



CMS Measure ID/CMS QCDR ID: CAP32

Measure Title: Prostate Cancer Gleason Pattern, Score, and Grade Group

Measure Description	Percentage of surgical pathology reports for biopsies or radical resections of primary prostate cancer that include histologic type, Gleason patterns used in determining the Gleason score, total Gleason score, and grade group classification
Denominator Statement	Surgical pathology reports for prostate biopsies and radical resections for carcinoma of the prostate CPT: 88305 (Prostate—Needle biopsy) 88309 (Prostate – Radical resection) OR HCPCS: G0416 (Surgical pathology, gross and microscopic examination, for prostate needle biopsy, any method) AND ICD10: C61 Malignant neoplasm of prostate
Denominator Exclusions	Transurethral resection of the prostate (TURP)
Denominator Exceptions	Documentation of medical reason(s) for not including required data elements. For example: <ul style="list-style-type: none"> • Specimen contains metastatic carcinoma (not a primary neoplasm) • Specimen has documented neoadjuvant hormone therapy/ treatment effects that hinder histologic assessments • Resection specimen has no residual cancer
Numerator Statement	Surgical pathology reports for biopsies and radical resections of carcinoma of the prostate that include: <ul style="list-style-type: none"> • Gleason patterns used in determining the Gleason score (primary and secondary if applicable) • Total Gleason score (2-10) • Grade group classification (1-5)
Numerator Exclusions	None
Measure Information	
NQS Domain	Communication and Care Coordination
Meaningful Measures Area(s)	Transfer of Health Information and Interoperability
Meaningful Measure Rationale	The 9 Gleason scores (2-10) have been variably lumped into different groups for prognosis and patient management purposes. Epstein and associates



proposed grouping scores into 5 prognostic categories, grade groups 1-5. (1) This grade grouping strongly correlates with biochemical recurrence and have been incorporated into the new Partin tables. (1-3) At the 2014 ISUP Consensus Conference, details of this prognostic system were clarified, and it was recommended for usage together with the Gleason system. (4) This grade grouping has also been subsequently validated by other independent studies in surgical and radiation cohorts show significant correlation with survival. (5-7) The new grade grouping has been endorsed in the 2016 WHO classification and updated in 2019 by the ISUP. (8-9) The grade grouping has also been endorsed by ISUP and is referred to as ISUP grade in some publications. Like Gleason scoring in needle biopsies, the grade group can be applied at core, specimen, or case levels.

1. Pierorazio PM, Walsh PC, Partin AW, Epstein JI. Prognostic Gleason grade grouping: data based on the modified Gleason scoring system. *BJU Int.* 2013;111:753-760.
2. Eifler JB, Feng Z, Lin BM, Partin MT, Humphreys EB, Han M, et al. An updated prostate cancer staging nomogram (Partin tables) based on cases from 2006 to 2011. *BJU Int.* 2013;111:22-29.
3. Epstein JI, Zelefsky MJ, Sjoberg DD, et al. A contemporary prostate cancer grading system: a validated alternative to the Gleason score. *Eur Urol.* 2016;69:428-435.
4. Epstein JI, Egevad L, Amin MB, Delahunt B, Srigley JR, Humphrey PA; and the Grading Committee The 2014 International Society of Urological Pathology (ISUP) Consensus Conference on Gleason Grading of Prostatic Carcinoma: definition of grading patterns and proposal for a new grading system. *Am J Surg Pathol.* 2016; 40: 244-252.
5. Delahunt B, Egevad L, Srigley JR, et al. Validation of International Society of Urological Pathology (ISUP) grading for prostatic adenocarcinoma in thin core biopsies using TROG 03.04 'RADAR' trial clinical data. *Pathology.* 2015;47:520-525.
6. Samaratunga H, Delahunt B, Gianduzzo T, et al. The prognostic significance of the 2014 International Society of Urological Pathology (ISUP) grading system for prostate cancer. *Pathology.* 2015;47:515-519.
7. Berney DM, Beltran L, Fisher G, et al. Validation of a contemporary prostate cancer grading system using prostate cancer death as outcome. *Br J Cancer.* 2016;114(10):1078-1083.
8. Humphrey P, Amin MB, Berney D, Billis A, et al. Acinar adenocarcinoma. In: Moch H, Humphrey PA, Ulbright T, Reuter VE, eds. *Pathology and Genetics: Tumors of the Urinary System and Male Genital Organs.* 4th edition. WHO Classification of Tumors. Zurich, Switzerland: WHO Press; 2015:3-28.
9. van Leenders, G.J.L.H et al (2020) The 2019 International Society of Urological Pathology (ISUP) Consensus Conference on Grading of Prostatic Carcinoma. *Am J Surg Pathol* (epub ahead of print).



Measure Type	Process
Data Source	Laboratory Information Systems; pathology reports
Summary of Performance Gap Evidence	<p>Recent updates to the Gleason grading system (1) have provided pathologists with a structured system to describe individual architectural patterns of prostate cancer (2). However, “notable interobserver variation among pathologists” remains (2). It is therefore recommended that in addition to Gleason grade, full score and pattern are recorded for every patient. However, studies suggest “differences in Gleason grading by pathologists practicing in different facility categories and variations in their promptness of adopting International Society of Urological Pathology recommendations.” (3). Furthermore, studies show that continuing use of terms such as “tertiary grade pattern” instead of summing together the most common and highest grade patterns introduces confusion (4-5). It is therefore all the more important for pathologists to discretely report Gleason pattern, score, and grade group classification.</p> <ol style="list-style-type: none"> 1. Humphrey P, Amin MB, Berney D, Billis A, et al. Acinar adenocarcinoma. In: Moch H, Humphrey PA, Ulbright T, Reuter VE, eds. Pathology and Genetics: Tumors of the Urinary System and Male Genital Organs. 4th edition. WHO Classification of Tumors. Zurich, Switzerland: WHO Press; 2015:3-28. 2. Kweldam, C F, Leenders, G J & Kwast, T (2019) <i>Histopathology</i> 74, 146– 160. https://doi.org/10.1111/his.13767 G grading of prostate cancer: a work in progress 3. Ted Gansler, Stacey A. Fedewa, Chun Chieh Lin, Mahul B. Amin, Ahmedin Jemal, and Elizabeth M. Ward (2017) Trends in Diagnosis of Gleason Score 2 Through 4 Prostate Cancer in the National Cancer Database, 1990–2013. <i>Archives of Pathology & Laboratory Medicine</i>: December 2017, Vol. 141, No. 12, pp. 1686-1696. 4. Epstein, J. (2018) Prostate cancer grading: a decade after the 2005 modified system <i>Modern Pathology</i> volume 31, pages S47–63. 5. Lu, T.C., Collins, L., Cohen, P. et al. <i>Pathol. Oncol. Res.</i> (2019). https://doi.org/10.1007/s12253-019-00632-1
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	Higher is better
Care Setting and Specialty	Care Setting: Other—Laboratories; Telehealth not applicable Specialty: Pathology
Current Clinical Guideline the Measure is Derived From	<p>CAP Cancer Protocol for Prostate Resection Specimens: https://documents.cap.org/protocols/cp-malegenital-prostate-radicalprostatectomy-20-4101.pdf</p> <p>van Leenders, G.J.L.H et al (2020) The 2019 International Society of Urological Pathology (ISUP) Consensus Conference on Grading of Prostatic Carcinoma. Am J Surg Pathol (epub ahead of print).</p> <p>NCCN Clinical Practice Guidelines in Oncology: Prostate Cancer (updated 21 May 2020): https://www.nccn.org/professionals/physician_gls/pdf/prostate.pdf</p>



Measure Flow

