



Testicular Cancer

Factsheet No.9

Testicular Cancer and your fertility

This factsheet is for men who have been recently diagnosed with or may be having treatment for testicular cancer and are concerned about fertility.

It provides information on testicular cancer, the treatment and management options, the impact of these treatments on your fertility and storing your sperm for future use. Even if starting a family is not a priority for you at the moment, certain treatments may affect your fertility. It is therefore advisable to discuss fertility treatment with your specialist healthcare team before you undergo any treatment. Further information on testicular cancer can be found on the Orchid website (www.orchid-cancer.org.uk). At the end of this factsheet we have also given details of other organisations that offer information and guidance on this topic.

Who is affected by testicular cancer?

Testicular cancer is the most common cancer in men aged 15-35. Every year over 2,200 men in the UK will be diagnosed with the disease.

What is testicular cancer?

The testicles are located inside the scrotum, the loose bag of skin that hangs below the penis. From the start of puberty, each testicle produces sperm. The testicles also produce the hormone testosterone. Testicular cancer is cancer occurring in one or both testicles. A testicular tumour is a lump created by the abnormal and uncontrolled growth of cells. These lumps can often be found through regular self-examination of the testicles. They can occur in one or both testicles.

What are the different types of testicular cancer?

There are a number of different types of testicular cancer. The most common of these is seminoma which is made up of a single type of cell, grows slowly and tends to stay localised in the testicle for a long time before spreading to other parts of the body. This type of cancer tends to affect men over the age of 25. The majority of remaining types, made up of more than one type of cell, are often grouped together and known as non-seminomas. They usually affect younger men and tend to be more aggressive.

There are other types of cancer which can start in the testicles but these are rare. The most common cancer found in the testicles in men over 60 is lymphoma.

What are the likely causes of testicular cancer?

There is no single known cause of testicular cancer. However, research studies have shown the following may make testicular cancer more likely:

- An undescended testicle (cryptorchidism). Research has shown the risk of testicular cancer increases dramatically if this is not corrected by the age of 11
- A brother or father who has had testicular cancer
- A previous diagnosis of testicular cancer

Treatment options: how is this decided?

Fortunately, testicular cancer is highly treatable. If caught early, 98% of men will make a full recovery, and even in the later stages of the disease it is still curable in 90% of cases. Your specialist healthcare team will carry out a series of blood tests, examinations and scans (such as a CT scan of the chest, abdomen and pelvis) to identify the type of cancer you have and whether it has spread beyond the testicle. This will help to determine the best course of treatment.

- Q.** I have been diagnosed with stage 2 testicular cancer. What does this mean?
- A.** Understanding how far your cancer has spread is called staging. It is important to know what stage your cancer is, in order that appropriate treatment may be given and to avoid your cancer spreading to other organs of your body. The stages are:
- Stage 1 - cancer is only in the testicle.
 - Stage 2 - cancer has spread to the lymph nodes in the abdomen.
 - Stage 3 - there are cancer cells in the lymph nodes in the chest or above the collarbone or there is evidence of spread to other parts of the body such as the liver or the lungs.



Treatment options: what are they and how will they affect my fertility?

There are three types of treatment available to you: surgery, radiotherapy and chemotherapy.

Surgery: removing the affected testicle and tumour by surgery (orchidectomy) is the standard treatment for testicular cancer where the cancer has remained within the testicle. This is usually done within a two week period. It will not adversely affect your sexual performance. A prosthesis – or false testicle - can be inserted in place of the removed one. This may be performed at the same time as the original surgery or be performed a few months after the initial operation. Another option is surgery involving a lumpectomy where just the tumour is removed, although this is only possible under specific conditions and is not considered standard treatment in many settings.

Having one testicle removed will not normally affect your fertility. However, you may still wish to consider and discuss with your specialist healthcare team storing your sperm before any form of treatment begins.

If the cancer has spread to your lymph nodes it is likely these will be removed by surgery. This can sometimes damage the nerves that control ejaculation and may leave you unable to conceive naturally. In these cases you should consider storing your sperm before surgery, if this has not already been done at the time of your initial operation to remove the testicle.

Radiotherapy: After surgery it is often not necessary to give any further treatment, providing the cancer has not spread beyond the testicle. This form of treatment is known as surveillance.

Unfortunately the cancer returns or relapses (usually at the site of the lymph nodes in the abdomen) in about 30% of patients. Almost all of these patients are cured with chemotherapy; however, chemotherapy does have side effects. Therefore some doctors offer either radiotherapy or mild chemotherapy to prevent the cancer coming back. Radiotherapy uses high energy beams of radiation to help destroy the cancer cells. This milder treatment has a much less profound effect on your immune system and some patients opt for this extra treatment for preventative purposes. Radiotherapy will not normally affect your fertility but storing your sperm should be considered before treatment starts.

Chemotherapy: For some types of cancer or if it is apparent that the cancer has spread beyond the testicle you will almost certainly need chemotherapy. Chemotherapy uses powerful medicines to kill the cancer cells or stop them multiplying. There are a number of possible side effects with this treatment, including lowering the number of sperm your body produces. This may cause temporary infertility during and after treatment (up to two years after in some cases) or in some cases this can be permanent. The effect of chemotherapy on sperm is uncertain and there is no evidence that chemotherapy given to a man can harm any children born subsequently. However most specialist healthcare teams would advise that you do not conceive for about a year after treatment. It is important to continue to use contraception during this period as it is still possible to conceive. Due to the effect which chemotherapy may have on your sperm count, all men undergoing this treatment should consider storing their sperm.

Low sperm count

Some men with testicular cancer have a low sperm count before they start treatment. Sometimes in these men, successful treatment can cause their sperm count to return to a more normal level. These patients should still consider storing their sperm before any treatment though, as their sperm count may get worse after treatment.

After your treatment is completed

Once your treatment has stopped you will be monitored on a regular basis for at least five years by your specialist healthcare team.

Sex and your treatment

Whether you choose to remain sexually active during your cancer treatment or not is entirely a personal choice and the type of treatment you have will affect you in different ways. You should continue to protect yourself and your partner during this time.

What is sperm storage?

Storing your sperm, also known as sperm banking, is the preservation of your sperm by freezing. The sperm may be used in the future for artificial insemination or other assisted reproduction techniques.



Why consider sperm banking?

There are a number of reasons why you may wish to consider storing your sperm. Certain treatments may lower the number of sperm your body produces which in turn can lead to infertility. This may be temporary and will recover following treatment. Sometimes the treatment may lead to permanent infertility. In some cases the tumour bearing testicle may be able to produce sperm whilst the healthy one may be non-functioning. If there is any doubt sperm storage should be discussed before surgery begins. Sometimes the cancer may return to the healthy testicle and if removed you will not be able to father a child.

Even if you don't plan to start a family, sperm banking is worth considering in case you change your mind in the future.

Where can you find a sperm bank or clinic?

Your specialist healthcare team will be able to advise you if the hospital where you are being treated has sperm banking facilities. They can also provide you with information on your local fertility centre where you may be offered the opportunity to bank your sperm.

Sperm can be stored for 10 years or to the age of 55, whichever ever comes first.

Visiting the sperm bank or clinic

When you first visit the clinic, the consultant or specialist healthcare team will discuss the process and answer any questions and concerns you may have. You may wish to take someone with you at this stage or to keep notes of the meeting.

You will be asked to provide a sperm sample, through masturbation, to the clinic which will then freeze and store it. When you are ready to have a child the semen is thawed and then used to artificially inseminate your partner. Prior to sperm banking you will be asked to have some blood tests to check for antibodies to the infectious viruses HIV, Hepatitis B and Hepatitis C. This is standard practice, and confirmation that you have not been exposed to these viruses will be needed before your sperm can be frozen.

To provide a sample you may be required to make several visits to a clinic. Understandably, some men may find the situation stressful or embarrassing and may not be able to produce a sperm sample through masturbation.

Not everyone is suitable for sperm banking and a low sperm count, poor sperm quality, and the freezing and thawing process can all affect your ability to father a child. If your cancer has spread and you need to begin your chemotherapy right away, your doctor may advise against sperm banking because it could delay the start of your cancer treatment.

Although banking sperm before treatment is strongly advised, if you are unable to bank sperm for any of the reasons above, you may still be able to father a child in the future.

Sometimes fertility recovers after treatment, however if it doesn't, in some cases it may still be possible to retrieve sperm from the testicles. Testicular sperm extraction (TESE) involves removing small pieces of testicular tissue under general anaesthetic and examining it under the microscope for the presence of sperm. If sperm is successfully retrieved, it can be used to fertilise an egg outside of the uterus via IVF.

However, only individual sperm will be retrieved, therefore, wherever possible, sperm banking is recommended as much larger samples of sperm can be obtained and stored ready for future fertility treatment if this is required.

What tests and consents are involved in banking sperm?

There are a number of tests and consent forms that you will need to complete including:

- If you are under 16 you will need your parent or guardian's permission to have your sperm treated and stored.
- Your blood will be screened for HIV, hepatitis B and hepatitis C. This is usually arranged by your specialist healthcare team.
- You will need to confirm what you would like done with your sperm in the event of your death.



Q. Following my cancer treatment, what happens if tests show that I am fertile?

A. You will need to discuss the results with your specialist healthcare team. You may wish to have your stored sperm destroyed. If your sperm count is still low, your sperm can be stored on an ongoing basis if desired.

What costs are involved in storing sperm?

Currently, the NHS will pay for the costs of the initial consultations, blood tests and storage for the first year. Funding for further treatment is under review and you should discuss this with your specialist healthcare team as it can be expensive to store the sperm longer term.

Q. What happens to my stored sperm if I move away from the area where I was originally treated?

A. You must ensure the clinic and your GP are provided with your new address details as they will need to contact you in the future. You do not need to move your stored sperm.

Conclusion

Treatment for testicular cancer will vary according to the type and stage of your cancer. Every case will vary but the vast majority of men, even those who have had chemotherapy, will be able to father a child. Even if this is not a priority for you at the moment, storing your sperm gives you an option for the future.

Further information:

Your specialist healthcare team and the fertility clinic can offer you information and guidance on issues relating to your fertility. For further information and support on testicular cancer and other male cancers please visit:

www.orchid-cancer.org.uk

You might also want to visit the following websites:

www.cancerhelp.org.uk

www.fertilehope.org

Written and Edited by:

Orchid Cancer Appeal

Orchid Editorial Board

Professor R Tim D Oliver MD FRCP

Mr Oliver Wiseman MA FRCS (Urol)

Consultant Urologist and Andrologist, Bourn Hall Clinic.

January 2013

Date for review: January 2014

This Factsheet has been supported by an educational grant from Bourn Hall Clinic



Bourn Hall
CLINIC