Consensus Statements of Cohorts from Radiology & Urology

Determining Best Practices for Prostate MRI

American Urological Association (AUA)

MRI of the prostate, Standard Operating Procedure (SOP) 2017

Multiparametric MR Imaging (mpMRI) of the prostate has the potential to change the paradigms for prostate cancer diagnosis, staging, and therapy. Given the rapid adoption of prostate MRI in clinical practice, the AUA and its thought leaders have published a Standard Operating Procedure (SOP) for MRI for the prostate.

In addition to the joint consensus report in 2016, the SOP offers expanded topics describing the clinical use of mpMRI for a number of patient conditions; even specifics of MRI scan parameters and techniques for best practices are found here. A must read for contemporary urologists.

http://www.auanet.org/guidelines/mri-of-the-prostate-sop

American Urological Association (AUA)
Society of Abdominal Radiology (SAR)
Joint Consensus Statement 2016

Prostate MRI and MRI Targeted Biopsy in Patients with Prior Negative Biopsy

Concerted effort in combining literature research findings from both radiology and urology result in a consensus on best practices of mpMRI performance, interpretation, and efficacy of MR/US fusion-guided biopsy in patients having had a prior negative prostate biopsy. All forms of targeted biopsy are compared/contrasted. All OEMs were evaluated and are featured as of this publication.

A need in managing patients with prior negative biopsy persists today. With patients having continued clinical suspicion, the motivation for repeat biopsy is concern of missing something on initial biopsy. MR-guided fusion biopsy helps improve both patient selection and diagnostic yield of significant cancers upon repeat biopsy.

The National Comprehensive Cancer Network (NCCN) and the American College of Radiology (ACR) advise once other clinical biomarkers are taken into account, MRI and MRI-targeted cores should be considered after a prior negative biopsy.

http://www.jurology.com/article/S0022-5347(16)30659-0/fulltext

The BJU Internation Consensus in 2014

Current status of magnetic resonance imaging (MRI) and ultrasonography fusion software platforms for guidance of prostate biopsies

The 2014 consensus statement highlights a detailed explanation of the elastic deformation feature. This cohort of authors from NIH used UroNav for their findings, some authors were involved in both forums where best practices for using MR–targeted biopsy were reviewed. All forms of targeted biopsy are compared/contrasted. All OEMs at the time were evaluated and are featured.

UroNav Bibliography

**National Institutes of Health (NIH)**

*Read the NIH Director’s Blog featuring UroNav for targeted fusion biopsy and risk stratification.*

[https://search.nih.gov/search?utf8=%E2%9C%93&affiliate=nih&query=prostate+fusion+biopsy&commit=Search](https://search.nih.gov/search?utf8=%E2%9C%93&affiliate=nih&query=prostate+fusion+biopsy&commit=Search)

**Effect of Prostate Magnetic Resonance Imaging/Ultrasound Fusion-Guided Biopsy on Radiation Treatment Recommendations**

Studies underway in evaluating how MR/US fusion biopsy may affect radiation therapy and androgen deprivation therapy (ADT) treatment viability.


**Electromagnetic Tracking & Fusion for Prostate Biopsy: UroNav**

A presentation of historical synopsis of UroNav used at the National Institutes of Health (NIH).

[https://www.cc.nih.gov/centerio/PDFs/prostate_fusion_biopsy.pdf](https://www.cc.nih.gov/centerio/PDFs/prostate_fusion_biopsy.pdf)

**Interviews and Videos**

**JAMA Report Video: Comparison of MR/Ultrasound Fusion-Guided Biopsy with Ultrasound-Guided Biopsy for the Diagnosis of Prostate Cancer**

Patient and physicians together review results of a fusion biopsy case.


**Author Video Interviews: Comparison of MR/Ultrasound Fusion-Guided Biopsy with Ultrasound-Guided Biopsy for the Diagnosis of Prostate Cancer**

Determining whether MR-guided findings increase detection rates of cancer over traditional biopsy and how MR may influence treatment options


**2015 Journal of American Medical Association JAMA**

**Comparison of MR/Ultrasound Fusion-Guided Biopsy for the Diagnosis of Prostate Cancer**

Clinical staging for patients with no prior biopsy and pathologic staging for prostatectomy cohort.

[http://jamanetwork.com/journals/jama/fullarticle/2091987?resultClick=1](http://jamanetwork.com/journals/jama/fullarticle/2091987?resultClick=1)

**Journal of Therapeutic Ultrasound**

**Transrectal focal HIFU: The use of MRI fusion in guiding treatment**

Early results suggest focal HIFU therapy may reduce side effects compared to whole gland ablative therapy.

UroNav fusion biopsy data can be integrated into Sonablate HIFU/Sonafuse software to plan and ablate targeted tissue.

**2014 Journal of Magnetic Resonance Imaging (JMRI)**

*A Prospective Comparison of MRI-US Fused Targeted Biopsy versus Systematic Ultrasound-Guided biopsy for Detecting Clinically Significant Prostate Cancer in Patients on Active Surveillance*

A small study evaluating the NPV of mpMRI and how UroNav targeted, fusion biopsy compared to TRUS biopsy in detecting clinically significant disease.


**2016 Journal of Urology**

*Initial Clinical Experience with a novel electromagnetically tracked transperineal fusion-guided prostate biopsy system*

Early adopters using UroNav with a transperineal approach for patients with increased risk of sepsis, antibiotic resistance, and potential for focal therapy.

http://www.jurology.com/article/S0022-5347(16)01024-7/fulltext