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## Andrology

An-drol'-uh-jee

The study of the  
functions and diseases  
peculiar to males,  
especially of the  
reproductive organs

## >> FROM THE DIRECTOR

Testicular cancer is not a widespread problem but does affect young men.

Similarly, because of the advances made with radiotherapy and chemotherapy in recent years, it is rarely a fatal condition.

Although we do not know what causes it, we are aware of several risk factors which increase the likelihood of its development.

The impact of the disease and its treatment on sexual function and fertility are generally only short term.

Overall the outlook is quite a positive one, compared to other male reproductive health problems being addressed by Andrology Australia.

Thus the task at hand is to create "positive awareness" of the disease so that those who do need medical attention can confidently seek it in a timely fashion.

By "normalising" the condition and communicating the optimistic outcomes, we hope to dispel many fears, help men cope psychologically with the disease and ideally save even more lives.

  
Professor David de Kretser

## TESTICULAR CANCER

### NEED FOR AWARENESS NOT ALARM



The Western world has seen a steady increase (2.2% each year in Australia) in the number of men diagnosed with testicular cancer over the past 20 years. However as it remains one of the more rare forms of cancer, with an estimated incidence of approximately 3.8 men in 100,000 men, this growth rate does not herald a need for alarm.

The success rate statistics, on the other hand, justify increased awareness of the disease and its positive prognosis. The death rate is approximately 1 in every 400,000, making it one of the most treatable forms of cancer.

Two tragic cases reported in The Lancet<sup>[1]</sup> last year highlight the value of increased awareness of testicular cancer.

Four days after being involved in a 'moderate velocity' car accident, a 17-year-old boy fell unconscious from severe back and abdominal pain and was rushed to a nearby hospital where he later died. At the time of the car accident, a GP found that the young man had 'abdominal abrasions and contusions of the skin'. A postmortem examination later found that the young man had a large tumour in his right testicle and secondary cancer in other parts of his body which lead to his death.

In a similar case a 32-year-old asylum seeker from Kosovo was admitted to hospital with a testis measuring 76 cm in circumference. Although knowing that his condition was not normal, the man did not seek medical advice due to his fear of being deported back to Kosovo. For two years the man hid his condition under baggy clothing. He had 'an enormous mass replacing the left testicle, [which] extended directly into the pelvis, abdomen, and retro peritoneum. The man experienced initial success through chemotherapy, but due to the extent of the cancer he later died.

In both of these tragic cases, the loss of life could have been avoided if both men had sought early medical advice.

#### Reference:

[1] Steele JP and Oliver RT. Testicular cancer: perils of very late presentation. Lancet 2002, 359: 1632-3

## Greater Awareness of Testicular Cancer Needed

An analysis of community education needs on male reproductive health, recently completed by Andrology Australia has shown that while awareness of testicular cancer has increased amongst the general community, knowledge within high-risk groups has not.

From the consultation process on testicular cancer it emerged that knowledge about testicular cancer, including risk factors (such as undescended testes) and good prognosis with early detection, was minimal to non-existent. It was also suggested that men's understanding of their own body, particularly testicular anatomy and what a normal testicle felt like, was limited.

Yet, while there is a clear urgent need to educate sectors of

the community about testicular cancer, Andrology Australia Director, Professor David de Kretser warned against creating an atmosphere of anxiety.

"Educational material on this subject must be appropriately packaged so that young men can manage this aspect of their reproductive health responsibly and confidently," said Professor de Kretser, "It is important that we communicate that if it is caught early the outlook is extremely positive".

Although testicular cancer is the second most common cancer of men aged between 18-38 years in Australia, the outlook is very positive with the overall death rate in men aged between 20-45 years being approximately 1 in every 400,000.

## >> PROFESSIONAL EDUCATION

### Testicular Health

Although the causes of testicular cancer are not known, men with a history of infertility may be more at risk of this cancer than men with normal fertility. Male infertility is common with 1 in 20 men being subfertile. Testicular cancer predominantly affects young men (18-40 years) however it is quite uncommon. Over the past few decades however a worldwide increase in prevalence has been seen.

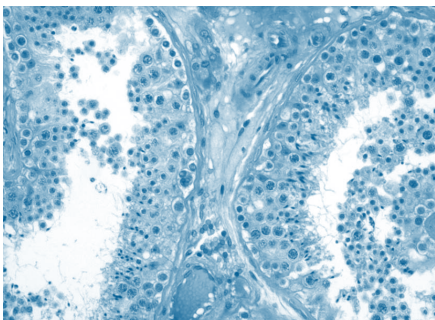
The question is raised as to whether these two problems are related. Sperm counts in men with testis cancer are often very low and carcinoma in situ, a precursor to testicular cancer, has been identified in men with low sperm counts

presenting for infertility treatment. It has been hypothesised that genetic and environmental factors may be working together to affect prenatal and postnatal function. This may present as either, most frequently, male infertility in adulthood but also as cryptorchidism (undescended testis) in infancy or more severely as testicular cancer in late adolescence [1].

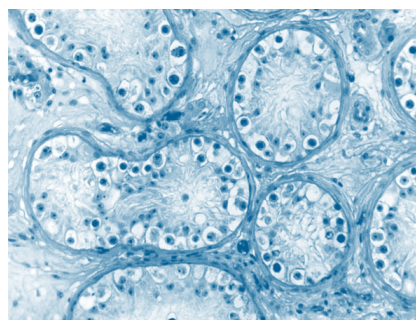
With the support of Andrology Australia, one of the international experts in this area, Prof. Niels Skakkebaek from Denmark will be visiting Australia early in November 2003. He will be speaking at the Fertility Society of Australia Annual meeting to be held in Perth and other venues in Melbourne and Sydney.

#### Reference:

[1] Skakkebaek NE, Rajpert-De Meyts E and Toppari J. Testicular Cancer Pathogenesis, Diagnosis and Endocrine Aspects. Endotext.com 2002 (chapter 13). <http://www.endotext.org/male/male13/maleframe13.htm>



Normal testis



Carcinoma in situ

### Rural Health Broadcast Focuses on Testicular Health

A recent Rural Health Education Foundation satellite television broadcast, which was developed with the assistance of Andrology Australia, provided an important update on testicular health for doctors in regional Australia.

Entitled "Testicular Health: A focus on Infertility and Cancer" the program went live on 29 April 2003 and featured discussion on:

- > Current status and prevalence of testicular cancer and male infertility
- > Causes of male infertility and its prevention
- > Latest in diagnosis and treatment options for male infertility
- > Major risk factors of testicular cancer
- > Importance of early detection of testicular cancer
- > Methods to correctly diagnose and treat testicular cancer

The program can be accessed on the Internet at [www.rhef.com.au](http://www.rhef.com.au) or for information on videos of the broadcast phone the Rural Health Education Foundation on: 02 6232 5480.

# Focus on TESTICULAR CANCER

## What is testicular cancer?

The testes are a pair of oval-shaped glands (testis, singular) that are suspended in a pouch of skin called the scrotum. Testicular cancer is a condition where the cells within the testis grow and divide abnormally and a tumour grows in the testis.

## How many men are affected with testicular cancer?

Testicular cancer is still one of the more rare forms of cancer with an estimated incidence of approximately 3.8 men in 100,000 men, with about 550 new cases diagnosed each year in Australia. More than three quarters of diagnoses are made in men under 40 years.

### NOTE:

All testicular cancers can be treated and if discovered early and the right treatment given, most men can be completely cured.

## Who is most at risk of testicular cancer?

Young men aged between 20 and 40 years of age are most at risk of developing testicular cancer and should regularly examine themselves for lumps in the testes.

## History of undescended testes

Men who were treated for undescended testes as infants are the greatest at risk group. Undescended testes is a condition where one or both of the testes are not lowered into the scrotum, but remain in the abdomen after the first year of life.

Approximately 10% of men with testicular cancer have had undescended testes in childhood and have approximately five times the risk of testicular cancer compared to men with normally descended testes. It is therefore important for families to share details of medical history in adolescence so the need for increased awareness is known.

## History of testicular cancer

Men who have been successfully treated for testicular cancer have a 5% chance of developing tumours in the other testis.

## History of male infertility

Men with a history of male infertility may be more at risk than men with normal fertility.

## What are the signs of testicular cancer?

A hard lump within the testes which can be painful in 10-20% of cases, is the principal symptom. Other symptoms may include swelling and tenderness of the testis or scrotum. Some men with testicular cancer experience a dull ache in the lower abdomen.

In a few men, constant backache, cough or breathlessness, enlarged or tender breasts may also mean that the cancer has spread and you should see your doctor straight away. However there may be many other reasons for these symptoms.

## Does sport or lifestyle increase risk of testicular cancer?

There is no proven medical evidence of a link between testicular cancer and injury or sporting strains. Men involved in sports such as cycling are NOT considered to be at greater risk. Similarly lifestyle (for example smoking or diet) or level of sexual activity do NOT increase chances of developing testicular cancer.

## How is testicular cancer diagnosed?

Diagnosis normally involves providing a detailed medical history and having a full medical examination. An ultrasound of the testes will usually be performed to confirm that the lump or suspected tumour is solid and is actually within the testis. Some lumps are found to be fluid filled cysts within the scrotum and these are often far less dangerous.

A biopsy is NOT recommended for the diagnosis of testicular cancer as it can increase the chances of the cancer spreading to other parts of the body.

Chest and abdomen examinations are performed to check whether the cancer has spread to other parts of the body.

### NOTE:

It is normal for one testis to be slightly bigger than the other.

## How is testicular self-examination performed?

- > Ideally after a warm bath or shower, when the skin of the scrotum is relaxed, use the palm of the hand to support the scrotum and become familiar with the texture and size of each testis.
- > Gently roll one testis between thumb and fingers to feel for any lumps or swellings in or on the surface of the testis. Repeat with the other testis. Each testis should feel firm and the surface smooth.
- > Using thumb and fingers, feel along the epididymis at the back of each testis. The epididymis is a soft, highly coiled tube that carries sperm from the testis to the vas deferens. Check for any swelling in this area.
- > If there is any change to how it feels normally, see a local doctor.

# Focus on TESTICULAR CANCER TREATMENT

## What are the main forms of treatment for testicular cancer?

There are three main types of treatment that may be used either on their own or together to treat testicular cancer:

### Surgery

Surgery is the first treatment for testicular cancer. Removal of the testis through a cut just above the groin is performed under general anaesthetic.

The surgical removal of one testis does not affect the ability to achieve an erection or to father children.

### Radiotherapy

Radiotherapy is commonly used to prevent the testicular cancer from coming back or to destroy any cancer cells that may have spread.

High energy X-rays kill the cancer cells while minimising damage to normal cells. A radiation oncologist will decide on the length of treatment, which may last between two and five weeks.

### Chemotherapy

Men with early stage disease who relapse and those with advanced disease are generally referred for chemotherapy with excellent results. Even men with extensive cancer spread usually have successful outcomes with modern day treatment.

Chemotherapy drugs are given intravenously (via injection into a vein). These circulate in the blood stream to kill cancer cells throughout the body.

The course of treatment is usually over four months. Each month one cycle of chemotherapy is given, followed by rest to allow the body to recover from the side effects of treatment. In some cases it may be given more often.

## Why is sperm storage recommended?

Each man undergoing treatment for testicular cancer is encouraged to produce a semen sample (through masturbation) that can be frozen and stored for future use. Even though surgical removal of one testis does not impact on the fertility of the remaining testis, both radiotherapy and chemotherapy can temporarily or permanently lower sperm counts significantly.

As radiation can also cause genetic damage in the germ cell precursors of sperm, it is advisable to avoid attempting a pregnancy for two years after radiation treatment.

Once thawed, frozen semen can be used in IVF or other assisted reproductive technologies, if there is a desire to have children at a later stage.

## What are some of the side effects of treatment?

Most side effects of radiotherapy and chemotherapy are generally short-term and can be minimised with additional treatment.

RADIOTHERAPY	CHEMOTHERAPY
<ul style="list-style-type: none"><li>&gt; Tiredness</li><li>&gt; Diarrhoea</li><li>&gt; Nausea</li><li>&gt; Temporary hair loss within the area of treatment</li></ul>	<ul style="list-style-type: none"><li>&gt; Nausea and vomiting</li><li>&gt; Inflammation of the gums, possibly with ulceration</li><li>&gt; Hair loss</li><li>&gt; Kidney damage</li><li>&gt; Bone marrow suppression, leading to anaemia and a reduction in white cell count, which may cause an increase in infections</li><li>&gt; Inflammation and scarring within the lung following treatment with the chemotherapy drug called Bleomycin</li></ul>

### NOTE:

The major long term side-effect of treatment can be infertility, and sperm storage is recommended before starting radiation or chemotherapy.

## Is follow-up treatment required?

At the end of a course of treatment, a full reassessment is done including a physical examination, a chest X-ray and CT scan. If the follow-up examination shows further tumours or spread of disease then either more aggressive chemotherapy may be given or surgical removal of remaining lumps may take place.

When treatment has finished, follow-up examinations will be needed on a regular basis to check that the cancer does not return. These check-ups may also include blood tests, X-rays and CT scans and may continue for a few years after treatment. If any new symptoms appear between check-ups, it is important to see a doctor immediately.

## What options are there to assist with appearance after surgery?

Some men may be concerned about body image after the removal of one testis. Speaking to a specialist about the possibility of inserting an artificial testis (prosthesis) into the scrotum for a normal appearance may be helpful.

## International Honour for Andrology Director



Leading Australian male reproductive health authority and Andrology Australia Director, Professor David de Kretser, was recently honored with a Distinguished Andrologist Award from the American Society of Andrology at its Annual Meeting in Phoenix, Arizona at the end of March.

Professor de Kretser, who is also Director of the Monash Institute of Reproduction and Development, has dedicated over 30 years of research to improve understanding of male reproductive health, working in clinical practice, education and research.

"I am delighted to receive this award which acknowledges the important work being undertaken in Australia to assist understanding and improve management of male reproductive health," said Professor de Kretser. "There is a strong history in Australia of quality work in this field".

The American Society of Andrology (ASA) was founded in 1975 and has 700 members worldwide. It describes itself as a unique partnership of scientists and clinicians encompassing a range of specialities including endocrinology, urology, anatomy, psychiatry, animal science, gynaecology and biochemistry.

## Fulbright Scholarship Supports Prostate Research



Professor Gail Risbridger, Director of the Centre for Urological Research at Monash Institute of Reproduction and Development and member of the Management Group of Andrology Australia, will work as a Fulbright Senior Scholar on

prostate disease in the Cell Biology Laboratory at the University of New York later this year.

"Discovering how prostate disease develops is critical to developing new methods of detection and diagnosis, and new therapeutic agents to combat them," Professor Risbridger says.

The Fulbright Program gives exceptional scholars and professionals a chance to study and enlarge their knowledge and experience overseas. Over 50 years, it has promoted mutual understanding through cultural exchange between the United States and other countries.

## INTERNET UPDATE

### Andrology Australia Responds

With access to this country's leading authorities in male reproductive health, Andrology Australia is ideally positioned to provide balanced quality information in debates on matters regarding men's health that frequently arise in the media.

A number of statements on topical subjects have been prepared and placed on the Andrology Australia website for the benefit of health professionals, the media and the general public.

#### New Treatments for Erectile Dysfunction

Associate Professor Doug Lording has prepared a brief statement on the new oral medications for the treatment of erectile dysfunction that are currently being made available in Australia. (See: What's New on [www.andrologyaustralia.org](http://www.andrologyaustralia.org))

#### Androgen Deficiency

Associate Professor Rob McLachlan has assisted in the production of a statement on diagnosis and treatment of androgen deficiency. (See: What's New on [www.andrologyaustralia.org](http://www.andrologyaustralia.org))

#### Alzheimer's Link With Low Testosterone Requires Further Research

A media release cautioning against linking Alzheimer's with low testosterone was issued in February following media reports of an unpublished uncontrolled study from Western Australia. (See: News on health professional website: [www.drandrologyaustralia.org](http://www.drandrologyaustralia.org))



**Associate Professor Mark Frydenberg**

Mr Mark Frydenberg is one of Australia's most respected authorities in urological oncology or male reproductive cancers.

As chairman of the Department of Urology, Monash Medical Centre and Associate Professor in Monash University's Department of Surgery, he has gained considerable expertise in both testicular and prostate cancers.

Mr Frydenberg is also the Clinical Director of Urological Research, Monash Institute of Reproduction and Development, where he pursues his research interests in prostate cancer.

He was a Urologic Oncology Fellow at the Mayo Clinic, Rochester, Minnesota, USA from July 1991 to 1992.

He is currently a member of the ACCV Uro-oncology study group as well as a Board member of Andrology Australia.

During Mr Frydenberg's 20-year career he has contributed to over 45 publications and now acts as an expert reviewer for the journal *Urology*, the *ANZ Journal of Surgery* and the *Journal of Urology*.

# ANNUAL REPORT

The 2002 Andrology Australia Annual Report is now available.

The theme of this year's report is Strengthening the Men's Health Community. The publication provides an overview of the organisation and its goals, as well as highlights of some of the major achievements of this Centre in 2002.

It can now be downloaded (using Acrobat Reader) as a PDF file from the website: [www.andrologyaustralia.org](http://www.andrologyaustralia.org)

Printed copies of the 28 page report can be obtained by contacting Vanessa Fleming-Baillie (Administrative Officer, Andrology Australia) on telephone +61 3 9594 7234 or email [Vanessa.Fleming-Baillie@med.monash.edu.au](mailto:Vanessa.Fleming-Baillie@med.monash.edu.au)



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Information contained in this newsletter is based on current medical evidence but should not take the place of proper medical advice from a qualified health professional. The services of a qualified medical practitioner should be sought before applying the information to particular circumstances.