

RMHP Prostate Mapping Biopsy (Saturation Biopsy)

MCG Health
Ambulatory Care
27th Edition

AUTH: RMHP-AC-5056 (AC)

[Link to Codes](#)

- [Clinical Indications for Procedure](#)
- [References](#)
- [Policy History](#)
- [Description](#)
- [Codes](#)

Clinical Indications for Procedure

[Return to top of RMHP Prostate Mapping Biopsy \(Saturation Biopsy\) - AC](#)

- Applies to **All RMHP Plans**: The procedure Prostate Mapping Biopsy is needed for the member due to **1 or more** of the following
 - The Member has a high possibility of prostate cancer, negative findings on at least one conventional transrectal in-office prostate biopsy and **1 or more** of the following
 - The Member has Intermediate histological findings on the first or second biopsy (such as atypia or prostatic intraepithelial neoplasia) (ICD-10-CM code R89.7)
 - The Member has persistent, or worsening suspicious digital rectal exam. (ICD-10-CM codes N40.2-N40.3)
 - The Member needs an upgraded Gleason Score and **ALL** of the following
 - The Member has a low level Gleason score, i.e., 6 or 3+
 - The Member is contemplating an Active Surveillance program
 - The Provider's claim for payment will report both diagnoses ICD-10 CM codes C61 and R89.7
 - This Prostate Mapping Biopsy is a single occurrence (Member lifetime limit of one for surveillance)

References

[Return to top of RMHP Prostate Mapping Biopsy \(Saturation Biopsy\) - AC](#)

Abdollah F, Novara G, Briganti A, et al. Trans-rectal versus trans-perineal saturation rebiopsy of the prostate: is there a difference in cancer detection rate? *Urology*. 2011; 77(4):921-925

Ahyai SA, Isbarn H, Karakiewicz PI, Chun FK, Reichert M, Walz J, et al. The presence of prostate cancer on saturation biopsy can be accurately predicted. *BJU Int*. 2010 Mar;105(5):636-41

Ashley RA, Inman BA, Routh JC, et al. Reassessing the diagnostic yield of saturation biopsy of the prostate. *Eur Urol*. 2008; 53(5):976-981

Augustin H, Aupricht M, Mannweiler S, Pachernegg O, Al-Ali BM, Pummer K. Prostate cancers detected by saturation repeat biopsy impairs the Partin tables' accuracy to predict final pathological stage., *BJU Int.* 2011 Nov 17. doi: 10.1111/j.1464-410X.2011.10765.x. [Epub ahead of print]

Barqawi AB, Rove KO, Gholizadeh S, et al. The role of 3-dimensional mapping biopsy in decision making for treatment of apparent early stage prostate cancer. *J Urol.* 2011; 186(1):80-85

Barzell WE, Melamed MR. Appropriate patient selection in the focal treatment of prostate cancer: the role of transperineal 3-dimensional pathologic mapping of the prostate--a 4-year experience. *Urology.* 2007 Dec;70(6 Suppl):27-35

Boccon-Gibod LM, de Longchamps NB, Toublanc M, et al. Prostate saturation biopsy in the reevaluation of microfocal prostate cancer. *J Urol.* 2006; 176(3):961-963

Bott SR, Henderson A, Halls JE, Montgomery BS, Laing R, Langley SE. Extensive transperineal template biopsies of prostate: modified technique and results. *Urology.* 2006 Nov;68(5):1037-41

Chun FK, Epstein JI, Ficarra V, et al. Optimizing performance and interpretation of prostate biopsy: a critical analysis of the literature. *Eur Urol.* 2010; 58(6):851-864

Crawford ED, Wilson SS, Torkko KC, Hirano D, Stewart JS, Brammell C, et al. Clinical staging of prostate cancer: a computer-simulated study of transperineal prostate biopsy. *BJU Int.* 2005 Nov;96(7):999-1004

DeLongchamps NB, de la Roza G, Jones R, Jumbelic M, Haas GP. Saturation biopsies on autopsied prostates for detecting and characterizing prostate cancer. *BJU Int.* 2009 Jan;103(1):49-54. Epub 2008 Aug 1

DeLongchamps NB, Haas GP. Saturation biopsies for prostate cancer: current uses and future prospects. *Nat Rev Urol.* 2009; 6(12):645-652

Descazeaud A, Rubin M, Chemama S, Larre S, Salomon L, Allory Y, et al. Saturation biopsy protocol enhances prediction of pT3 and surgical margin status on prostatectomy specimen. *World J Urol.* 2006 Dec;24(6):676-80

Djavan B, Remzi M, Marberger M. When to biopsy and when to stop biopsying. *Urol Clin North Am.* 2003 May;30(2):253-62, viii

Dominguez-Escrig JL, McCracken SR, Greene D., Beyond diagnosis: evolving prostate biopsy in the era of focal therapy., *Prostate Cancer.* 2011;2011:386207. Epub 2010 Dec 9

Eichler K, Hempel S, Wilby J, et al. Diagnostic value of systematic biopsy methods in the investigation of prostate cancer: a systematic review. *J Urol.* 2006; 175(5):1605-1612

Epstein JI, Sanderson H, Carter HB, Scharfstein DO. Utility of saturation biopsy to predict insignificant cancer at radical prostatectomy. *Urology.* 2005 Aug;66(2):356-60

Falzarano SM, Zhou M, Hernandez AV, Moussa AS, Jones JS, Magi-Galluzzi C. Can saturation biopsy predict prostate cancer localization in radical prostatectomy specimens: a correlative study and implications for focal therapy. *Urology.* 2010 Sep;76(3):682-7

Fandella A., Analysis of costs of transrectal prostate biopsy., *Urologia.* 2011 Oct-Dec;78(4):288-92. doi: 10.5301/RU.2011.8875

Fleshner N, Klotz L. Role of "saturation biopsy" in the detection of prostate cancer among difficult diagnostic cases. *Urology*. 2002 Jul;60(1):93-7

Giulianelli R, Brunori S, Gentile BC, Vincenti G, Nardoni S, Pisanti F, Shestani T, Mavilla L, Albanesi L, Attisani F, Mirabile G, Schettini M., Saturation biopsy technique increase the capacity to diagnose adenocarcinoma of prostate in patients with PSA < 10 ng/ml, after a first negative biopsy., *Arch Ital Urol Androl*. 2011 Sep;83(3):154-9

Jones JS, Patel A, Schoenfield L, et al. Saturation technique does not improve cancer detection as an initial prostate biopsy strategy. *J Urol*. 2006; 175(2):485-488

Jones JS. Saturation biopsy for detecting and characterizing prostate cancer. *BJU Int*. 2007 Jun;99(6):1340-4

Klein T, Palisaar RJ, Holz A, et al. The impact of prostate biopsy and periprostatic nerve block on erectile and voiding function: a prospective study. *J Urol*. 2010; 184(4):1447-1452

Lane BR, Zippe CD, Abouassaly R, Schoenfield L, Magi-Galluzzi C, Jones JS. Saturation Technique Does Not Decrease Cancer Detection During Followup After Initial Prostate Biopsy. *J Urol*. 2008 Mar 14

Lee MC, Moussa AS, Zaytoun O, Yu C, Jones JS., Using a saturation biopsy scheme increases cancer detection during repeat biopsy in men with high-grade prostatic intra-epithelial neoplasia., *Urology*. 2011 Nov;78(5):1115-9

Li H, Yan W, Zhou Y, Ji Z, Chen J. Transperineal ultrasound-guided saturation biopsies using 11-region template of prostate: report of 303 cases. *Urology*. 2007 Dec;70(6):1157-61

Mabjeesh NJ, Lidawi G, Chen J, German L, Matzkin H, High detection rate of significant prostate tumours in anterior zones using transperineal ultrasound-guided template saturation biopsy., *BJU Int*. 2012 Mar 6. doi: 10.1111/j.1464-410X.2012.10972.x. [Epub ahead of print]

Meng MV, Elkin EP, DuChane J, Carroll PR. Impact of increased number of biopsies on the nature of prostate cancer identified. *J Urol*. 2006; 176(1):63-68

Merrick GS, Gutman S, Andreini H, et al. Prostate cancer distribution in patients diagnosed by transperineal template-guided saturation biopsy. *Eur Urol*. 2007; 52(3):715-723

National Institute for Health and Clinical Excellence. Interventional procedure guidance 364. Transperineal template biopsy and mapping of the prostate. October 27, 2010

Novara G, Boscolo-Berto R, Lamon C, Fracalanza S, Gardiman M, Artibani W, Ficarra V. Detection rate and factors predictive the presence of prostate cancer in patients undergoing ultrasonography-guided transperineal saturation biopsies of the prostate. *BJU Int*. 2010 May;105(9):1242-6

Onik G, Barzell W. Transperineal 3D mapping biopsy of the prostate: an essential tool in selecting patients for focal prostate cancer therapy. *Urol Oncol*. 2008 Sep-Oct;26(5):506-10

Patel AR, Jones JS. Optimal biopsy strategies for the diagnosis and staging of prostate cancer. *Curr Opin Urol*. 2009 May;19(3):232-7

Pepe P, Aragona F. Saturation prostate needle biopsy and prostate cancer detection at initial and repeat evaluation. *Urology*. 2007; 70(6):1131-1135

Pepe P, Aragona F., PCA3 score vs PSA free/total accuracy in prostate cancer diagnosis at repeat saturation biopsy., *Anticancer Res*. 2011 Dec;31(12):4445-9

Pepe P, Dibenedetto G, Gulletta M, et al. Prostate cancer detection after one or more negative extended needle biopsy: results of a multicenter case-findings protocol. *Arch Ital Urol Androl*. 2010; 82(2):95-99

Pinkstaff DM, Igel TC, Petrou SP, Broderick GA, Wehle MJ, Young PR. Systematic transperineal ultrasound-guided template biopsy of the prostate: three-year experience. *Urology*. 2005 Apr;65(4):735-9

Rabets JC, Jones JS, Patel A, Zippe CD. Prostate cancer detection with office based saturation biopsy in a repeat biopsy population. *J Urol*. 2004 Jul;172(1):94-7

Sajadi KP, Kim T, Terris MK, Brown JA, Lewis RW. High yield of saturation prostate biopsy for patients with previous negative biopsies and small prostates. *Urology*. 2007 Oct;70(4):691-5

Sartor AO, Hricak H, Wheeler TM, Coleman J, Penson DF, Carroll PR, et al. Evaluating localized prostate cancer and identifying candidates for focal therapy. *Urology*. 2008 Dec;72(6 Suppl):S12-24

Scattoni V, Zlotta A, Montironi R, et al. Extended and saturation prostatic biopsy in the diagnosis and characterization of prostate cancer: a critical analysis of the literature. *Eur Urol*. 2007; 52(5):1309-1322

Scattoni V, Maccagnano C, Zanni G, Angiolilli D, Raber M, Roscigno M, et al. Is extended and saturation biopsy necessary? *Int J Urol*. 2010 May;17(5):432-47

Schoenfield L, Jones JS, Zippe CD, Reuther AM, Klein E, Zhou M, Magi-Galluzzi C. The incidence of high-grade prostatic intraepithelial neoplasia and atypical glands suspicious for carcinoma on first-time saturation needle biopsy, and the subsequent risk of cancer. *BJU Int*. 2007 Apr;99(4):770-4. Epub 2007 Jan 16

Simon J, Kuefer R, Bartsch G Jr, et al. Intensifying the saturation biopsy technique for detecting prostate cancer after previous negative biopsies: a step in the wrong direction. *BJU Int*. 2008; 102(4):459-462

Siu W, Dunn RL, Shah RB, Wei JT. Use of extended pattern technique for initial prostate biopsy. *J Urol*. 2005 Aug;174(2):505-9

Stav K, Leibovici D, Sandbank J, et al. Saturation prostate biopsy in high risk patients after multiple previous negative biopsies. *Urology*. 2008; 71(3):399-403

Stewart CS, Leibovich BC, Weaver AL, Lieber MM. Prostate cancer diagnosis using a saturation needle biopsy technique after previous negative sextant biopsies. *J Urol*. 2001; 166(1):86-91

Sur RL, Borboroglu PG, Roberts JL, Amling CL. A prospective randomized comparison of extensive prostate biopsy to standard biopsy with assessment of diagnostic yield, biopsy pain and morbidity. *Prostate Cancer Prostatic Dis*. 2004; 7(2):126-131

Taneja SS. Prostate biopsy: targeting cancer for detection and therapy. *Rev Urol*. 2006 Fall;8(4):173-82

Utrera NM, Sanchez AT, Rodriguez-Antolin A, Martin-Parada A, Lora D, Passas J, Gonzalez RD., Saturation biopsies for prostate cancer detection: effectiveness, safety and predictive factors., Arch Esp Urol. 2011 Jun;64(5):421-6

van Renterghem K, Van Koeveringe G, Achten R, van Kerrebroeck P. A new algorithm in patients with elevated and/or rising prostate-specific antigen level, minor lower urinary tract symptoms, and negative multisite prostate biopsies. Int Urol Nephrol. 2010; 42(1):29-38

Walz J, Graefen M, Chun FK, Erbersdobler A, Haese A, Steuber T, et al. High incidence of prostate cancer detected by saturation biopsy after previous negative biopsy series. Eur Urol. 2006 Sep;50(3):498-505

Zaytoun OM, Moussa AS, Gao T, et al. Office based transrectal saturation biopsy improves prostate cancer detection compared to extended biopsy in the repeat biopsy population. J Urol. 2011; 186(3):850-854

Zaytoun OM, Stephenson AJ, Fareed K, El-Shafei A, Gao T, Levy D, Jones JS., When serial prostate biopsy is recommended: most cancers detected are clinically insignificant., BJU Int. 2012 Mar 15. doi: 10.1111/j.1464-410X.2012.10958.x. [Epub ahead of print]Arch Esp Urol. 2011 Jun;64(5):421-6

No MCG guideline exists in 25th edition as of 7/10/2023.

Policy History

[Return to top of RMHP Prostate Mapping Biopsy \(Saturation Biopsy\) - AC](#)

History Summary: 7/2/2013 RMHP Medical Advisory Committee (MAC) approved new policy. Review and approval by committee hierarchy annually. Updates as needed. See archive versions for details. 9/29/2022 Annual review and approval by committee hierarchy. CMS LCD and LCA are retired. 7/10/2023 annual review and updates.

Description

[Return to top of RMHP Prostate Mapping Biopsy \(Saturation Biopsy\) - AC](#)

Prostate mapping is performed after an initial diagnosis of prostate cancer when a prior needle biopsy (55700) has been performed. If a previous biopsy has not indicated prostate cancer, then a more extensive biopsy method is needed to rule out prostate cancer. It is also used if a traditional biopsy has revealed prostate cancer and patient has elected focused treatment.

Saturation biopsy using prostate mapping is performed under general anesthesia to identify the exact location of each biopsy core. Each core (typically 20-40) is marked individually to identify the exact location and the extent of the tumor for further treatment of prostate cancer.

The 3D prostate mapping biopsy (PMB) is an ultrasound-guided biopsy procedure that takes the biopsies through the perineum (rather than the rectum as in the usual TRUS biopsy) using a brachytherapy grid system. The biopsies are taken every 5 millimeters throughout the gland, and each sample is labeled as to its location on the grid. When the results of the biopsy are reported, we then refer to the grid overlay on a saved ultrasound of the prostate and, therefore, know the exact location of the cancer. Using 3D PMB, we can effectively direct subsequent focal cryoablation and exclude patients with significant multifocal disease.

Codes

[Return to top of RMHP Prostate Mapping Biopsy \(Saturation Biopsy\) - AC](#)

CPT® : 55706

MCG Health
Ambulatory Care 27th Edition