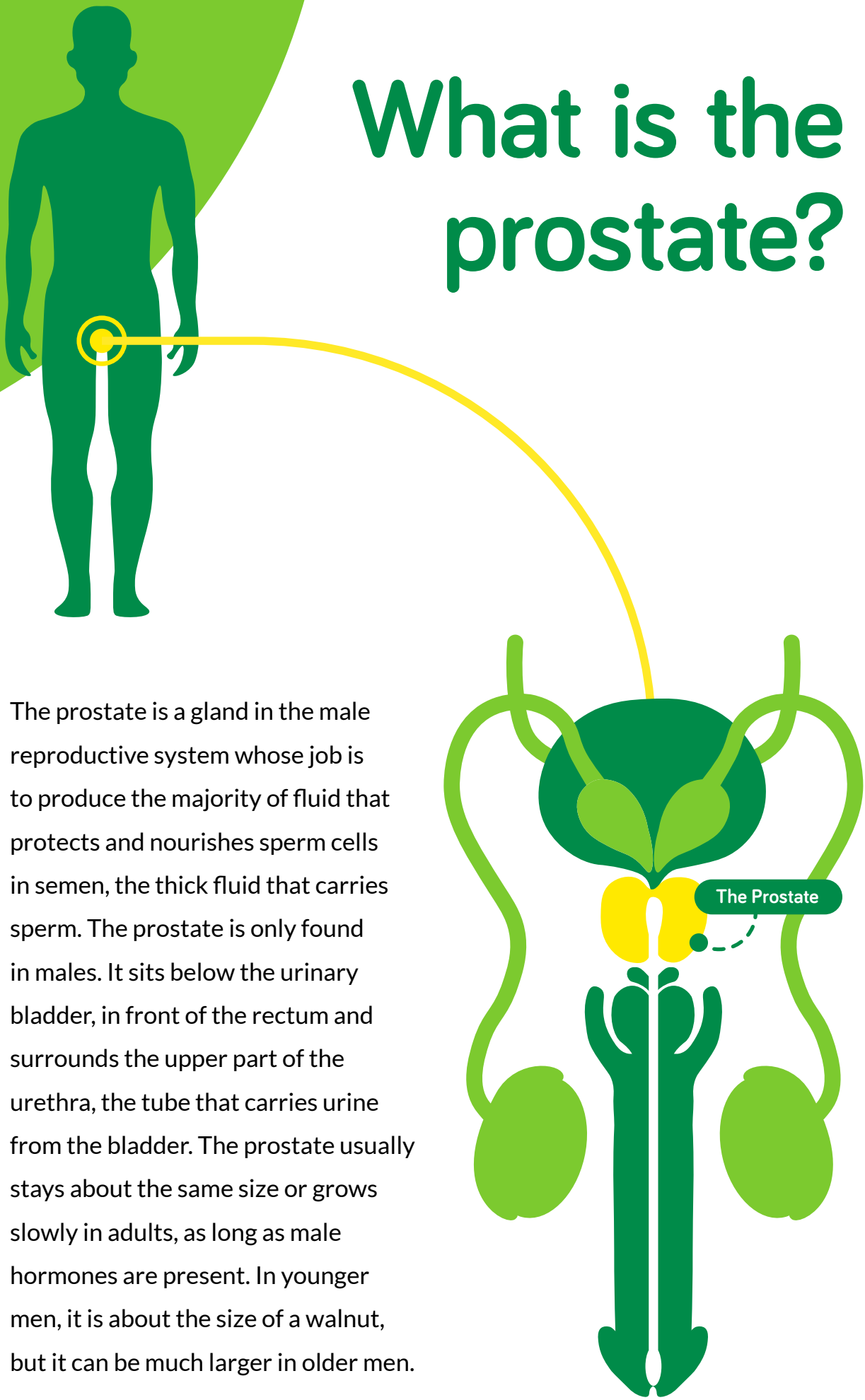
So you've been diagnosed with prostate cancer

A guide on prostate cancer and the treatment options

BXTA™

What is the prostate?



The prostate is a gland in the male reproductive system whose job is to produce the majority of fluid that protects and nourishes sperm cells in semen, the thick fluid that carries sperm. The prostate is only found in males. It sits below the urinary bladder, in front of the rectum and surrounds the upper part of the urethra, the tube that carries urine from the bladder. The prostate usually stays about the same size or grows slowly in adults, as long as male hormones are present. In younger men, it is about the size of a walnut, but it can be much larger in older men.

Prostate cancer and what causes it

As with all types of cancer, an exact cause of prostate cancer isn't easy to determine. There are often many factors involved, but ultimately what leads to the growth of cancerous cells are mutations in your DNA or genetic material. These mutations cause normal cells in your prostate to start growing abnormally.

Abnormal or cancerous cells continue to grow and divide until a tumour develops. In cases of aggressive cancer, the cells may leave the original tumour and spread to other parts of the body.

In some cases, the mutations that lead to prostate cancer are inherited.

If you have a family history of prostate cancer, you're at greater risk of developing the disease because you may have inherited damaged DNA.

1.4m

men were diagnosed with prostate cancer globally in 2020[1]

99%

treatable if detected early[1]

52,300

UK men are diagnosed with prostate cancer every year[4]

84%

survive prostate cancer for 10 or more years[3]

1 in 8

men in the UK will be diagnosed with prostate cancer in their lifetime[2]

11,500

die every year from prostate cancer[2]

Most Common

cancer in men in the UK[1]

[1] Prostate Cancer Foundation Guide [2] Prostate Cancer UK [3] England and Wales Cancer Research UK, 2010-11
[4] Cancer Research Statistics, 2020

Who Gets It

Prostate cancer occurs mainly in older men. The average age for a man to be diagnosed with prostate cancer is about 66. Prostate cancer in men under the age of 40 is rare. There is a higher disposition in men of African-Caribbean descent.

Risk Factors

It is believed that a number of things can increase your risk of developing the condition. These include:

Age – risk rises as you get older and most cases are diagnosed in men over 50 years of age.

Ethnic group – prostate cancer is more common among men of African-Caribbean and African descent than in men of Asian descent.

Family history – having a brother or father who developed prostate cancer under the age of 60 seems to increase the risk of you developing it.

Obesity – recent research suggests that there may be a link between obesity and prostate cancer.

Exercise – men who regularly exercise have also been found to be at lower risk of developing prostate cancer.

Diet – there is evidence that a diet high in calcium is linked to an increased risk of developing prostate cancer.

What are the signs & symptoms of prostate cancer?

Different men have different symptoms of prostate cancer and some men do not have symptoms at all, especially in the early stages. **Some symptoms of prostate cancer are:**

- Weak or interrupted flow of urine
- The need to urinate more often, especially at night
- Difficulty emptying the bladder completely
- Pain or burning during urination
- Blood in the urine or semen
- Difficulty getting an erection (erectile dysfunction)

How is it Detected?

1. **Digital rectal exam (DRE)** A doctor or nurse inserts a gloved, lubricated finger into the rectum to estimate the size of the prostate and feel for lumps or other abnormalities.

2. **Prostate-specific antigen (PSA) test** Measures the level of PSA in the blood. PSA is a substance made by the prostate. It is a protein produced by both normal and cancerous prostate cells. It's normal for all men to have some PSA in their blood.

If your prostate specific antigen (PSA) test or digital rectal exam (DRE) is abnormal, doctors may do more tests to find or diagnose prostate cancer.

1. **MRI Scan** An MRI (magnetic resonance imaging) scan uses magnets to create a detailed picture of the prostate and the surrounding tissues.

2. **Transrectal ultrasound** A probe is inserted into the rectum, and high-energy sound waves (ultrasound) are bounced off the prostate to create a picture of the prostate called a sonogram.

3. **Transperineal Biopsy** A small piece of tissue is removed from the prostate by passing a needle through the skin. It is then looked at under a microscope to see if there are cancer cells. This technique is gaining in popularity because it is safer.

4. **Transrectal Biopsy Needle biopsy** Used to look for cancer cells in the prostate. A series of small tissue samples from the prostate is taken by passing a needle through your back passage (rectum) using a transrectal ultrasound scanner. ‘

A Typical Process

1. Present signs or symptoms discussed with GP/ Community Doctor

2. GP/ Community doctor refers patient to specialist for prostate cancer review

3. Patient reviewed and risk of prostate cancer assessed

4. MRI & Prostate biopsy if prostate cancer suspected

5. Biopsy results discussed (internally) then with patient and treatment agreed

6. Treatment carried out and monitored

Not every pathway will be the same but these are the typical steps a patient can expect.

Treatment Options

Depending on how advanced the cancer is, men may be offered a range of treatments, or; Watchful waiting or Active surveillance, LDR Brachytherapy, HDR Brachytherapy, Surgery, Radiation therapy, Cryosurgery (cryotherapy, Hormone therapy and Chemotherapy.

LDR Brachytherapy

What is it?

LDR (low dose-rate) Brachytherapy is a targeted form of internal radiotherapy for prostate cancer and an effective, minimally invasive treatment appropriate for many men. It has significant quality of life benefits over alternative treatments such as surgery and external radiotherapy. In addition to offering significantly improved outcomes regarding both sexual function and incontinence, according to data from the Prostate Cancer Results Study Group, LDR Brachytherapy achieves >90% of patients disease-free at over 10 years and unlike with surgery, <1% ever need to have further treatment such as a radical prostatectomy.

LDR Brachytherapy is targeted at the site of the tumour so the radiation kills the cancer cells minimising damage to surrounding healthy cells. It is not major surgery and usually patients only spend 1 day in hospital. Generally LDR Brachytherapy has a low complication rate, and most men return to their usual pre-treatment activities within a couple of days.

The Treatment Process

1. A patient referred for LDR Brachytherapy will first attend an appointment with the oncologist/urologist for treatment planning.

2. The clinicians map the exact position of the tumour and the prostatic anatomy to plan the appropriate radiation dose.

3. At the time of the procedure, the patient will have a general anaesthetic. Tiny radioactive 'seeds' about the size of a grain of rice are inserted into the prostate using hollow needles that allow accurate positioning according to the treatment plan.

4. Once the seeds have been inserted into the prostate the needles are then removed.

5. After having time to recover from the anaesthetic, most patients return home the same day.

6. A CT scan is usually performed within the first 4 weeks to obtain post-operative treatment information. The seeds remain in place, emitting most of the therapeutic radiation over a period of 2 months.

7. After treatment, the patient will return periodically for monitoring of the treatment progress and prostate cancer tumour reduction.

Is LDR Brachytherapy Right For Me?

It is a minimally invasive treatment with significant quality of life benefits over alternative treatments such as surgery and externally delivered radiotherapy.

The key benefits are:

- Same-day or overnight procedure
- Low incidence of severe side-effects such as impaired sexual function and incontinence.
- Rapid return to normal activities

4D Brachytherapy

Moreover, recent advances in the development of LDR Brachytherapy, such as 4D Brachytherapy, mean that the treatment is now available as a one-stage implant technique that can normally be performed within 45 minutes. Improved dosimetry and clinical outcomes together with reduced side effects have been demonstrated over traditional two-stage approaches.

I went in on Friday morning, and the operation was done during the day, so I stayed overnight, but by Saturday morning, I was on my way home. I had no pain from anywhere, it was as if I had gone to sleep one night and woke up the next morning fine. I then had no trouble at all during my recovery process after the treatment, and carried on as if nothing had happened. ”

Raymond’s LDR Brachytherapy treatment took place on the 10th July 2009, in which he experienced ‘no problems.’

Given what I’d seen my dad go through, I was pretty rattled and wanted to get the treatment underway, but my consultant advised a four-week ‘cooling off’ period,” Paul says. “This was actually the best thing they could have suggested. Prostate cancer is pretty slow growing and it gave me time to really research and understand what the different treatment options involved and their potential side effects. ”

Paul Rickett’s LDR Brachytherapy treatment took place on 9th December 2018.

Support

A list of support resources available to find out more about prostate cancer.

Cancer Support UK

cancerhelp.org.uk

Cancer Research UK

cancerresearchuk.org

Macmillan CancerLine

macmillan.org.uk

National Cancer Alliance

canceradvice.co.uk

The Prostate Brachytherapy Centre

prostatebrachytherapycentre.com

NHS Prostate Cancer

nhs.uk/Conditions/Cancer-of-the-prostate

Prostate Cancer Research Centre

prostate-cancer-research.org.uk

Prostate Cancer Foundation

pcf.org

Prostate Cancer Support Association

prostatecancersupport.co.uk

Prostate Cancer UK

prostatecanceruk.org

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