AJCC: Chapter 1 Principles

Pop Quiz

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Q1

- c), p), yc), yp) stage (classification) can be best defined by:

A. Time point in the care of the patient

B. What pathologic specimens are available

C. Estimated survival time of patient

Q1 Answer

A. Time point in the care of the patient

- Chapter 1, page 6: time points are defined as "classification" or "staging window"
- Information gathered during the time point has unique descriptions
- Prognostic stage groups are determined per information from the time points
  - p) includes info from c) timeframe, operative note, and path report
  - yp includes info from yc) timeframe, y) operative note, and y) path report

Q2

- Clinical staging includes only PE & imaging because pathology and cytology are reserved for pathological staging.

A. True

B. False

Q2 Answer

B. False

- Chapter 1, pg 6 and pg 12

- Biopsy of primary site
- Biopsy or excision single regional LN or SLN
- Sampling regional LN w/clinical T
- Biopsy distant metastatic site

Q3

- pN is defined as:

A. Biopsy/FNA of regional lymph node(s)

B. Regional lymph node resection

C. ANY lymph node resection

D. ANY microscopic evaluation of RLN(s) when pT is met

Q3 Answer

D. ANY microscopic evaluation of RLN(s) when pT is met

- Chapter 1, pg 19
- cN includes
  - Biopsy/FNA of RLN in the clinical time frame (prior to Tx)
  - Resection of RLN when no resection of the primary tumor (no pT)
    - Exceptions for RLND in some Head and Neck Chapters
- Resection of ANY LN could include distant LN (M category)

Q4

- Description of cT category must

A. Always include size of tumor

B. Can be determined by physical exam alone

C. Can include surgical exploration without resection of primary

Q4 Answer

C. Can include surgical exploration without resection of primary

- If biopsy proves highest T category, that info may be pT if also microscopic proof of highest N category
- Page 14 describes components of cT
- Size of tumor may be overestimated by PE
- Size is not useful in some chapters (those that need extent of disease, i.e. colon, bladder, etc)
- PE may not be able to palpate tumor or extent of involvement

Q5

- If a distant metastasis is microscopically positive:

A. Document as pM, regardless of time frame

B. Document as cM, if found during the clinical time frame

C. The patient is automatically stage IV

Q5 Answer

A. Document as pM, regardless of time frame

- Chapter 1, pg 17
  - **Positive** FNA cytology, core biopsy, incisional bx, excisional bx, or resection of involved distant site/LN = pM1
    - If done in clinical time frame, enter pM1 in cM AND pM fields
    - If done in pathological time frame, do not enter pM1 in cM field (can't go back in time)
  - Not all chapters have stage IV when distant mets found (i.e. testicle is one)

Q6

- The pTNM is determined by:

A. cTNM + op note + path report of resected specimen

B. Path report alone

C. cTNM + resected path report

Q6 Answer

A. cTNM + op note + path report of resected specimen

- Chapter 1, pg 18
- The op report may describe tissue that is involved but not resected and not included in the path report
- pTNM may include cTNM info that is part of the total stage of the patient
  - i.e., skin changes like peau d'orange in breast cancer
- Some chapters allow cN in the pN field when no RLNs examined pathologically

When cN0 is Allowed in pN0 Field

- Chap 38 Bone
- Chap 40 Soft Tissue Sarcoma Head/Neck
- Chap 41 Soft Tissue Sarcoma Trunk, Extremities
- Chap 42 Soft Tissue Sarcoma Abdomen/Thoracic Visceral Organs
- Chap 43 GIST
- Chap 44 Soft Tissue Saroma Retroperitoneum
- Chap 53 Corpus Uteri CA/Carcinosarcoma
- Chap 54 Corpus Uteri Sarcoma
- Chap 67 Uveal Melanoma
- Chap 68 Retinoblastoma
- ** Chap 47 Melanoma ONLY when **pT1**

PLUS
Chapter 1: Use cN0 for in situ tumors when LNs are not removed **and** pT is met.

Q7

- Hemicolectomy shows tumor in transverse colon. Op note states tumor involves pylorus. Surgeon resected what (s)he could but had not discussed gastrectomy with patient. Path report states tumor invades visceral peritoneum and 4 positive LN. What is best description?

A. pT4a (invades visc peritoneum)	pN2	cM0	PSG IIIC
B. pT4b (directly invades adjac organ)	pN2a	cM0	PSG IIIC
C. pT4b (directly invades adjac organ)	pN2	cM1	PSG IV

Q7 Answer

B. pT4b (directly invades adjac organ)
pN2a cM0 PSG IIIC

- Chapter 1, pg 19
- pT4a = invades visceral peritoneum (pathology report does not mention tumor left behind)
- pT4b = Tumor directly invades adjacent organ (per op report)
- While N2 (≥ 4 LN) is not wrong, you can be more specific. N2a = 4-6 LN +
- Even though A and B are PSG IIIC, we should be as specific as we can for all fields; it may affect future staging changes

Q8

- Breast cancer patient had lumpectomy with in situ and 1 of 3 SLN positive. Case is best described as:

A. pTis pN1a(sn) cM0 PSG 1A

B. pTis pN1a(sn) cM0 PSG 0

C. pTis pN1a(sn) cM0 PSG 99

Q8 Answer

C. pTis pN1a(sn) cM0 group stage 99

- Chapter 1, pg 19
- No group stage that allows the combination of pTis with any N1
- In the breast chapter, the group stage would be unstageable or 99

Q9

- Elderly woman had lumpectomy but refused more surgery or treatment. Path showed 2cm area of in situ carcinoma.

A. pTis pNx cM0 PSG 99

B. pTis pN0 cM0 PSG 0

C. pTis cN0 cM0 PSG 0

Q9 Answer

C. pTis cN0 cM0 PGS 0

- Remember slide 14? cN0 is allowed in the pN field when the tumor is resected (pT met) and the path shows in situ tumor without invasion
  - Applies to
    - Any in situ carcinoma or melanoma
    - Ta lesions in the urinary chapters

Q10

- Patient with transverse colon adenocarcinoma that invades through the visceral peritoneum and invaded the liver, lymph nodes negative.

A. pT4b pN0 cM0 PGS 3C

B. pT3 pN0 pM1a PGS 4A

C. pT4b pN0 cM1a PGS 4A

Q10 Answer

A. pT4b pN0 cM0 PGS 3C

- Chapter 1, pg 19
- Liver involvement is not always distant mets
- Direct invasion of the liver is classified in the T category (pT4b) in the colon chapter
- If there were separate nodules in the liver, then you would have M1

Q11

- 65-year-old male was diagnosed in urologist's office with prostate adenocarcinoma. PSA 4.8. MRI-prostate showed cT2a lesion. Biopsy showed Gleason 3/3 adenoca. Urologist stated patient had cT2a cN0 cM0, PGS 1. Registrar records:

A.	cT2a	cN0	cM0	PGS 1
B.	cT blank	cN0	cM0	PGS 99
C.	cTX	cN0	cM0	PGS 99

Q11 Answer

B. cT blank cN0 cM0 PGS 99

- There is no DRE documented (pg 14, pg 718)
  - Even though physician clinically stages the case based on the info (s)he has, that info is for planning treatment purposes
  - It does not follow the rules of what info we can use for clinical staging
- *"Clinical T for no DRE" 02-23-22, 03:56 PM*
  - *If you know for a fact that a DRE was not performed then you can assign cTX. But if you are not positive that one was done outside of your facility or not I would assign cT blank.*

https://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/male-genital-organs-chapters-57-59/prostate-chapter-58/125051-clinical-t-for-no-dre

Q12

- Patient has 8.0 cm clear cell renal cell carcinoma left kidney on CT abdomen. PET scan shows suspicious lung lesion in hilum. EBUS biopsy of hilar lesion is negative. What is correct stage?

A. cT2a cN0 pM0 PGS II

B. cT2a cN0 cM0 PGS II

C. cT2a cN0 cMX PGS 99

Q12 Answer

B. cT2a cN0 cM0 PGS II

- Chapter 1, pg 17
  - pM0 doesn't exist – it would require a biopsy of every organ and tissue in the body (doesn't even happen at autopsy)
  - If clinical evidence shows distant mets in organs that are/can not be biopsied, cM1 would be used
  - c/pMX do not exist – MX was removed after the 6th edition
  - cM0 based on PE and imaging (imaging not required)
  - cM1 based on PE, imaging, and invasive procedures (endoscopies and/or exploratory surgeries when no microscopic examination of distant mets)

Q13

- Long-time smoker has CT chest that shows 8 cm tumor RUL and involved mediastinal lymph nodes. Needle biopsy of lung shows squamous cell carcinoma, PD. EBUS attempted with no path from LNs done.

A. pT4 pN0 cM0 PGS IIIA

B. cT4 cN2 cM0 PGS IIIB

C. pT4 cN2 cM0 PGS 99

Q13 Answer

B. cT4 cN2 cM0 PGS IIIB

- Chapter 1, pg 19
- pT may be assigned w/o resection IF
  - Biopsy of primary tumor to evaluate highest category
  - And micro confirmation of highest N (any laterality scalene or supraclavicular LNs or contralateral hilar or mediastinal LNs in this
  - In this chapter, we can't mix pT and cN

Q14

- Axillary mass (matted adenopathy) biopsied, showing malignant melanoma. Physical exam showed no skin lesions. PET scan showed only axillary LN. /What is the correct stage?

A. pT0 pN1b cM0 PGS IIIB

B. pTX pN1b cM0 PGS 99

C. cT0 cN3b cM0 PGS IIIC

Q14 Answer

C. cT0 cN3b cM0 PGS IIIC

- Chapter 1, pg 19
- T0 = No evidence of primary tumor (primary skin lesion not found)
- LN are noted to be matted.
  - Even if only 1 may have been biopsied, N3b description is for matted LN

Q14 Advice

- STORE v22: Melanoma • Code to Skin, NOS (C44.9) if a patient is diagnosed with metastatic melanoma and the primary site is not identified.
- SINQ 20190049: Lymph node mets from a *melanoma* of unknown primary site are presumed to be regional if the lymph node mets are confined to one area, as they are in this case. We are assuming there are no previous *melanoma* diagnoses for this patient. The workup should include examination of the skin areas that drain to the axillary area.

Q15

- Patient's colonoscopy showed rectal adenocarcinoma. EUS showed invasion of muscularis propria and probable 3 regional LN. Patient agreed to pre-op radiation of 40 Gy, and chemo of FOLFOX. Patient then underwent colonoscopy for restaging with biopsy still positive in muscularis tissue and CT abdomen still some suspicious adenopathy. What is the correct stage?

A. ycT2 ycN1 cM0 PGS IIIA

B. ycT2 ycN blank cM0 PGS 99

C. ycT3 ycN1 cM0 PGS IIIB

Q15 Answer

B. ycT2 ycN blank cM0 PGS 99

- Chapter 1, pg 23
- Even though EUS said 3 probable LN, that was clinical findings. Clinical findings are not included in the post therapy classifications. CT scan just noted adenopathy and we cannot narrow it down to N1 or N2.
  - If N1 (1-3 LN), PGS would be IIIA
  - If N2 (4 or more LN), PGS would be IIIB

Q16

- Same rectal patient went on to have abdomino-perineal resection since colonoscopy showed residual cancer. Path described invasion through muscularis propria with foci invading perirectal tissue, 4 of 8 positive LNs, margin neg.

A. ypT2 ypN2 PGS IIIB

B. ypT3 ypN2a PGS IIIB

C. ypT3 ypN2 PGS III

Q16 Answer

B. ypT3 ypN2a PGS IIIB

- (pg 23)
- ypN2a is specific for 4 positive LN. We should always be as specific as possible. This allows for a specific group stage.
  - N2a 4-6 regional LN, would show group IIIB
  - N2b 7 or more regional LN, would show group IIIC

Q17

- Patient with colon cancer presents for surgery. Surgical observations deem the patient unresectable and surgery aborted.

A. Use findings for clinical staging

B. Use findings for pathological staging

Q17 Answer

A. Use findings for clinical staging

- If a physician is only doing an exploratory procedure then those findings belong to clinical staging.

https://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/principles-of-ca-staging-and-general-info-chapters-1-4/principles-of-cancer-staging-chapter-1/108459-x-vs-blank-clarification-for-colon-and-bile-duct (See last four posts in this string)

Q18

- Patient had colonoscopy and the level of invasion could not be determined and cT could not be assigned. At the time of surgery, the physician observes tumor adherence to another organ and notes this in the operative report. Surgery performed.

A. Use findings for clinical staging

B. Use findings for pathological staging

Q18 Answer

B. Use findings for pathological staging

- What the surgeon sees at the start of the surgery is all part of a colorectal resection. The surgical guidelines for performing that operation include that evaluation as part of the standard procedure. Surgical observation is part of the operative findings for pathological staging.

https://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/principles-of-ca-staging-and-general-info-chapters-1-4/principles-of-cancer-staging-chapter-1/108459-x-vs-blank-clarification-for-colon-and-bile-duct

Q19

- Patient undergoes a colonoscopy w/ bx from sigmoid colon (+) for adenocarcinoma (no tumor extent documented in colonoscopy or path report); staging CT documents sigmoid colon tumor is seen (but tumor extent is not documented on scan), and there is no regional LAD or distant mets. No cTNM stage is documented by the managing physician prior to surgical resection.

A. cT blank cN0 cM0 Stage group 99
B. cTX cN0 cM0 Stage group 99

Q19 Answer

A. cT blank cN0 cM0 Stage group 99

- With no information from the physician, you do not know if the physician looked at the imaging and was able to come up with a clinical stage (even though it wasn't documented) in order to plan the treatment.

https://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/principles-of-ca-staging-and-general-info-chapters-1-4/principles-of-cancer-staging-chapter-1/108459-x-vs-blank-clarification-for-colon-and-bile-duct

Q20

- Patient undergoes an ERCP w/ bx from distal bile duct (+) for adenocarcinoma (tumor extent/depth not documented in the report); staging CT reveals the distal bile duct tumor (tumor extent and depth of invasion not documented in scan), RLN mets documented (but the # of nodes involved is not stated), and no distant mets; no cTNM stage is documented by the managing physician prior to surgical resection.

A. cT blank cN blank cM0 Stage group 99
B. cTX cNX cM0 Stage group 99

Q20 Answer

A. cT blank cN blank cM0 Stage group 99

- There was imaging which probably provided information, but you don't have physician documentation, which means blank is correct since you do not have information on what the managing physician knew.
- If you do not have the physician information, you cannot use X, since that means the physician didn't know and with the imaging it is very probable it is known.
- By using blank instead of X, you are not taking away any information and more correctly stating there is no documentation in the medical record.

https://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/principles-of-ca-staging-and-general-info-chapters-1-4/principles-of-cancer-staging-chapter-1/108459-x-vs-blank-clarification-for-colon-and-bile-duct

Q21

- If a physician assigns a T1/2 or T3/4, the registrar assigns:

A. The lower of the 2 categories
B. T blank
C. TX

Q21 Answer

C. TX

- The physician was using different T categories like they really weren't sure, therefore TX is appropriate.

- The "uncertain rule" in chapter 1 allows the **physician** to choose the lower category when the information is unclear between two categories, such as it is actually invading or just close to that structure. The chapter 1 rules make it clear that a registrar may never use this rule. This rule also states that it is NOT for unknown information, even for the physician. That skews the data.

https://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/lower-gastrointestinal-tract-chapters-19-21/colon-and-rectum-chapter-20/83968-clinical-n-staging

Q22

- Patient with T3 rectal cancer. Radiology says at least 3 abnormal appearing nodes with multiple other LNs (5) measuring >5mm, making this at least N1 and probably N2a; Managing physician states clinical N1/N2 and later states N2. This is a T3 tumor so whether it's N1b or N2a, it would be a stage IIIB.

A.	cT3	cN1b	cM0	PSG IIIB
B.	cT3	cN2a	cM0	PSG IIIB
C.	cT3	cNX	cM0	PSG 99
D.	cT3	cN blank	cM0	PSG 99

Q22 Answer

C. cT3 cNX cM0 Stage group 99

- NX would be used since the registrar may not choose the lower category. Researchers often do studies on the T and N, not just the stage groups, and this would skew the N category data.

https://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/lower-gastrointestinal-tract-chapters-19-21/colon-and-rectum-chapter-20/83968-clinical-n-staging

Q23

- Physician staged a colon case cT1 cN0 cM0 Stage group I and recommended definitive surgery. Pathology from surgical resection revealed no residual disease and all the LNs removed were negative.

A. pT0 pN0 cM0 Stage Group 99
B. pTX pN0 cM0 Stage Group 99
C. pT1 pN0 cM0 Stage Group I

Q23 Answer

C. pT1 pN0 cM0 Stage Group I

- Remember pathological staging = clinical stage info + operative findings + resected specimen path report.

  1 + 0 does not equal 0.

https://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/lower-gastrointestinal-tract-chapters-19-21/colon-and-rectum-chapter-20/90699-clinical-staging-a-colon

Q24

- Path report states at least adenocarcinoma in situ.

A. cT blank cN blank cM0 Stage group 99
B. cTX cN blank cM0 Stage group 99
C. cTis cN blank cM0 Stage group 99
D. cTis cN0 cM0 Stage group 0

Q24 Answer

D. cTis cN0 cM0 Stage group 0

- For clinical staging, I would accept this as cTis. (per Donna Gress).

https://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/lower-gastrointestinal-tract-chapters-19-21/colon-and-rectum-chapter-20/90699-clinical-staging-a-colon

Q25

- Clinical workup revealed positive mesorectal LNs involvement per imaging & per statement from managing physician. Primary site is rectum. Specific number involved LNs is not known.

A. cN blank
B. cNX
C. cN1

Q25 Answer

B. cNX

- NX is correct (for the date of the post), as you cannot assign the lowest category to unknown information. This is covered in the AJCC Curriculum for Registrars.
- This is a **pre- AJCC 8th edition answer** from Donna Gress, but helps us understand why we are confused about using blanks, X, and the uncertainty principle!

https://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging/ajcc-disease-site-webinars/colorectum/67798-positive-lns-involved-but-unknown-rectal-case

Q25 Notes

- **Now**, we would assign cN blank (choice A) to this case because we don't have the information, but the physician does.
- Be careful about the **dates** in the CAnswer Forum posts as rules and guidance can change over time.

Q26

- MMG: New calcifications in UOQ Lt breast; Bx shows IMC NST, HG, at least 10 mm plus DCIS; MRI: up to 98 mm non-mass enhancement corresponding to bx-proven malignancy and calcifications seen on MMG, skin w/ enhancement – suspected involvement; Med onc tells patient stage of her breast cancer is unclear at this point.

A. cT blank
B. cTX

Q26 Answer

B. cTX

- Per Donna Gress: In this case it is clear the physician doesn't know for cTX.

  But if there is ever any doubt, I would use cT blank - since there is no advantage from the registrars to blank vs X, you don't get penalized for one or the other. It would be erring on the side of caution if you aren't sure the physician doesn't know.

Questions?

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