

Prostate Cancer

Some things to think about when first diagnosed.

Todd D Brandt, 2022

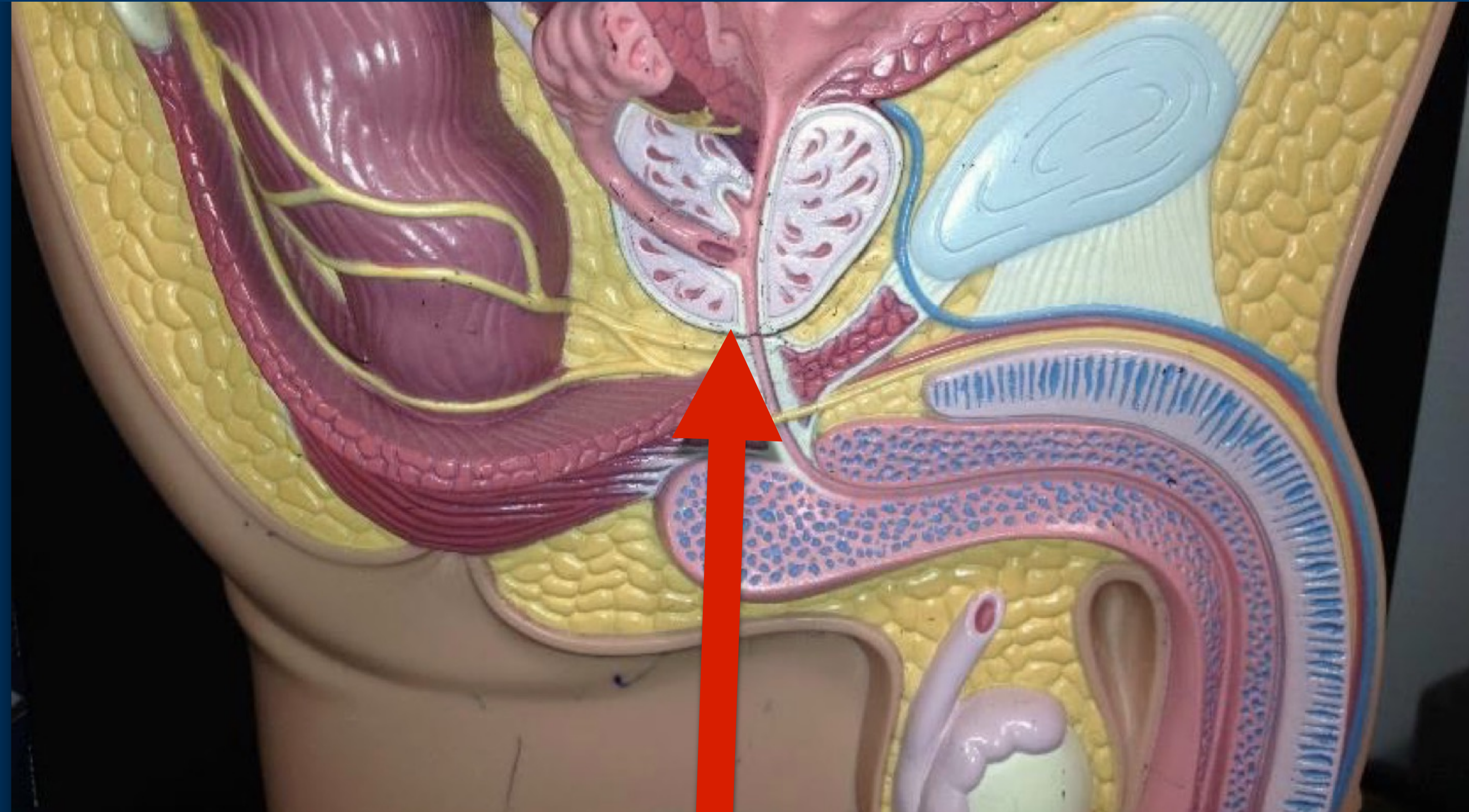
Anatomy and Physiology

Anatomy and Physiology

- Where is the Prostate?
- What does it do?

Anatomy and Physiology

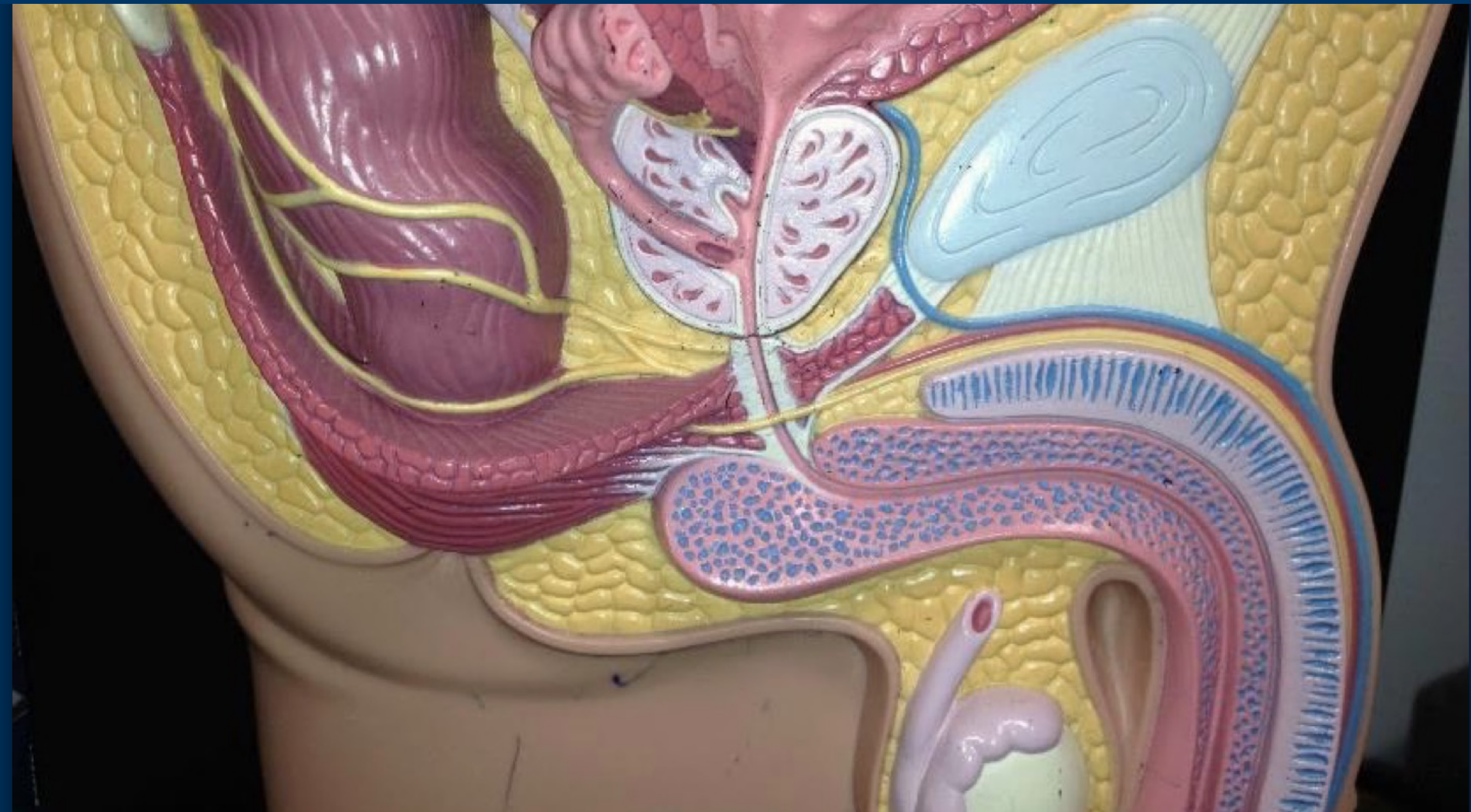
The prostate is found below the bladder near the base of the penis and in front of the rectum. The prostate can be felt during a rectal exam.



Prostate

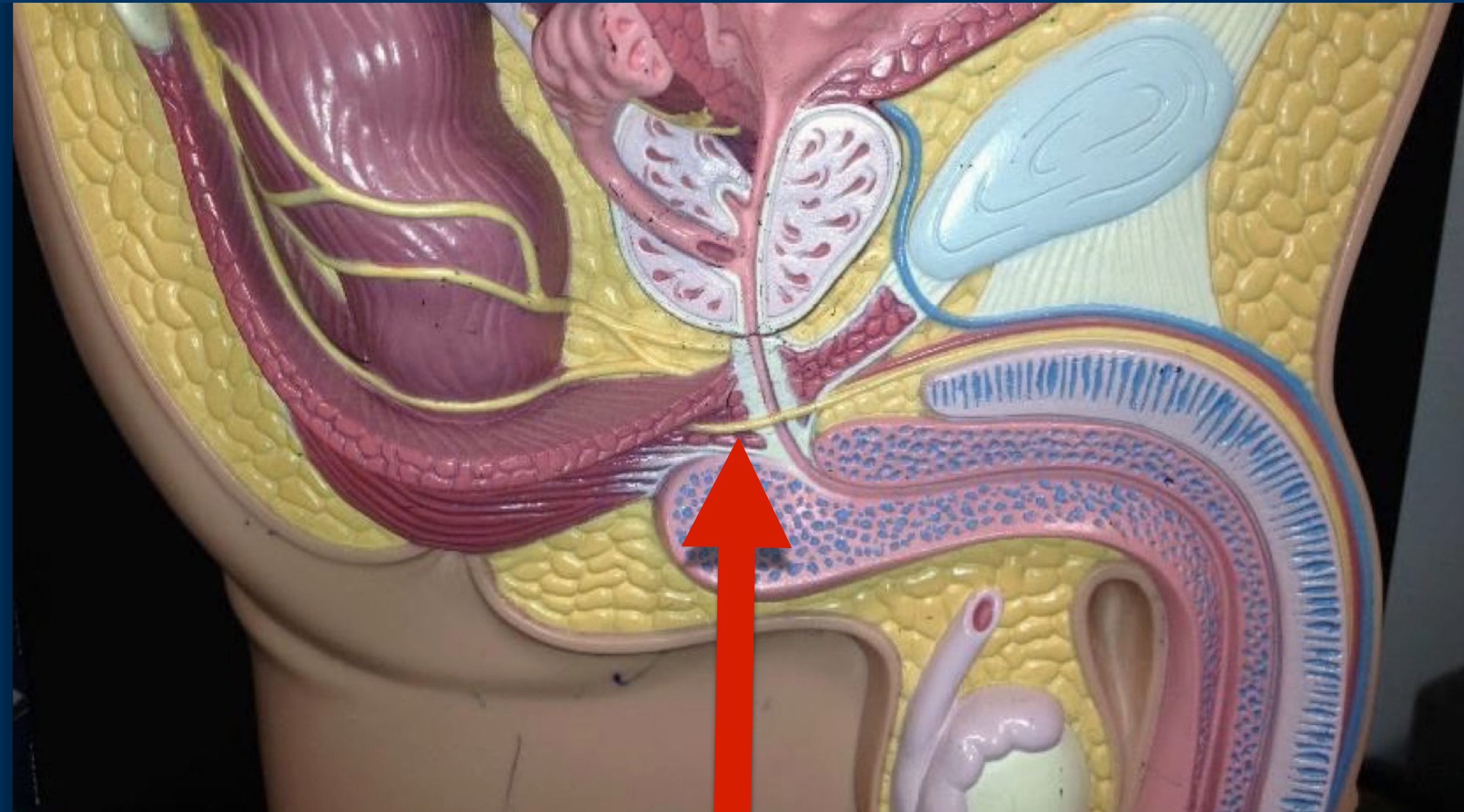
Anatomy and Physiology

The prostate produces semen and is responsible for ejaculation.



Anatomy and Physiology

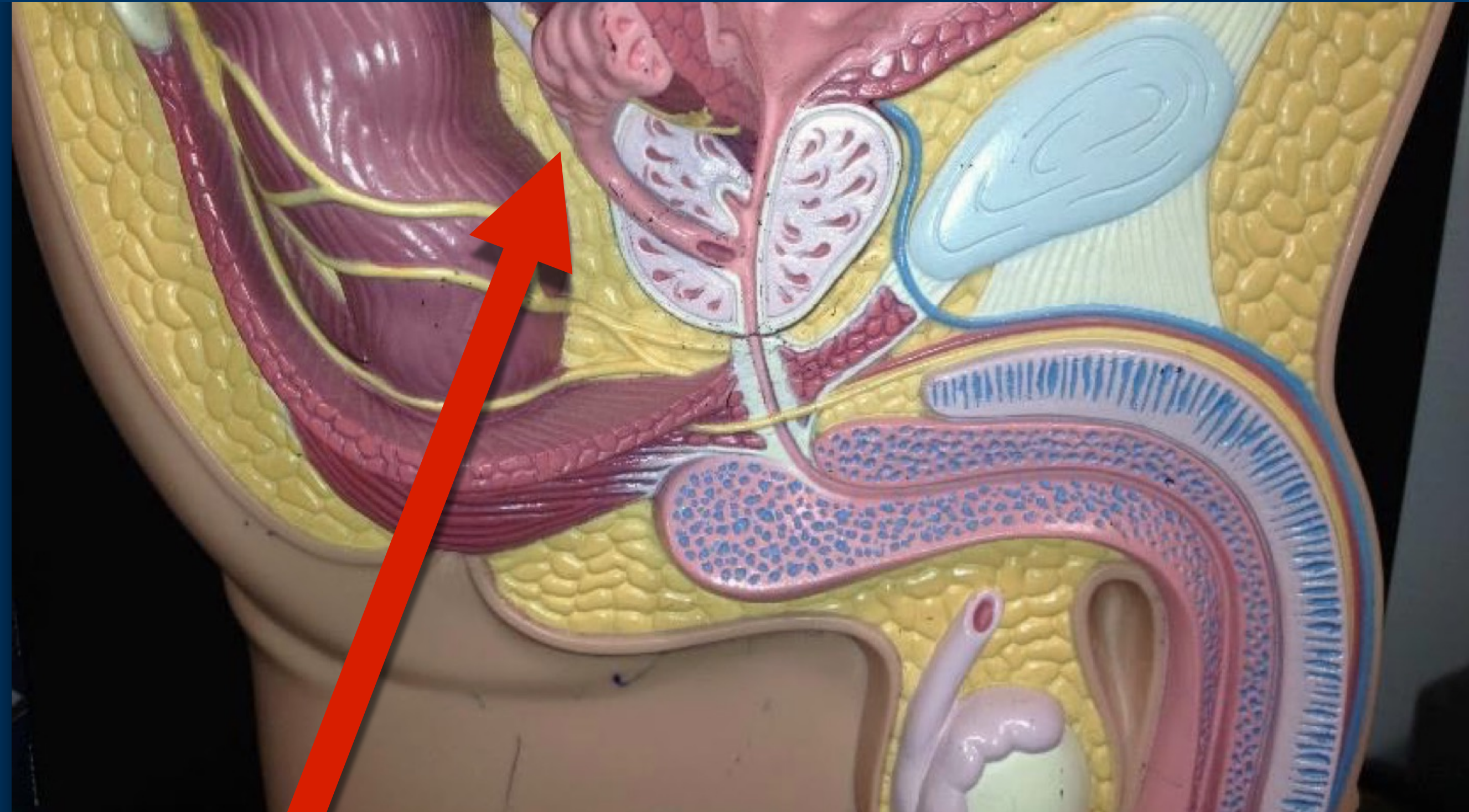
The prostate surrounds the urethra. The urethra is a tube that carries urine from the bladder and out of the body. The prostate is the urethral channel and connects with the true urethra as it passes through the pelvic floor muscle.



Urethra

Anatomy and Physiology

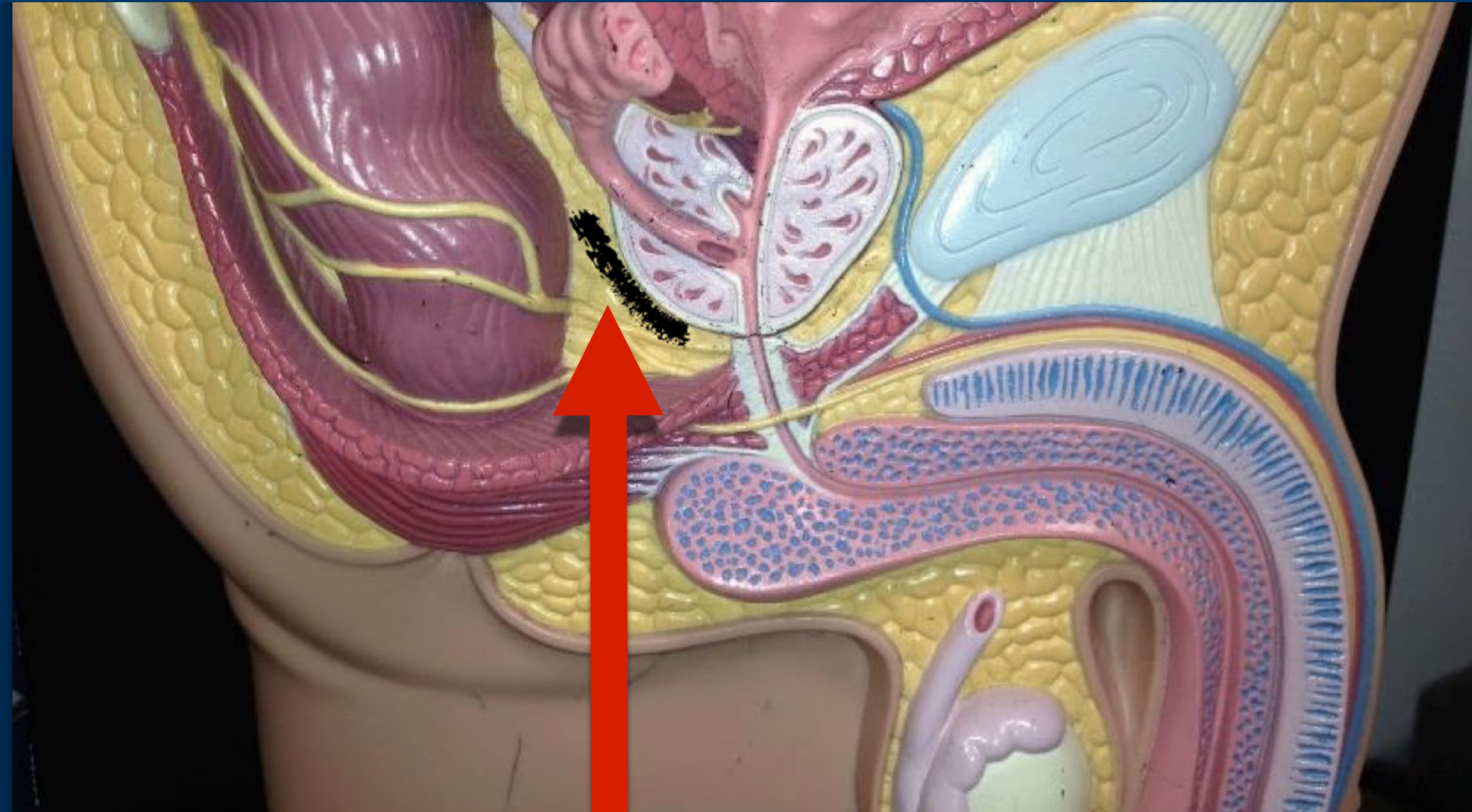
Above the prostate and behind the bladder are two seminal vesicles that are removed along with the prostate during a prostatectomy.



Seminal Vesicles

Anatomy and Physiology

The neurovascular connective tissue that help men get erection as well as help with the act of ejaculation run along the back side of the prostate. The area of the neurovascular plane is sketched in pencil



Neurovascular Bundle to the Penis

Cancer Stage

Cancer Stage

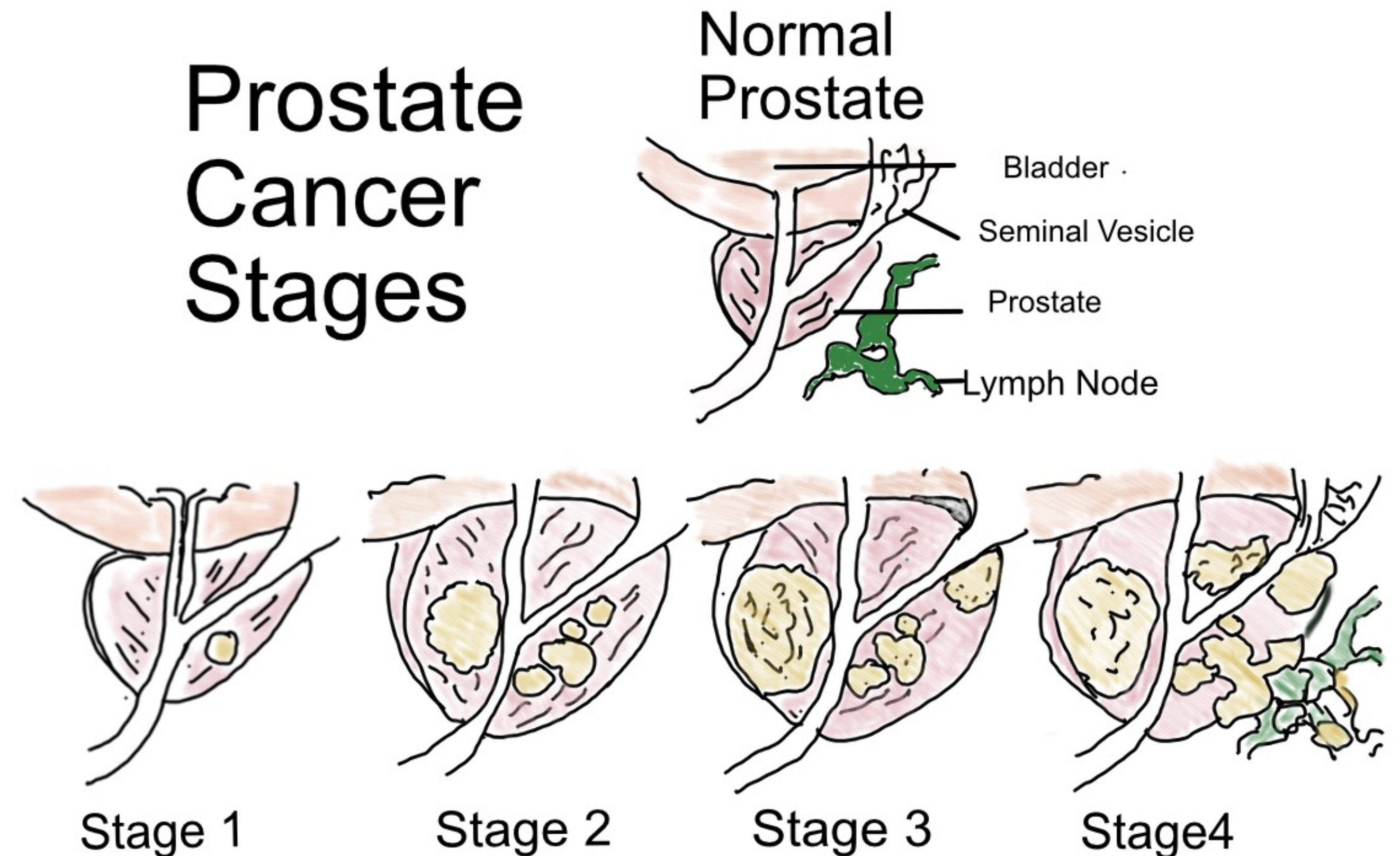
- Where is the Cancer?

Cancer Stage

- Cancer Stage is the location of the tumor in the body.
- Is it still in the prostate?
- Is it extending through the prostate capsule?
- Is it in the lymph nodes?
- Is it metastatic?

Cancer Stage

- Cancer Stage is the location of the tumor in the body.
- Stage 1 and 2 are contained within the prostate.
- Stage 3 is extending through the prostate capsule, even if only microscopic.
- Stage 4 is in the lymph nodes or metastatic disease.



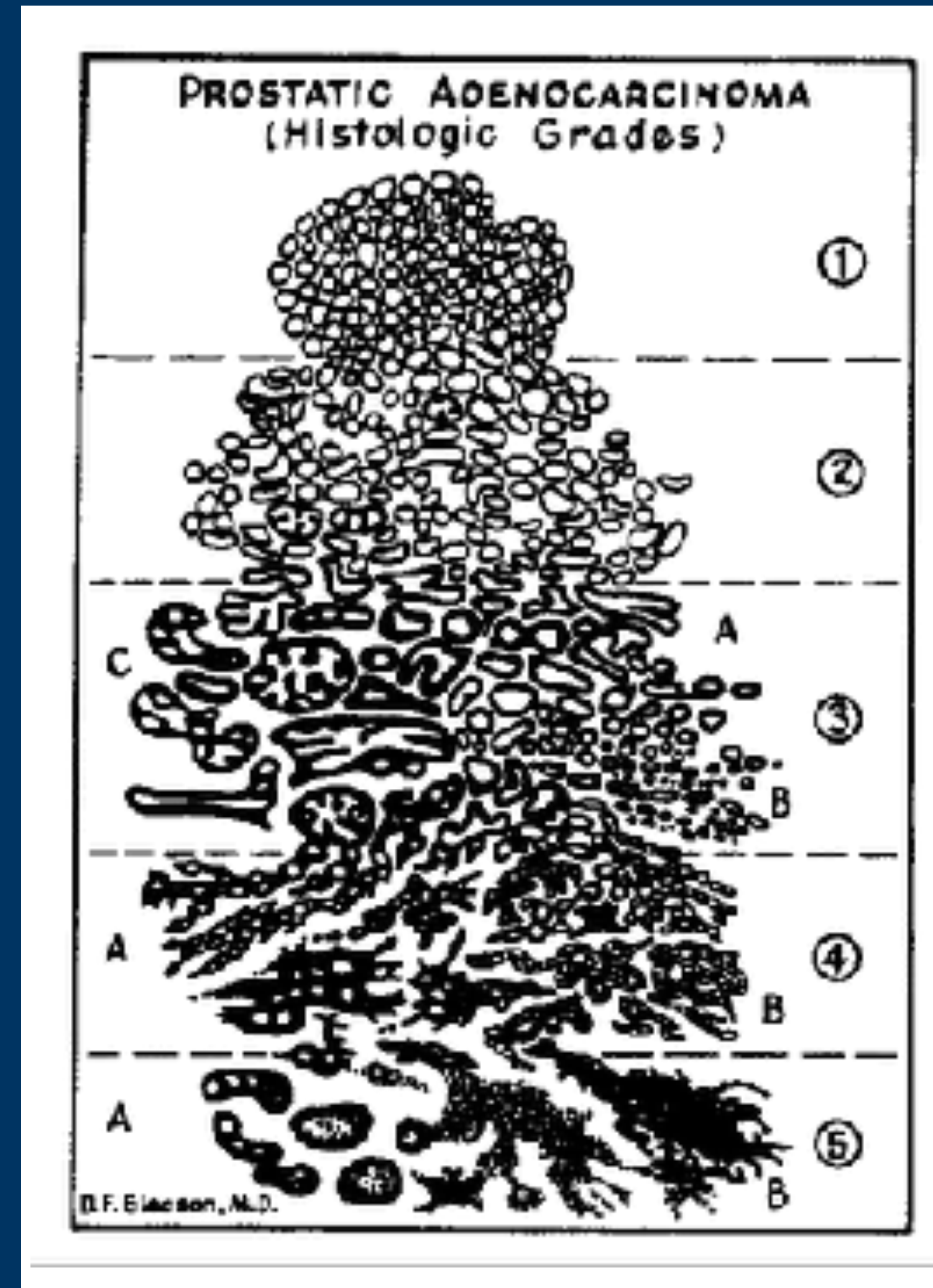
Cancer Grade

Cancer Grade

- How fast is the cancer growing?

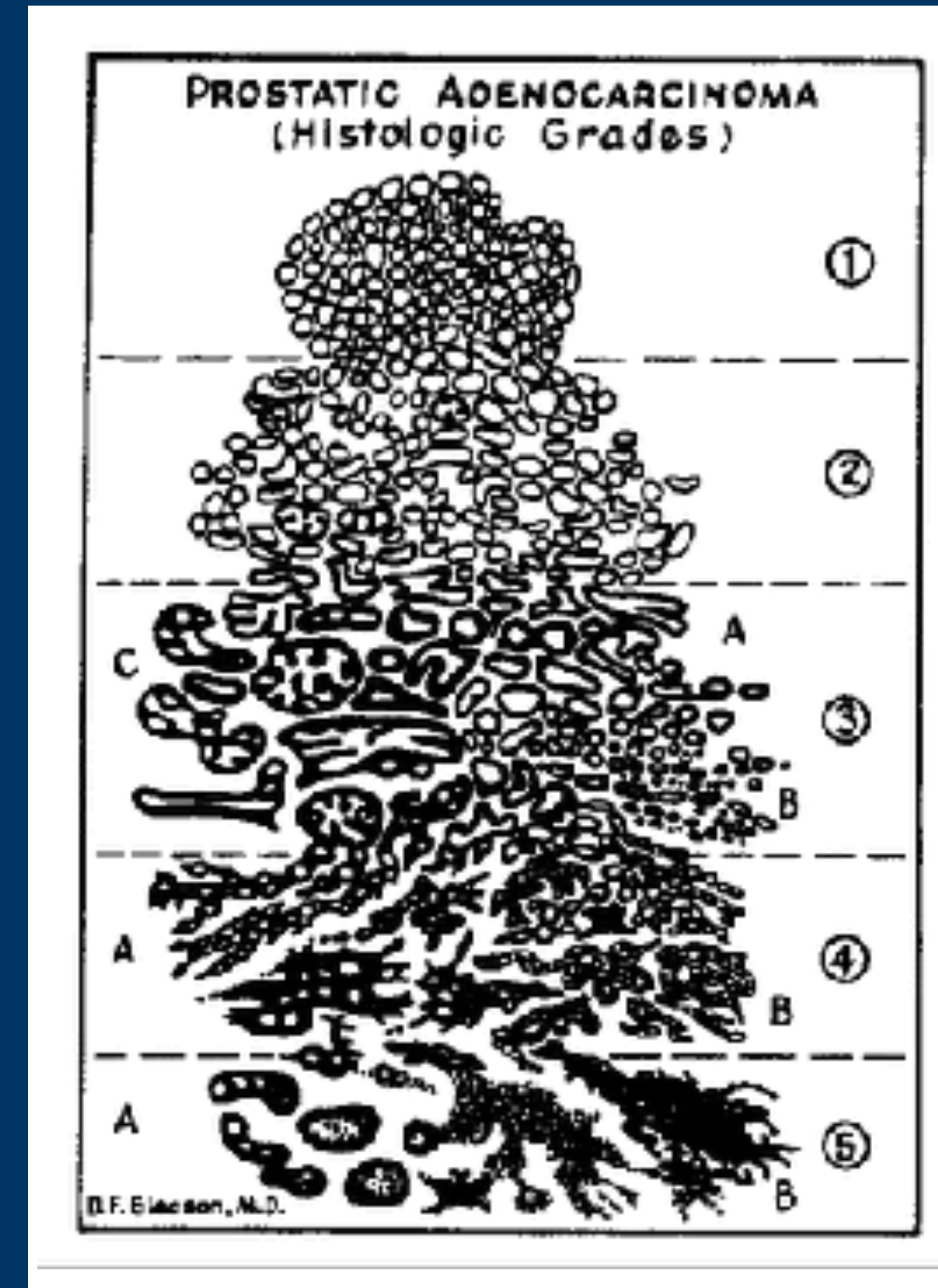
Cancer Grade

- Prostate Cancer Grading is dependent and determined by the pattern of growth.
- Most prostate cancers have a variety of growth patterns and are heterogeneous, sometimes making it difficult to determine how aggressive a cancer might be.
- A grading scale, either the Gleason score or the more accurate and newer Grade Grouping system accounts for the variety of cells seen and predicts speed of growth



Cancer Grade

- Prostate Cancer Grading is dependent and determined by the pattern of growth.
- Gleason 6 or Grade Group 1 cancers are generally considered slow growing and lower risk for spread.
- Gleason score 7 or Grade Group 2 and 3 cancers are generally considered moderate risk for growth and spread.
- Gleason 8,9,10 or Grade Group 4 and 5 cancers are generally considered higher risk cancers for growth and spread.



Treatment Goals

Making a decision about prostate cancer treatments involves determining what the risk of the prostate cancer is combined with your expected longevity and health status over the long term.

Many prostate cancers do not need treatment. Some prostate cancers are found small. Others are slow growing. Many are both.

Small, slow growing cancers may be monitored for growth. This is called active surveillance.

As a cancer that is larger or faster growing will impact quality or quantity of life. Those cancers will need treatment.

Your medical history and expected longevity impacts a decision regarding treatment for prostate cancer.

Contributors to longevity: weight, medical conditions, smoking history, diet, exercise, other “lifestyle”, family longevity.

Treatment Options

Treatment Options

Choosing a Treatment Option depends on a combination of your health status, goals for therapy, and your cancer...

- Observation
- Active surveillance
- Removal (Prostatectomy)
- Radiation
- “Alternatives” (HIFU, Cryotherapy, Interstitial Laser Treatment)
- Focal Therapy Options

Treatment Options	What is it?	Benefits	Potential Risks
Active Surveillance	Monitor the cancer over time for potential growth. Treat when appropriate to prevent spread or symptoms.	No immediate complications experienced for men who don't have symptoms or the cancer is small and slow growing	Progression of cancer while being monitor, spread of cancer. Anxiety related to "just waiting for cancer to grow."
Radical Prostatectomy	Removal of the entire prostate and seminal vesicles. Most often includes a lymph node dissection	Removes all of the cancer and all of the prostate so cancer does not come back in the prostate itself. Best long term cure.	Surgery risks infection, bleeding, anesthesia; Incontinence : leaking urine, diapers; Impotence : loss of erections
Radiation	Many forms of radiation exists. Most deliver radiation to prostate and surrounding tissue to kill the cancer.	Leaves prostate intact. No surgery Less incontinence Less immediate risk for erections	Radiation damage long term risk for bladder, colon Urinary and sexual dysfunction exist. Limits options if cancer returns
Less Common Options	What is it?	Benefits	Potential Risks
Cryosurgery	Freeze the prostate to kill the cancer	Leaves prostate intact. Less incontinence risk.	Not as good as cancer control. Impotence. Imprecise method
High Frequency Ultrasound	Intense ultrasound beams burn the prostate.	Leaves prostate intact. Less incontinence risk. Less risk of potency.	Scarring of urethra. Not as good cancer control.
Interstitial Lasers	Lasers beams in the prostate kills the cancer cells	Leaves prostate intact. Less incontinence risk. Less risk of potency.	Not as good cancer control. Requires heavy surveillance.

...good luck on your journey...