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What does a fluctuating PSA mean?

November 3, 2009

By **Harvard Prostate Knowledge**

I am 59 years old and have a fluctuating PSA. In 2005, it was 2.5 ng/ml. A 12-core biopsy was negative. In 2006, my PSA dropped to 0.97 ng/ml. In 2007, it went up to 2.54, and I had another biopsy. All 14 cores were negative for cancer. What does this mean for my prostate health?


Kevin Loughlin, M.D., M.B.A., director of Urologic Research at Brigham and Women's

Hospital, responds:

Variations in PSA like yours aren't particularly remarkable. In fact, fluctuations in PSA of up to 36% from one day to the next may have nothing to do with cancer. Prostate infections and inflammation may account for some of the variation, as can an enlarged prostate and advancing age. However, the Prostate Cancer Prevention Trial found that prostate cancer might be detected in 23.9% of patients with a PSA of 2.1 to 3 ng/ml, so you don't want to ignore an elevated PSA either.

Before you have a third biopsy, consider having your free PSA measured. A 2008 study of 125 men who had a prostate biopsy showed that the percentage of free PSA in men with a total PSA of 2.5 ng/ml or less could indicate who was most likely to have prostate cancer: 59% of the men with a free PSA of 14% or less had prostate cancer versus just 13% of the men with a free PSA of 28% or more. So the lower your percentage of free PSA, the more you might want to think about having another biopsy.

You could also ask about having an endorectal MRI. This imaging test can help physicians spot abnormalities in regions of the prostate not typically sampled during a biopsy. Any follow-up biopsies could then target those suspicious areas.



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Assuming the endorectal MRI and your digital rectal examination (DRE) are normal, and depending on your general health and any medications you take, you and your doctor might simply want to track your PSA over time. If it jumps much above its current level, you could opt for a biopsy then.

Unfortunately, there is no one right answer to your question. In the end, it comes down to combining all of the data you have, talking with your doctor, and making an educated decision about what to do next.

SOURCES: Lawrentschuk N, Fleshner N. The Role of Magnetic Resonance Imaging in Targeting Prostate Cancer in Patients with Previous Negative Biopsies and Elevated Prostate-Specific Antigen Levels. *BJU International* 2009;103:730–33. PMID: 19154475.

Walz J, Haese A, Scattoni V, et al. Percent Free Prostate-Specific Antigen (PSA) Is an Accurate Predictor of Prostate Cancer Risk in Men with Serum PSA 2.5 ng/ml and Lower. *Cancer* 2008;113:2695–703. PMID: 18853417.

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Comments

Al Lancaster

May 21, 2018

Al Lancaster

I have read that Lyme disease raises the psa. I have 2 levels of lyme old and new I was treated with antibiotics with two different types in a 3 month span it curved my psa growth considerably over 1 year span . Check for Lyme first get both lyme tests at the same time.

Rick Max

April 20, 2018

Paul Schenk: might be a connection with your bike riding.

Mel Bishop

March 30, 2018

56 y.o very active male. I had 43 radiation treatments in 2014. My biopsy showed 1 of 12 cores taken

suspected of CA. My psa fluctuates. I have a very large prostate inherited from my father. No CA in our family. I'm monitored every 3 months now and they want to possibly do another biopsy and other treatment methods. I'm confused and not trusting that the docs know what is going on, they're guessing.

Mar 18: 1.36

Dec 17: 2.0

Jun 17: 1.16

Dec 16: 1.91

Jun 16: 2.20

Dec 15: 1.54

Nov 15: 2.00

Jun 15 4.35 (recent uroscopy)

Feb 15: 2.66

Dec 14: 2.54

Sep 14: 2.62

Ted

February 14, 2018

My PSA had crept up to 5.3 by Sept. 2017. Then I cut out all sugar and went on a very strict vegetable, fruit and only white meat diet . . in Jan 2018 my PSA had dropped to 3.6. Great, but only two weeks later another blood test was done to see if I was a potential donor of a kidney to a friend . . and the PSA was back up to 5.8. I'm pretty frustrated. What can cause spikes like that?

Christopher j Fluri

January 4, 2018

wow...so many #'s..mine jumped from 5.7 to 9.1, then down to 8.2 and down to 7.5 ..odd.... who knows....

I am going to have a 4score test and just stay on this and checking the # every 4 months.

I am 59 today...I do not want to do a biopsy at this time..especially without a MRI...them cutting me up in 14 areas and guessing where a growth or cancer is ...to me... is crazy and not accurate..... I do not know...suggestions???

Tinay

March 3, 2018

My husband is the same way he is 51 years old. His PSA was about a 3 last year. Went to a 4 six months later. Had a lacerated injury of his kidney when he was playing baseball and brought his PSA to a 9! 3 weeks after his accident it went down to a 4 and two months ago his PSA is up to 5. His kidney is not healed yet and still has a hematoma. I am thinking the not-so healed kidney is keeping his PSA out of range. His urologist is encouraging him to have a biopsy done and my husband had done a lot of research and decided to have a 3D Color Doppler done. They don't do it in CA. We had to drive to AZ to have it done. Their ultrasound is very sophisticated and was able to see things that his previous MRI didn't show. His prostate was dense and it came out large. Although it did show, 3 small

dark spots in his prostate. Again, it didn't show on his MRI. They did a saliva and blood test on him as well. The doctor will not rule out anything until we get the lab results back which is in 3 weeks. Nerve wrecking to say the least.

David Bannister

September 26, 2017

sorry i forgot to say above that I am now 68.

David Bannister

September 26, 2017

I had radical radiotherapy in March 2004 for T2 Grade 2+3' PSA 15.

PSA Sept 2004 was 4.0. My PSA readings since are as follows

June 2005 3.0

Oct 2005 3.8

Feb 2006 2.8

July 2007 3.1

Dec 2007 2.3

Feb 2008 1.04

Nov 2008 .72

Nov 2009 1.02

Dec 2010 .85

Jan 2012 1.27

July 2013 1.02

Feb 2015 1.49

Sep 2017 4.76

Can anyone tell me why its been so erratic?

Paul Schenk

September 25, 2017

Two more dates:

08/05/17 Rode in my 14th Pan Mass Challenge. Did a shorter route this year because I'd had to reduce my training miles.

09/28/17 Am scheduled for robotic prostatectomy.

Paul Schenk

September 25, 2017

I will turn 69 next month. Here are some numbers:

02/09/10 PSA 4.08

01/22/16 PSA 5.9

06/21/16 PSA 5.56

12/16/16 PSA 7.81

05/27/17 PSA 13.81

06/02/17 My endocrinologist took me off Axiron. I had been on it for several years because I had low testosterone levels which contributed to my bone density dropping into the risky range for

osteoporosis.

06/07/17 PSA 12.6

06/16/17 4K lab work done: 65% chance I have cancer.

06/20/17 Urine sample b/o increasing symptoms for several days of painful urination, frequency, change in color and cloudy. Tested positive in urologist's office for UTI, so was started on antibiotics. When sample sent to the lab for confirmation, it came back negative for UTI.

Symptoms cleared on antibiotics.

06/28/17 First of several consult sessions over the next 10 weeks with two colleagues who do Reiki/energy work. (I am a clinical psychologist, so I also took a hard look at some life events with significant cognitive/emotional factors that had occurred earlier this year.)

07/27/17 Biopsy. Gleason score of 3 + 4; 3 of 12 samples had some cancer; 50% of 2 had slow growing kind; 10% of 1 sample had cancer growing at an "intermediate" rate.

08/25/17 MRI Confirmed the cancer was still inside the prostate.

09/21/17 PSA 3.17

That's better than a 75% drop since the peak PSA on 05/27/17. Why? Too many variables I know to be sure. What else besides these:

- Prostate cancer feeds on testosterone. I had discontinued its use on 6/2/17. But that would only seem to slow the growth, not drop the PSA level.
- Maybe the biopsy luckily removed most of the cancer cells.
- Maybe I had an acute prostatitis in mid-June that responded to the antibiotics for what was thought to be a UTI. But that doesn't explain the presence of the cancer cells.
- Maybe the Reiki/energy work and psychotherapy helped my immune system combat the cancer.

Does this kind of significant PSA drop have other explanations? Could the biopsy really account for the drop in PSA?

Jan Stokes

July 27, 2017

Hi back in 2004 my PSA was 1.8. Now at the beginning of 2017 they say it went to 8.1. I was traveling but when I returned I retested PSA blood test which specifically I don't know but it has dropped to 6.4 still very high. I have classic low back issues labored urination. Naturally my doc wants a biopsy however I had not heard of rectal MRI before so I will pursue this before and in conjunction with the possible biopsy. Insight and suggestions are so welcome.

Jan

Eric Olsen

February 26, 2017

It means some quack wanted to turn your prostate into a sponge. I hope you didn't have any side effects from two biopsies performed when your PSA was in normal 0-4 range. It's infuriating.

Carol

February 10, 2017

Insist on a multi-parametric MRI scan which concentrates specifically on the prostate gland and close organs.. My partner had an exam done by his GP...gland normal size although slightly firm..psa 4.5. GP recommended a biopsy via NHS but as this procedure would distort a future image of the gland for scan purposes we declined. Decided on a private consultancy...much more

thorough exam of the prostate done by the consultant...prostate enlarged and two bumps found! Recommended m.p. MRI as above (cost £700). Result within 3 days..benign hyperplasia..continue to monitor psa every 3 months..further checks if psa rises by more than 1.0 over a 12 month period. My partner is 54 and his father had prostate cancer so he was under great pressure to have a biopsy done – without an MRI in my opinion, it would be looking for a needle in a hay stack.

I understand there has recently been a change of thinking in the NHS in that they no longer just go for a biopsy but think more about MRI and if necessary any identified possible tumour areas can be targeted for biopsy. Wish this policy had been adopted much earlier. Hope this helps someone...
Carol

Ameeta

September 29, 2015

I have a PSA free % of 36%. PSA of 12. Free PSA 4.3...I will undergo biopsy after a few days. I am a heart patient. Could you suggest if it is cancer or a benign disease?

jonathan honig

August 14, 2015

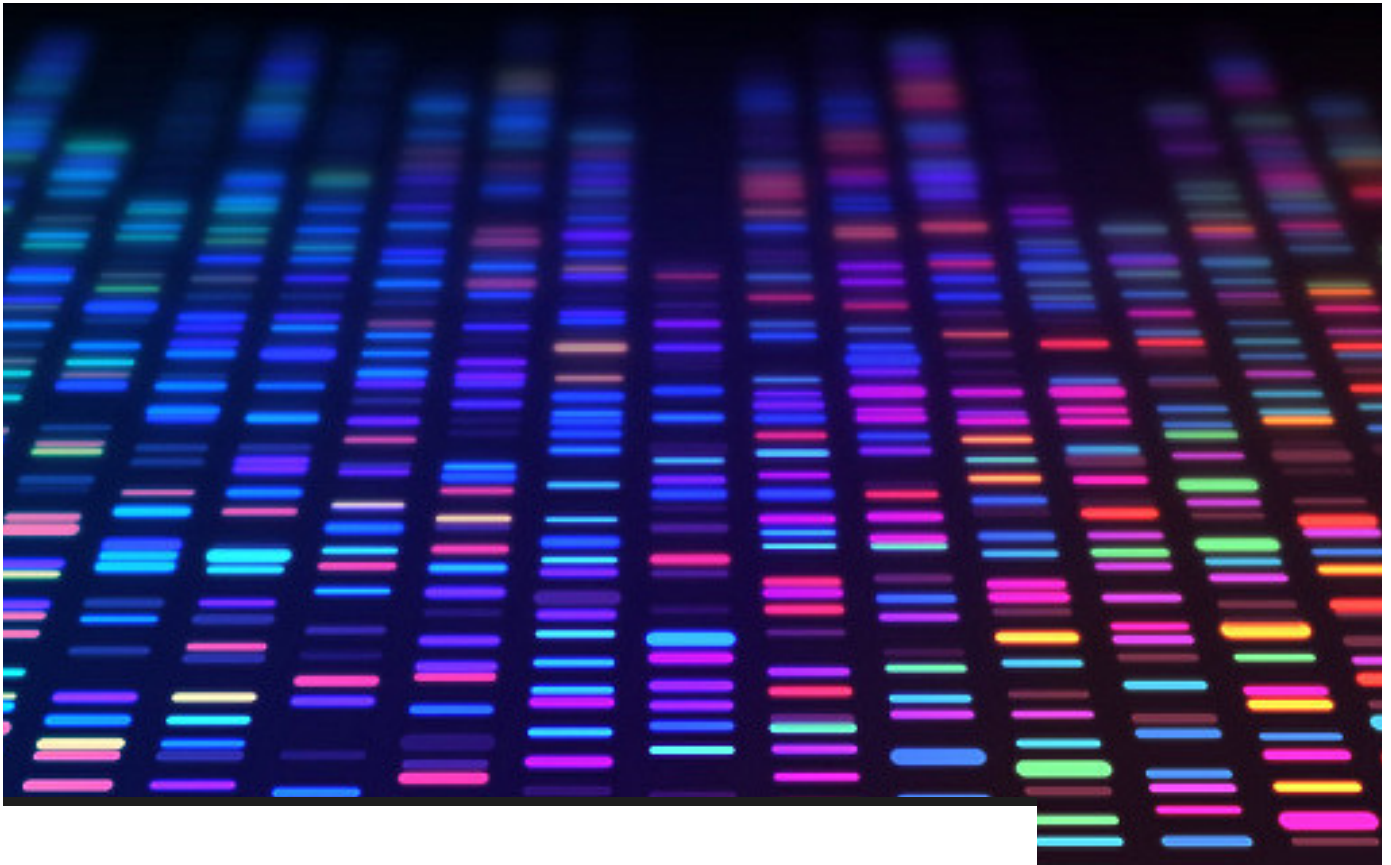
It is hard to believe that with all the billions spent on medical research no one has done any research on patterns over five years of psa and free psa in people with prostate cancer. This is beyond belief.

Miranda Hinds

May 27, 2014

A friend was treated with testosterone therapy...whether or not he had an enlarged prostate prior is unknown. Nevertheless, he had prostate surgery March of '13, with a very long healing process. This is a 59 year old very active, very athletic male. He continues to take 1/2 cc of testosterone a week (injection). In Feb. 2014 his PSA level was 5.5 ng/ml..On 5/12 a PSA was performed with a result of 5.7ng/ml.. On 5/22 his urologist ordered another PSA with a free PSA...results 8.5 ng/mg and a free PSA of .77 ng/ml or 9.1% in 10 days...The methodology used Was ECLIA. The Urologist is insisting on a biopsy. What are the other alternatives...and wouldn't the hormonal treatment affect the PSA results. What would be your recommendation? a repeat, perhaps?

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