

Case Study: A Clearer Picture of Prostate Health



A neuroradiologist pursued training in urology to develop a clinical prostate imaging practice that provides direct patient interaction.

By Brooke N. Bates

Key Takeaways:

- Imaging Healthcare Specialists acquired a 3T MRI machine, prompting Ross E. Schwartzberg, MD, to launch a clinical prostate imaging practice.
- Schwartzberg pursued research, training, and even guidance from an existing prostate imaging clinic nearby to understand how to optimize his program for patient care.
- Schwartzberg provides one-on-one interaction and follow-up with patients undergoing prostate imaging and their referring physicians.

The thought of undergoing a prostate biopsy can make many men uncomfortable — especially men like Michael Pines, who was already in a lot of pain when his urologist recommended a biopsy. Pines had intermittent prostatitis for nearly 25 years when a blood test revealed that his prostate-specific antigen (PSA) level had spiked. While elevated PSA levels are common with prostatitis, they can also indicate prostate cancer, often leading doctors to order transrectal ultrasound-guided (TRUS) biopsies.

But the last thing Pines wanted was a dozen biopsy needles in his already inflamed prostate, so he asked his urologist about alternative diagnostic options. Pines' urologist referred him to Ross E. Schwartzberg, MD, a neuroradiologist who started a clinical practice for prostate imaging at Imaging Healthcare Specialists in San Diego in 2014. Schwartzberg developed the program to help patients like Pines obtain a more accurate picture of their prostate health, without needles or probes.

"The PSA blood test is false-positive about 75 percent of the time,¹ which means that only 25 percent of men presenting with an elevated PSA actually have cancer,"² Schwartzberg says. "Still, that's the conventional screening test for prostate cancer, and imaging is rarely used to determine the appropriateness of prostate biopsies. In fact, the prostate is the only organ in which imaging isn't typically used for the guidance of a biopsy. Now, we have evidence that MRI imaging prior to standard random biopsy can identify at least 25 percent of men who might safely avoid unnecessary biopsies and reduce overtreatment."³

Building a Clinical Program

Schwartzberg's interest in urology dates back to his days in medical school, when he began exploring prostate imaging capabilities. But at that time, the technology couldn't differentiate between cancerous and normal overlapping tissue in the prostate. So Schwartzberg decided to specialize in neuroradiology, instead.

In 2014, Schwartzberg's interest in prostate imaging was piqued again, when Imaging Healthcare Specialists purchased a 3 Tesla (3T) MRI. The machine combines



Ross E. Schwartzberg, MD, is a neuroradiologist who pursued additional training to open a clinical prostate imaging practice at Imaging Healthcare Specialists in San Diego.

magnetic pulse sequences with diffusion-weighted imaging and dynamic contrast-enhanced scans to provide multiparametric MRI (MP-MRI) for improved diagnostic capabilities.⁴

"We didn't purchase the 3T specifically for prostate imaging; we also use it for musculoskeletal and neuroimaging," Schwartzberg explains. "But the equipment was the genesis for my decision to establish our prostate imaging program."

To launch the prostate imaging program, Schwartzberg also needed digital imaging software to help organize thousands of images, as well as hardware to enable in-bore MRI-targeted biopsy.

Getting Buy-in

To get buy-in for the initial investment from his partners and referring urologists, Schwartzberg had to understand (and persuasively communicate) how prostate imaging compared to the traditional diagnostic pathway of PSA tests and TRUS biopsies, and illustrate how MRI could reduce the risk of over-diagnosis and overtreatment.

"If you're trying to convince somebody to make an investment in prostate imaging, there's plenty of literature showing that it is a growth area," he says.^{5,6} "It's a benefit to individual patients and a potentially

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Continued on next page

Case Study: A Clearer Picture of Prostate Health



Continued from previous page

large savings for the health system, which spends a lot of money on patients who are diagnosed and treated for low-grade, non-aggressive, clinically insignificant cancers that wouldn't cause any problems without treatment."

In fact, a study from the National Cancer Institute found that two-thirds of men are over-treated for clinically insignificant prostate cancer, and estimated that avoiding this overtreatment would generate savings of more than \$1.3 billion a year.² "If you have a tool like MRI to stratify aggressive cancer that needs to be treated while avoiding unnecessary biopsies it's a huge win for everybody," Schwartzberg says — especially for patients like Pines.

"A biopsy can actually cause more problems, from what I understand, and if they don't biopsy the exact spot that has cancer, they might miss it anyway," says 59-year-old Pines. "The MRI is much more thorough than a biopsy because it looks at the whole prostate with the best-quality imaging. To me, that was a much better option than having 12 random needle samples, risking infection, and making the area even sorer."

Learning to Interpret Prostate MRI

While the 3T MRI equipped Schwartzberg to launch the prostate imaging program, learning how to interpret the images was even more fundamental to its success.

Initially, Schwartzberg reached out to John F. Feller, MD, who opened a prostate imaging clinic several years earlier at Desert Medical Imaging, two and a half hours away in Palm Springs. Schwartzberg visited the clinic several times to observe how Feller performed exams and interpreted studies, and then made arrangements for Feller to do a secondary read of exams when he wanted another opinion during the first four months of running his own program.

"There's no certification for prostate imaging, so the training I found to be the most useful was using

someone else's experience and reviewing hundreds of his cases to see how he did it," Schwartzberg says. "Looking at the images and then seeing the follow-up history and pathology was tremendously helpful in the beginning."

Schwartzberg immersed himself in literature from radiology and urology journals to better understand prostate cancer, starting with ACR's **PI-RADS** Version 2. He also pursued several training courses from ACR, the American Roentgen Ray Society, and the European Society of Uroradiology, all of which allow radiologists to review cases at a workstation with experts available to offer guidance.

"The real key is dedication," Schwartzberg says of mastering prostate imaging. "It's an ongoing process, and there's no substitute for experience." In addition to reading as much research as possible, he recommends that radiologists shadow an existing prostate imaging program before starting a new one — and he offers to let others shadow him.

Providing Patient Interaction

Once Schwartzberg understood how to interpret prostate images, he wanted to help patients understand his findings and recommendations, too. He began inviting patients into his reading room for one-on-one consultations — allowing him to take a more active role in their care.

Schwartzberg's interactive approach begins as soon as a patient is referred to his office. Though Schwartzberg fields most of his own calls, several members of his team are also trained to collect the necessary background information from the referring physician's office for each patient's clinical record. This data includes detailed results from any previous biopsies and other treatments or medications, like antiandrogen hormones, that might affect the appearance of the prostate.

Patients typically come to Schwartzberg seeking alternatives to biopsies or, more commonly, seeking answers that previous biopsies couldn't provide — details about tumor detection, localization, risk stratification, and image guidance for biopsy, surgery, or treatment planning. The more Schwartzberg knows about the specifics of each case, the better he can help patients make informed decisions.

"One of the reasons I've been successful is that I call every single patient and stay in touch to piece together as much of each patient's story as possible," he says. "I offer — and many patients take me up on — the opportunity to sit down and review their images and discuss the findings and recommendations."



Patients like Michael Pines (left) consult with Ross E. Schwartzberg, MD, in his reading room to discuss prostate MRI results.

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Continued on next page

Case Study: A Clearer Picture of Prostate Health



Continued from previous page

Schwartzberg meets with patients and families in his reading room, where he displays their images on a screen and points out exactly what he sees. “Most patients haven’t seen what a prostate looks like, so showing them a normal gland and pointing out what a tumor looks like is extremely powerful,” he says.

From the patient’s perspective, a personal invitation to the reading room feels like VIP access. “I felt really special going back into that room,” says Pines, who recently met with Schwartzberg to discuss his MRI. “It was like being with the Wizard of Oz; not many people get to go behind the curtain and hang out with the wizard.”

During the consultation, Pines got a firsthand look at what Schwartzberg saw: The results were benign, confirming that chronic prostatitis was the reason for his rising PSA. Pines will monitor the inflammation with annual follow-up imaging — sparing him from unnecessary biopsies in the future.

The experience put Pines at ease. “It was more than just looking at the MRI,” he says. “Dr. Schwartzberg answered all my questions and even pulled examples from other presentations to show me what cancer looked like. I’d seen ultrasound pictures before, but I never got a tour of my prostate until I got it with him. He made the complicated simple to understand and talked like he was a patient suffering prostate issues himself, which made me feel very comfortable asking questions. I got to see and have explained to me what was going on, so I was more confident in the findings.”

Building Rapport with Urologists

Early on, Schwartzberg promoted the prostate imaging program through a dinner his practice hosted for local urologists, where he presented his vision for the program, backed by research about prostate imaging. After that, he called nearby urologists offering to bring lunch to their offices and give 20-minute presentations about the program.

His referral network grew and solidified as he called patients and their referring physicians to discuss his findings. “Calling the referring doctors is important when you want to establish yourself,” he says. “It helps develop a rapport with them.”

Schwartzberg created a system of following up with referring physicians to better understand patient’s outcomes after they leave Imaging Healthcare. He keeps a spreadsheet of patient info, which tracks biopsy results and treatment pathways. Blank cells on the spreadsheet prompt him to call referring physicians at certain intervals to fill in case details.



Advances in prostate imaging allow Ross E. Schwartzberg, MD, to show patients a clear picture of prostate health without requiring biopsy needles or probes.

Though it’s a lot of extra legwork, Schwartzberg says this follow-up process emphasizes a radiologist’s value as an engaged member of a collaborative care team. Because most radiologists only contact referring physicians to indicate an abnormality — and often only talk to a staff member, not the physician — Schwartzberg’s persistence in contacting referring physicians personally on all cases shows his proactive commitment to patient care.

His approach has built Imaging Healthcare’s reputation as the go-to prostate imaging clinic for urologists like Scott L. Brown, MD, who often refers patients for prostate MRIs. “The contact with the physicians who order the imaging is important, because most urologists don’t have a lot of experience reading this type of MRI,” says Brown, a urologist at San Diego Urology Associates. “Because of our lack of familiarity with prostate images, it’s important to have direct communication with the interpreting radiologist.”

Referring urologists like Brown find value in Schwartzberg’s interpretation and his follow-up process. “I’ve been impressed with the technology, the data we’ve received, and the studies that have been published regarding prostate MRI,” Brown says. “I order MRIs routinely in my practice, and the information has been very useful. From the patient’s standpoint, any time a physician takes time and interest to talk to them, they always feel more comfortable and confident in their care.”

Emphasizing the Results

While the feedback from referring urologists has been positive, it doesn’t compare to the hundreds of thank you notes that Schwartzberg receives from grateful patients. Patients quickly became Schwartzberg’s

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Continued on next page

Case Study: A Clearer Picture of Prostate Health



Continued from previous page

biggest advocates and started referring others to Imaging Healthcare. Once Schwartzberg got involved with the Informed Prostate Cancer Support Group in San Diego — giving presentations to the group and providing his cell phone number — the program really took off.

“The way patients have received the program has exceeded my expectations,” Schwartzberg says. “They understand there aren’t a lot of people providing prostate imaging, and certainly not a lot of people are willing to sit down and answer all their questions about it. Helping patients get the right diagnosis and the appropriate treatment with MR, especially in a field that’s not known for direct patient care, has been extremely rewarding.”

In addition to the anecdotal evidence showing that patients appreciate the program, a growing volume of published research is helping to validate the value of prostate imaging in detecting, managing, and treating prostate cancer.^{7,8}

Schwartzberg also notes that the program adds value through volume — an average of two to three prostate exams per day, toward his goal of five per day. “It’s an opportunity to drive volume to our center and to do good work,” Schwartzberg says. “I feel like I’m making a contribution and really providing value, because of all the positive feedback I get from patients and doctors.”

The ultimate measure of success might be referrals from patients like Pines. “How many people even remember their radiologist’s name? I do: Dr. Schwartzberg. And if anybody I know needs a referral, I’ll send them to Imaging Healthcare,” Pines says. “Sometimes medical professionals get into the day-to-day of the business of medicine and forget

that the patient is suffering with prostate issues. Dr. Schwartzberg was really concerned about me, and that made me feel really special.”

Next Steps

- Find another prostate imaging clinic that will let you review their cases and shadow their radiologists.
- Inform local urologists about the value of your prostate imaging practice.
- Invite patients “behind the curtain” into your reading room to discuss your findings and recommendations.

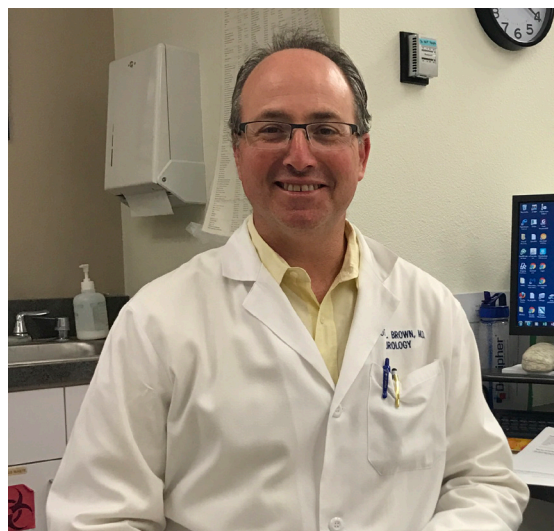
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Join the Discussion

Want to join the discussion about how radiologists can develop a successful prostate imaging program? Let us know your thoughts on Twitter at #imaging3.

Have a case study idea you’d like to share with the radiology community? Please submit your idea to <http://bit.ly/CaseStudyForm>.



Scott L. Brown, MD, a urologist at San Diego Urology Associates, routinely refers patients to Imaging Healthcare Specialists for prostate MRIs.

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