# Staging Practice

1

# Case 1 – Case Vignette

2

- HISTORY: 59 year old African American female admitted following recent colonoscopy showing malignant appearing mass in ascending colon. Family History: Father had rectal cancer Physical Exam is essentially WNL.
- CT CHEST/ABDOMEN: no abnormalities noted
- COLONOSCOPY per history showed malignant appearing mass in proximal ascending colon – unknown if biopsy was taken to confirm malignancy.
- CEA 0.6 – WNL
- PATHOLOGY from Resection - Right colon, hemicolectomy: Low grade (moderately differentiated) adenocarcinoma of cecum. Maximum dimension: 3.0 cm. Grossly the lesion invades through the muscularis propria into the underlying mesenteric adipose tissue. Microscopic tumor extension: invades through muscularis propria. Lymphovascular invasion: present (venous). Perineural invasion: not identified. Discontinuous extramural tumor deposits: not identified. Margins: free of tumor. Twenty two lymph nodes negative for metastatic carcinoma (0/22).

# Case 1 – Answer & Rationale

3

| Practice Case #1<br>C18.0 – Cecum<br>8140/32 – Low Grade/Mod Diff Adenocarcinoma, NOS | | | |
|---|---|---|---|
| ***Clinical* TNM AJCC Stage Group** | *c*Tblank *c*N0 *c*M0 | *c*99 | Tumor Extension into or thru the colon wall is basis for cT evaluation. But, only tumor location can be assessed from Colonoscopy or CT Scan (cTblank or cTX).<br>Clinical Node status can be based on CT Abd and no nodes noted (cN0).<br>cM0 based on CT Chest/Abd neg.<br>Clinical Stage - Unstaged - cannot clinically determine depth of invasion into colon wall by PE or on imaging. |
| ***Pathologic* TNM AJCC Stage Group** | *p*T3 *p*N0 *c*M0 | *p*IIA | Pathologic staging is based on histologic review of resection of primary site and regional lymph nodes specimen.<br>Tumor invades thru muscularis propria into (pericolic) adipose tissue (pT3) but not to the peritoneum or to other adjacent organs or structures.<br>No lymph node mets (0/22) and no tumor deposits in found in mesentery (pN0).<br>No pathologic confirmation of any metastasis - so, you take the clinical (cM0).<br>Pathologic Stage IIA |
| **SEER Summary Stage 2000** | | 2 Regional Direct Ext Only | Regional Direct Ext Only into Pericolic Adipose Tissue |

# Case 2 – Case Vignette

4

- HISTORY: 64 year old white male admitted through the ER with severe abdominal pain.
- CT CHEST/ABD: extra-luminal gas right lower quadrant in area of cecum, suspect perforation of ascending colon
- PATHOLOGY Laparoscopic Ileocecectomy: poorly differentiated adenocarcinoma of cecum.; Maximum dimension: 4.4 cm, Microscopic tumor extension: penetrates serosal surface (visceral peritoneum) with perforation and direct invasion of distal ileum; LVI: present; One discontinuous extramural tumor deposit found in mesentery without nodal structure; Margins: free of tumor, nine lymph nodes negative for mets (0/9).

# Case 2 – Answer & Rationale

5

| Practice Case #2 | | | |
|---|---|---|---|
| C18.0 – Cecum<br>8140/33 – Adenocarcinoma, NOS; poorly differentiated = Grade 3 per 2014 Grade Coding Instructions | | | |
| ***Clinical* TNM AJCC Stage Group** | cTblank cN0 cM0 | c99 | Tumor Extension into or thru the colon wall is basis for cT evaluation. But, only tumor location can be assessed from Colonoscopy (cTblank or cTX).<br>Clinical Node status can be based on CT Abd which was negative (cN0).<br>cM0 based on CT Chest/Abd neg.<br>Clinical Stage - Unstaged - cannot clinically determine depth of invasion into colon wall. |
| ***Pathologic* TNM AJCC Stage Group** | pT4b pN1c cM0 | pIIIC | Pathologic staging is based on histologic review of resection of primary site and regional lymph nodes specimen.<br>Microscopic states tumor penetrates into visceral peritoneum (pT4a) plus there is invasion of (adjacent) ileum (pT4b). So, you go with most extensive (pT4b).<br>All Lymph Nodes are negative (0/9). But there was 1 tumor deposit without nodal structure noted in path (pN1c).<br>No pathologic confirmation of any metastasis - so, you take the clinical cM0.<br>Pathologic Stage IIIC. |
| **SEER Summary Stage 2000** | | 4 Regional Direct Ext PLUS Lymph Nodes | Regional direct extension plus lymph nodes - per Summary Stage 2000 - mesenteric tumor nodules (tumor deposits) are treated as + nodes |

# Case 3 – Case Vignette

6

- HISTORY: 57 year-old Hispanic female with biopsy-confirmed adenocarcinoma of the rectosigmoid.
- CT CHEST: few small (<1cm) nonspecific hilar lymph nodes noted in chest. Exam otherwise negative.
- COLONOSCOPY SPECIMEN: Tumor colon @ 15 cm biopsy: invasive well differentiated adenocarcinoma
- PATHOLOGY: Sigmoidectomy - 3.9 x 3.2 x 0.7 cm circumferential ulcerative lesion; invasive moderately differentiated colonic adenocarcinoma with extension into and through muscularis propria and focal transmural extension to serosal surface, margins free of tumor, 2/13 lymph nodes positive for metastatic carcinoma; discontinuous tumor deposits – present; liver wedge biopsy metastatic colonic adenocarcinoma

# Case 3 – Answer & Rationale

7

| Practice Case #3 | | | |
|---|---|---|---|
| C18.7 – Sigmoid Colon (4cm size tumor mass @ 15cm from anal verge with sigmoidectomy procedure)<br>8140/32 – Adenocarcinoma, NOS; mod diff | | | |
| ***Clinical* TNM AJCC Stage Group** | cTblank cNblank cM0 | c99 | Tumor Extension into or thru the colon wall is basis for cT evaluation. But, only tumor location can be assessed from Colonoscopy (cTblank or cTX).<br>Clinical Node status can be based on CT Abd but only CT Chest done so cannot assess nodes in abdomen (cNblank or cNX).<br>cM0 based on CT Chest neg.<br>Clinical Stage - Unstaged - cannot clinically determine depth of invasion into colon wall or node involvement. |
| ***Pathologic* TNM AJCC Stage Group** | *p*T3 *p*N1b *p*M1a | *p*IVA | Pathologic staging is based on histologic review of resection of primary site and regional lymph nodes specimen.<br>T3 based on extension thru muscularis propria up to serosal surface (pT3) without mention of extension to visceral peritoneum or other organs or structures.<br>2/13 nodes positive and there are tumor deposits<br>When both tumor deposits and nodes are present you ignore the tumor deposits and assign pN based on nodes +. So, pN1b is nodal category assigned.<br>NOTE: Only use pN1c when there are NO + nodes but there are + tumor deposits (not nodes) on path.<br>Pathologic confirmation of liver metastasis - pM1a.<br>Pathologic Stage IVA. |
| **SEER Summary Stage 2000** | | 7 Distant | Distant to Liver |

# Case 4 – Case Vignette

8

- HISTORY: 61 yr old white female, lifelong smoker, with multiple medical problems including recent adenoma on routine screening colonoscopy. Physical exam - negative.
- CT CHEST: Negative
- COLONOSCOPY : Transverse colon polyp @ 110cm – high grade dysplasia with focal intramucosal well differentiated adenocarcinoma arising in an adenoma. PATHOLOGY: laparoscopic transverse colectomy – Small residual component of tubulovillous adenoma w/ no evidence of residual carcinoma, no evidence to suggest invasion of lamina propria, 0/4 + pericolonic lns

# Case 4 – Answer & Rationale

9

| Practice Case #4 | | | |
|---|---|---|---|
| C18.4 – Transverse Colon<br>8263/31 – Adenocarcinoma (invasive) arising in Tubulovillous Adenoma, Well Differentiated | | | |
| ***Clinical* TNM AJCC Stage Group** | *p*T1 *c*N0 *cM0* | *clA* | Tumor Extension into or thru the colon wall is basis for cT evaluation. Colonoscopy with HGD and focal intramucosal adenocarcinoma with invasion noted. Intramucosal in this case is invasive so is this pT1 ??<br>Clinical Node status can be based on CT Abd but NO CT performed. However, colonoscopy shows minimal invasive adenocarcinoma in polyp can this be (cN0)??<br>cM0 based on CT Chest neg.<br>Clinical Stage IA based on minimal invasion. |
| ***Pathologic* TNM AJCC Stage Group** | *p*T1 *p*N0 cM0 | *plA* | Pathologic staging is based on histologic review of resection of primary site and regional lymph nodes specimen.<br>Polypectomy showed focal intramucosal neoplasm with minimally invasive adenocarcinoma (pT1).<br>0/4 nodes positive (pN0).<br>No pathologic confirmation of any metastasis – cM0.<br>Pathologic Stage IA |
| **SEER Summary Stage 2000** | | 1<br>Localized | Localized |

# Case 5 – Case Vignette

10

- HISTORY: 57 year old obese white female with chronic constipation and bright red blood in stool. Rectal exam positive for mass low in rectum with fixation.
- EUS: large mass fixed to rectal wall with evidence of invasion into perirectal fat and partial lumen obstruction, prominent node on ultrasound exam.
- RECTAL BX: poorly differentiated adenocarcinoma
- Treatment Summary: Patient was treated with pre-operative 5-FU with concurrent radiation therapy. Patient completed her short-course XRT but did not return for surgical resection and expired in home.

# Case 5 – Answer & Rationale

11

| Practice Case #5 | | | |
|---|---|---|---|
| C20.9 – Rectum<br>8140/33 – Adenocarcinoma, NOS; poorly differentiated | | | |
| ***Clinical* TNM AJCC Stage Group** | *c*T3 *c*N1 *c*M0 | cIIIB | Tumor Extension into or thru the colon wall is basis for cT evaluation.<br>EUS shows at least invasion into perirectal fat but cannot assess any further extension. Fixation does not imply penetration or invasion into adjacent organs or visceral peritoneum.<br>Clinically assessed depth invasion of cT3.<br>Clinical Node status based on EUS with prominent node noted cN1.<br>cM0 based on clinical no evidence of mets in history.<br>Clinical Stage IIIB. |
| ***Pathologic* TNM AJCC Stage Group** | *p*Tblank *p*Nblank *c*M0 | *p*99 | Pathologic staging is based on histologic review of resection of primary site and regional lymph nodes specimen.<br>Patient did not have post-treatment resection. So, cannot assess pathologic or post-neoadjuvant T or N. pTblank and pNblank. Not assessed.<br>No pathologic confirmation of any metastasis - cM0.<br>Pathologic Stage – unstaged<br>*yp* not allowed due to no surgical resection |
| **SEER Summary Stage 2000** | | 4 Regional Direct Ext PLUS Lymph Nodes | Regional Direct extension plus lymph nodes (Summary Stage is best stage - clinical/pathologic or combined) |