TNM Snippets & Scenarios

CCRA Northern Region

Staging symposium

September 20, 2017

Outline

- Cytology vs. Tissue
- Polyp Q & A
- X or Blanks
- Unknown vs Guessing
- Is This Really treatment?
- Neoadjuvant Staging Rules
- T - "Tips"
  - Primary Peritoneal pT
  - Prostate cT DRE vs Bx
  - Colon pT – Peritonealized vs non peritonealized
  - CRM & pT3, pT4a or pT4b?
- Stage Group Notes
- TNM Staging Resources

Cytology vs. Tissue

- For TNM staging
- **Microscopic confirmation by Cytology just as valid as Tissue!**
- Differs from registry rules for other data fields
- Use rules which apply

Polyp Q & A

Polypectomy is it Diagnostic or Treatment

Polyp Q & A

- Polyp Types:
  - Sessile: mostly a flat growth along mucous membrane - no stalk
  - Pedunculated: attached by a narrow elongated stalk
- Q: What is my "T"?
  - Polyp pathology report: invasive adenocarcinoma
  - No further extension stated -intraepithelial, lamina propria, or submucosa
- A: If report says invasive, that is at least involvement of submucosa
  - Assign T1
  - Best pathologist can do with anatomy distortion due to snare
  - If pathologist felt this was confined to mucosa, it would not be called invasive

Clarified with AJCC Surgeons & Pathologists

Polypectomy - Diagnostic vs Treatment

- Sessile polyp
  - Colonsocopy bx is usually diagnostic, incomplete resection, cTX
  - Surgical resection is treatment, pT
- Pedunculated polyp
  - Colonoscopy snare polypectomy is treatment, pT
  - No diagnosis prior to snare, therefore no clinical stage assigned
- General Guideline for polyp removal during colonoscopy
  - Incomplete resection – cTNM
  - Complete resection of polyp, treatment – pTNM
  - Not dependent on margins, but on purpose/intent of resection

Clarified with AJCC Surgeons & Pathologists

Polypectomy

Bonus Slide

- A colonoscopy/polypectomy snare for a pedunculated polyp is usually considered treatment.
- AJCC surgeons state they consider this treatment, and there was no knowledge of the polyp prior to the procedure, therefore you should not assign a clinical stage. The intent of the procedure is treatment and you should assign a pathologic stage.
- This is also not dependent on margins status. If there is a positive margin or residual you do not negate that as treatment.
- If the surgeon subsequently resects the colon and samples nodes, this would still be part of the treatment and pathologic stage.

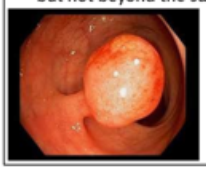
Polypectomy TNM Example #1

Bonus Slide

- No suspicion of cancer prior to colonoscopy
- No clinical stage
- No special rules for polyp pN- Still must meet general pN rules which require microscopic exam of at least one LN to assign, otherwise =pNX
- Stage group is 99 due to pNx

Pop Quiz 7

- A patient presents for routine colonoscopy and is found to have a pedunculated polyp in the sigmoid colon. A hot snare is used to remove the polyp.
- Pathology from the polypectomy shows an invasive adenocarcinoma extending into, but not beyond the submucosa.



No further treatment was done.

Data Item	Value
Clinical T	
Clinical N	
Clinical M	
Clinical Stage	99
Pathologic T	pT1
Pathologic N	pNX
Pathologic M	cM0
Pathologic Stage	99

NAACCR

Coding Pitfalls NAACCR 2016-2017 Webinar Series - Used with Permisson

Polypectomy TNM Example #2

Bonus Slide

- No suspicion of cancer prior to colonoscopy
- Tumor confined to polyp
- Sigmoidectomy confirms no residual
- LN dissection provides pN info
- Stage Group can now be completed

Pop Quiz 7 (part 2)

- A patient presents for routine colonoscopy and is found to have a pedunculated polyp in the sigmoid colon. A hot snare is used to remove the polyp.
- Pathology from the polypectomy shows an invasive adenocarcinoma extending into, but not beyond the submucosa.
- The patient returns for a sigmoidectomy.
- Pathology did not reveal any residual tumor 22 lymph nodes negative for metastasis.

Data Item	Value
Clinical T	
Clinical N	
Clinical M	
Clinical Stage	99
Pathologic T	pT1
Pathologic N	pN0
Pathologic M	cM0
Pathologic Stage	1

NAACCR

Coding Pitfalls NAACCR 2016-2017 Webinar Series - Used with Permisson

X or blank

X or Blank

- **X is an AJCC defined value**
  - AJCC X = Cannot be Assessed
  - Applies to T & N
  - Never applies to M
  - Never applies to Stage Group
- **Blank is registry "workaround"**

3 reasons:

- Case not eligible for stage
- Information missing from record and unknown
- 2016-2017 software does not have valid value per TNM rules for you to select and assign

X or Blank

- Whether X or Blank dependent on meeting stage criteria
- Is patient eligible for stage?
  - Clinical
  - Pathologic
- 1st Determine if rules for stage classification met
  - X never applies when case not eligible for stage
  - X never applies when information is missing or unknown

cTX and cNX

- cTX = MD did not exam patient or workup insufficient to determine
  - Colonoscopy bx not able to determine depth = cTX
  - Patient health factor precludes more specific testing
    - Unable to text/assess = cTX or cNX
      - Allergy to radiographic contrast
      - Implanted medical device precludes testing
      - Comorbidities preclude procedures
- cNX=
  - LN involvement inconclusive/indeterminant on imaging
  - LN(s) involved/number unknown & site requires number to assign

pTX and pNX

- pTX = Someone lost specimen from OR to pathology department
  - **No valid scenario for use of pTX**
- pNX = No LNs removed at surgery
  - None resected
  - Resected tissue thought to be LNs contained no lymph node(s)

Blanks

- If case not eligible for stage Clinical or Patholologic
  - T, N, M blank - registry rules require 99 for stage group
- Case eligible for stage but info missing or unknown
  - Use available information, even if incomplete
  - If only info is stage group
    - Stage IIA lung cancer
    - Record T__N__M__Stage 2A
  - T3/Stage III clear cell carcinoma of kidney documented
    - Record T3 N__M0, Stage 3 (N is blank) (M0- Stage 3 does not include M1)
    - Different combinations of N included in stage III, cannot guess

Blanks – valid TNM value not in software

- Current software does not include all valid TNM categories
- Blanks used when valid value not in software for the "implied value"
  - Clinical Stage: cT2 cN0 pM1 Stage 4
  - Pathologic Stage: pT blank pN blank pM1 Stage 4

What we do now

  - Clinical Stage: cT2 cN0 pM1 Stage 4
  - Pathologic Stage: cT2 cN0 pM1 Stage 4

What it should be

- Temporary workaround 2016-2017
- Will have all appropriate cT/N values for 2018

Blanks – valid TNM value not in software

- cN0 & pathologic stage
  - cN0 in path stage allowed for ***in situ histology***- can assign now
  - cN0 in path stage for invasive histologies ALSO VALID - for many sites
  - AJCC needed more time to review and assemble complete list
  - Only in situ cN0 put into valid values list for 2016-2017
- Current workaround allows blank pN – indicating implied value of cN0 for a few select primary sites with ***invasive*** histology in 2016-2017
  - Melanoma Example: Clin: cT1a cN0 cM0 Stage 1A
    Path: pT1a pN____ cM0 Stage 1A

AJCC Manual pg 326 last sentence under stage table cites melanoma "rule"

  - Only others thru 7th Ed: Corpus Uteri Stage 1, Soft Tissue Sarcoma, GIST and Bone
- AJCC complete list of sites with valid cN0 in path stage with *invasive* histology will be avail for 2018 dx

Unknown vs Guessing

- What do researchers prefer: "guesstimate vs. unknown"
  - **Unknown** should **ALWAYS** be used
  - Researchers may use guesstimates when analyzing unknown data
    - Carefully controlled by researchers
    - Documented in the analysis
- Critical to know what is real or valid, guesses skew data
  - All data looks the same in database
  - Cannot differentiate between valid data and defaults
  - Rules for default options can skew analysis
  - Registrars should **record facts** and not change data
- Likely able able to assign Summary Stage

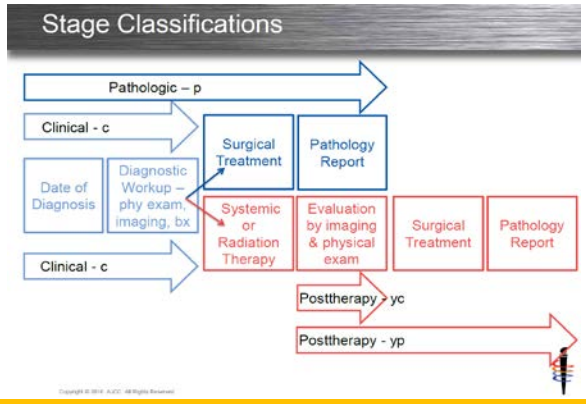
Is It Really Treatment?

- Variable and unconventional reasons for medications
  - Short-term pre-op Lupron for prostate cancer
  - Few days/weeks of pre-op Tamoxifen for breast cancer
  - Sometimes is test dose to evaluate tolerance for post surgery treatment
  - Per AJCC this is ***NOT*** neoadjuvant treatment and *should* ***not*** *be staged* as such
    - **From TNM Staging perspective**
    - Caution: Different rules for other data fields
    - Follow appropriate rules for data item being coded

ycTNM
ypTNM
ypCR

Neoadjuvant/Posttherapy TNM

Timing is Everything



yc T & N

- **yc/Clinical Stage:**
  - Post therapy Info obtained **s/p clinical "*restaging*"**
    - Physical Exam
    - Imaging
    - Biopsies
  - Prior to surgery
  - Currently no registry ability to record/capture a ycTNM

yc/Clinical "restaging" information

Can be used in ypTNM pathologic stage

yp T & N

- **ypT & ypN** based on pathologic resection specimen
  - Can include surgical observations
  - Can include "yc" post therapy stage information
  - Can include progression/mets identified after neoadjuvant RX
- **Clinical information cT & cN** from diagnostic workup is **EXCLUDED**

yp M?

- **M**
  - "yp" does not apply to M
- **M – based on pre-treatment clinical status at diagnosis**
  - cM0 or cM1 or pM1
  - If cM1 before treatment - stays cM1 for yp stage
    Even if mets no longer detected post therapy
    Exception: Rare instance of cM1 or pM1 identified *after* neoadjuvant
  - M assigned cM1 or pM1 per assessment method
    http://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging/ajcc-disease-site-webinars/breast-ac/66136-mets-developing-after-neoadjuvant-tx-ym

Complete Response (CR) & ypStage Group

Stage Group

- Assign per combo of categories per staging stable
- If complete response **(CR)** to neoadjuvant treatment no stage group applicable per AJCC rules.
  - ➢**NOT STAGE 0 !**

    Example: **pT0 pN0 cM0**
    - No residual cancer found s/p neoadjuvant therapy
    - Indicates "no cancer"
  - Assign stage group as 99 in registry database

ypTNM - DX Clinical Info Excluded

- 6/8/16: 4.0cm breast mass. Bx(+) for Invasive ductal ca. Sentinel LN Bx: 0/5 LNs pos(+)
- 7/5/18: ACT neoadjuvant therapy
- 10/2/16: Lumpectomy/Path: No residual tumor; benign tissue with treatment related changes. No additional LNs resected

What is the ypTNM?

	T	N	M	Stage	Descriptor
Clin	cT2	cN0(sn)	cM0	2B	0
Path	pT0	pNX	cM0	99	4

➢**cT2 & cN0(sn) info excluded from post neoadjuvant stage**

➢pT0 assigned - based on *resection* specimen

➢MD clinical judgement- if cN0(sn) no need for further dissection, however = pNx

➢M status from diagnosis always assigned

ycTNM can be used in ypTNM

- 3/1/16 71 yo female 5.2cm infiltrating ductal ca & palpable axillary LN c/w tumor spread per MD
- 3/15/16-5/28/16 Neoadjuvant chemotherapy
- 6/1/16 Posttherapy Staging: Breast MRI: TS reduced to 2.0cm. Sentinel LN bx: 0/3 LNs pos
- 6/18/16 Lumpectomy: Pathology pos(+) for residual invasive ductal ca 1.8cm. No LN dissection

ycTNM

	T	N	M	Stage	Descriptor
Clin	cT3	cN1	cM0	3A	0
Path	pT1c	pN0(sn)	cM0	1A	4 Post Neoadjuvant

Why pN0 and not pNX since no LNs removed at definitive surgical resection?

➢Diagnostic clinical info *excluded* from ypTNM

➢**CAN use ycTNM** info which included sentinel LNs on biopsy

➢pN0 assigned -microscopic exam of LNs during ycTNM

Primary Peritoneal pT

Prostate cT

Colon pT

"T" tips

Primary Peritoneal pT

- Extra-Ovarian
  - Intraperitoneal
  - Primary Peritoneal
  - Ovaries negative or only incidentally involved-not the primary
  - Stage with Ovary Chapter
- **T3, T3a, T3b and T3c** only T categories that apply
- T categories T1a-T2c only apply to Ovarian primaries

Prostate cT

- Physical exam and DRE required for assigning cT
- Must have statement or some description stating why bx performed
- Determine whether tumor apparent or in-apparent
  - Apparent tumor
    - Palpable involvement of prostate lobe
    - Palpable extension beyond prostate
  - In-apparent tumor
    - PE reveals BPH only = negative DRE
- DRE determines biopsy location

Prostate cT

- AJCC MDs have stated a "nodule" would describe something that is palpated, as well as tumor or mass
  - Mass in right lobe
  - Nodularity and left seminal vesicle palpated
  - Hardened palpable mass in prostate apex with fullness
- Look for descriptions of structures palpated in prostate or beyond
- Physical Exam- If only BPH stated, infers negative DRE
- If no DRE performed =cTX

Prostate cT

- Biopsy reports **not** used to assign cT
  - Biopsy confirms diagnosis of cancer
  - Does not determine T category

Example:

- DRE: small palpable nodule involving periphery of prostate apex on the right; PSA 5.1
- BxPath: Adenoca Gleason 3+4 in 5 cores right lobe and 2 cores left lobe

- **Assign cT2a**
  - Palpable nodule periphery prostate apex on right
  - Describes less than half of right lobe
  - cT based on DRE – what was palpated
  - Not biopsy findings

Colorectum pT

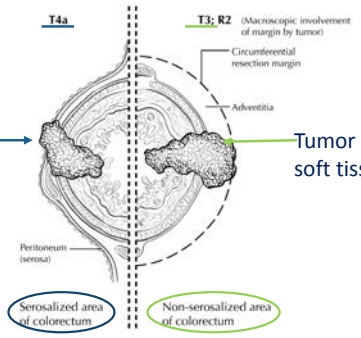
- **Is it pT3 or pT4a?**
  - Depends on section of colon
  - Peritonealized vs Non-Peritonealized

Colorectum with Serosa/Visceral Peritoneum	Colorectum *without* Serosa/Visceral Peritoneum
Cecum Transverse Sigmoid Anterior Ascending Anterior Descending Rectosigmoid junction Upper third and anterior wall of the middle third of rectum	Posterior Ascending Posterior Descending Rectum – below peritoneal reflection (lower third of rectum or rectal ampulla)

Alternate terms
"**serosalized**"
"**Intraperitoneal**"

Colorectum pT

- Is it pT3 or pT4a



Tumor penetrates serosa - had an extra barrier to cross – warrants higher pT

Tumor extends into Adventitia soft tissue/fat

Colorectum pT

- Question: When is T4a appropriate?
  - T4a – tumor penetrates to surface of visceral peritoneum – thru serosa
- Answer:
  - T4a only appropriate in areas with peritoneum
    - Such as ascending colon/descending colon
      - Could have T4a on peritoneal side
      - If tumor on retroperitoneal side, could be T3 & positive radial margin

Colorectum pT

- T4b direct invasion vs. adherence
  - Operative findings may state adherence
  - But if no microscopic confirmation in adhesion/tissue, assign pT1-pT4a
- Unequivocal extension into other organs or structures would be T4b
  - Whether in peritonealized or non-peritonealized colorectal segment
- Macroscopic gross adherence is used in cT4b only

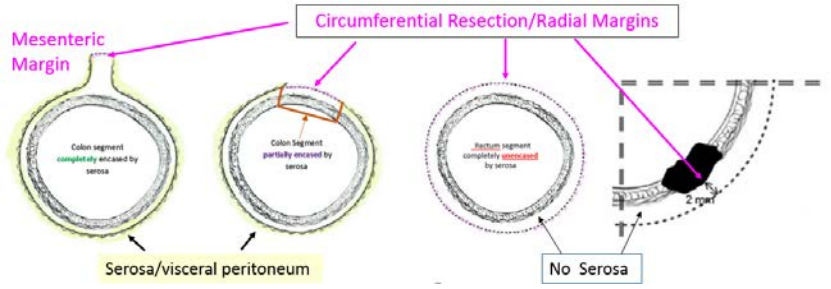
Colorectum "CRM"

- CRM – Distance between tumor and surgical margin of mesentery
- CRM refers to any aspect of the colorectum not covered by the serosal layer
  - Requires dissection from retroperitoneum or subperitoneum.
- CRM
  - Circumferential "resection" margin
  - Circumferential "radial" margin

  } **Synonymous**
- Mesenteric margin is also a type of CRM

Circumferential Resection/Radial Margin

- "Radial" margins may be different depending on the location of the colorectal segment



Stage Groups-updates

- A few stage table updates

Lung	Kidney	Ovary
Stage Group IIIB ▪ "T" includes T0 w/N3 M0 ▪ Add "T0" to table ▪ page 264	**Stage Group III** T3 NX cM0 = Stage III Add: **NX**/N0/N1 page 485 **Stage Group IV** Any N includes NX page 497	**Stage IIIC =** pT3c with pN0/pN1 or **pNX** T category is driving stage Add NX to Stage Group IIIC page 421

TNM Staging Resources

Data Collection Rules Not Consistent

- Ambiguous terminology
  - Used with Summary Stage
  - Not for AJCC TNM, except as last resort (FORDS)
- Breast biopsy "suspicious for microinvasion"
  - Summary Stage localized
  - AJCC TNM is not clear cut at that point in time
    - Assess the information
    - Physician treatment plans may help you decide
- AJCC stage data can be unknown
  - Example: Tis N1 M0 stage unknown (99)
  - Recording correct facts helps AJCC to understand trends
  - Don't change facts

Ambiguous Terms Describing Tumor Spread

- NCDB statement clarifying FORDS Ambiguous Terminology
- Resource priority order when information is unclear
  - **Physician is first and foremost resource**
  - Review medical record closely for information
  - FORDS terms describing tumor spread list used only when
    - Situation is not clear
    - Case cannot be discussed with physician
- "Ambiguous Terms Describing Tumor Spread"
  - Must be used correctly – Use only to describe tumor spread
  - Continued use in CoC-accredited programs
  - Maintained by CoC as **"REFERENCE OF LAST RESORT"**

FORDS - Ambiguous Terms Describing Tumor Spread

- **Reference of LAST RESORT!**

Ambiguous Terms Describing Tumor Spread

Terms that Constitute Tumor Involvement or Extension		**Terms that *Do Not* Constitute Tumor Involvement or Extension**
Adherent	Into	Approaching
Apparent	Onto	Equivocal
Compatible with	Out onto	Possible
Consistent with	Probable	Questionable
Encroaching upon	Suspect	Suggests
Fixation, fixed	Suspicious	Very close to
Induration	To	

AJCC Staging Resources

- https://cancerstaging.org
  - Cancer Staging Education Registrar menu includes
    - Timing is Everything – Stage Classifications
    - Critical Clarifications for Registrars
  - Seventh Edition Webinars with new focus and information
    - 5 sites: prostate, breast, lung, melanoma, colorectum
  - Disease Site Webinars
    - 5 sites: melanoma, lung, breast, prostate, colorectum
  - AJCC Curriculum for Registrars
    - 4 free self-study modules of increasing difficulty on staging rules
    - Each module consists of 7 lessons, including recorded webinar with quizzes
  - Presentations
    - Self-study or group lecture materials, including blank vs. X

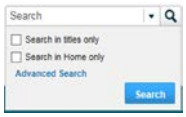
SEER Educate

- https://educate.fredhutch.org/LandingPage.aspx
  - PRACTICAL APPLICATIONS TESTS

- **AJCC TNM 7th Ed - Dx Year 2016 (Current guidelines)**
  - + **Bladder**
  - + **Breast**
  - + **Colorectal**
  - + **Lung**
  - + **Prostate**

CAnswer Forum

- https://www.facs.org/quality-programs/cancer



  - Home Page includes guide documents
  - Searching
    - Click on down arrow in search box
    - Select “Advanced Search”
  - Advanced Search allows choice of
    - Specific forums
    - Keywords
    - Specified Users

Thank You

Questions:

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