

Collecting Cancer Data: Prostate



2013-2014 NAACCR Webinar Series

November 7, 2013



Q&A

- Please submit all questions concerning webinar content through the Q&A panel.

Reminder:

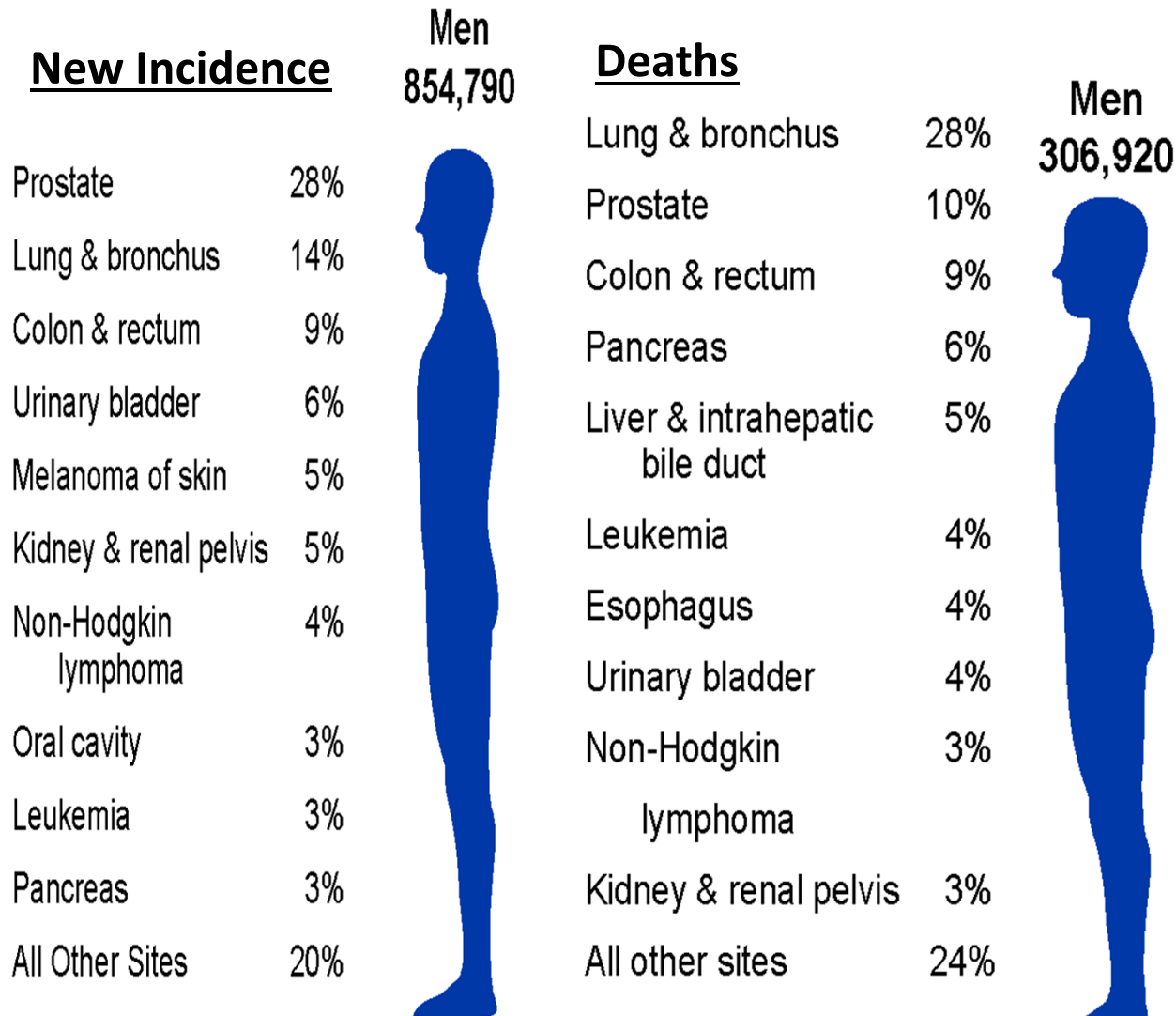
- If you have participants watching this webinar at your site, please collect their names and emails.
 - We will be distributing a Q&A document in about one week. This document will fully answer questions asked during the webinar and will contain any corrections that we may discover after the webinar.

Fabulous Prizes



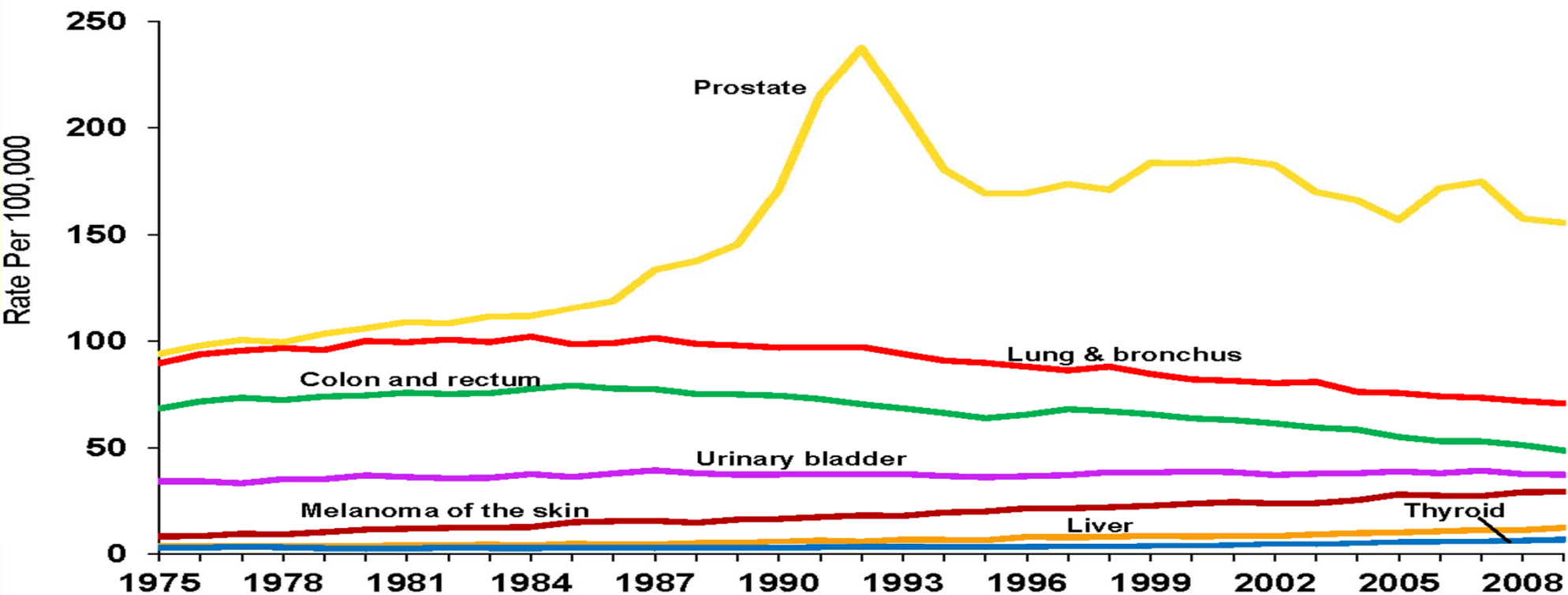
Key Statistics

- Estimated new cases and deaths from prostate cancer in the United States in 2013:
 - New cases: 238,590
 - Deaths: 29,720



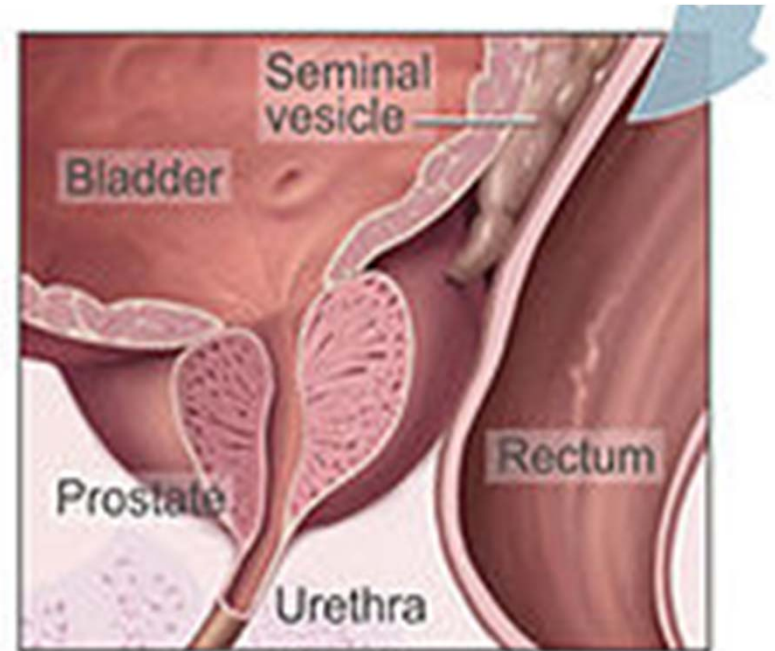
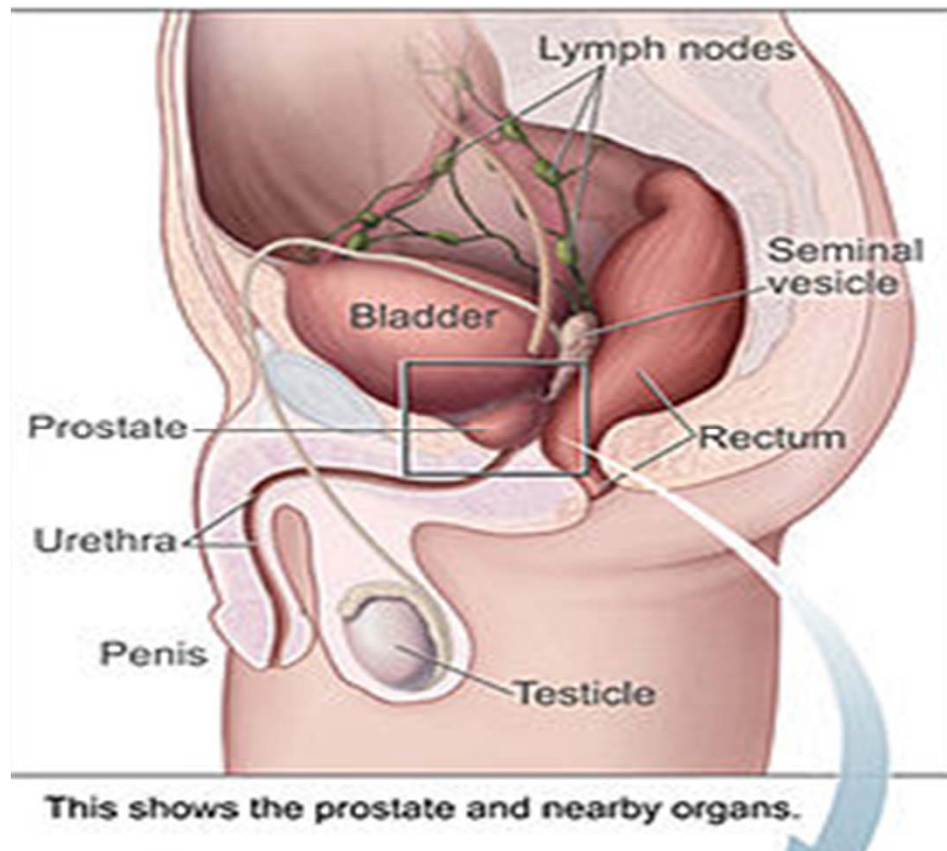
American Cancer Society. *Cancer Facts & Figures 2013*. Atlanta: American Cancer Society; 2013.

Cancer Incidence Rates* Among Men, US, 1975-2009



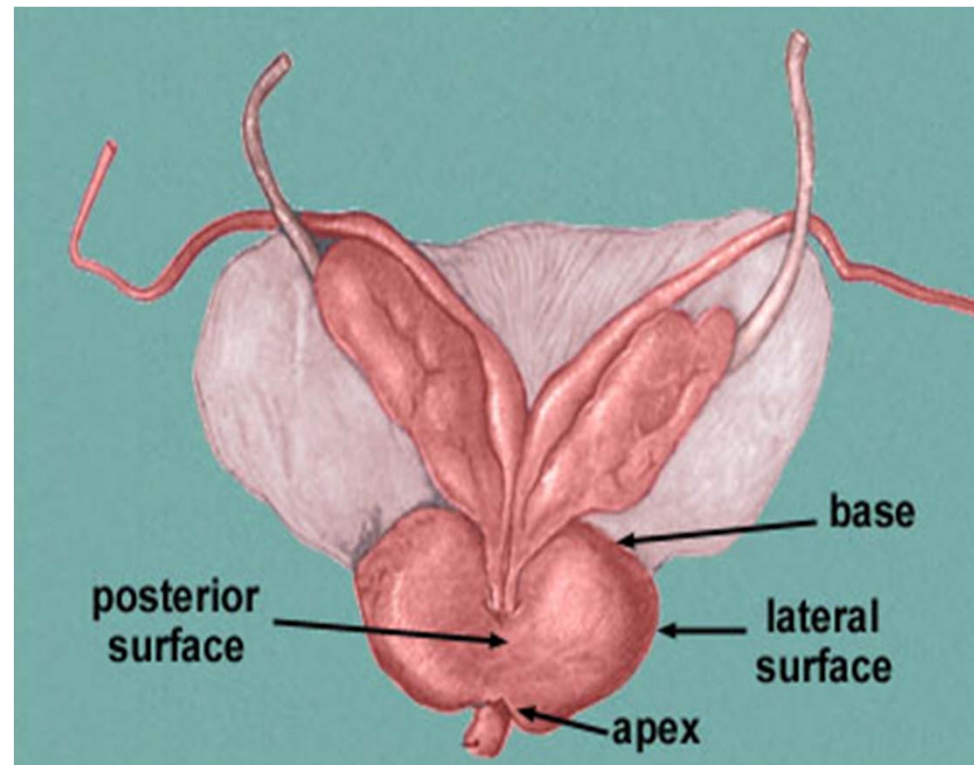
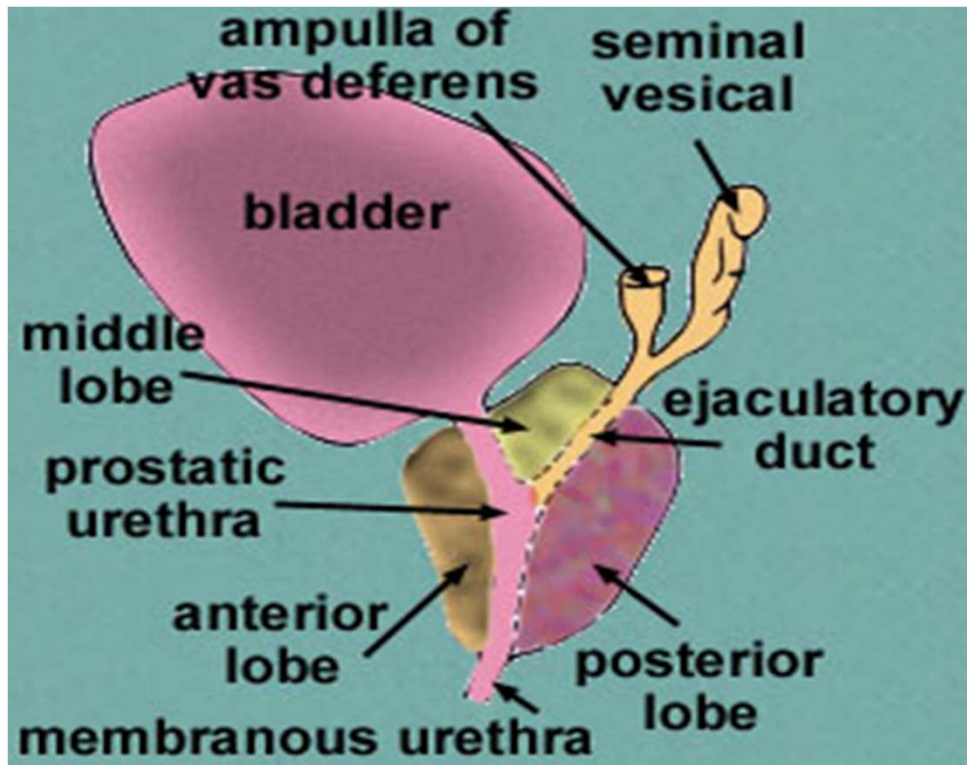
*Age-adjusted to the 2000 US standard population and adjusted for delays in reporting.
Source: Surveillance, Epidemiology, and End Results Program, Delay-adjusted Incidence database:
SEER Incidence Delay-adjusted Rates, 9 Registries, 1975-2009, National Cancer Institute, 2012.

Prostate Anatomy



This shows the inside of the prostate, urethra, rectum, and bladder.

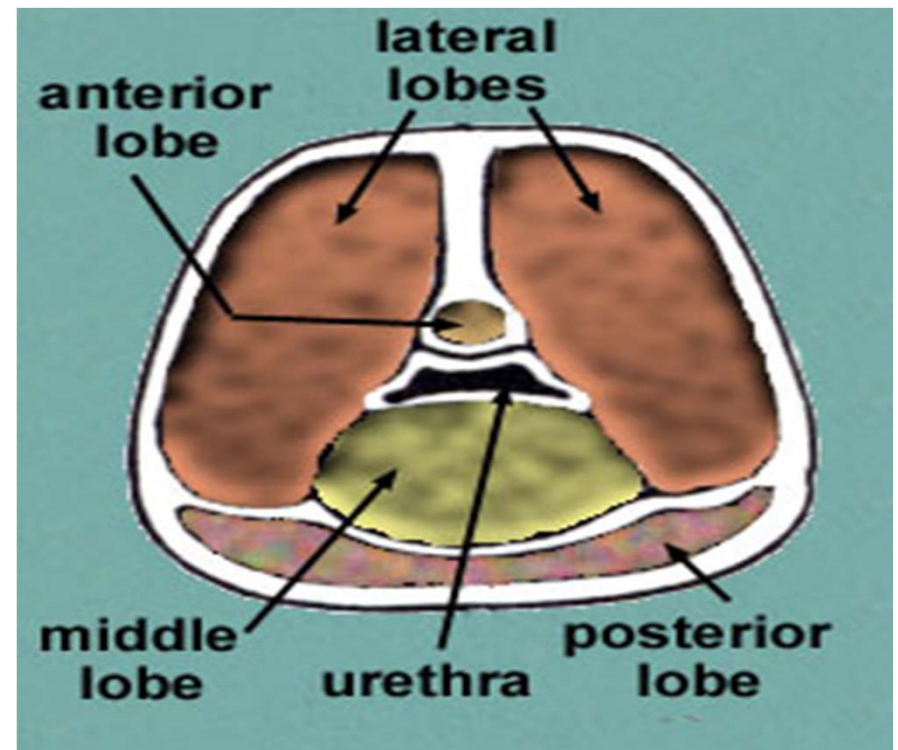
Prostate Anatomy



<http://home.comcast.net/~wnor/pelvis.htm>

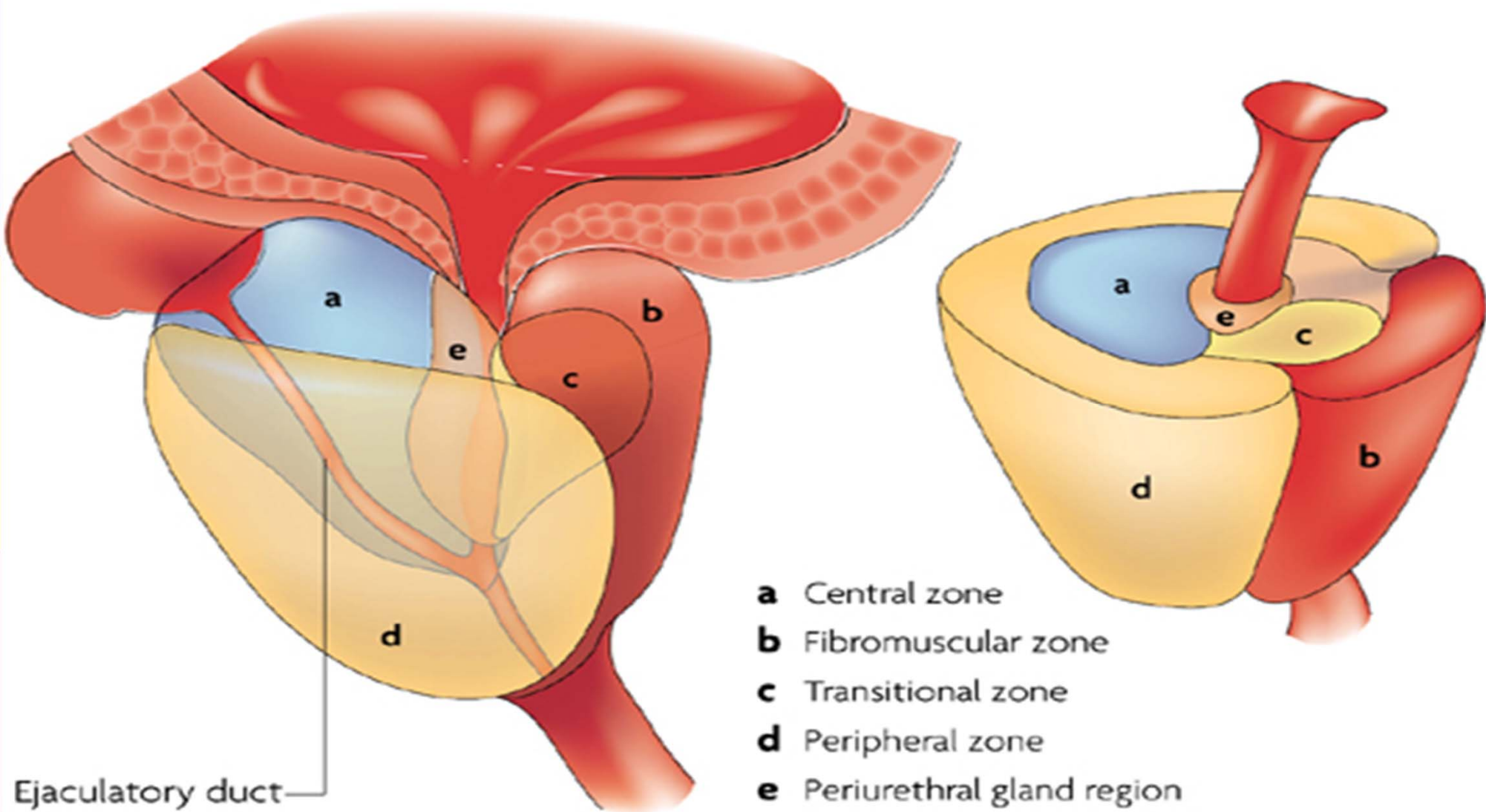
Lobes of the Prostate

- Posterior Lobe
- Anterior lobe
- Middle Lobe
- Lateral Lobes

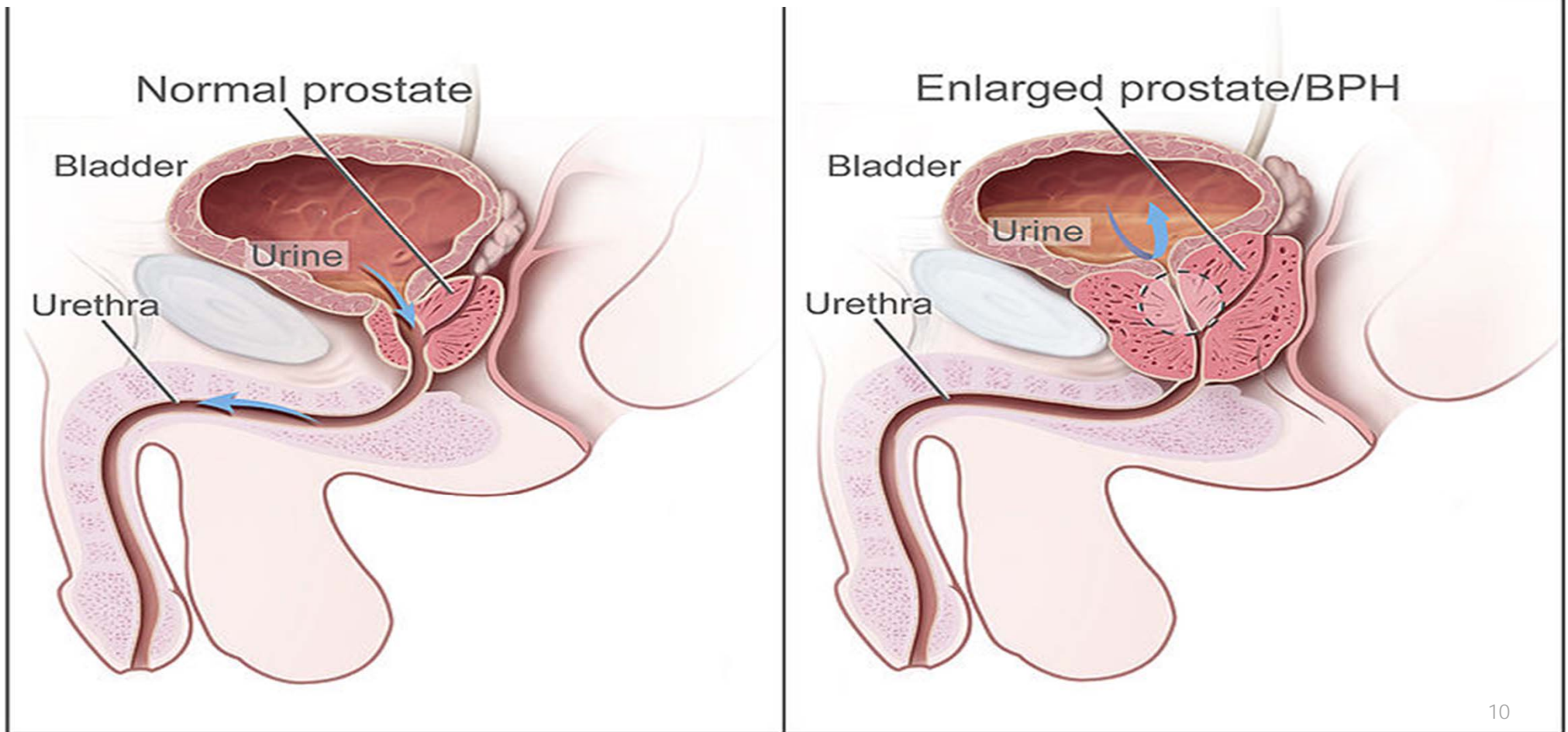


<http://home.comcast.net/~wnor/pelvis.htm>

Prostate zones



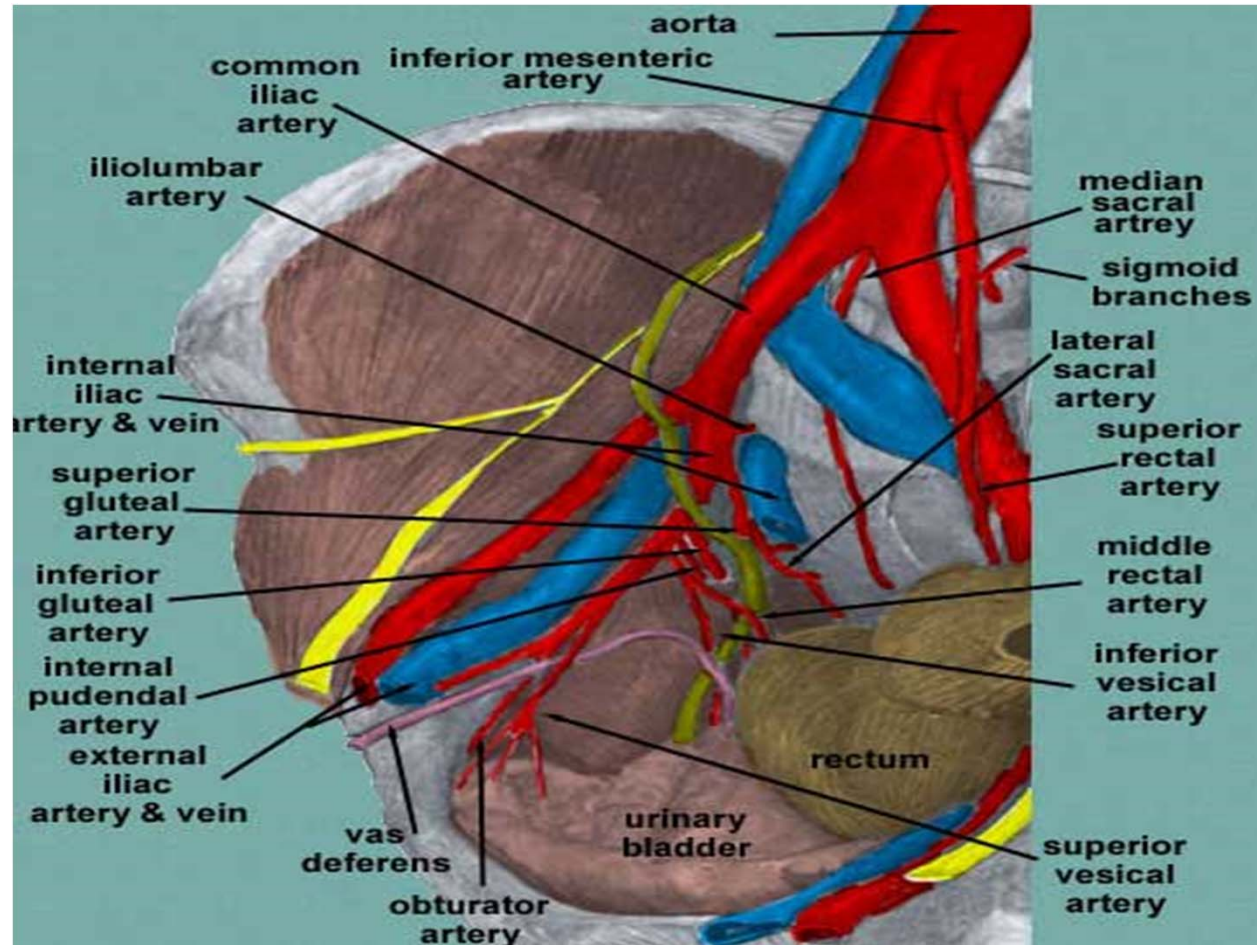
Benign Prostatic Hyperplasia (BPH)



<http://home.comcast.net/~wnor/pelvis.htm>

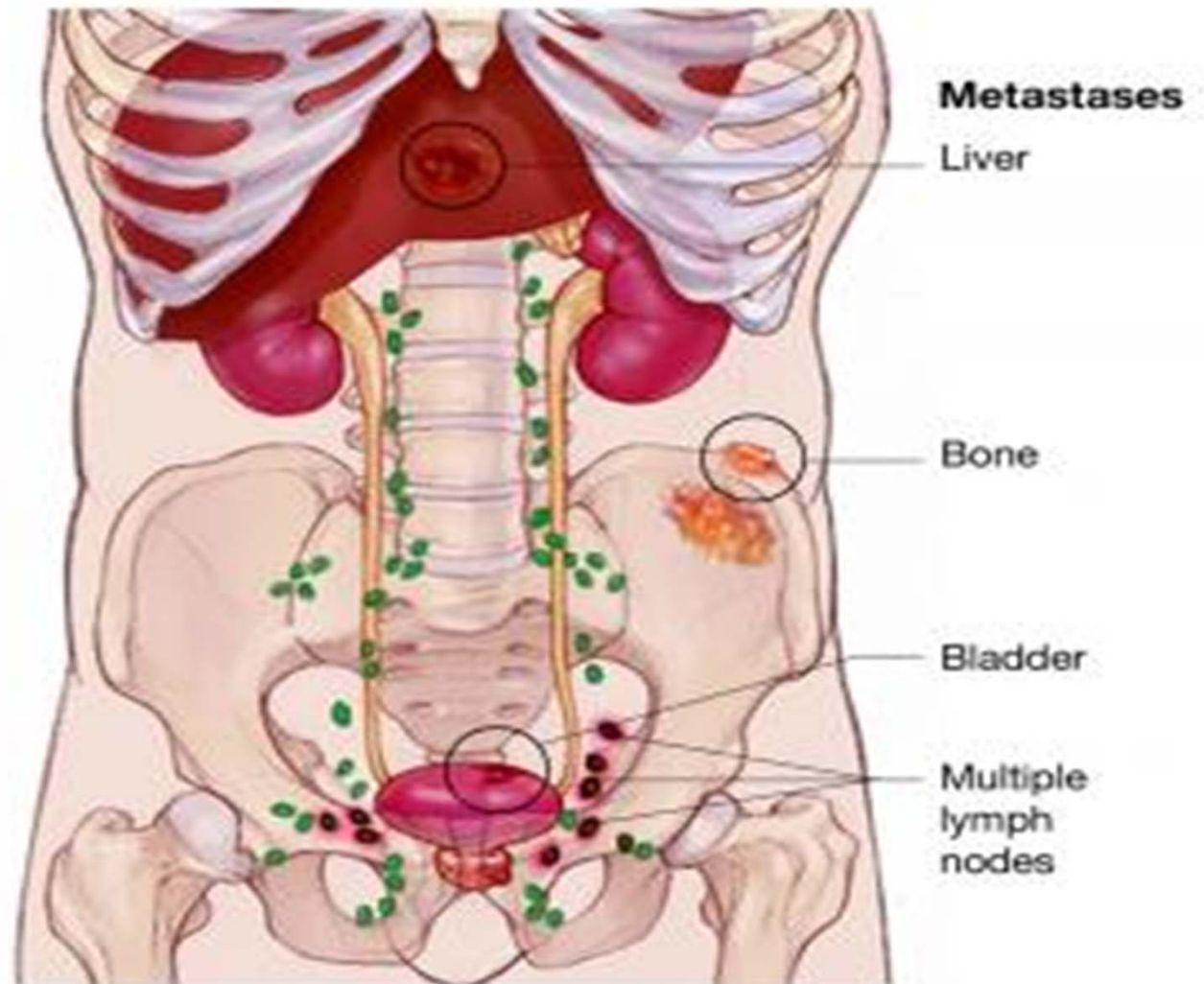
Regional Lymph Nodes

- Pelvic, NOS
- Hypogastric
- Obturator
- Iliac
 - External
 - Internal
 - NOS
- Sacral
 - Lateral
 - Presacral
 - Promontory (Gerota's)
 - NOS



Distant Mets

- Bone
- Distant Lymph Nodes
 - Aortic
 - Common Iliac
 - Inguinal
 - Supraclavicular
 - Cervical
 - Scalene
 - Retroperitoneal
- Lung
- Liver



© 2005-2011 American Society of Clinical Oncology (ASCO)

Histology

- Acinar adenocarcinoma of the prostate
 - Makes up 95% of all prostate cancers
 - Refers to the fact that the adenocarcinoma originates in the prostatic acini
 - Is not a specific histologic type
 - Is assigned ICD-O-3 histology code 8140

Multiple Primary and Histology Coding Rules

- Rule M3: Adenocarcinoma of the prostate is always a single primary.
 - *Note 1: Report only one adenocarcinoma of the prostate per patient per lifetime.*
 - *Note 2: 95% of prostate malignancies are the common (acinar) adenocarcinoma histology (8140).*
 - *Note 3: If patient has a previous acinar adenocarcinoma of the prostate in the database and is diagnosed with adenocarcinoma in 2007 it is a single primary.*

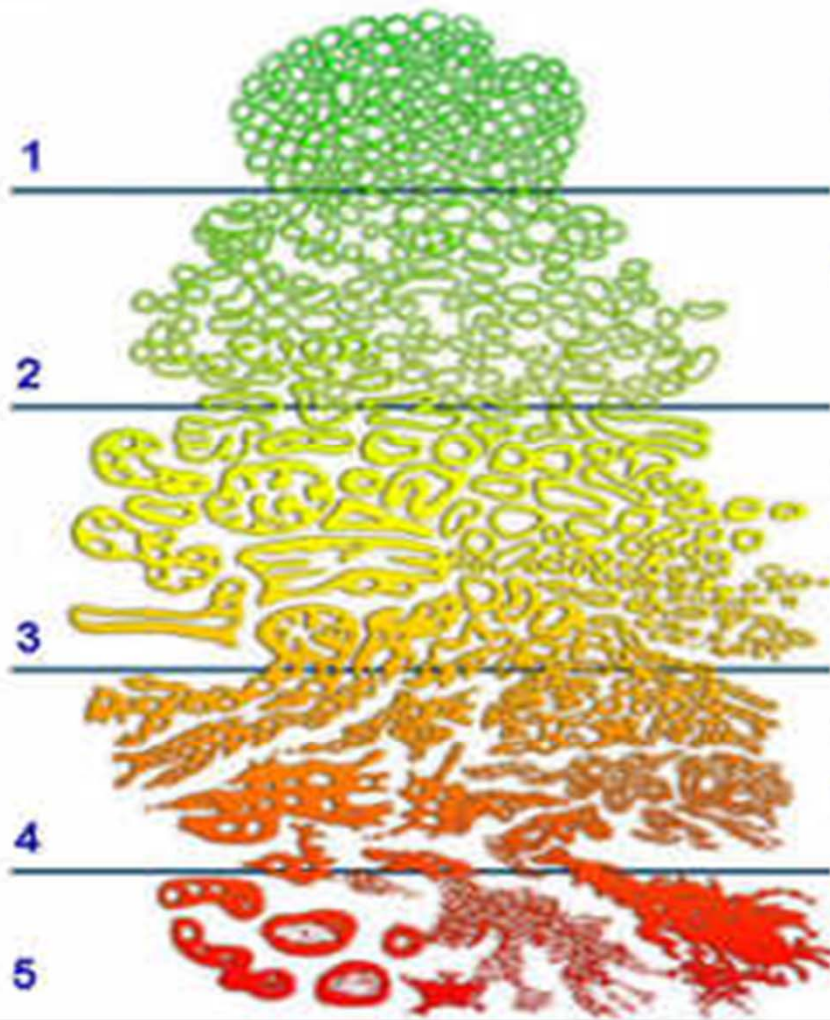
Multiple Primary and Histology Coding Rules

- Rule H10 (single tumor) H20 (multiple tumors)
 - Code 8140 (adenocarcinoma, NOS) for prostate primaries when the diagnosis is acinar (adeno)carcinoma.

Coding Grade for Prostate

- Gleason's grading system
 - Is based on 5 histologic components (patterns)
 - Calculates a score by summing the primary and secondary patterns
 - May refer to the 3rd most common pattern as a tertiary grade

Gleason's Pattern Scale



1. Small, uniform glands.

2. More space (stroma) between glands.

3. Distinctly infiltration of cells from glands at margins.

4. Irregular masses of neoplastic cells with few glands.

5. Lack of or occasional glands, sheets of cells.

Well differentiated

Moderately differentiated

Poorly differentiated
Anaplastic

Coding Prostate Cancer Grade

Code	Gleason's Score	Terminology	Histologic Grade
1	2, 3, 4	Well differentiated	I
2	5, 6	Moderately differentiated	II
3	7, 8, 9, 10	Poorly differentiated	III

Always code the highest grade!

Prostate Cancer Work-Up

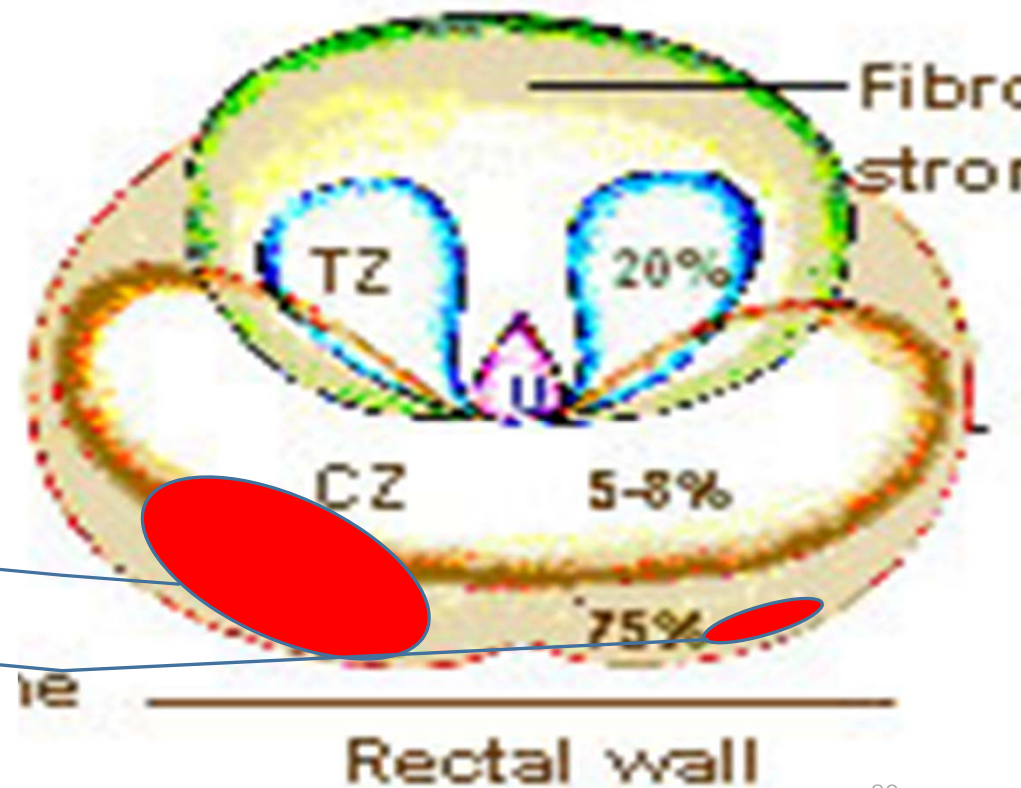
- Prostatic specific antigen (PSA) screening
 - Not diagnostic without other work-up
- Free PSA
 - The ratio of how much PSA circulates free compared to the total PSA level
 - Do not code free PSA
- PSA Velocity (PSA-V)
 - Rate of rise in the PSA level
- PSA Doubling Time (PSA-DT)
- PSA Density
 - PSA level / volume of the prostate

Prostate Cancer Work-Up

- History and physical examination
 - Digital rectal exam (DRE)
 - Most prostate cancers occur in the peripheral zone
 - Whether or not a tumor is large enough to be palpable is an important clinical indicator

Palpable

Not Palpable



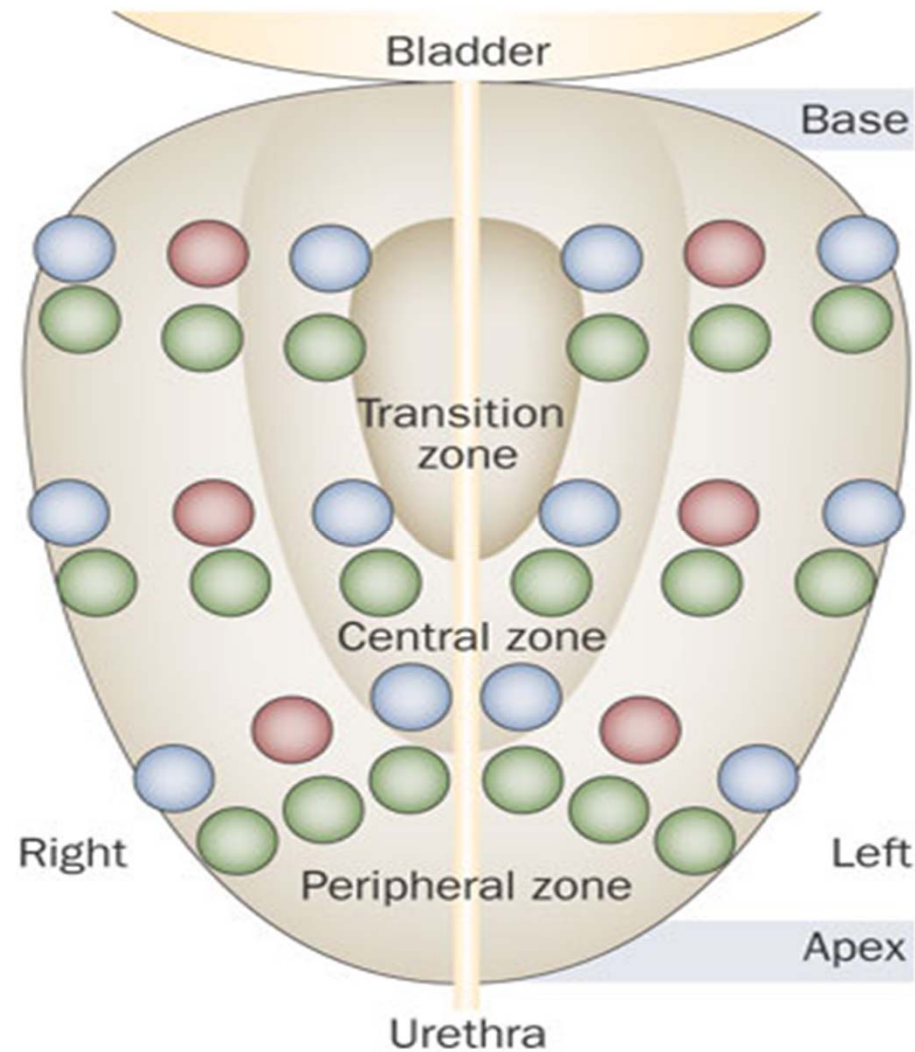
Prostate Cancer Work-up

Imaging studies

- Transrectal ultrasound (TRUS)
- MRI
 - Endorectal (ER MRI)
 - Spectroscopic (MRSI)
 - Dynamic contrast enhanced (DCE MRI)
 - T2 Weighted MRI
- CT scans
 - Abdomen/pelvis
 - Bone
 - Liver/spleen
 - Brain
- Chest x-ray

Prostate Cancer Work-up

- Endoscopy
 - Cystoscopy, proctosigmoidoscopy, laparoscopy
- Transrectal needle biopsy
- Transperineal needle biopsy
- Transurethral core biopsy



Nomograms and Predictive Models

- Assessment of risk
 - How likely is a cancer to be confined to the prostate?
 - How likely is the cancer to progress after treatment?
- Predictions based on:
 - Clinical stage
 - Biopsy Gleason grade
 - Preoperative PSA

Partin Tables

PSA:

Clinical Stage: ▼

Gleason Score: ▼

PSA:6 Clinical Stage:'T1c' Gleason Score:'5-6'

Organ confined:	[82.2%(80.4%-84%)]
Extraprostatic extension:	[16.3%(14.6%-18%)]
Seminal Vesicle Invasion:	[1.2%(0.0%-2%)]
Lymph Node Invasion:	[0.2%(0.1%-0%)]

All numbers represent predictive probabilities with a 95 percent confidence interval

<http://urology.jhu.edu/prostate/partintables.php>

Partin Table

PSA:

Clinical Stage:

Gleason Score:

PSA:6 Clinical Stage:'T2b/T2c' Gleason Score:'4+3'

Organ confined: [23.9%(18.1%-30.3%)]

Extraprostatic extension: [46%(37.4%-55%)]

Seminal Vesicle Invasion: [17.5%(10.5%-25%)]

Lymph Node Invasion: [12.5%(6.2%-22%)]

All numbers represent predictive probabilities with a 95 percent confidence interval

Life Expectancy

- Social Security Life Tables

Exact age	Male		
	Death probability ^a	Number of lives ^b	Life expectancy
65	0.017161	79,354	17.00
66	0.018610	77,992	16.28
67	0.020216	76,540	15.58
68	0.021992	74,993	14.89
69	0.023966	73,344	14.22

<http://www.ssa.gov/OACT/STATS/table4c6.html>

Initial Diagnosis

- DRE
- PSA
- Core Biopsy

- Life Expectancy \leq 5yrs and patient is asymptomatic
 - No further workup or treatment until symptomatic, except for high risk patients (bulky T3-T4 disease or Gleason score 8-10)

- Life expectancy $>$ 5yrs or symptomatic
 - Bone scan if
 - T1 and PSA $>$ 20
 - T2 and PSA $>$ 10
 - Gleason Score \geq 8
 - T3 or T4
 - Symptomatic
 - Pelvic CT or MRI if
 - T3 or T4
 - T1-T2 and probability of LN mets $>$ 10%
 - All others; no additional imaging

Treatment Categories

- Localized
 - Very Low Risk
 - Low Risk
 - Intermediate Risk
 - High Risk
- Very High Risk (locally advanced)
- Metastatic Disease



Questions?

Quiz 1



Staging Systems

Prostate

CS Tumor Size: Prostate

- Record largest dimension of primary prostate tumor
- Tumor size is not a determinant in AJCC T category or Summary Stage

CS Extension-Clinical Extension: Prostate

- Code 000 = in situ
 - AJCC considers in situ carcinoma of prostate impossible and 00 maps to TX
- Codes 100-150 = clinically inapparent tumor
- Codes 200-240 = clinically apparent tumor
- CS 300 = localized NOS
 - Use if confined to prostate and unknown if tumor is inapparent or apparent
- Codes 410-700 = extension beyond prostate

CS Extension-Clinical Extension: Prostate

- Clinically inapparent tumor
 - Not palpable by DRE
 - DRE does not mention palpable tumor/mass/nodule
 - Clinician statement of cT1

CS Extension-Clinical Extension: Prostate

- AJCC Cancer Stage
 - Clinically inapparent tumor
 - T1 NOS: Not palpable or visible by imaging
 - CS Extension = 100
 - T1a: Incidental histologic finding in 5% or less of resected tissue
 - CS Extension = 130
 - T1b: Incidental histologic finding in more than 5% of resected tissue
 - CS Extension = 140
 - T1c: Identified by needle biopsy
 - CS Extension = 150

CS Extension-Clinical Extension: Prostate

- Clinically apparent tumor
 - Palpable
 - Digital rectal exam (DRE)
 - Gold standard for clinically identifying prostate tumor
 - Clinician documentation of tumor, mass, or nodule infers apparent
 - Abnormal DRE alone DOES NOT infer apparent

CS Extension-Clinical Extension: Prostate

- Clinically apparent tumor
 - Imaging
 - Poor ability to identify tumor location and extent
 - Alone cannot replace DRE as staging standard
 - Not sufficiently uniform for detection and staging of prostate cancer to be part of routine staging
 - Clinician statement of cT2
 - Do not use information from biopsy to determine extent of involvement

CS Extension-Clinical Extension: Prostate

- Clinically inapparent vs. clinically apparent prostate tumor
 - Dependent upon DRE with physician statement of mass/tumor/nodule
 - Registrar should not upstage from inapparent to apparent based on imaging
 - Only managing physician can upstage to apparent based on imaging

CAnswer Forum: <http://cancerbulletin.facs.org/forums/showthread.php?5612-Using-the-MRI-to-determine-the-CS-Clinical-Extent>

CS Extension-Clinical Extension: Prostate

- AJCC Cancer Stage
 - Clinically apparent tumor
 - T2 NOS: Confined within prostate
 - CS Extension = 200, 240, or 300
 - T2a: Involves $\frac{1}{2}$ of 1 lobe/side or less
 - CS Extension = 210
 - T2b: Involves more than $\frac{1}{2}$ of 1 lobe/side but not both lobes/sides
 - CS Extension = 220
 - T2c: Involves both lobes/sides
 - CS Extension = 230

CS Extension-Clinical Extension: Prostate

- AJCC Cancer Stage
 - T3 NOS: Extends through prostate capsule
 - CS Extension = 410 or 490
 - T3a: Extracapsular extension (unilateral or bilateral)
 - CS Extension = 420-445
 - T3b: Invades seminal vesicle (s)
 - CS Extension = 450 or 470
 - T4: Adjacent structure (other than seminal vesicles) fixation or invasion
 - CS Extension = 500-750

CS Extension-Clinical Extension: Prostate

- Summary Stage 2000
 - In situ: Noninvasive; intraepithelial
 - CS Extension = 000
 - Localized (L): Clinically inapparent tumor; tumor confined to prostate; invasion into but not beyond prostatic capsule
 - CS Extension = 100-300
 - Regional by direct extension (RE): Extension beyond prostate
 - CS Extension = 410-520
 - Distant extension (D): Extension or fixation to pelvic wall or bone; further extension to bone, soft tissue, or other organs
 - CS Extension = 600 or 700

Pop Quiz

- Patient has elevated PSA. Per physician note, DRE is benign. Needle biopsy of prostate: Adenocarcinoma right and left lobes. Per managing physician cT1c. MRI report states the result as cT2c prostate carcinoma.
- What is the code for CS Extension?
 - 150: Tumor identified by needle biopsy (clinically inapparent); Stated as cT1c with no other information on clinical extension
 - 230: Clinically apparent tumor involves both lobes/sides; Stated as cT2c with no other info on clinical extension
 - 300: Localized NOS; Confined to prostate NOS; Intracapsular involvement only; Not stated if T1 or T2, clinically apparent or inapparent
 - 999: Unknown

CS Extension-Clinical Extension: Prostate

Code	Description	TNM 7	SS20000
150	Tumor identified by needle biopsy (clinically inapparent); Stated as cT1c with no other information on clinical extension	T1c	L
230	Clinically apparent tumor involves both lobes/sides; Stated as cT2c with no other info on clinical extension	T2c	L
300	Localized NOS; Confined to prostate NOS; Intracapsular involvement only; Not stated if T1 or T2, clinically apparent or inapparent	T2NOS	L
999	Unknown	TX	U

CS Tumor Size/Ext Eval: Prostate

- Codes are different for this data item for prostate than for other sites
- Eval code reflects how most extensive disease was determined as coded in CS Extension – Clinical Extension or SSF3 CS Extension – Pathologic Extension

CS Tumor Size/Ext Eval: Prostate

- Does not meet criteria for AJCC pathologic staging
 - Code 0: Evaluation based on physical examination including DRE, imaging examination, or other non-invasive clinical evidence
 - Assign code 0 if CS Extension – Clinical Extension is code 200-240 without prostatectomy
 - Code 1: Evaluation based on endoscopy, diagnostic biopsy (needle core biopsy or fine needle aspiration biopsy), TURP or other invasive techniques
 - Assign code 1 if CS Extension – Clinical Extension is code 100-150 without prostatectomy

CS Tumor Size/Ext Eval: Prostate

- Meets criteria for AJCC pathologic staging
 - Code 2: Positive biopsy of extraprostatic tissue allows assignment to CS Extension Codes 410-700 in CS Extension – Clinical Extension
 - Do not use with CS Extension codes 000-300
 - Code 3: Evidence from autopsy; tumor suspected or diagnosed prior to autopsy; no prostatectomy
 - Code 4: Prostatectomy performed WITHOUT pre-surgical systemic treatment or radiation

CS Tumor Size/Ext Eval: Prostate

- Does not meet criteria for AJCC y-pathologic (yp) staging
 - Code 5: Prostatectomy performed AFTER neoadjuvant therapy and tumor size/extension based on clinical evidence
- Meets criteria for AJCC y-pathologic (yp) staging
 - Code 6: Prostatectomy performed AFTER neoadjuvant therapy and tumor size/extension based on pathologic evidence because pathologic evidence at surgery is more extensive than clinical evidence before treatment

CS Tumor Size/Ext Eval: Prostate

- Meets criteria for autopsy staging
 - Code 8: Evidence from autopsy only; tumor unsuspected or undiagnosed prior to autopsy
- Unknown
 - Code 9: Unknown if prostatectomy done
Not assessed; cannot be assessed
Unknown if assessed
Not documented in patient record

Pop Quiz

- Patient has elevated PSA. Per physician note, DRE is benign. Needle biopsy of prostate: Adenocarcinoma right and left lobes. Per managing physician cT1c. MRI report states the result as cT2c prostate carcinoma.
- What is the code for CS Tumor Size/Ext Eval?
 - 0: No prostatectomy; evaluation based on non-invasive clinical evidence
 - 1: No prostatectomy; evaluation based on other invasive techniques
 - 2: No prostatectomy; positive biopsy of extraprostatic tissue allows assignment to CS Extension Codes 410-700 in CS Extension – Clinical Extension
 - 4: Prostatectomy without pre-surgical treatment

CS Lymph Nodes: Prostate

Code	Description	TNM 7	SS20000
000	No regional lymph node involvement	N0	None
100	Regional nodes including contralateral or bilateral: Iliac, pelvic, periprostatic, sacral, regional nodes NOS; Stated as N1 with no other info on regional nodes	N1	RN
800	Lymph nodes NOS	N1	RN
999	Unknown	NX	U

Pop Quiz

- Patient reported with groin pain. PSA elevated at 170. CT scan reveals 6.6 cm right pelvic nodal mass and prominent prostate gland. Biopsy of pelvic node mass revealed metastatic prostate adenocarcinoma, Gleason score 4 + 3 = 7. DRE revealed high-riding prostate but only prostate apex could be touched so the presence or absence of induration or nodularity of the prostate could not be determined. Patient was treated with hormone therapy and did not have prostate biopsy.

Pop Quiz

- What is the code for CS Lymph Nodes?
 - 000: No regional node involvement
 - 100: Regional nodes including contralateral or bilateral: Iliac, pelvic, periprostatic, sacral, regional nodes NOS; Stated as N1 with no other info on regional nodes
 - 800: Lymph nodes NOS
 - 999: Unknown

CS Mets at DX: Prostate

- AJCC Cancer Stage
 - M1: Distant metastasis
 - Code 60
 - M1a: Non-regional lymph nodes
 - Codes 11, 12, & 20
 - M1b: Bone
 - Codes 30, 35, & 38
 - M1c: Other sites with or without bone disease
 - Codes 40, 50, 55, & 58
- Summary Stage 2000
 - Metastasis (D)
 - Codes 11-60

Pop Quiz

- Patient has biopsy positive for prostatic adenocarcinoma. Imaging shows right and left pelvic side wall nodes and a perirectal node consistent with metastatic prostate cancer.
- What is the code for CS Mets at DX?
 - 00: No distant metastasis
 - 12: Distant lymph nodes: Aortic, cervical, inguinal, retroperitoneal, scalene, supraclavicular, distant lymph nodes NOS
 - 99: Unknown

Prostatic Specific Antigen (PSA)

- Monitors progression of disease & response to therapy in prostate cancer
- Screening test to detect early stage prostate cancer
- PSA Lab Value is used for stage grouping in AJCC Cancer Stage for prostate

Prostatic Specific Antigen (PSA)

■ SSF1: PSA Lab Value

- Record highest PSA lab value prior to diagnostic prostate biopsy and treatment to nearest tenth in nanograms/milliliter (ng/ml)
 - Record test prior to diagnosis if there are tests prior to diagnosis and after diagnosis but before treatment

■ SSF2: PSA Interpretation

- Record the clinician's interpretation of highest PSA lab value prior to diagnostic prostate biopsy and treatment

SSF3: CS Extension – Pathologic Extension

- Record information from prostatectomy and autopsy
 - Includes simple prostatectomy with negative margins
 - Code info from biopsy of extraprostatic sites in CS Extension – Clinical Extension
 - Include extension information from prostatectomy for another reason (i.e., cystoprostatectomy for bladder cancer) when prostate cancer is incidentally identified
 - AJCC considers in situ carcinoma of prostate impossible and 00 maps to TX

SSF3: CS Extension – Pathologic Extension

- AJCC Cancer Stage
 - T2 NOS: Organ confined
 - SSF3 = 200, 300, 320, or 400
 - T2a: Involves $\frac{1}{2}$ of 1 lobe/side or less
 - SSF3 = 210, 330, or 402
 - T2b: Involves more than $\frac{1}{2}$ of 1 lobe/side but not both lobes/sides
 - SSF3 = 220, 340, or 404
 - T2c: Involves both lobes/sides
 - SSF3 = 230, 350, or 406

SSF3: CS Extension – Pathologic Extension

- AJCC Cancer Stage
 - T3 NOS: Extraprostatic extension
 - SSF3 = 495
 - T3a: Extracapsular extension; Microscopic invasion of bladder neck
 - SSF3 = 415-483
 - T3b: Seminal vesicle invasion
 - SSF3 = 485 or 490
 - T4: Invasion of rectum, levator muscles, and/or pelvic wall
 - SSF3 = 500-750

SSF3: CS Extension – Pathologic Extension

- Summary Stage 2000
 - In situ: Noninvasive; intraepithelial
 - SSF3 = 000
 - Localized (L): Tumor confined to prostate
 - SSF3 = 200-350
 - Regional by direct extension (RE): Extension beyond prostate
 - SSF3 = 400-520
 - Distant extension (D): Extension or fixation to pelvic wall or bone; further extension to bone, soft tissue, or other organs
 - SSF3 = 600-700

SSF3: CS Extension – Pathologic Extension Special Codes

Code	Description	TNM 7	SS20000
960	Unknown if prostatectomy done	TX	U
970	No prostatectomy done within 1 st course treatment	TX	U
980	Prostatectomy done but not considered 1 st course treatment	TX	U
985	Autopsy performed but extension unknown	TX	U
990	Prostatectomy done: Extension not stated; Primary tumor cannot be accessed; Not documented in patient record	TX	U

Pop Quiz

- 9/6/12 Prostate needle biopsy: Adenocarcinoma right & left lobes; T1c. Patient opted for surveillance.
- 3/19/13 PSA rising. Prostate biopsy: Adenocarcinoma. Patient referred to the oncology department for a consultation for an intermediate risk prostate carcinoma.
- 6/17/13 Prostatectomy: Adenocarcinoma involving seminal vesicles (pT3b).

Pop Quiz

- What is the code for SSF3 (CS Extension – Pathologic Extension)?
 - 230: Involves both lobes; Stated as pT2c with no other info on pathologic extension
 - 300: Localized NOS
 - 485: Extension to seminal vesicles; Stated as pT3b with no other info on pathologic extension
 - 980: Prostatectomy performed but not considered 1st course treatment

Gleason System for Grading Prostate Cancer

- Patterns based on 5 component system
- Primary pattern
 - Predominant
- Secondary pattern
 - Second most predominant
- Gleason's score
 - Sum of primary and secondary patterns
- Tertiary pattern
 - Small component of 3rd more aggressive pattern associated with a worse outcome

SSF7: Gleason's Primary Pattern & Secondary Pattern Values on Needle Core Biopsy/TURP

- Record primary and secondary patterns from needle core biopsy or TURP
- Record patterns that reflect highest score if different patterns are documented on multiple biopsies
- Record patterns that reflect highest score if both biopsy and TURP performed
- Do not mix patterns from multiple specimens
- Use code 998 if biopsy/TURP not performed

SSF8: Gleason's Score on Needle Core Biopsy/TURP

- Record Gleason's score based on primary & secondary patterns recorded in SSF7
- Use code 998 if biopsy/TURP not performed
- Used for clinical stage grouping in AJCC Cancer Stage for prostate

SSF9: Gleason's Primary Pattern & Secondary Pattern Values on Prostatectomy/Autopsy

- Record primary and secondary patterns from prostatectomy or autopsy
- Use code 998 if prostatectomy or autopsy not performed
- Do NOT code tertiary pattern in this SSF

SSF10: Gleason's Score on Prostatectomy/Autopsy

- Record Gleason's score based on primary & secondary patterns recorded in SSF9
- Use code 998 if prostatectomy or autopsy not performed
- Used for pathologic stage grouping in AJCC Cancer Stage for prostate
- Do NOT code tertiary pattern in this SSF

Pop Quiz

- Patient reported with groin pain. PSA elevated at 170. CT scan reveals 6.6 cm right pelvic nodal mass and prominent prostate gland. Biopsy of pelvic node mass revealed metastatic prostate adenocarcinoma, Gleason score 4 + 3 = 7. DRE revealed high-riding prostate but only prostate apex could be touched so the presence or absence of induration or nodularity of the prostate could not be determined. Patient was treated with hormone therapy and did not have prostate biopsy.

Pop Quiz

- What is the code for SSF7: Gleason's Primary Pattern & Secondary Pattern Values on Needle Core Biopsy/TURP?
 - 043
 - 998: No needle core biopsy/TURP performed
 - 999: Unknown
- What is the code for SSF8: Gleason's Score on Needle Core Biopsy/TURP?
 - 007
 - 998: No needle core biopsy/TURP performed
 - 999: Unknown

Pop Quiz

- What is the code for SSF9: Gleason's Primary Pattern & Secondary Pattern Values on Prostatectomy/Autopsy?
 - 043
 - 998: No prostatectomy/autopsy performed
 - 999: Unknown
- What is the code for SSF10: Gleason's Score on Prostatectomy/Autopsy?
 - 007
 - 998: No prostatectomy/autopsy performed
 - 999: Unknown

SSF11: Gleason's Tertiary Pattern Value on Prostatectomy/Autopsy

- Record tertiary pattern documented on prostatectomy or autopsy
- Disregard tertiary pattern from prostate biopsy or TURP
- Use code 998 if prostatectomy or autopsy not performed

SSF12: Number of Cores Positive

- Record the number of prostate core biopsies positive for cancer
- If multiple core biopsy procedures are performed, record the number of cores positive for cancer from procedure with highest number of cores positive
- Use code 991 if core biopsies positive but number unknown
- Use code 998 if needle core biopsy was not performed

SSF13: Number of Cores Examined

- Record number of prostate core biopsies examined
- If multiple core biopsy procedures are performed, record the number of cores examined from procedure with highest number of cores positive (same procedure as used to record SSF12)
- Use code 991 if core biopsies examined but number unknown
- Use code 998 if needle core biopsy was not performed



Questions?

Quiz 2



Treatment

Initial Diagnosis

- DRE
- PSA
- Core Biopsy

- Life Expectancy \leq 5yrs and patient is asymptomatic
 - No further workup or treatment until symptomatic, except for high risk patients (bulky T3-T4 disease or Gleason score 8-10)

- Life expectancy $>$ 5yrs or symptomatic
 - Bone scan if
 - T1 and PSA $>$ 20
 - T2 and PSA $>$ 10
 - Gleason Score \geq 8
 - T3 or T4
 - Symptomatic
 - Pelvic CT or MRI if
 - T3 or T4
 - T1-T2 and probability of LN mets $>$ 10%
 - All others; no additional imaging

Treatment Categories

- Localized
 - Very Low Risk of Recurrence
 - Low Risk of Recurrence
 - Intermediate Risk of Recurrence
 - High Risk of Recurrence
- Very High Risk of Recurrence (locally advanced)
- Metastatic Disease

Clinically Localized

Very Low Risk

- T1c
- Gleason Score ≤ 6
- PSA < 10 ng/mL
- Fewer than 3 prostate biopsy cores positive, $\leq 50\%$ cancer in each core
- PSA density < 0.15 ng/mL/g

Treatment

- If life expectancy is < 20 yrs
 - Active Surveillance
- If life expectancy is ≥ 20 yrs initial treatment should be based on treatment for patients with Low recurrence risk.

Active Surveillance

- Active surveillance involves actively monitoring the course of disease with the expectation to intervene with curative intent if the disease progresses.
 - PSA testing every 3-6 months
 - DRE as often as every 6-12 months
 - Repeat biopsies every 6-18 months

RX Summ-Treatment Status

Code	Definition
0	No treatment given
1	Treatment given
2	Active surveillance
9	Unknown

Clinically Localized

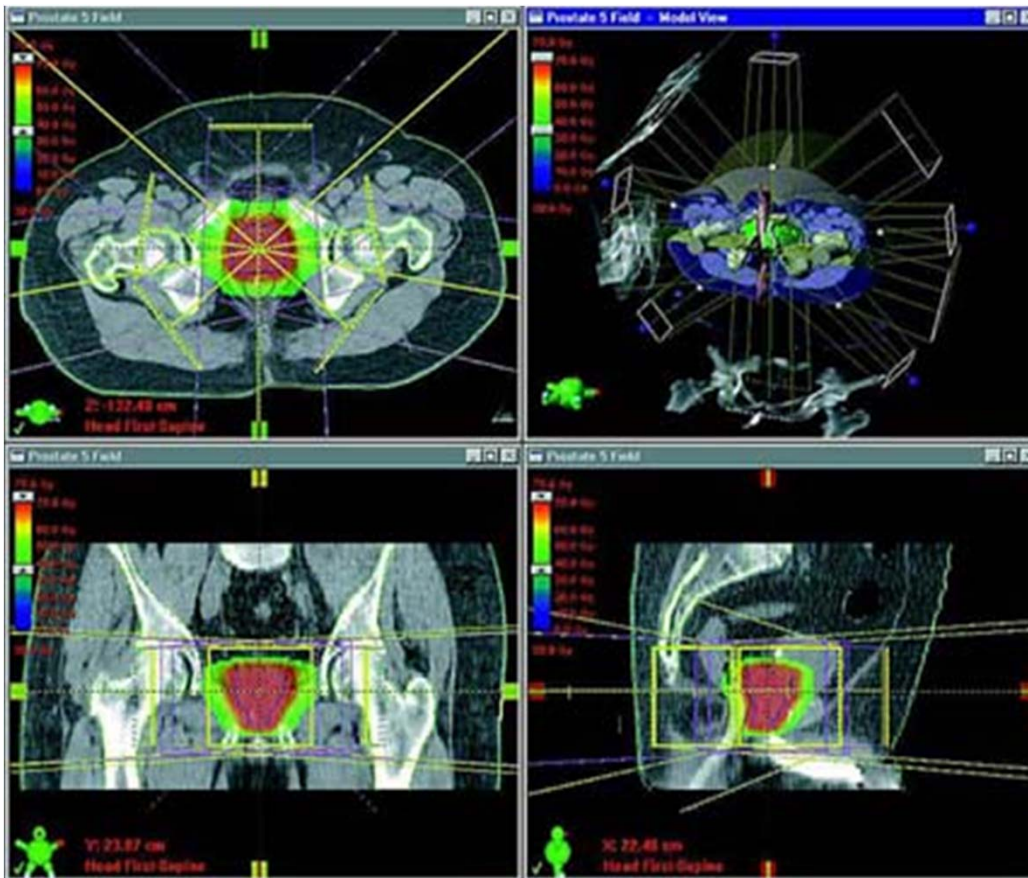
Low Risk

- T1-T2a
- Gleason Score 2-6
- PSA <10 ng/mL

Treatment

- If life expectancy is <10 yrs
 - Active surveillance (PSA and DRE only no repeat biopsies)
 - Radiation therapy (IMRT/3D-CRT)
- If life expectancy is ≥ 10 yrs
 - Active Surveillance
 - Radiation (IMRT/3D-CRT) or brachytherapy
 - Radical prostatectomy
 - Lymph node dissection if risk is $\geq 2\%$

External Beam Radiation



- Three-dimensional conformal radiation therapy (3D CRT)
- Intensity Modulated Radiation Therapy (IMRT)
- Image-Guided Radiation Therapy (IGRT)
- Proton Therapy

Post Prostatectomy Radiation

- Indications for adjuvant RT include
 - pT3
 - Positive margins
 - Gleason score of 8 to 10
 - Seminal vesicle involvement
- Usually given within 1 year of surgery once operative side effects have stabilized

Radiation Therapy

- Brachytherapy
 - Permanent Low Dose Radiation Implants (LDR) Seed Implants (iodine-125 or palladium-103)
 - Temporary High Dose Radiation (HDR) Brachytherapy (iridium-192 or cesium-137)

Coding Radiation Therapy

- If IMRT or 3D CRT are administered code Regional Treatment Modality to 31(IMRT) or 32 (3D CRT)
 - 18mv delivered in 25 sessions using IMRT
 - Code to 31 (IMRT) even though a specific energy was given

Coding Radiation Therapy

- If external beam radiation to the pelvis and brachytherapy are performed, code beam radiation as Regional Treatment Modality and brachytherapy as Boost Treatment Modality

Example:

- 4500 cGy delivered to the pelvis followed by brachytherapy
 - Code beam radiation as Regional Treatment Modality and seed implants as Boost

Clinically Localized

Intermediate

- T2b-T2c or
- Gleason score 7 or
- PSA 10-20 ng/mL

Treatment

- If life expectancy is <10 yrs
 - Active surveillance (PSA and DRE only no repeat biopsies)
 - Radiation therapy
 - ± Androgen Deprivation Therapy (ADT)
 - ± Brachytherapy
- If life expectancy is ≥ 10yrs
 - Radical prostatectomy
 - Lymph node dissection if risk is ≥ 2%
 - Radiation
 - ± ADT
 - ± Brachytherapy

Androgen Deprivation Therapy (ADT)

- Androgens
 - Testosterone
 - Dihydrotestosterone (DHT)
- Androgens stimulate prostate cancer cells to grow
 - Lowering levels causes prostate tumors to shrink or grow more slowly.
 - Produced primarily in the testes, but small amounts are produced in the adrenal glands.

Androgen Deprivation Therapy

- Bilateral orchiectomy
- Luteinizing hormone-releasing hormone (LHRH) *agonist*
 - Chemical castration-they lower androgen levels as well as a orchiectomy.
 - Cause testosterone goes up briefly before falling to very low levels (flare).
 - LHRH *antagonist* work in a similar manner, but do not cause the initial testosterone flare.
- Anti-androgens bind to the androgen receptor in order to stop androgens from working.
 - When combined with LHRH or Orchiectomy they are called a combined androgen blockade (CAB)

Androgen Deprivation Therapy

- Primarily administered in combination with radiation in localized or locally advanced disease.
- Has not been shown to benefit as a neoadjuvant or adjuvant treatment for men who have been treated with radical prostatectomy.

Clinically Localized

High Risk

- T3a
- Gleason Score 8-10 or
- PSA >10 ng/mL

Treatment

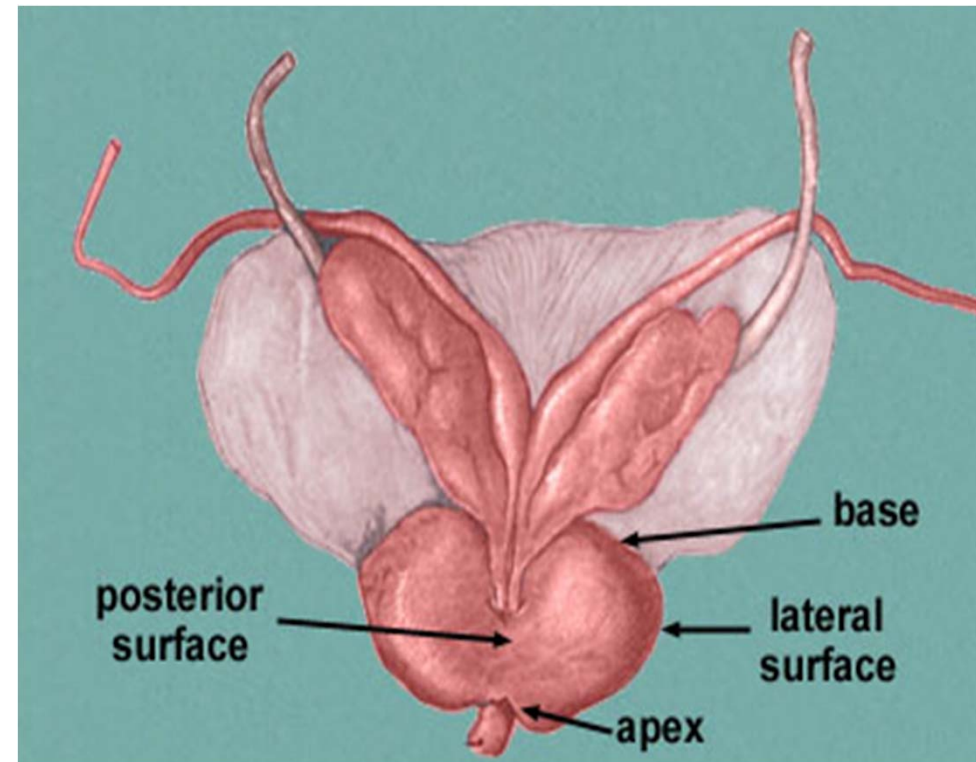
- Radiation
 - IMRT/3D-CRT and long term ADT or
 - IMRT/3D-CRT and brachytherapy ± long term ADT or
- Radical prostatectomy and lymph node dissection

Radical Prostatectomy

- Reserved for patients with >10yrs life expectancy
- Robotic and laparoscopic approaches have been associated with shorter stays, fewer surgical complications, and less blood loss than the traditional open approach. However, they have also been shown to have higher rates of incontinence and erectile dysfunction than open approaches performed by experienced surgeons.
 - Cohort study using SEER medicare linked data on 8,837 patients.

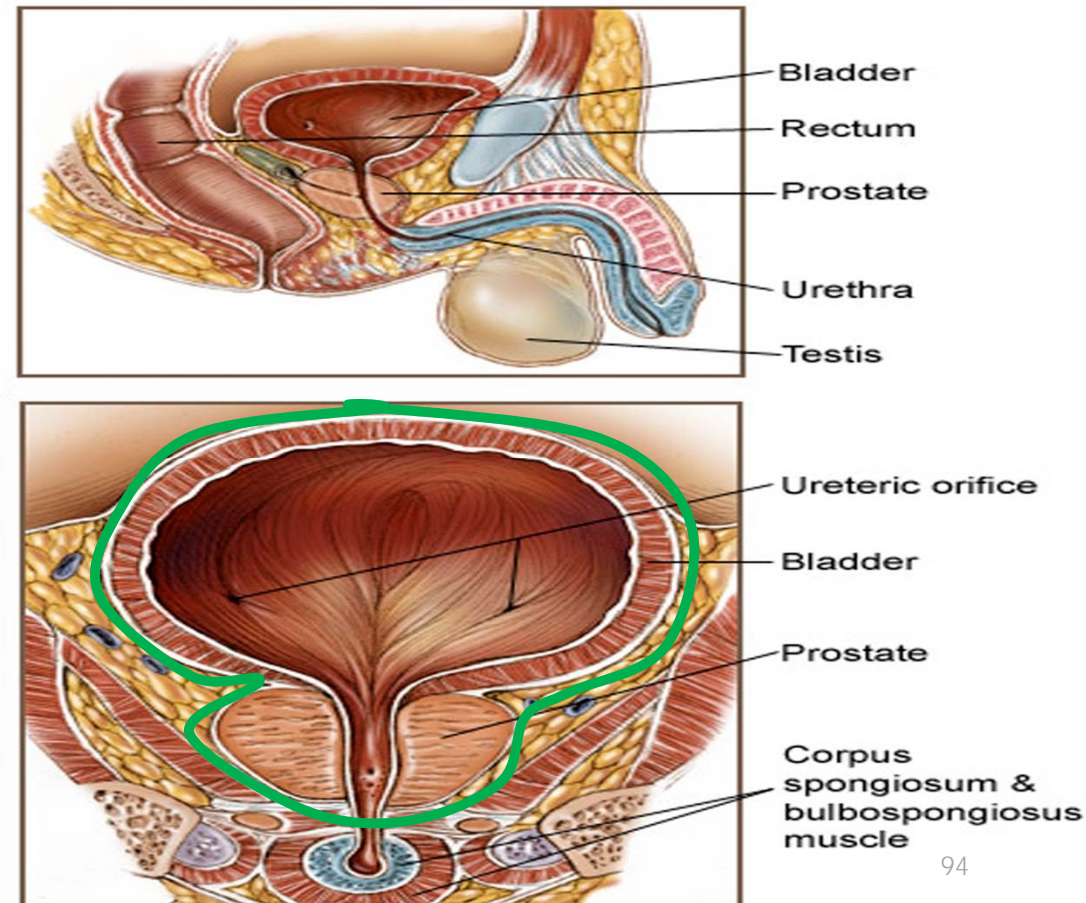
50 Radical Prostatectomy

- Excised prostate, prostatic capsule, ejaculatory ducts, seminal vesicle(s) and may include a narrow cuff of bladder neck



70 Prostatectomy WITH resection in continuity with other organs

- The other organs may be partially or totally removed
- Procedures may include, but are not limited to cystoprostatectomy or radical cystectomy



Pelvic Lymph Node Dissection

- Patients with <2% predicted probability of nodal metastasis can be excluded from an pelvic lymph node dissection.
 - This avoids 47.7% of pelvic lymph node dissections at a cost of missing 12.1% of positive lymph nodes.
- An extended technique should be performed
 - Removal of additional lymph nodes improves staging and shows a survival benefit when compared to a traditional pelvic node dissection.
- Open, robotic, and laparoscopic approaches have similar complication rates.

Locally Advanced

Very High

- T3b-T4

Treatment

- Radiation
 - IMRT/3D-CRT and long term ADT
 - IMRT/3D-CRT and brachytherapy ± ADT
- Radical Prostatectomy (if not fixation) and Lymph Node Dissection
- ADT

Metastatic

- Any T, N1
 - ADT
 - Radiation (IMRT/3D-CRT) and long term ADT
- Any T, Any N, M1
 - ADT

Palliative Radiation

- A short course of 8Gy delivered in a single treatment has been found to be as effective as the traditional 30Gy in 10 fractions.
- Beta-emitting radiopharmaceuticals
 - Strontium 89
 - Samarium 153
- Alpha emitting radium 223 has been shown to have survival advantage so is not considered palliative.
 - Approved for castration-recurrent prostate cancer.

Chemotherapy and Immunotherapy

- May be used for advanced stage or metastatic disease
- May also be used for disease that no longer responds to androgen deprivation therapy
 - Docetaxel (taxotere)



Questions?

Quiz 3

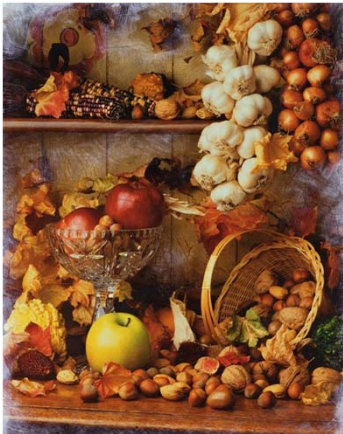


Case Scenarios

Coming Up...

- Collecting Cancer Data: Ovary
 - December 5, 2013
- Collecting Cancer Data: GIST
 - January 9, 2014

And the winners are...



CE Certificate Quiz/Survey

- Phrase
- Link
 - <http://www.surveygizmo.com/s3/1433349/Prostate>

Thank You!!!!



Please send any question to:

Jim Hofferkamp jhofferkamp@naaccr.org

Shannon Vann svann@naaccr.org

