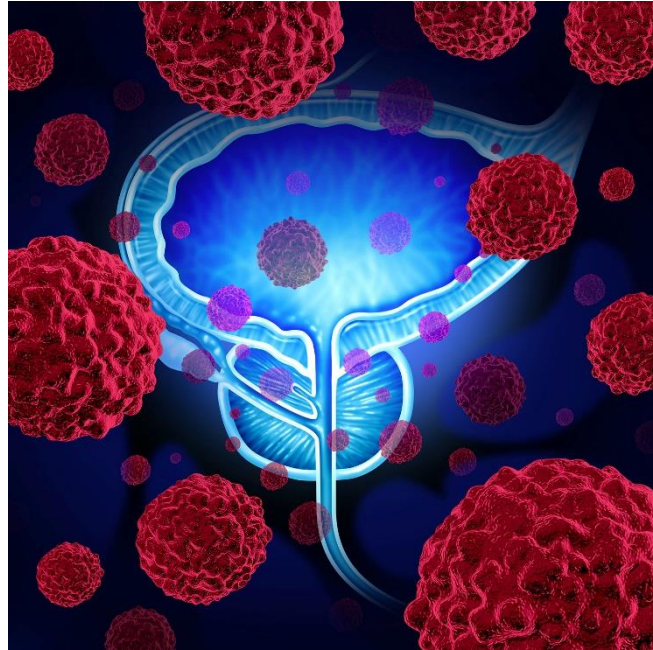


# Chasing the shapeshifter:

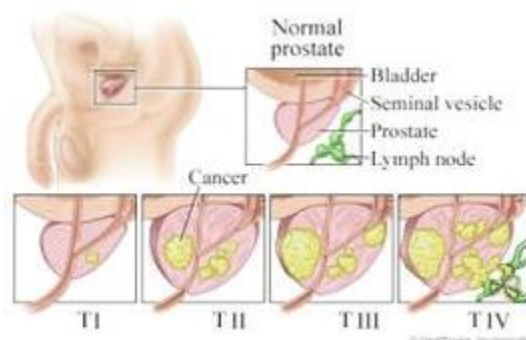
## Identifying and treating advanced prostate cancer



**Targeted Cancer Therapy Group  
University of Surrey**

### Prostate Cancer

- Around 47,000 men are diagnosed with Prostate Cancer each year in the UK and approximately 11,000 will die from the disease every year.

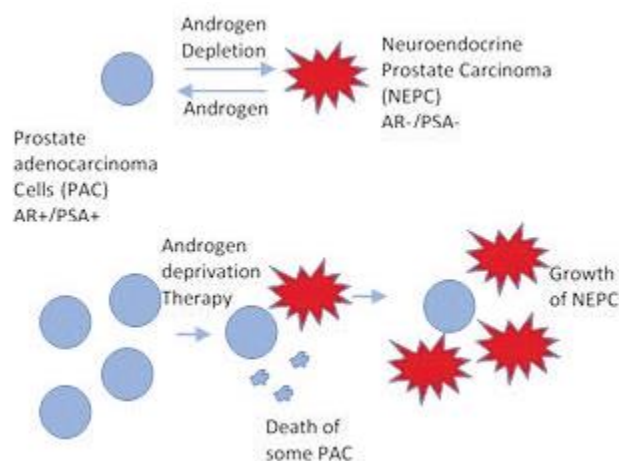


- The prostate is a small walnut shaped gland which sits under the bladder. Its main function is to produce semen.
- Prostate cancer is usually detected using a PSA screening test and confirmed by a biopsy.

- Small tumours (T1-T2) can be monitored without intervention. This avoids unnecessary treatment and the associated side effects.
- Larger tumours will require treatment which may include brachytherapy, radiotherapy, chemotherapy, surgery or hormone therapy.
- Prostate Cancer depends on testosterone to grow. Hormone therapy blocks or lowers the amount of testosterone in the body. This can lower the risk of an early Prostate Cancer coming back when you have it with other treatments. Or it can shrink an advanced Prostate Cancer or slow its growth.

## Advanced Prostate Cancer

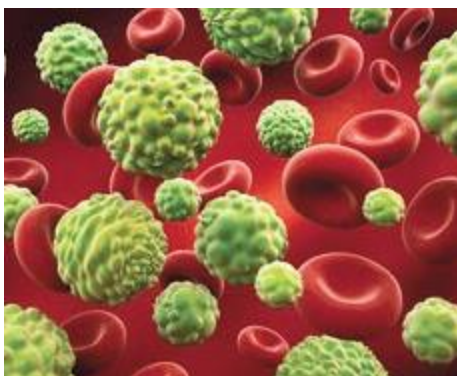
- Most Prostate Cancers are a type called adenocarcinoma and are regulated by the male hormone androgen.
- Advanced adenocarcinoma of the prostate is typically treated with drugs that cut off the supply of that hormone. Increasingly, however, these cancers are becoming resistant to androgen-blocking treatment and progressing to a more aggressive form of the disease, called Neuroendocrine Prostate Cancer (NEPC).



- Neuroendocrine Prostate Cancer does not secrete Prostate Specific Antigen (PSA).
- It can therefore be hard to identify when Prostate Cancer has progressed to NEPC as PSA levels do not rise. Because they are aggressive and can't be picked up by PSA tests, most neuroendocrine prostate cancers are diagnosed when they have already spread to other parts of the body, most commonly the bones. They can only be diagnosed by biopsy or transurethral resection of the prostate (TURP).

## New strategies to identify and treat NEPC

- New approaches to identify and treat NEPC are urgently needed.
- The Targeted Therapy Group at The University of Surrey are investigating ways to identify and alert clinicians to when a patient's prostate cancer has progressed to NEPC.
- The group is developing a simple blood test which will allow NEPC cells circulating in the blood stream to be detected.



- New approaches using immunotherapy to prime the patient's immune system to target the NEPC cells are also being developed. Immunotherapy will ensure that any metastatic NEPC deposits will also be recognised and destroyed by the immune system.
- This is vital research work requiring long-term financial support. Please help us if you can.

## Meet the Team



**Professor Hardev Pandha** –  
Head of Targeted Cancer  
Therapy and Urological  
Oncologist at the Royal  
Surrey County Hospital



**Dr Nicola Annels**  
Senior Research Fellow



**Dr Guy Simpson**  
Research Fellow

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