

Prostate Biopsy

November 15, 2018 at 12:20 pm

18 replies

What should I know about the prostate biopsy procedure? Please talk about the different types of biopsies and suggestions for preparation.

x

I had the twelve needle one, I was in and out in 20 minutes. The dr swabbed a little freezing solution similar to what a dentist does. While a bit uncomfortable, it was not a big deal. Some say it's like getting kicked but that is not what I experienced. If you are starting this journey, don't panic, do a lot of research, My wife and I did about 3 months of research, created a scoring system of all the potential side effects and came to a decision. We chose SBRT (cyberknife).

x

Go for in bore MRI biopsy

I had the TRUS biopsy versus MRI DESCRIBED as "think small fist versus small finger"

TRUS biopsy is medieval in comfort and less accurate in finding cancer

However

All urologists will tell you TRUS is "standard of care"

Yeah

So we're leeches in medieval times

x

I had an ultrasound guided biopsy. The first step was a MRI to see if we actually had something. The MRI found a suspect area so next was the biopsy. They put the MRI picture on the screen and overlaid the current ultrasound image on top. This way they made sure to get accurate samples.

My doctor offered me a real strong Xanax, take it. Then an antibiotic injection for prevention. They then injected lidocaine into the prostate. This was uncomfortable but livable. I was actually able to watch the samples being taken. It was amazing.

Whole thing took about an hour because of waiting for various medications to kick in. On the table for maybe 20 minutes. No real pain afterwards.

Best wishes on your journey.

x

Ultrasound fusion

Better than non-MRI TRUS

Not as accurate as in-bore MRI

IN BORE is live biopsy

Fusion uses MRI but cannot correct for natural prostate movements while they turn the ultrasound

pride in rectum
Comfort?
Small finger: in bore
Small fist: fusion

So why, one asks, does ANY responsible MD do fusion?

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Urologists can't do in-bore and they have money invested in ultrasound

Interventional radiologists do in bore

They have money invested in MRI machine

From a pure science point of view it isn't close

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There are several different types of prostate biopsy. Most are taken through the rectum; so it is important to clean yourself out before the biopsy. I do a Fleet's-type enema the night before and again the morning of. The day before the biopsy I don't eat much but stay hydrated. Some say taking an antibiotic like cipro starting a day before the biopsy and for a few days after is a good idea to reduce the risk of infection even more. Whoever is giving the biopsy will likely give you directions.

A TRUS biopsy is taken to a pattern rectally. Everyone I know believes a TRUS biopsy gives too many false negatives because there is no direct aiming at lesions. The usual 12 to 16 patterned samples are taken where prostate cancer is most likely located, but (1) samples are not taken toward the front of the gland, (2) the resulting pathology reports fairly frequently undergrade the cancer (i.e., Gleason score too low), and (3) there are misses even in the volume sampled, particularly for small lesions.

There are two types of guided biopsies, and both require a prior MRI of your prostate. A 3TmpMRI is generally thought to be the best type. 3T stands for 3 Tesla, designating the size of the MRI machine, and mp stands for multiparametric because there are multiple scans taken. The radiologist, the tech who performs the test, and the protocol under which the test is taken and data analyzed are very important to get a quality MRI. Some radiologists have patients insert an endorectal coil, which can be either solid or inflatable, and some patients find that uncomfortable or even intolerable. Depending on who you talk to, 3TmpMRIs find the cancer that is there between 80% and 90% of the time.

In an MR-guided biopsy, the patient goes back into the MRI tube where the radiologist takes two or three samples of each suspicious lesion identified on the MRI. In taking those samples the radiologist can see the lesion being sampled directly; so the aiming tends to be more accurate. Some radiologists taking the samples want to first have an MRI produced at their facility; so if you want this type of biopsy, you may want to have the initial MRI done at the same facility.

In an MR-fusion biopsy, the MRI imagery is used to aim the guided samples. For better accuracy, you want the MRI imagery overlaid and tied as close as possible to what the urologist sees in the ultrasound machine. (In some cases the MRI imagery is just used for reference and is not seen in the ultrasound machine, and in other cases the MRI imagery is available to be viewed with the ultrasound imagery but is not closely tied.) Because of differences in time, individual physiology, and patient position (on the back for the MRI but on the side for the ultrasound) up to 2mm to 7mm of aiming accuracy is lost (according to experts at the 2017 RSNA Conference). So, a lesion may be missed with the two or three aimed samples or grazed (potentially yielding an undergraded pathology report). The urologist

performing the biopsy will also usually take a TRUS biopsy at the same time. Some say the additional TRUS samples substantially improve the probability of finding cancer. The MR-fusion biopsy is the type approved by the medical community. However, because prostate cancer has been in the urological domain for a very long time, some say the better aiming in an MR-guided biopsy is caught up in a turf issue.

There are other types of prostate biopsies as well. A transperineal biopsy does is taken through the perineum and avoids a substantial part of the risk of infection. However, the technique is not used as much as the rectal methods, and I don't know of anyone in this country who uses method. In a saturation biopsy, the prostate is sampled many more times to run sample the entire volume of the gland extensively. Of course the number of samples depends on the size of the gland.

There are several centers of excellence for prostate cancer scattered around the country. One that is thought highly of is Memorial Sloan Kettering, which looks to be very close to you. If you want another name you might try Dr. Daniel Margolis, a radiologist at Cornell.

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I declined any TRUS as hit and miss, mostly miss, and got a 3T MRI and in-bore biopsy from Dr. Busch (Chattanooga). He hit my small 1/2 cc G 4+5 with three needles. Pathology done by Path Group, confirmed by Epstein.

Bob, G9

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You should know that after the biopsy your ejaculate will be bloody for two weeks. And, I mean, like just blood coming out, not a tinted color. Feels the same but a little horrifying each and every time (at least to me). My doctor told me "the more you ejaculate, the faster it will clear." I'm not sure that was true, as it took the full two weeks.

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After my In bore, 3TR MRI guided biopsy done by Dr. Busch in Chattanooga last year, I had ZERO blood in my urine and ZERO blood in my ejaculate; literally a walk in the park. It DID hurt a little; okay, I cried like a little girl, LOL. But honestly, I've hurt MYSELF worse than Dr. Busch hurt me; he'll be doing my next biopsy (assuming that I need one, which I hope I don't) in early 2019 as well...

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That's remarkable! I've had two biopsies, one TRUS and the other Transperineal, by two different urologists and both times I was bloody for two weeks. Maybe it's just me.....

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I had an in bore mri guided biopsy done by Dr Busch. Only two needle sticks but a massive amount of blood with the first ejaculation.. It looked like a murder scene. Each ejaculation after that got better. After about 4 or 5 it was back to normal. Only about one drop of blood in the first urination. Dr Busch said the amount of blood in the ejaculate depends where he has to stick you. When you see how exact the needle biopsies are with in bore mri biopsies you will never even consider TRUS biopsies.

Preparation is antibiotics the day before, the day of the procedure and the day after along with an

enema before the procedure. I had twilight anesthesia and felt and remember everything. Don't think the twilight did anything for the pain but it was only two needle sticks so it was tolerable.

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TRUS = OLD SCHOOL and ANTIQUATED

3TmpMRI = very good bang for the buck (VERY informative video)

.....<https://grandroundsinurology.com/point-focal-definitive-therapy-prostate-cancer-mri-vs-mapping-part/>

Saturation Transperineal 3D Prostate Mapping Biopsy = most complete and costly (VERY informative video)

.....<https://grandroundsinurology.com/lepor-stone-part-2/>

Dr. Gary Onik, Fort Lauderdale, FL has done both of mine and few issues following, with earlier this year a 64 core for my last one. Bicycled 104 miles less than a week after it for our local Venice FL. Cancer Society Relay For Life 12 hour event. Initial 3D-PMB found my Gleason 10 missed by a TRUS.

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WJG,

Very few radiologists do in-bore, hard to find one (urologists don't like to write for MRI's either). Fusion is the next best thing, at least there's an MRI involved.

Bob, G9

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Here's my updated list for anyone who's interested,

18nov18, #6

I'm collecting a list of competent MRI operators from the experiences of members of this site, here's what I have so far,

(comments except for #1, are by the patient, not me)

1. Dr. Joe Busch, Chattanooga, TN (His reading of my MRI was verified by Dr. Epstein and the local Path Group). Also does in bore biopsies.

2. Dr. Ara Karamanian, Houston, TX. Uses a Siemens 3T Skyra at Houston Medical Imaging, excellent prostate MRI protocol and excellent doctor.

3. Dr. Stephen Scionti in Florida has done more HIFUs than anyone in the US and is an excellent reader

of mpMRI...as well as works with a top radiologist in Sarasota. <https://www.scientiprostatacenter.com/>
All of his treatments are proximity mapped by mpMRI with greater accuracy.

4. Dr.Princenthal, in Thousand Oaks, CA, excellent 3TmpMRI w. quality images, confirmed and reviewed by Walser and Busch, detail and comprehensive report with 3 CDs when left their radiology, two years ago it was \$895USD self payed, this doctor did few thousands of prostate MRI readings.

<http://www.rollingoaksradiology.com/centers/thousand-oaks-radiology/>

5. Partners Imaging is at 1250 S. Tamiami Trail, Sarasota, FL 34239. Phone 941-951-2100. I do recommend them based on my experience and am satisfied with my results as more fully explained in my 12/31/17 post on this thread. Of course, I am just a layman so it's difficult for me to actually know for certain all of the ins and outs of all this. I chose them because they seem to have top of the line hardware and software, prostate MRI's are one of their specialties, they have a lot of experience, training and credentials in this area, they were recommended by a credible unaffiliated scanning industry participant and they are near the beach :).

<http://www.partnersimage.com/sarasota-west/>

<https://www.inspire.com/groups/us-too-prostate-cancer/discussion/3t-mri-2/?page=1#replies>

6. Dr. Eric Walser at University of Texas Medical Branch in Galveston was Dr. Karamanian's professor at UTMB.

<https://islandmedicalimaging.com/doctors-and-staff/eric-walser-md/>

7. Dr. Ross Schwartzberg at Imaging Healthcare Specialists in San Diego, like Dr. Princenthal worked with Dr. John Feller at Desert Medical Imaging and was confirmed by Dr. Walser's staff. Imaging Healthcare Specialists currently charges about \$600 for a quality 3TmpMRI for those without insurance coverage.

<https://www.imaginghealthcare.com/doctors/dr-ross-e-schwartzberg/>

8. The Stevenson Cancer Center at Oklahoma Health Sciences Complex has a 3.0T MRI (in the radiology dept), Oklahoma City. This is a teaching center and the doctor that ordered the MRI was Dr Stratton in the Urology Dept (He is a Urological Oncologist). My PSA score was 35 and a TRUS previously identified a minimum amt of G6 in the posterior section of my prostate. I wanted to find out what was really going on so I self-referred to Dr Stratton. The MRI revealed a 2.5 cm lesion (PRad5) in the anterior which was later sampled in a transperineal fusion biopsy. Lots of 100% Gleason 6 plus a few other high volume G6, mostly in the anterior. Since no lesions with G7 or higher have been identified in any of my biopsies, I can't testify as to how good the operators of the MRI are. Stephenson Cancer Center appears (so far) to be a progressive,well equipped, versatile institution for prostate cancer detection and treatment. My final judgement is undetermined as I am still in the process of electing treatment. But having the knowledge that the MRI gave me (my previous urologist was not cooperative) allows me to know exactly what I'm dealing with. Can't over-recommend the MRI diagnosis of PCa.

<http://www.stephensoncancercenter.org>

additional opinion,

"I am another patient of Dr. Stratton's at Stephenson in OKC. I will be brief to stay on topic for this thread. I had my first ever prostate MRI at Stephenson back in April last year, 2017. No enema prep and tech did not monitor image for the resulting gas artifacts that made the image unusable and completely non-diagnostic for my G7 PCa. The local radiologist concluded may have chronic prostatitis and no PIRAD scoring given. Fortunately the resulting mostly blind fusion biopsy found 2/15 cores of G7 in an area already noted by a positive DRE and maybe in retrospect corresponding to some early enhancement on DW image MRI. Notch one for Barry championing random sampling over targeted biopsies. I was clueless at the time and couldn't have told you what any of these acronyms mean or why you need an enema before hopping into an MRI tube.

Since then I have had an MRI with Busch on his Siemens Verio with a lap coil and then one with Karamanian on his Skyra with a diaper coil. Busch's skill as an interpreter/operator is top notch but the Skyra wins the imaging arms race - message me and I will send you comparison that Karamanian did for me and if you want post-FLA shots.

Bottom line - will not go back to Stephenson for an MRI - they don't use for live procedures and the scans they are doing with that GE machine have no real time QC being done - as a result the urologists have very low confidence in the images and probably for good reason. I made all these points to Stratton's PA last visit there but I doubt very much they have changed their protocols or their radiologist (unknown person never spoke with)."

9. Memorial Sloan Kettering Cancer Center in New York City. 3 T MRI.

Dr. Eastham (surgeon at the Sidney Kimmel Center for Prostate and Urologic Cancers) ordered the MRI while weighing options on treatment. Location was their radiology imaging location.

<https://www.mskcc.org/locations/directory/sidney-kimmel-prostate-urologic>

10. Mayo clinic. They have mostly 3T machines (and certainly for PCa. I have had 2 in Rochester. Also, fusion biopsy. I had different radiologists, but I have heard only positive info about the ones that do the prostate MRIs. Urology docs have been all great I've seen. Igor Frank is terrific, but I recall does tons of surgeries. I went to Dr. Mynderse for the biopsy and to go over focal therapy options. Also, Dr. Houston's team was wonderful and suggested I consider radiation. I just finished the 5 treatment proton clinical trial.

added later,

"Hi Bob,

If figured I would send this to you in a PM since I can't edit my post in your thread. I should have included that both my MRI's were with a coil. One with an endorectal coil and one with an external coil. Both times they gave me an injection of Glucagon to slow things down to improve image quality. You can just include whatever you want in #10.

Thanks,

Jon"

- JoRo4"

11. attached is information on the radiologist (Dr. Melnick) who has read most of my mp MRIs. He has particular expertise in the area of prostate cancer, and my own urologist is a strong advocate of his work.(Saying he sometimes finds lesions that are overlooked by other radiologists.) Others have read my MRIs in the past and have confirmed Dr. Melnick's impressions and the quality of his images.

Dr. Melnick, to the best of my knowledge, has no professional or financial connections with any given treatment option.

<https://doctor.webmd.com/doctor/john-melnick-md-f01f2549-1216-498c-80d1-b52-f9266431f-overview>

12. *What is NANO MRI?

NANO MRI is an examination in which a new contrast agent (Combidex) is used. This contrast agent is a fluid containing very small iron particles which is administered via an intravenous line. After 24 hours the iron particles are found in healthy lymph nodes. When an MRI scan is made, the healthy lymph nodes which contain the iron particles, show up black in the images. Unhealthy (metastases) lymph nodes show up white (no up-take of the iron particles). With this technique, even the smallest metastases are visible.

Not an endorsement, just for information about Nano MRI-

<https://www.radboudumc.nl/en/patientenzorg/onderzoeken/mri-nano>

Chrome browser translated this site for me-

<http://www.ru.nl/@932781/nano-mri-vergroot/>

13. I Had , MRI Guided (In Bore) Biopsy , Done At NYU Langone , L I , N.Y. in January 2018 ,

14. <http://sikerimaging.com> (no in-bore), Portland, OR

Bob (G 4+5, Proton + ADT)

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That's a lot of homework right there. Thank you.

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That's unusual to the point of being unheard of. I've had five biopsies and each resulted in bloody urine and stools for several days, and bloody ejaculate for two to three weeks.

You are amazingly fortunate. I've never heard of such an effect-free result.

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Also

Danny Sperling in Delray Beach does diagnostic MRI, in-bore MRI BIOPSY and FLA
I believe he's done more diagnosis and FLA than the rest put together

Also, UT Southwest in Dallas does diagnostic MRI and in-bore MRI biopsy

UT Southwest recently did my 3 year post-FLA MRI and sent it digitally to Dr. Sperling, who did my FLA
UT and Sperling concurred on MRI reading

This is a big deal post-FLA because many radiologists are not well versed in reading post-FLA prostate MRI

at 12 months I had a major scare at another major hospital radiology department
Both Drs. Sperling and Karamadian reviewer and said it was clean

Caveat Emptor

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WJG,

Added to list, thanks.

Bob, G9

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Had standard TRUS-16 pokes. Bled like a pig for two hours on the table, got home and passed a clot which

could have filled the palm of my hand. Uro must have been a butcher in prior life.

Everyone I talked to with this uro had similar experience, even my physician.

Good luck.