When to take a prostate cancer test?

Test inventor William Catalona can tell you

In the world of prostate cancer, William Catalona is a celebrity. He's known as "the father of PSA testing" and for the past 25 years he has kept an extremely close watch on his brain child.
While he is fully aware of the shortcomings of PSA (prostate-specific antigen) and has devised different ways of using it, he has no doubt about its importance as a screening tool for prostate cancer.
Whenever powerful organisations have opposed the test, he has held the line.
Now that major organisations are reversing their positions, he says they are not going far enough.
Professor Catalona was in Melbourne this month to present a keynote address at the Asia-Pacific Prostate Cancer Conference, the largest conference focusing exclusively on prostate cancer in the world.
In conversation with The Australian Financial Review, he explained his views on PSA testing and on "active surveillance", a process during which men with apparently indolent cancers are closely monitored.
The PSA test measures the level of a protein called prostate specific antigen in the blood.
It is an imperfect test because although this protein is a marker for prostate cancer, it can also be a marker for two other prostate conditions: a benign enlargement and an inflammation.
This can be confounding and can cause men much anxiety.
But, Catalona says, it is often possible to exclude inflammation.
While inflammation is the most frequent cause of a raised PSA, importantly it fluctuates. When the inflammation is high, PSA goes up and when the inflammation subsides, it goes down.
Generally, a man with prostate cancer or a benign enlargement won't have these peaks and valleys. His PSA will steadily increase as his condition worsens.
So when should men have their first PSA test?
In contrast to many others, Catalona recommends they have it early.
"A man should be tested in his 40s and early 50s. At this age, his PSA should be less than 1.
"If it's higher, then that is most powerful predictor of the probability of him developing metastatic or lethal prostate cancer later in life.
"If it's higher than 1 he should have more intensive screening going forward."
This recommendation is more aggressive than Australia's 2016 guidelines for men at average risk of prostate cancer who decide to be tested.
It recommends testing every two years from age 50 to 69, and further investigation if their PSA is greater than 3.

Catalona's advice is also more aggressive than the US Preventive Services Task Force current draft recommendations.
In 2012 this task force recommended against all PSA screening for prostate cancer for all men.
This year it changed its mind and has issued draft recommendations - for debate - saying screening should be discussed with men between the ages of 50 and 69.
Catalona doesn't agree with a cut off of 69. As men over 70 tend to have more aggressive prostate cancer than younger men, he says a man of this age who is healthy and has a long life expectancy would benefit from PSA screening.
"A high PSA in the 70s or 80s could be from a benign enlargement which is very common but it could also be from an aggressive cancer. Men can have both.
"In the US, men over 70 account for 25 per cent of all prostate cancer cases but account 50 per cent of all cases of metastatic cancer and deaths from this cancer.
"Many men are now living into their mid-80s and 90s and if a healthy man in 70 has an aggressive prostate cancer he could clearly benefit from detection and treatment."
A blue-blood urologist trained at Yale, the National Cancer Institute and Johns Hopkins, Catalona is now Professor of Urology at Northwestern University School of Medicine in Chicago.
He is regarded as an expert in nerve sparing surgery having performed more than 6000 such operations.
He now also leads a large US National Institutes of Health project on the genetics of prostate cancer. It is trying to determine the extent to which DNA holds clues to the aggressiveness of this cancer.
Catalona's ascent began in 1991, when he published the first paper showing PSA could be used a first line test for prostate cancer.
It was published in the New England Journal of Medicine and kicked off a new era in the management of this cancer.
In his original study, 36,000 men were enrolled for 12 years, giving him ample opportunity to see that PSA screening enabled their cancer to be detected earlier when it could still be successfully treated.
The test was quickly taken up in other countries where men suddenly began presenting with early treatable cancers rather than advanced lethal ones.
Catalona acknowledges, however, that some men paid an unnecessary price. Their cancer was indolent and they didn't need to be rushed to surgery.
But they were. They were over-treated and ended up with sexual dysfunction and urinary problems.
"But it's hard to tell who they are. If you diagnose a prostate cancer at 55 and you remove it and the man never has a recurrence, some could argue that it was unnecessary and some might argue that you saved his life.
"It becomes somewhat speculative except when you look at national statistics which show we are saving lives."

To prevent over-treatment, men with apparently indolent tumours are now funnelled into "active surveillance" where they have regular PSA tests and biopsies to check if their cancer has become active.
If it has, they are immediately sent for treatment.
But active surveillance is imperfect too. Sometimes the moment is missed and the cancer has spread before it can be treated.
And the frequency of biopsies can be a problem. It's not a pleasant procedure and over time, 80 per cent of men stop complying.
Biopsies can cause infections that can turn dangerous and they can scar the prostate. Should the man eventually need surgery, scarring around the gland can make a clean removal difficult.
Erectile nerves around the prostate can also be scarred and adversely affect sexual performance.
"It's hoped that imaging studies like MRI and new biomarkers may be combined to substitute for biopsies but that has not been achieved yet," he says.
"At the moment there is truly no adequate substitute for the surveillance biopsy."
Catalona says the 2012 recommendation to stop all testing saw a dramatic downturn in screening in the US and predictable decline in the number of prostate cancers being diagnosed.
"But we saw a higher percentage of men with advance disease at the time of diagnosis and that has dramatically increased since that recommendation.
"Hopefully the new recommendations will prevent us from losing the all the gains that have accrued over the last 20 years where PSA testing resulted in prostate cancer death rates in the US decreasing by 53 per cent."
Associate professor Anthony Lowe, head of the Prostate Cancer Foundation of Australia, says "while our PSA guidelines are based on the best evidence available, it could be that Professor Catalona, who is a world leader in this field, is correct.
"But while we recommended men make a decision about PSA testing we don't provide tools for them to do so."
To cure this, the PCFA and Cancer Council Australia are about to publish a decision aid that will be freely available to all men.
- Jill Margo is an adjunct associate professor at the University of NSW.
http://www.afr.com/lifestyle/health/mens-health/when-to-take-a-prostate-cancer-test-test-inventor-william-catalona-can-tell-you-20170925-gyob0f#ixzz4zomO9sPC