Information	
NQS Domain	Communication and Care Coordination
Meaningful Measures Area(s)	Transfer of Health Information and Interoperability
Meaningful Measure Rationale	The vast majority (more than 95%) of carcinomas of the urinary bladder, renal pelvis, and ureter are urothelial cell in origin, previously termed transitional cell cancer. Utilization of the most recent 2016 World Health Organization (WHO) classification of tumors of the urothelial tract and the updated AJCC (8th ed) TNM Staging System for carcinomas of the urinary bladder is recommended.

(1) These cancers may be heterogeneous in histologic appearance, including adenocarcinoma, squamous cell carcinoma or small cell carcinoma elements; however, they should still be classified as urothelial carcinoma unless the cancer is composed entirely of the aforementioned histologic types (1-7).

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 (8-10)

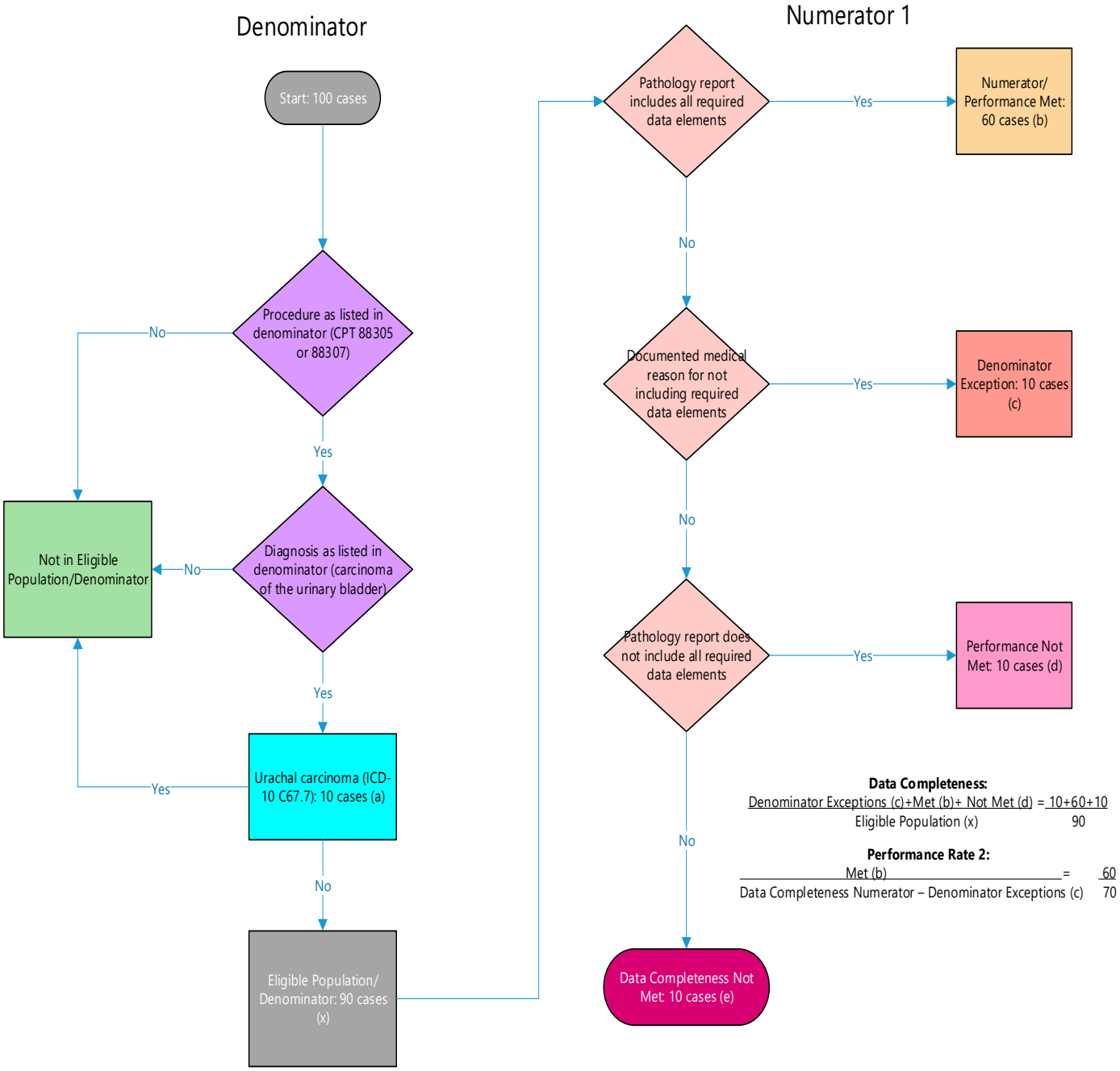
1. Magers, M J, Lopez-Beltran, A, Montironi, R, Williamson, S R, Kaimakliotis, H Z & Cheng, L (2019) *Histopathology* 74, 112– 134. https://doi.org/10.1111/his.13734 Staging of bladder cancer
2. Amin MB, Murphy WM, Reuter VE, et al. Controversies in the pathology of transitional cell carcinoma of the urinary bladder. In: Rosen PP, Fechner RE, eds. Reviews of Pathology. Vol. 1. Chicago, IL: ASCP Press; 1996.
3. Eble JN, Young RH. Carcinoma of the urinary bladder: a review of its diverse morphology. Semin Diagn Pathol. 1997;14(2):98-108.
4. Moch H, Humphrey PA, Ulbright TM, Reuter VE. WHO Classification of Tumours of the Urinary System and Male Genital Organs. Geneva, Switzerland: WHO Press; 2016.
5. Murphy WM, Grignon DJ, Perlman EJ. Tumors of the urinary bladder. In: Tumors of the Kidney, Bladder, and Related Urinary Structures. AFIP Atlas of Tumor Pathology Series 4. Washington, DC: American Registry of Pathology; 2004.
6. Epstein JI, Amin MB, Reuter VR, Mostofi FK, the Bladder Consensus Conference Committee. The World Health Organization/ International Society of Urological Pathology Consensus classification of urothelial (transitional cell) neoplasms of the urinary bladder. Am J Surg Pathol. 1998;22:1435-1448.
7. Amin MB, Edge SB, Greene FL, et al, eds. AJCC Cancer Staging Manual. 8th Ed. New York: Springer; 2017.
8. 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.
9. 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.

	10. 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 Systems; pathology reports
Summary of Performance Gap Evidence	For performance year 2021, 16 reporting entities submitted data on this measure to CMS, ranging from 21 cases to 628 cases. Performance scores ranged from 44.4% to 100% with an average performance of 85.98%. We performed an analysis to determine whether this measures was topped out. Because the truncated coefficient of variance is > 10%, the measure would not be considered topped out. For January 1st to July 1st 2022, 13 reporting entities have entered data on this measure into the Pathologists Quality Registry, ranging from 18 to 1,226 cases. Performance scores range from 38.35% to 100% with an average performance of 84.1%. Prior to review by genitourinary pathologists, "[a]mong 78 patients with urothelial carcinoma (UC) who presented with either stage T1, T2, or T4a, the presence or absence of LVI, concomitant CIS, and VH was reported only in 27 (34.6%), 20 (25.6%), and 16 (20.5%) cases, respectively" (1) where LVI is lymphovascular invasion, CIS is carcinoma in situ and VH is variant histology. The latter two are components of the histologic type, which is required by the measure, and the former is required by the measure. In addition, histologic grading remains a significant challenge for pathologists: "Interobserver variation in pT1 diagnosis and the associated pitfalls in pT1 assessment are the critical pathological issues" (2) In a study of 3,042 TURBTs, only 73% had muscularis propria mentioned (3). A similar study of 30, 498 pathology reports for bladder cancer found that grade was absent in 13.6% of cases, lymphovascular invasion was absent in 31.5% of cases, and muscularis propria was absent in 32.1% of cases (4) (1) Traboulsi SL, Brimo F, Yang Y, et al. Pathology review impacts clinical management of patients with T1-T2 bladder cancer. Can Urol Assoc J. 2017;11(6):188-193. doi:10.5489/cuaj.4126 (2) Raspollini, M.R., Montironi, R., Mazzucchelli, R. et al. pT1 high-grade bladder cancer: histologic criteria, pitfalls in the assessment of invasion, and substaging. Virchows Arch 477, 3–16 (2020) (3) Automated Extraction of Grade, Stage, and Quality Information From Transurethral Resection of Bladder Tumor Pathology Reports Using Natural Language Processing Alexander P. Glaser, Brian J. Jordan, Jason Cohen, Anuj Desai, Philip Silberman, and Joshua J. Meeks JCO Clinical Cancer Informatics 2018 :2, 1-8

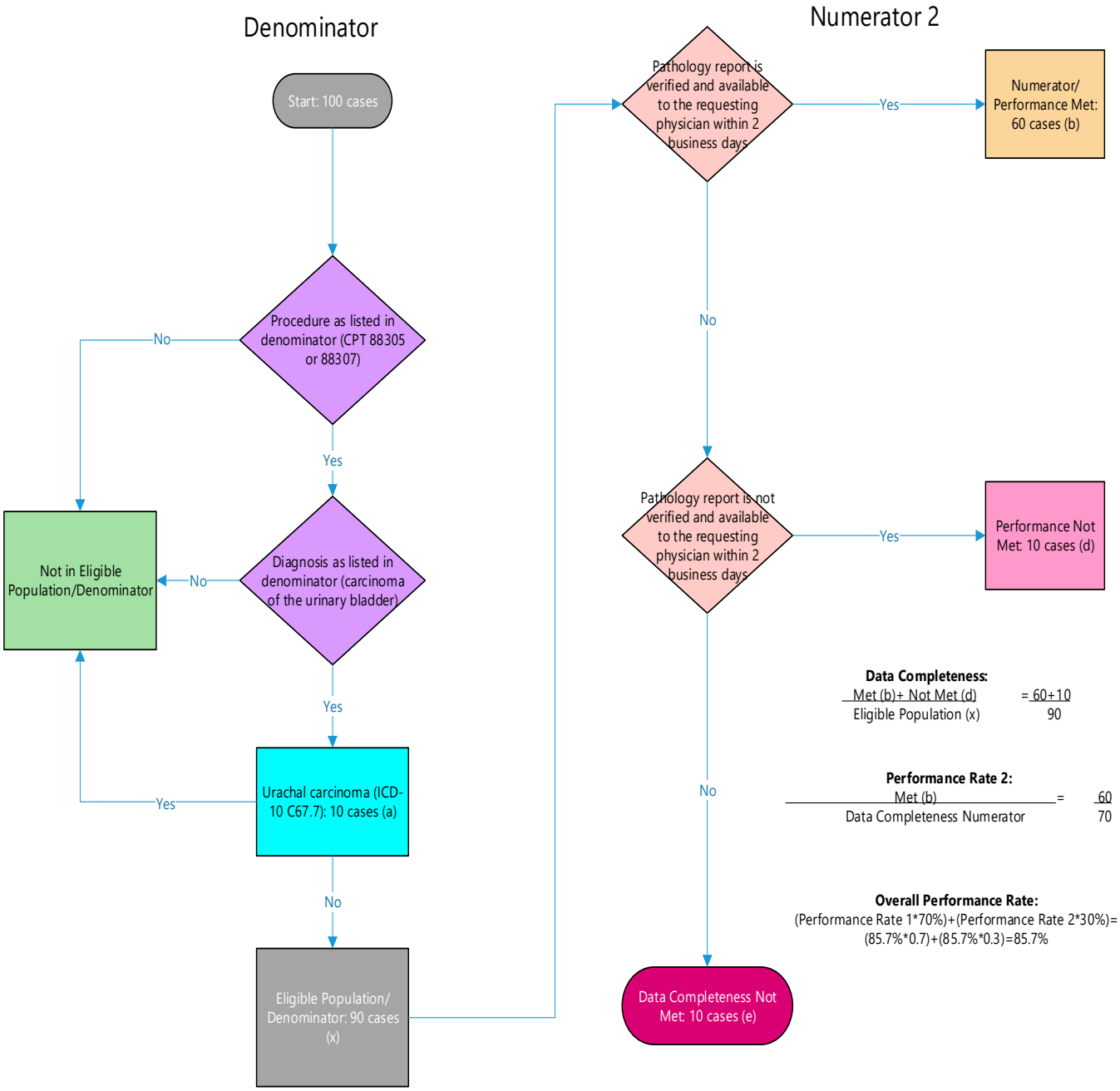
	(4) Schroeck FR, Patterson OV, Alba PR, Pattison EA, Seigne JD, DuVall SL, Roberston DJ, Sirovich B and Goodney PP (2017) Development of a Natural Language Processing Engine to Generate Bladder Cancer Pathology Data for Health Services Research. Urology 110: 84-91.
Measure Owner	College of American Pathologists
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
Submission Pathway	Traditional MIPS Only
Current Clinical Guideline the Measure is Derived From	Paner, GP et al. With guidance from the CAP Cancer and CAP Pathology Electronic Reporting Committees Protocol for the Examination of Biopsy and Transurethral Resection of Bladder Tumor (TURBT) Specimens From Patients With Carcinoma of the Urinary Bladder. v 4.1.0.0 (June 2021) https://documents.cap.org/protocols/Bladder.Bx.TURBT_4.1.0.0.REL_CAPCP.pdf

Measure Flow

Performance Rate 1



Performance Rate 2:



Data Completeness:

$$\frac{\text{Met (b)+ Not Met (d)}}{\text{Eligible Population (x)}} = \frac{60+10}{90}$$

Performance Rate 2:

$$\frac{\text{Met (b)}}{\text{Data Completeness Numerator}} = \frac{60}{70}$$

Overall Performance Rate:

(Performance Rate 1*70%)+(Performance Rate 2*30%)=
(85.7%*0.7)+(85.7%*0.3)=85.7%