

## Shared Decision Making – prostate specific antigen

Next clinical review date March 2018

### Deciding whether to have a prostate specific antigen (PSA) test

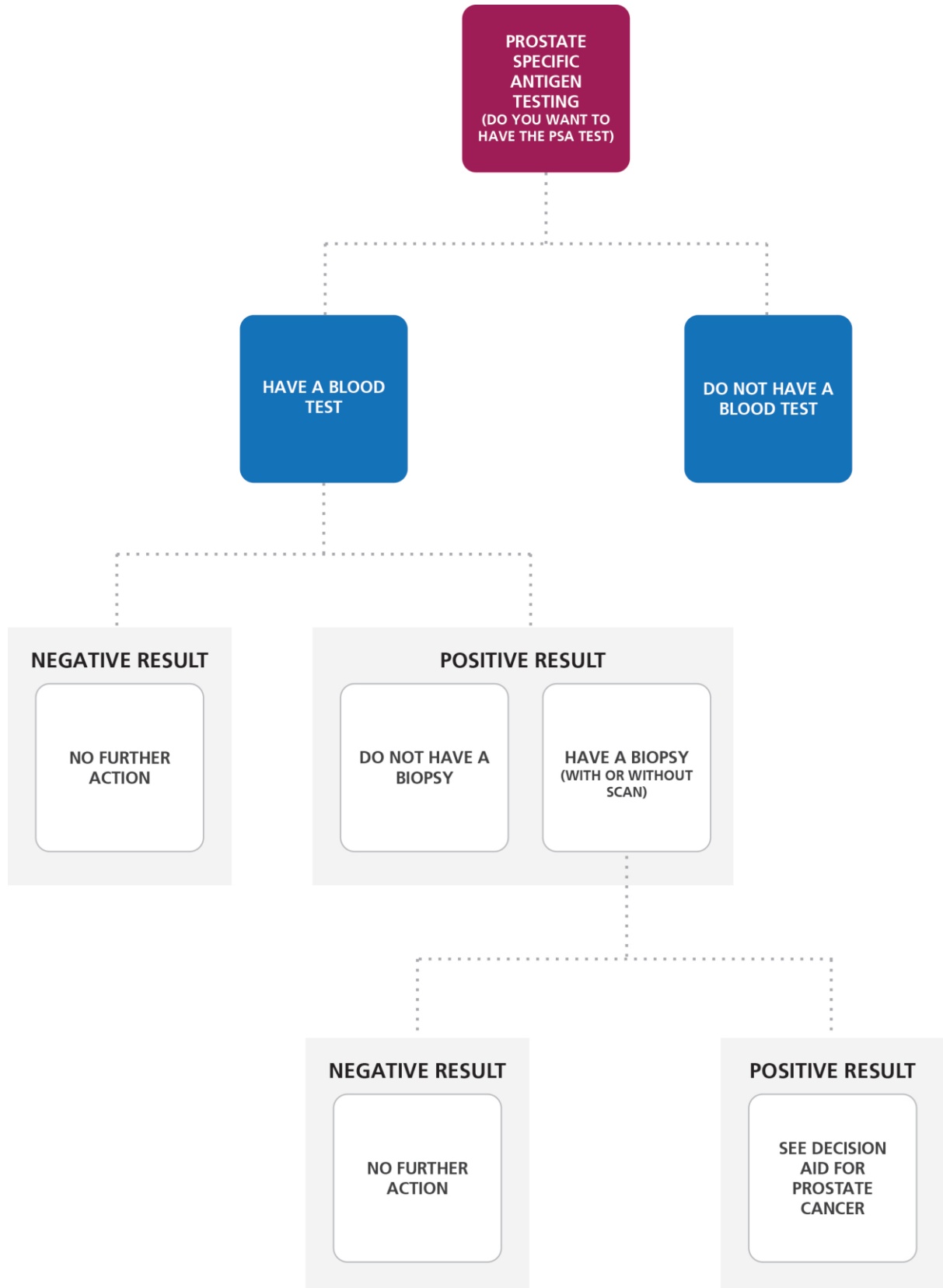
This short decision aid is for men who are considering having a test to find out more about their risk of having prostate cancer. The decision aid is not for people who have symptoms of prostate cancer and need a test to diagnose cancer.

The prostate specific antigen (PSA) test can tell you if you have a raised chance of prostate cancer. The PSA test cannot tell you for certain whether you have prostate cancer. If you decide to have a PSA test you can discuss this with your GP, who can arrange for you to have a test.

Whether you decide to have a test will depend on many things, including whether there is a history of prostate cancer in your family, whether you want to know about a raised risk of cancer, and what you think you would do if you had a result that showed a raised chance of prostate cancer.

#### **The options are:**

- Have a blood test for prostate specific antigen.
- Do not have a blood test for prostate specific antigen.



## What are my options?

	Having the PSA test	Not having the PSA test
<b>What is the choice?</b>	<p>The PSA blood test can help to diagnose prostate cancer. It measures the amount of a protein called prostate-specific antigen (or PSA) in your blood. PSA is made by the prostate gland. It is normally found in semen, the fluid which contains your sperm. If there is cancer in the prostate, more PSA leaks into the blood. The higher the level of PSA in the blood sample, the more likely it is to be a sign of cancer.</p> <p>A PSA test on its own cannot tell you for certain whether you have prostate cancer. It can only tell you if you have a raised risk of prostate cancer. PSA levels can vary between men of the same age. Other illnesses which are not cancer can also cause a rise in PSA. If you have a raised PSA level you will need to have other tests to find out if this is caused by prostate cancer</p>	<p>If you choose not to have a PSA test, you don't have a blood test to find out whether you have a raised risk of prostate cancer.</p>

	Having the PSA test	Not having the PSA test
<b>What is the effect on how long you live?</b>	<p>On average, men who have a PSA test do not live longer or shorter lives than men who do not have a test.[16]</p> <p>This information comes from studies looking at big groups of men who were offered PSA testing. We don't know whether having a PSA test will affect your individual length of life.</p>	<p>On average, men who do not have a PSA test do not live longer or shorter lives than men who do have a test.[16]</p> <p>This information comes from studies looking at big groups of men who were offered PSA testing. We don't know whether not having a PSA test will affect your individual length of life.</p>

	Having the PSA test	Not having the PSA test
<b>What is the effect on chances of dying from Prostate Cancer?</b>	<p>Men who have prostate cancer are less likely to die of prostate cancer if they had a PSA test. Their chances of dying of prostate cancer reduce by about <b>1 in 1000</b>.[17]</p> <p>We don't know if having a PSA test means you're more likely to live longer if you are diagnosed with prostate cancer.[17] This is because having a PSA test does not affect how likely you are to die early of other causes.</p> <p>When all men in a big group are screened, studies show that <b>293 men need to have a PSA test to prevent one</b> man dying from prostate cancer.[18]</p>	<p>Men who have prostate cancer are more likely to die of prostate cancer if they didn't have a PSA test, compared to men who do have a test. Their chances of dying of prostate cancer are about <b>1 in 1000</b> higher.[17]</p> <p>We don't know if not having a PSA test means you're more likely to live longer if you are diagnosed with prostate cancer.[17]</p> <p>Not having a PSA test does not prevent death from prostate cancer.[18]</p>

	Having the PSA test	Not having the PSA test
<b>What is the effect on chances of being diagnosed with Prostate Cancer?</b>	More men who have a PSA test find out they have prostate cancer than those who don't have a test. Between <b>6 and 7 in 100</b> men who have a PSA test are diagnosed with prostate cancer. Between <b>4 and 5 in 100</b> men who don't have a PSA test are diagnosed with prostate cancer.[19]	Fewer men who don't have a PSA test find out they have prostate cancer than those who do have a test. Between <b>4 and 5 in 100</b> men who don't have a PSA test are diagnosed with prostate cancer. Between <b>6 and 7 in 100</b> men who have a PSA test are diagnosed with prostate cancer.[19]

	Having the PSA test	Not having the PSA test
<b>What is the effect on chances of being diagnosed early?</b>	Prostate cancer is diagnosed six to eight years earlier in men who have a PSA test.[20]	Prostate cancer is diagnosed six to eight years later in men who don't have a PSA test.[20]

	Having the PSA test	Not having the PSA test
<b>What is the effect of being diagnosed and treated early?</b>	<p>If you have the PSA test, you are more likely to be diagnosed and treated early.</p> <p>We're not sure if early diagnosis and treatment makes a difference to how long you are likely to live. Not many studies have compared different treatments to no treatment. It also depends on your type of cancer and how advanced it is</p>	<p>If you don't have the PSA test, you are not likely to be diagnosed and treated early.</p> <p>We're not sure if early diagnosis and treatment makes a difference to how long you are likely to live. Not many studies have compared different treatments to no treatment. It also depends on your type of cancer and how advanced it is.</p>

	Having the PSA test	Not having the PSA test
<b>What are the chances of having a positive test result when you don't have cancer (a false positive)</b>	The PSA test can suggest you have cancer when you don't (over diagnose cancer). Most men who have a raised PSA level don't have prostate cancer. Between <b>65 in 100</b> [21] and <b>76 in 100</b> [22] men who have a raised PSA result do not have prostate cancer, when they have a biopsy test to check. Doctors call this a false positive result.	If you don't have a PSA test, you won't get a false positive result.

	Having the PSA test	Not having the PSA test
<b>What are the chances of having a negative test result when you do have cancer (false negative)</b>	The PSA test can miss cases of cancer (under diagnose cancer). Around <b>15 in 100</b> men who have a normal PSA level when they are tested will have prostate cancer. [23] Doctors call this a false negative result.	If you don't have a PSA test, you won't get a false negative result.

	Having the PSA test	Not having the PSA test
<b>What is the effect on the quality of life?</b>	<p>We don't know if having a PSA test makes much difference to your quality of life. Not many studies have looked at this.[24]</p> <p>Having a PSA test doesn't seem to make much difference to how likely you are to feel anxious or depressed, or have mental health problems.[25]</p>	<p>We don't know if not having a PSA test makes much difference to your quality of life. Not many studies have looked at this.[24]</p> <p>Not having a PSA test doesn't seem to make much difference to how likely you are to feel anxious or depressed, or have mental health problems.[25]</p>

	Having the PSA test	Not having the PSA test
<b>What is the effect on the chances of needing a biopsy?</b>	<p>In one large group of men, between <b>16 and 17 in 100</b> men who had a PSA test had a result showing a raised PSA level.[17]</p> <p>If the results of your PSA test show you have a raised PSA level, your doctor is likely to suggest you have a biopsy.</p> <p>About <b>86 in 100</b> men with a raised PSA level after a PSA test will have a biopsy.[22]</p>	<p>If you don't have a PSA test, it's unlikely you will need to have a biopsy unless you get symptoms of prostate cancer.</p>

	Having the PSA test	Not having the PSA test
<b>What is the effect on the chances of having complications from biopsy or treatment?</b>	<p>If you have a raised PSA test result, your doctor will suggest you have a biopsy. If you are diagnosed with prostate cancer, you will need to decide about treatment. Some men have problems or complications after a biopsy or treatment for prostate cancer.</p> <p>Problems from prostate cancer treatment include urinary incontinence and difficulty getting an erection. These problems may not go away.</p>	<p>If you choose not to have a PSA test, it's unlikely you will need to have a biopsy or treatment for prostate cancer, unless you get symptoms. This means you are unlikely to have any complications from biopsies or treatments.</p>

## What are the pros and cons of each option?

People have different views on the pros and cons of having a test for prostate specific antigen (PSA) to find out more about their risk of having prostate cancer. Choosing the option that is best for you means considering how the consequences of each option - having a blood test or not having a blood test - will affect your life.

Here are some questions people may want to consider before deciding whether have the PSA test.

- Do they only want to take the test if it will lower their chances of dying from prostate cancer?
- Do they want to know for sure whether or not they have prostate cancer?
- Are they willing to take the PSA test if it's likely they will need more tests afterwards?
- Are they willing to take the PSA test if it's likely they will need treatments afterwards?
- Are they willing to take the PSA test if it will make them worried or anxious about the results?
- How important is it to them that the test is reliable?
- Are they willing to take the PSA test if there's a chance they will have side effects or problems?

## **How do I get support to help me make a decision that is right for me?**

People using this type of information say they understand the health problem and treatment choices more clearly, and why one treatment is better for them than another. They also say they can talk more confidently about their reasons for liking or not liking an option with health professionals, friends and family.



## References

16. Lumen N, Fonteyne V, De Meerleert G, et al. Population screening for prostate cancer: an overview of available studies and meta-analysis. *International Journal of Urology*. 2012; 19: 100-108.
17. Schröder FH, Hugosson J, Roobol MJ, et al. Prostate cancer mortality at 11 years of followup. *New England Journal of Medicine*. 2012; 366: 981-990.
18. Hugosson J, Carlsson S, Aus G, et al. Mortality results from the Göteborg randomised population-based prostate-cancer screening trial. *Lancet Oncology*. 2010; 11: 725-732.
19. Djulbegovic M, Beyth RJ, Neuberger MM, et al. Screening for prostate cancer: systematic review and meta-analysis of randomised controlled trials. *BMJ*. 2010; 341: c4543.
20. Finne P, Fallah M, Hakama M, et al. Lead-time in the European randomised study of screening for prostate cancer. *European Journal of Urology*. 2010; 46: 3102-3108.
21. NHS Clinical Knowledge Summaries. Benefits and harms of PSA testing. 2011. Available at [http://www.cks.nhs.uk/prostate\\_cancer/management/scenario\\_diagnosis/psa\\_testing/#-480150](http://www.cks.nhs.uk/prostate_cancer/management/scenario_diagnosis/psa_testing/#-480150) (accessed 29 August 2012).
22. Schröder FH, Hugosson J, Roobol MJ, et al. Screening and prostate-cancer mortality in a randomized European study. *New England Journal of Medicine*. 2009; 360: 1320-1328.
23. Cancer Research UK. Prostate cancer screening. September 2011. Available at: <http://info.cancerresearchuk.org/cancerstats/types/prostate/screening/> (accessed 21 August 2012).
24. Chou R, Croswell JM, Dana T, et al. Screening for prostate cancer: a review of the evidence for the U.S. Preventive Services Task Force. *Annals of Internal Medicine*. 2011; 155: 762-771.
25. Lane JA, Hamdy FC, Martin RM, et al. Latest results from the UK trials evaluating prostate cancer screening and treatment: the CAP and ProtecT studies. *European Journal of Cancer*. 2010; 46: 3095-3101