OnQ Prostate: Case Study

Dr. Ross Schwartzberg | Imaging Healthcare Specialists

Offering over 30 years of imaging experience, Imaging Healthcare Specialists has earned an outstanding reputation for providing the highest quality medical imaging technology, highly specialized expertise, and exceptional customer service to physicians and patients. Dr. Ross Schwartzberg initiated the prostate MRI program at Imaging Healthcare Specialists in 2013, and the program has experienced progressive growth. Imaging Healthcare is on pace to perform approximately 1400 prostate MRI exams, and 120 MRI in-bore targeted biopsies this year. Imaging Healthcare Specialists partners with Cortechs.ai to provide the latest advancement in diffusion MRI with OnQ Prostate, which supports improved detection of clinically significant prostate in patients.

OnQ Prostate Overview

OnQ Prostate is FDA-cleared post-processing software from Cortechs.ai that supports improved detection of clinically significant prostate cancer. OnQ Prostate leverages an advanced diffusion MRI technique called Restriction Spectrum Imaging (RSI), powered by AI, to enable faster, more accurate PI-RADS scoring. When compared to conventional MRI, RSI has demonstrated superior accuracy for discriminating between aggressive prostate cancer (PCa) and normal prostate tissue, and improved correlation with Gleason Score. RSI with multiparametric (mp)MRI improves PCa detection compared to mpMRI alone, while biparametric (bp)MRI with only RSI and T2-weighted imaging achieves equivalent performance to mpMRI. In addition, RSI improves inter-reader agreement across radiologists.

Clinical Benefits

- Improved PI-RADS accuracy for fewer false positives and false negatives
- Non-invasive, non-contrast prostate cancer screening
- Improved inter-reader agreement
- Simplified communication of findings

OnQ Prostate at Imaging Healthcare Specialists

Imaging Healthcare Specialists was the first outpatient imaging provider to adopt OnQ Prostate as part of all clinical routine prostate MRI exams, and Dr. Schwartzberg quickly became a champion of the technology. Dr. Schwartzberg testifies to the utility of OnQ Prostate for PI-RADS scoring, stating that it allows him to more quickly and confidently rule in or rule out the likely presence of clinically significant prostate cancer. This allows many men to safely avoid a biopsy and provides more accurate targeting for biopsies that are deemed necessary by MRI. As an expert radiologist, Dr. Schwartzberg appreciates the added efficiency and clinical confidence that OnQ Prostate provides in typical routine exams, along with the needed assistance in more complex cases. He also acknowledges the clear potential for OnQ Prostate to "level the playing field" for less experienced or less specialized readers to improve overall accuracy and performance.

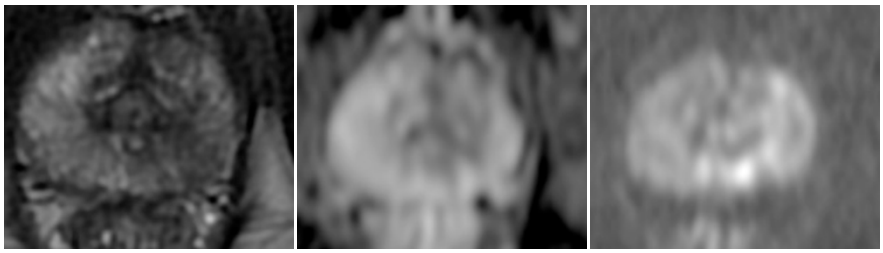
[1] McCammack KC, Kane CJ, Parsons JK, et al. In vivo prostate cancer detection and grading using restriction spectrum imaging-MRI. Prostate Cancer Prostatic Dis. 2016;19(2):168-173. doi:10.1038/pcan.2015.61

2 McCammack KC, Schenker-Ahmed NM, White NS, et al. Restriction spectrum imaging improves MRI-based prostate cancer detection. Abdom Radiol (NY). 2016;41(5):946-953. doi:10.1007/s00261-016-0659-1

Case Examples

Case# 1

mpMRI | **OnQ Prostate**

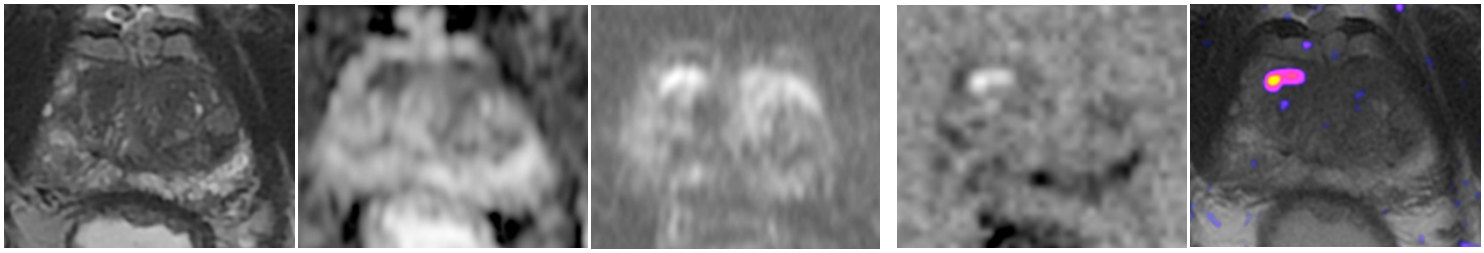


T2W | ADC | DWI | Restricted Signal Map | Color Fusion Map

This case features a patient with progressively increasing PSA and no prior biopsy. The patient had a prostate MRI exam without OnQ Prostate performed 1 year prior that was assessed as PI-RADS 3. This follow-up exam with OnQ Prostate shows a strikingly positive region of interest/target lateral and posterior extending right of midline mid left peripheral zone, while DWI is only faintly hyperintense and ADC is mildly hypointense at the same location. With the help of OnQ Prostate, Dr. Schwartzberg assigned a PI-RADS 4 and a targeted and systematic biopsy was performed, yielding a Gleason 3+4 adenocarcinoma at the targeted site, with all other cores negative.

Case #2

mpMRI | **OnQ Prostate**



T2W | ADC | DWI | Restricted Signal Map | Color Fusion Map

In this case, OnQ Prostate enabled the “upgrade” of what would have been assigned PI-RADS 3 with conventional imaging, to PI-RADS 4 in a patient with clinically significant cancer. This patient had persistently elevated PSA levels with several prior negative TRUS biopsies. As shown, the anterior transition zone is diffusely homogeneous and non-circumscribed on T2, with a mildly hyperintense DWI and hypointense ADC, and thereby would have been called PI-RADS 3. However, since the transition zone lesion “pops” much more with OnQ Prostate, Dr. Schwartzberg changed his assessment to PI-RADS 4. An MRI-targeted and systematic biopsy was performed and yielded a Gleason 3+4 adenocarcinoma at the targeted site, with all other cores negative.

About Dr. Schwartzberg

Ross E. Schwartzberg, M.D. is a board-certified Neuroradiologist. He earned his medical degree from the University of Arizona College of Medicine in Tucson, Arizona. An internship in Internal Medicine at St. Mary’s Hospital in San Francisco brought him to the Bay Area. He then completed a Radiology residency and a two-year fellowship training program in Neuroradiology at Stanford University Hospital and Medical Center.