

EPAD

The logo consists of the letters 'EPAD' in a bold, sans-serif font. The 'E' and 'P' are green, the 'A' is light blue, and the 'D' is dark blue. A dark blue ribbon is tied around the 'A'. The background is split into a green left half and a white right half by a vertical dark green line.

European  
Prostate Cancer  
Awareness Day

EUROPA  
UOM 

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**Warning:** This document  
does not contain medical  
advice, please consult  
with your doctor.



# WHY YOU SHOULD READ THIS MESSAGE?

It is a common fallacy that urinary problems are symptomatic of prostate cancer. Problems with urination are nearly always due to BPH or prostatitis, but if a prostate biopsy is performed on a man who has BPH the biopsy may reveal the simultaneous presence of prostate cancer tumours. Early stage prostate cancer on its own does not have symptoms. If prostate cancer has spread to bones or other tissues it is known as metastasis. This may also be referred to as advanced prostate cancer and such a condition may produce symptoms such as bone pain or bone fractures.

Should otherwise healthy men or their partners be concerned? This booklet seeks to provide a man with basic information on his own prostate, or the prostate of a family member, the prostate of a loved one. The booklet should be read carefully and any questions arising talked over with the family doctor. It should be remembered that most prostate diseases and even many prostate cancers are readily treatable or may not need treatment at all. If a man informs himself now he will be better placed to recognise problems should they arise and better prepared to raise concerns with his doctor in a timely and effective fashion.

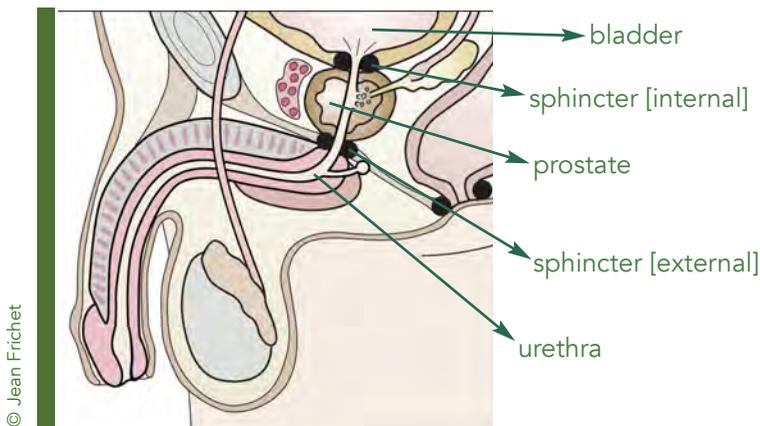
To take better care of your own health.

# THE PROSTATE

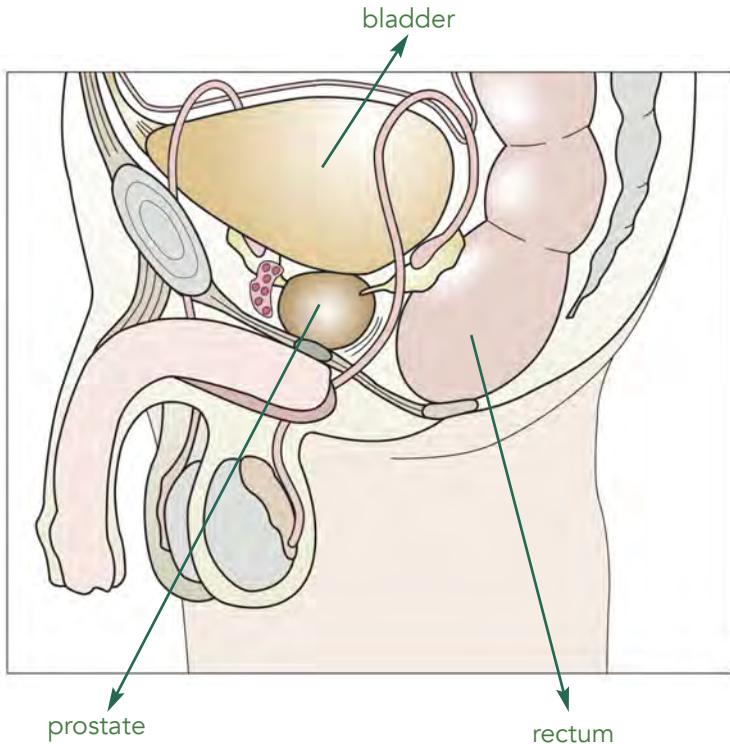
What is the prostate? It's a small gland, usually about the size of a walnut, deep inside the pelvic region of the body.

What does the prostate do? It secretes a prostatic fluid which is a major component of a man's semen and it plays a role in the muscle contraction called orgasm that signals the end of a normal sex act, or at least the end of the erection.

Why is the prostatic fluid so important? In order for a single sperm to fertilise an egg produced by a woman's ovaries the sperm must first get out of the ejaculate – the clump of dozens of thousands of sperm cells produced by the testicles (testes). The prostate produces certain chemical substances which facilitates this disengagement from other sperm cells in the seminal fluid. This separation is essential to allow sperm cells to swim a huge distance, and at very considerable speed relative to their size, to meet up with an egg before any other sperm does so.



Is there anything about the physical location of the prostate that can be troublesome for a man? Yes, the tube carrying urine from the bladder to the penis (the urethra) runs right through the prostate tissue, so some conditions of the prostate give rise to urinary problems unless treated and in other cases the treatment itself may give rise to urinary problems. The prostate gland lies adjacent to the bladder and rectum which means that certain treatments of the prostate have the risk of collateral damage to these organs.



The location of the prostate, just beneath the bladder and in front of the rectum, and between an internal and external sphincter muscles, may cause various unwanted side effects after treatment - such as urinary incontinence, especially as the urethra runs through the prostate gland.

Because the prostate is only millimetres away from the rectum, a doctor can easily feel the prostate by using a finger in the rectum (digital rectal exam or DRE). The DRE can tell if the surface of the prostate is regular or if there are any hard zones. The prostate itself has no function in achieving an erection of the penis, but the nerves needed for an erection adhere to its sidewalls and can be affected by treatment.

*The prostate is an important, though hidden, part of the male reproductive organs. Without a prostate a man is infertile.*

*The prostate evolves during a man's life, it will increase in size from the age of 40 to 50 years old and never stops growing.*

# PSA

Prostate Specific Antigen is one of the compounds produced by the prostate. It is a protein (like in egg white) that has a very important function in reproduction. PSA is what biochemists call an enzyme. PSA is a protein that is able to cut other proteins into smaller pieces.

PSA does its work in the semen. When semen is ejaculated it is a clot of thick liquid. Imagine how difficult it is for an individual sperm to escape this thick secretion in order to swim to the egg. PSA enables this by cutting the relatively large proteins in the seminal fluid into smaller pieces. This process transforms the seminal fluid into a lighter, more free-flowing liquid. The action of the PSA allows individual sperm cells to easily swim free from this less dense liquid and enables them to perform their reproductive function.

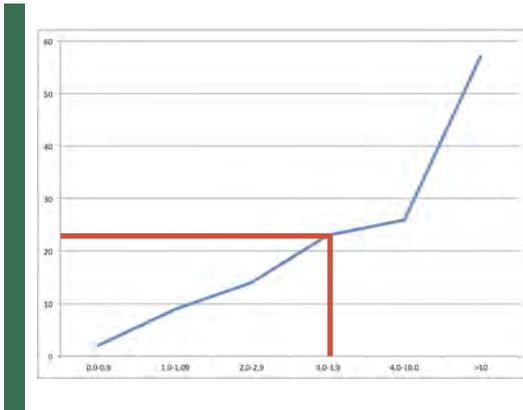
The prostate specific enzyme is absolutely necessary for reproduction. It is produced in large quantities in the prostate. Some of the PSA leaks through into the bloodstream where it actually has no function. It is this PSA that can be measured in the laboratory with special tests that are extremely sensitive meaning that they can measure very small amounts of PSA.

In the blood we measure the enzyme in nanograms of PSA per millilitre (ng/ml). To illustrate: if a lump of sugar is 2 grammes, and we throw one lump of sugar in an Olympic size swimming pool (50 metres x 25 metres and 3 metres deep) than the sugar concentration would be 0.5 nanograms per millilitre. This means that in the blood of any man we can measure a very small amount of PSA at any time. As we know that the only cells which produce PSA are prostate cells we can safely say that PSA is "organ-specific" and "prostate-specific".

PSA is produced by prostate tissue, so more prostate tissue will yield more measurable PSA. As the prostate increases in volume, PSA levels in the blood can also increase. Every problem in the prostate, whether an infection or even a cancer, can lead to very high levels of PSA in our blood.

If we can measure PSA in a blood sample we can be sure that somewhere in the body prostate tissue is producing PSA. If the prostate itself has been removed by a surgical procedure or is destroyed by radiation then the continuing presence of PSA means that there is prostate tissue left behind or growing in other parts of the body (known as a metastasis).

## PSA as a tumour marker or risk indicator



*This graph shows the relationship between PSA values and the risk that your biopsy is positive. You read this graph as follows: If for 100 men PSA is between 3.0 and 3.9 (ng/ml) and if the doctor takes biopsies on all of them, he will find cancer in 23 men (but most of these are not of the dangerous type).*

If the level of PSA in a man's blood reaches a level that is considered higher than normal then it may be assumed that this is an indication of disease and may point to the need for a biopsy of the prostate tissue.

From studies with large numbers of men we can conclude that if the PSA measured at an age of between 44-50 years is around 1.5 ng/ml, a man with this level of PSA has about a 20% risk of having prostate cancer before the age of 75.

The level of PSA measured in the blood may be a useful indicator for a man as to whether a biopsy of his prostate will confirm the presence of cancer tumours. If a man has a PSA of 1-2 ng/ml the risk of cancer is less than 10%. But if the PSA is greater than 10 ng/ml the risk of the biopsy confirming cancer jumps to 57%.

It is important to emphasise that an elevated PSA alone is not a diagnosis of prostate cancer. Even where men have a PSA reading in excess of 10 ng/ml almost half do not have a positive cancer finding on biopsy.

## PSA TESTS ARE NOT ALL THE SAME

*Laboratories measure PSA using products made by different companies. Because there are differences between the results obtained with different products it is important that all your tests are done in the same laboratory, using the same technique and calibration.*

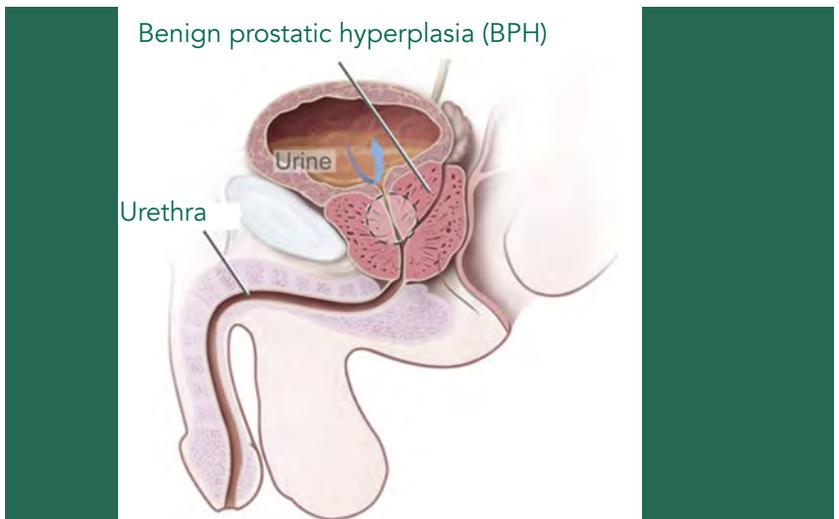
# PROSTATE DISEASES THAT ARE NOT CANCER

## Urinary symptoms

Relative to its size and weight the prostate is the cause of more disease than any other organ in our body. Problems of the prostate are very often seen as problems with voiding urine. It is, however, very important to remember that urinary symptoms may result from several diseases like BPH or prostatitis and these causes should always be ruled out first before an investigation is launched to confirm the presence of prostate cancer.

## Prostatitis

Prostatitis is an acute infection of the prostate caused by bacteria and characterised by fever, chills and urinary urgency. It is a rare but serious disease. Hospitalisation is required if there is no clear improvement in 24 hours because of the dangers from the invasion of bacteria into the blood system. Much more common, practically omnipresent after age 50, is some form of chronic prostatitis or inflammation in some prostate zones caused by the stagnation of the secretions or reflux of urine. Fortunately only 5% of these patients have complaints and these are usually caused by bacteria. One cannot demonstrate infection in the majority of cases showing very different symptoms as pain, distress, sexual problems, lower urinary tract dysfunction, etc., etc. This is an annoying disease requiring patience and psycho-social support for the patient.



## Benign Prostatic Hyperplasia (BPH)

An enlarged prostate is usually due to BPH (benign prostatic hyperplasia) and is one of the commonest conditions in middle-aged and elderly men.

The most important thing when experiencing these symptoms is to stay calm and understand why these minor but annoying symptoms occur. Some of the symptoms are: a decrease of the urinary stream, waking up to empty the bladder, sometimes urgency and mostly dribbling after urination.

If treatments fail to improve a patient's complaints, surgery can solve the problem by removing the excess prostate tissue and leaving the outer prostate in place. This procedure is called a transurethral resection (TURP), it sometimes wrongly called a prostatectomy. A TURP involves removing the problem tissue via the urethra, thereby removing the cause of the obstruction. Satisfaction is normally 100 % in a correct diagnosis.

### **More on BPH( Benign Prostatic Hyperplasia)**

*In BPH the prostate zone surrounding the urethra becomes enlarged by the formation of balls of prostatic tissue instead of glands. It should be called fibro-myo-adenoma pointing to this cellular structure. It starts with a declining production of the male hormones and the increasing occurrence of female hormones. It is rather innocent, but the continuation of a small but persistent growth may create a serious obstacle to the normal passage of urine that can lead to acute urine retention.*

*This BPH condition has been solved by urology. If symptoms deteriorate there are effective drugs to alleviate the condition.*

*Side effects of treatment: Alpha-blockers decrease the muscle tension in the prostate allowing urine to pass more easily. This treatment may also mean that sometimes the ejaculation may disappear or is reduced to a few drops. The relaxation of the inner sphincter causes the ejaculate to flow into the bladder. 5-alpha reductase inhibitors that block the formation of the specific prostatic male hormone, a derivative of testosterone, causes the prostate cells to dry out and the prostate size to decrease.*

# DIAGNOSING PROSTATE CANCER

## Prostate Specific Antigen (PSA) test

Early prostate cancer, always localised in the prostate, has no symptoms. Fortunately, this is the stage of disease where cure is possible. In evaluating the possible risk of prostate cancer being present, the PSA blood test is the leading marker, ahead of the digital rectal examination and even modern imaging techniques. PSA levels may be above normal levels but this does not equal a cancer diagnosis, but if a man's PSA is far above the "normal" range then there can be a working assumption that there may be prostate cancer which can be confirmed by a biopsy.

The PSA test is a very common investigation that can be done on the same blood sample as that normally taken in a regular check-up. But, as explained earlier, PSA is prostate specific but not prostate cancer specific, so interpretation of the result of a PSA test has to be done with caution. A man's doctor will compare the result of his test with results for a group of men of similar age. As you grow older, your prostate may grow larger (BPH) and so the PSA test results tend to increase with age.

If a man's PSA is high according to his age his doctor will carefully check if there are no other reasons for this result (BPH, prostatitis) and he will perform a digital rectal exam to feel if the prostate feels normal.

## Biopsies

If the PSA test result looks suspicious, the doctor will send a man to a urologist for an ultrasound guided biopsy. The ultrasound technology is the same used to visualise the unborn baby, but uses specific probes. The probe, which enables the urologist to visualise the prostate, is inserted into the rectum. The doctor sees an image of the prostate on a screen and this allows the urologist to measure the size of the prostate and to see if there are irregular spots which appear as zones of other shades of grey. These spots indicate parts of the prostate with a different density which may eventually prove to be cancerous. The doctor will use a biopsy spring-loaded instrument to cut out small cores of prostate tissue to send to the laboratory. Biopsy is an invasive procedure, it can be uncomfortable and there is a slight risk of infection. Other tests are under development and review which may reduce the number of biopsies by eliminating non-suspicious prostates but before any active treatment is recommended a confirmatory biopsy will be necessary.

## Gleason score

Prostate cancer is a disease with many aspects. Its aggressiveness can be estimated by the microscopic examination of biopsy specimens. The standard classification is the Gleason Scoring system; it runs from 2 to 10.

If a man is going to get a cancer, prostate cancer has some advantages over others. It is mostly a slow growing cancer so that a man and his family have plenty of time (at least 3 months) to study all personal facts, the predicting factors of the cancer and to extensively discuss in depth all available methods of cure or control - with their side-effects before making a decision. The specialist doctor should provide the man and his family with correct, reliable information on his individual choices starting with the indications for biopsy and on to treatment/non-treatment options where indicated.

## More on Gleason Score

*Since 2005 it has been decided that the Gleason Score on a biopsy should range from 6 to 10. The Gleason score 6 and even some score 7 (3+4), are slow growing diseases while scores 8 to 10 (maximum 20% of all diagnosed cancers) indicates aggressive cancer – this does not mean that there is no chance of cure or control. It means that these are the potentially deadly cancers.*

## When in doubt repeat

It is possible that, despite a suspicious PSA, a series of biopsies does not show any sign of cancer then the urologist can propose to wait and repeat the tests some months later. This is a normal procedure; prostate cancer is not a fast growing tumour.

## Other techniques

Apart from PSA and biopsies, the doctor can propose other medical tests; these can include special ultrasound imaging techniques. These may be magnetic resonance imaging (MRI) or even special new laboratory tests. Some of these techniques will show more precisely where in the prostate gland a tumour might be found so that biopsies can be targeted to that site.

For prostate cancer, as for most solid tumours, the final diagnosis is made by the pathologist examining the prostate tissue under the microscope.

# PROSTATE CANCER TREATMENTS

As with many cancers, there is no such thing as “the prostate cancer”. Every man is different, so is every prostate cancer. This combination of unique factors means that every man needs individualised treatment which recognises that every man’s prostate cancer is different. For most patients it is difficult to compare their treatments.

Below is a quick overview of the main treatments:

## Watchful waiting

Some men are diagnosed with prostate cancer but they are also suffering from some other life-threatening diseases (known as co-morbidities) which indicates that they have a limited lifespan. To subject such men to an active treatment programme may not extend life and may adversely affect their quality of life for their remaining time. Watchful waiting may be the most appropriate option for such men. Their symptoms, such as bone pain, should be treated as part of the patient’s overall care.

## Active surveillance

Most prostate cancers develop slowly and almost never cause serious (life threatening) disease. For these men active surveillance can be the best option. These men are carefully monitored with regular PSA tests and, if needed, biopsies. The objective is to keep an option on curative treatment, if needed.

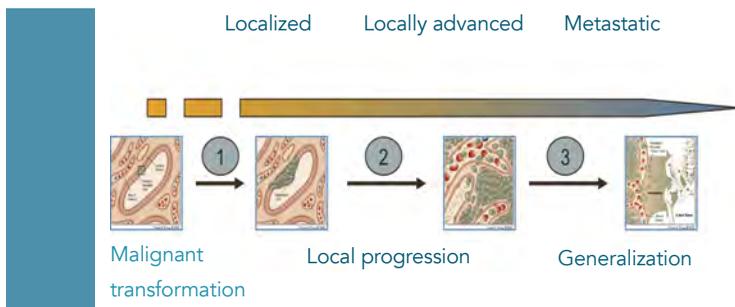
## Radical prostatectomy

Depending on the age of the man and on his specific type of cancer, a total removal of the prostate can be a good treatment option. Given the explanation above, about the location of the prostate, it is easy to understand that problems can arise. The possible and undesired side-effects of this form of treatment may result in incontinence due to surgical damage to the sphincter muscle which controls the release of urine from the bladder. In addition, there may be impotence due to nerve damage because these nerves are located on the exterior wall of the prostate gland.

A radical prostatectomy can be performed using several techniques such as open surgery, laparoscopic and robot-assisted surgery. Each technique may have different advantages and drawbacks and costs and not all techniques are universally available.

## Radiation treatment

Radiation can kill tissue, both good and bad. Radiation treatment will today be administered in a very precise way so that healthy tissue will be protected from damage by radiation. Radiation treatment can be given with implanted radioactive seeds (low dose brachytherapy) or with external beam radiation (EBR). The latter option has modern technical variants that limit the exposure of healthy tissue to a minimum. For radiation treatment, unwanted side effects are incontinence and impotence but also radiation damage to bladder and rectum.



## Androgen deprivation therapy (ADT)

ADT is also called hormone therapy. The male sex hormone testosterone stimulates the growth of prostate tissue and of prostate cancers. Lowering testosterone in the blood slows growth of a prostate cancer. Several drugs can be prescribed by a man's doctor to lower his testosterone level. To monitor the effectiveness of this treatment the man's PSA and testosterone level will be tested. ADT may affect sexual life (libido), bone density, body weight, mood, may cause fatigue and even depression.

## Chemotherapy

When the ADT treatments fail and nothing else seems to be working your doctor can propose to use chemotherapy. These drugs interfere with normal reproduction of cells and impact on cancer cells that reproduce faster than most normal cells. Chemotherapy slows down the evolution of a cancer but it cannot cure prostate cancer.

## The whole picture

Many men experience prostate cancer in several phases. A man's prostate can be removed surgically or destroyed by radiation, but if some residual cancer tissue remains in the body, it can reappear later as metastasis which will require further treatments. So some men see all of the above described treatments, whereas the more fortunate prostate cancer survivors may only experience a successful and curative prostatectomy or radiation treatment.

*As every patient is entitled to his personal optimal treatment and holistic care, only a multi-professional medical team (also known as a multi-disciplinary team – MDT) can guide the patient to that goal.*

# EUROPEAN PROSTATE CANCER AWARENESS DAY 2012

## EPAD 2012

### Brussels Declaration

- /1 Prostate cancer is the most prominent men's cancer
- /2 Prostate cancer is the third most frequently occurring cancer-related cause of death for men
- /3 Use of the prostate specific antigen (PSA) test, to detect prostate cancer at an early stage, lowers the death rate significantly (ERSPC)
- /4 Use of the PSA test for early detection lowers significantly the prevalence, the number of prostate cancers that metastasise (ERSPC)
- /5 Injudicious use of PSA test results can lead to undesired side effects and harm to men unnecessarily treated for cancers with a low degree of malignancy

### Therefore we conclude:

- /1 A man, well-informed about his prostate and the PSA test, is entitled to a PSA test and to early detection of prostate cancer
- /2 General practitioners and urologists must use PSA tests in an intelligent way and safeguard men from unwanted side effects.

# 10 TEN POINTS YOU NEED TO REMEMBER

- /1 Prostate cancer is the most frequent cancer in men; one man in seven will have to deal with it during his life.
- /2 Prostate cancer is the third most common cause of cancer-related death for men
- /3 Prostate cancer, if detected early, can be cured.
- /4 Many prostate tumours that are found following a PSA test will not need any treatment.
- /5 Early prostate cancer does not manifest or give rise to any symptoms.
- /6 Prostate specific antigen (PSA) is a measure of the risk a man has of having a tumour in his prostate now or in the future
- /7 PSA is measured in the blood with a simple blood test, but PSA is also higher in other common prostate diseases
- /8 If your father or another close genetic relative had prostate cancer at a young age, you run a higher risk of prostate cancer, due to genetic factors
- /9 If prostate cancer "runs" in your family, you should have a PSA test at age 40, the result will give an early indication of your risk and will guide future tests
- /10 If there is no prostate cancer in your family, your first test could be at 45 - 50 years old and this will give you an indication of your risk and guide future tests.

## DON'T STICK YOUR HEAD IN THE SAND, GET INFORMED ON YOUR PROSTATE



### ***And one more...***

Adopting a healthy diet and an active lifestyle may reduce your risk of developing prostate and other cancers as well as other disease such as diabetes..

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# EUROPA UOMO, THE “EUROPEAN PROSTATE CANCER COALITION”

Europa Uomo was legally established in Milan in June 2004 as the European advocacy movement for the fight against prostate cancer.

Europa Uomo's objective is to increase awareness of prostate cancer in Europe. Europa Uomo is a European coalition of patients' support groups for prostate diseases in general and prostate cancer in particular.

At present Europa Uomo is represented in 23 countries of the European Economic Area. The Manifesto of aims is linked to these members in their own language.

Our expansion is based on three guiding principles:

1. Keep patients' advocacy a priority with focus on quality of life based on solidarity and mutual respect.
2. Provide information to educate men based on objective, evidence-based holistic patient-centred care.
3. Collaborate with professional organisations to support optimal medical treatment.



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