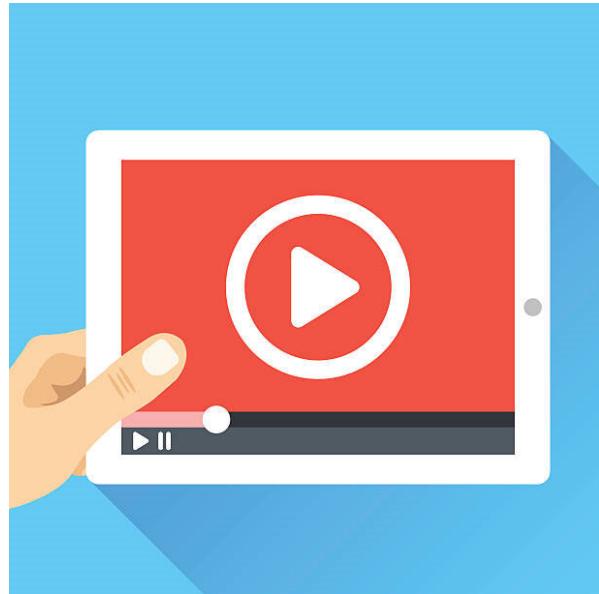


## PROSTATE INTRO ANATOMY

Presented by Lori Somers, RN  
SHRI Video Training Series | Iowa  
Cancer Registry  
Recorded 3/2023



1

1

## PROSTATE GLAND ANATOMY

Gland of the male reproductive system & is located in front of rectum just below bladder

Main purpose to produce fluid for semen

About size of chestnut, somewhat conical in shape

Consists of base, apex, anterior, posterior & lateral surfaces

The prostate & its plexus is surrounded by the prostatic fascia.

Denovilliers fascia – Posterior portion of the fascia which forms barrier between prostate & rectum.

2

2

## TERMS

### Base of prostate

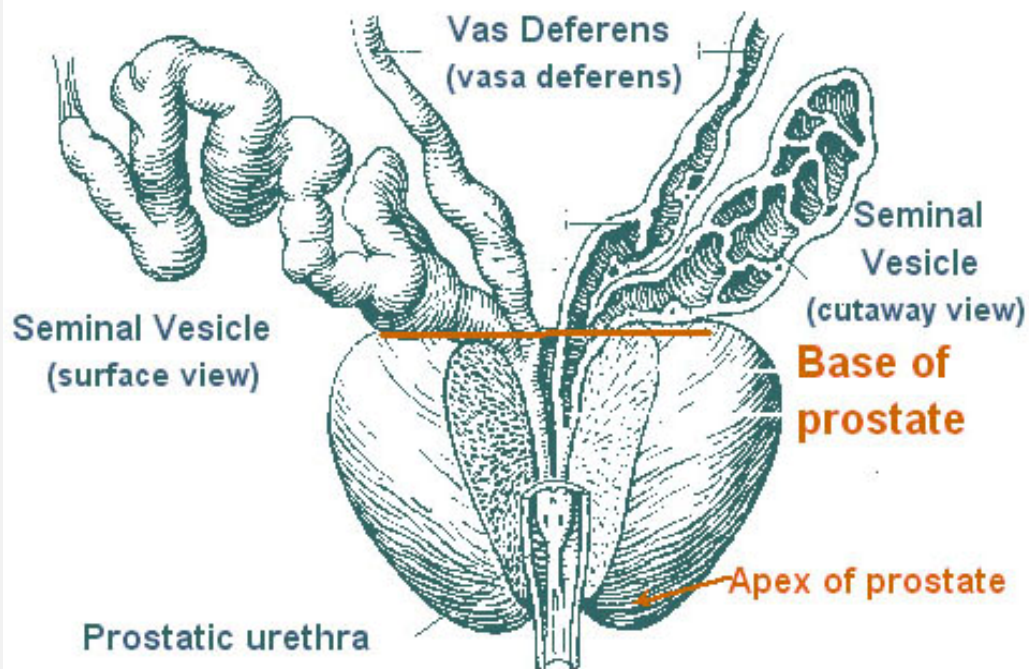
- Directed upward near inferior surface of bladder.
- Greater part of this surface is directly continuous with bladder wall

### Apex of prostate

- Apex is directed downward
- In contact with superior fascia of urogenital diaphragm

3

3



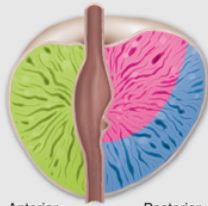
4

4

**Lobes**

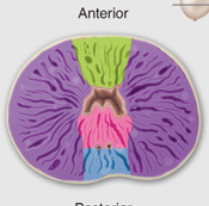
- Lateral
- Middle (median)
- Anterior (isthmus)
- Posterior

**Median sagittal section**



Anterior      Posterior

**Transverse section**

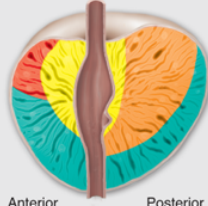


Anterior      Posterior

**Zones**

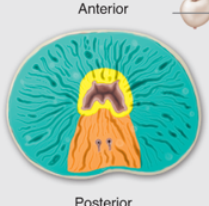
- Peripheral
- Central
- Transitional (periurethral)
- Fibromuscular

**Median sagittal section**



Anterior      Posterior

**Transverse section**



Anterior      Posterior

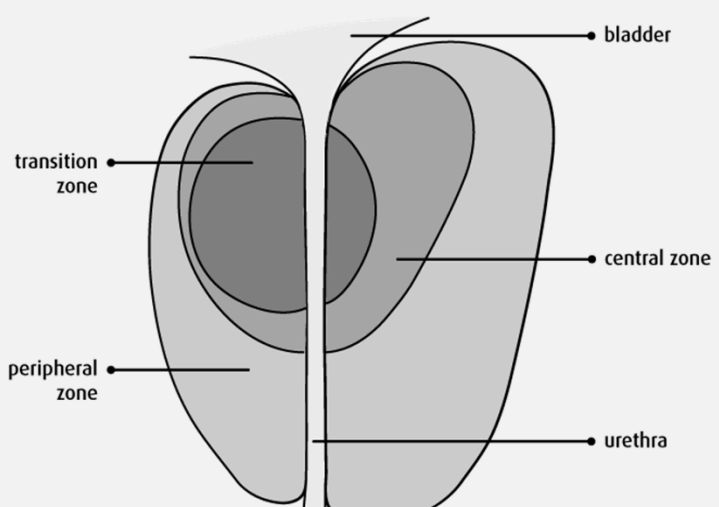
**LOBES & ZONES OF PROSTATE**

Source: Mark. H. Hankin, Dennis.E. Morse, Carol. A. Bennett-Clarke: Clinical Anatomy: A Case Study Approach Copyright © McGraw-Hill Education. All rights reserved.

5

**ZONES OF PROSTATE**

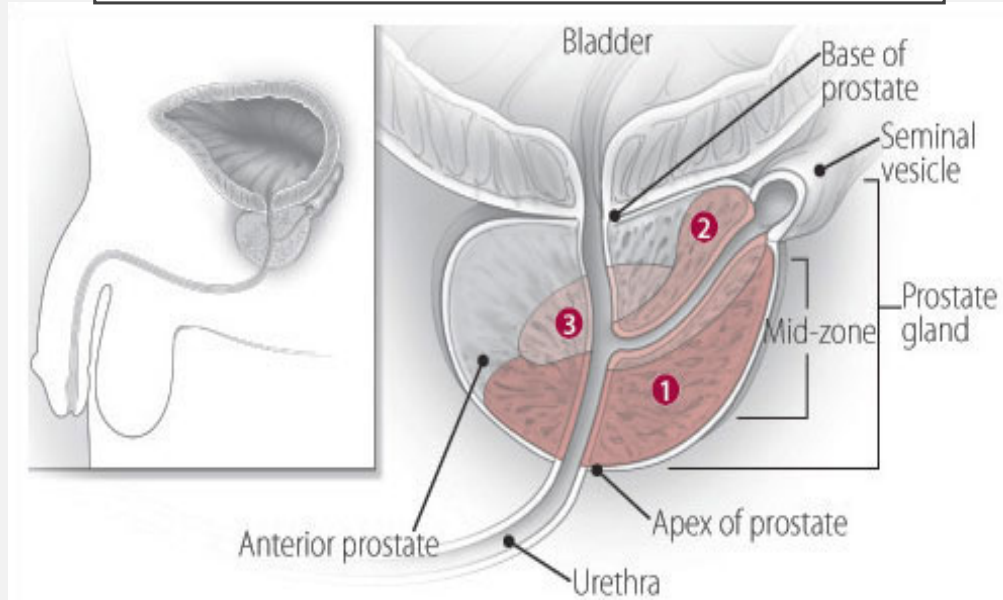
Prostate Zones



Labels: bladder, transition zone, peripheral zone, central zone, urethra

6

## ZONES OF PROSTATE



7

7

## BENIGN PROSTATIC HYPERTROPHY (BPH)

- ❖ Benign condition which an overgrowth of prostate tissue pushes against urethra causing obstruction of urine flow
  - ❖ May cause frequent urination, difficulty to start or complete obstruction in severe cases.
- ❖ A gradual enlargement of prostate & occurs in more than half of men over 45
- ❖ While BPH is not a malignant condition, prostate CA is present in about 38% of men who undergo surgery to relieve symptoms

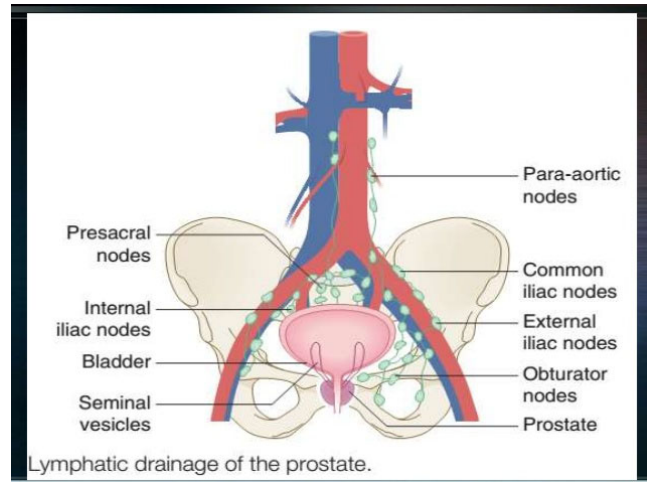
8

8

## REGIONAL LYMPH NODES

### Groups:

- Pelvic, NOS
- Hypogastric
- Obturator
- Iliac
- Sacral



9

9

## DIAGNOSING PROSTATE CANCER

10

10

## PROSTATE CA

- ❖ Prostate CA usually arises near surface of gland, & may be felt by physician during digital rectal exam (DRE)
- ❖ As tumor grows, prostate expands around the urethra & may cause urinary symptoms similar to BPH. By the time tumor large enough to cause symptoms, has often spread beyond its capsule.
- ❖ May invade surrounding fat & tissue, seminal vesicles &/or neck of bladder.
- ❖ May involve LN's in pelvic region. Later can spread to bones, primarily in spine, hip, pelvis & chest.

11

11

## PHYSICAL EXAM

- ❖ **Key information to document:**
  - ❖ palpable mass, tumor, nodule on DRE
  - ❖ enlargement of prostate (Many times numbered 1+, 2+, and so forth)
  - ❖ size of nodule
  - ❖ nodularity in prostate or pelvis
  - ❖ palpable lymph nodes, palpable nodes
  - ❖ evidence of "frozen" pelvis
  - ❖ organomegaly (hepatosplenomegaly)

12

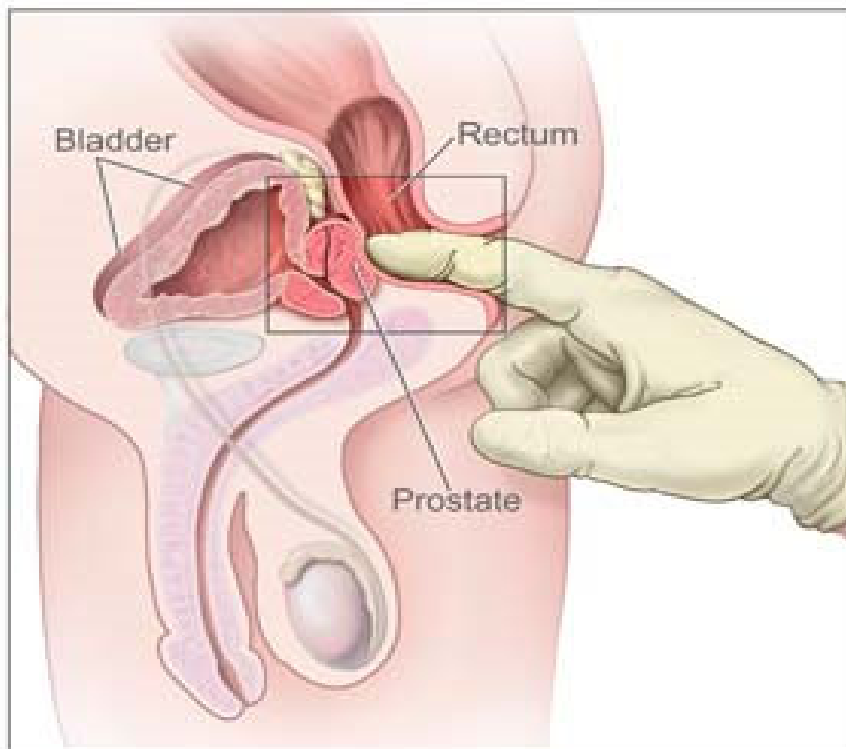
12

❖ Digital Rectal Exam (DRE)

❖ Prostate Specific Antigen blood test (PSA)

13

13



14

14

## PSA ~ BLOOD

- ❖ Tumor marker assay of blood serum for antigen released from cells in prostate tissue.
  - ❖ Value may be elevated in benign prostatic hypertrophy.
  - ❖ After radical prostatectomy or radiation therapy, rising levels of PSA indicate residual disease or recurrence
- ❖ Normal range: 0 - 4.0 ng/ml. Normal range also varies depending on the patient's age.

15

15

## IMAGING

- ❖ **Prostatic Ultrasound** – Many times called Transrectal U/S (TRUS). Document “increased areas of attenuation”, mention of “hypoechoic area or nodule”.
- ❖ **CT Abd/Pelvis** – Done to assess primary tumor extension, regional LN mets & distant mets.
- ❖ **Bone Scan** – common site of distant mets in prostate CA. Document mention of “lytic”, “osteolytic” or “blastic” lesions. Exception: Use of these terms in conjunction with a (suspected) Dx of arthritis, previous fracture or osteomyelitis.

16

16



## PI-RADS

SEER 2022 Appendix E1:

PI-RADS 4 or 5  
REPORTABLE

19	Prostate cancer cases with an PI-RADS category 4 or 5	Report based on the American College of Radiology Prostate Imaging Reporting and Data System (PI-RADS) <a href="#">definitions</a> . PI-RADS categories 4 (high-clinically significant cancer is likely to be present) and 5 (very high-clinically significant cancer is highly likely to be present) are reportable, unless there is other information to the contrary.
----	---	---

Appendix E1: Reportable Examples

E.1.2

17

17

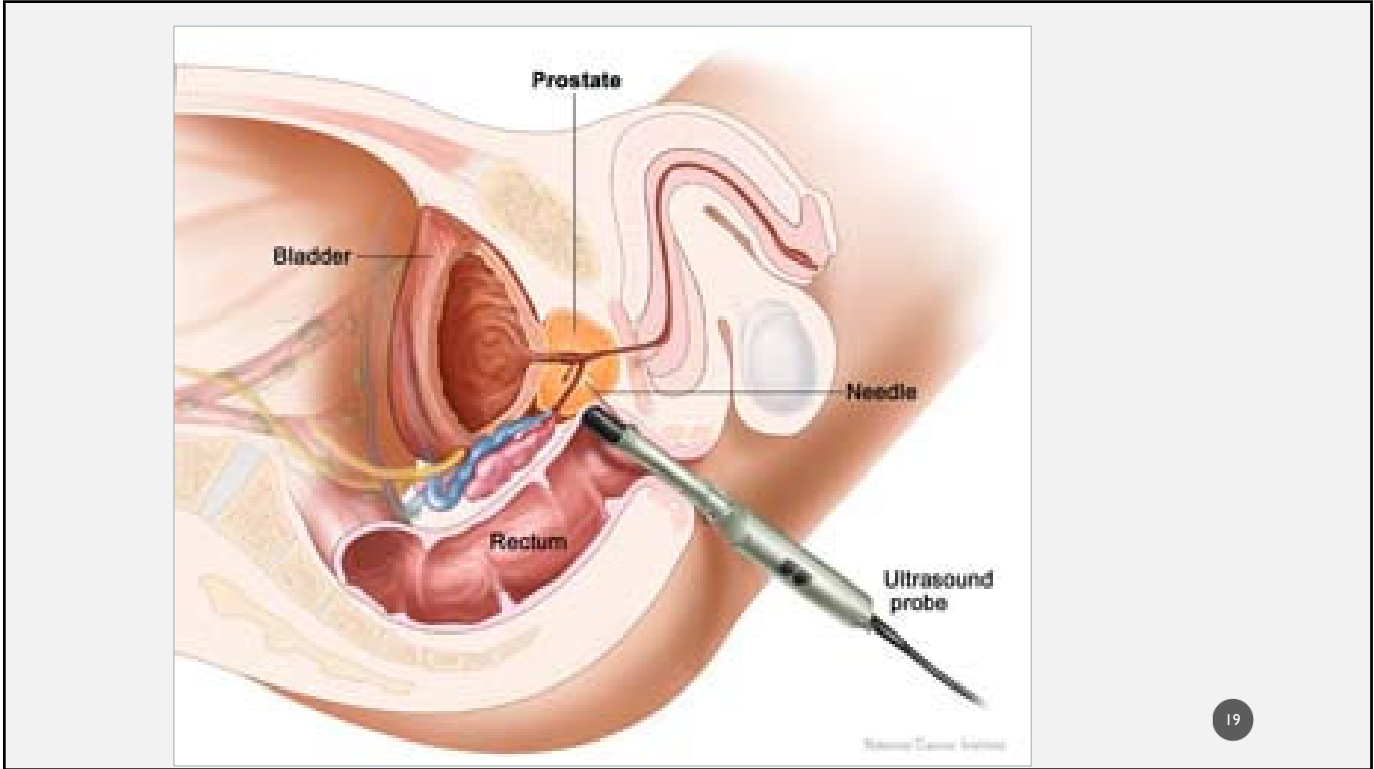
## ENDOSCOPIES

### ❖ Cystoscopy

- ❖ Examination of the bladder using a fiberoptic instrument.
- ❖ Used to also evaluate the prostatic urethra & any stricture potentially caused by an enlarged prostate.
- ❖ Used to access PROSTATE when performing a TURP.

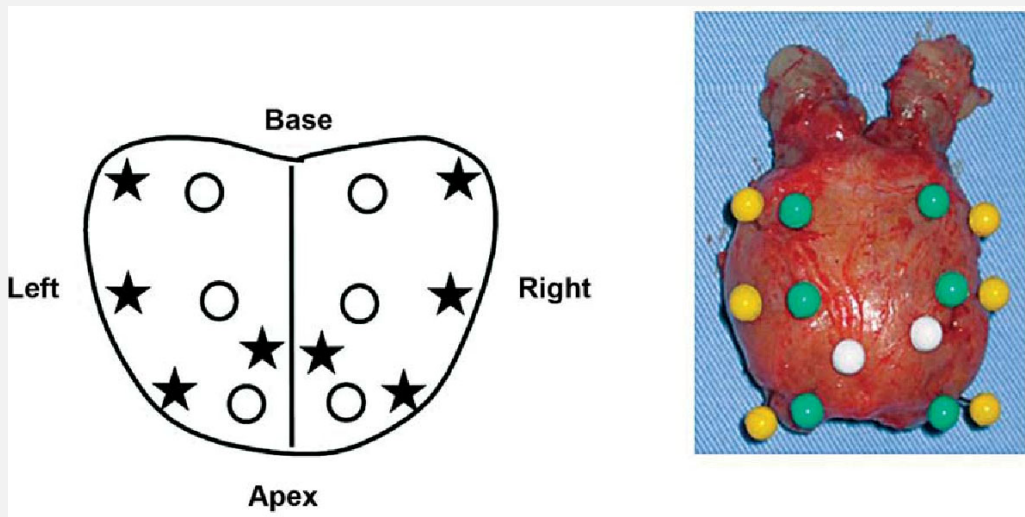
18

18



19

# DRAWING OF SEXTANT BX



20

20

## PRIMARY SITE

### Prostate

Primary Site	Histology
C619	8000-8700, 8720-8790

#### Notes

8000-8700, 8720-8790

C619 Prostate gland

21

21

## QUESTIONS

Contact Info  
 Lori Somers, RN  
 Training & Quality Improvement  
 State Health Registry of Iowa  
[lori-somers@uiowa.edu](mailto:lori-somers@uiowa.edu)

22

22