Breast Staging

T, N, M, Prognostic Factor Categories

Breast Staging Anatomy

- Chest wall
  - Ribs
  - Intercostal muscles
  - Serratus anterior muscles
  - N0/T pectoral muscle
- Intramammary nodes
- Within breast
- Considered axillary for staging
- Regional nodes, chapter lists:
  - Location
  - Alternate names
Clinical T Category

- Determining size for T category
  - Most accurate size needed
  - Don't just choose largest
  - Review physical exam, mammogram, ultrasound, biopsy
  - Physician statement

- Multiple simultaneous ipsilateral tumors
  - T category based on largest of multiple tumors
  - Must use (m) suffix

- Skin dimpling or nipple retraction not used for staging

Clinical T Category

- Chest wall structures
  - Ribs
  - Intercostal and serratus anterior muscles

- Skin involvement
  - Ulceration
  - Satellite nodules must be macroscopic and separate from primary tumor
  - Edema or peau d'orange not meeting inflammatory criteria

- Inflammatory carcinoma
  - Diffuse erythema and edema (peau d'orange)
    - Specific size NOT used to diagnose inflammatory ca
    - "Approximately a third or more" in general guidance NOT a measurement
  - Clinical diagnosis, microscopic evidence not required
  - Rare, progresses quickly within days/weeks

Pathological T Category

- Size for T category
  - Nearest mm used, tenths of mm rounded to assign T
    - >1.0 mm to 1.4 mm rounded to 2 mm
    - Avoid assigning "microinvasion" T1mi category to cancer >1.0 mm
    - Do not add core biopsies to residual tumor in resection
    - May need to use either core biopsy or resection to assign T

- Complex shapes may represent one tumor
  - Macroscopically distinct tumors that are very close together
  - May find microscopic subtle areas of continuity between foci
  - Need contiguous uniform tumor density in intervening tissue
  - Does not apply to macroscopic tumor with microscopic satellites
  - Determined by pathological and imaging findings
  - Need managing physician and pathologist statements

- Multiple simultaneous/synchronous ipsilateral tumors
  - T category based on largest of multiple tumors
  - Must use (m) suffix
Clinical N Category

- Clinically fixed or matted denotes
  - Nodes attached to each other or other structures
  - Extracapsular extension or inflammatory process

- Consider as movable if no statement
  - Physicians document exam findings, not what is absent

- Micromets will be designated as such
  - Consider as metastasis, >2.0 mm if no statement

- Important to note physical exam and imaging for nodes
  - Negative exam or imaging
  - Clinically detected on imaging or physical exam
  - No description implies movable
  - Level of nodes involved

Pathological N Category

- pN category
  - Must have microscopic assessment of at least 1 node to assign
  - Microscopic assessment includes
    - FNA or core needle biopsy
    - Sentinel node procedure
    - Axillary node dissection
    - Include nodes not microscopically confirmed to assign pN
    - No microscopic assessment is pNX

- 3 categories for size of nodal involvement
  - Isolated tumor cells (ITC) is pN0(i+), size ≤ 0.2mm
  - Micrometastasis is pN1mi, size > 0.2mm but ≤ 2.0mm
  - Metastasis in lymph node, size at least one metastasis > 2.0mm

Clinical M and Pathological M Categories

- M category assessment
  - Based on physical exam signs or symptoms of mets
  - Imaging is not required
  - Assign cM0 or cM1 based on physical exam or imaging
  - Assign pM1 based on FNA or biopsy of involved metastatic site
  - Assign cM0(i+) for CTC in blood or DTC in bone marrow/non-regional tissue

- M category for postneoadjuvant therapy staging (yc) and/or (yp)
  - Same as M category assigned for clinical stage
  - If M1 before Rx, M1 for yc and/or yp even if mets no longer detected
  - Survival will not be same as patients who were never M1
Stage Classification –
Diagnostic Workup & Treatment

Anatomic Stage Groups

• May never use anatomic stage group table
  • Even if prognostic factor categories are missing
  • Even if stage group will be unknown
  • Will skew stage group data

• ONLY for global regions where biomarker tests unavailable

• Physicians in U.S. must use prognostic tables ONLY

• Cancer registries in U.S. must use prognostic tables ONLY

Clinical and Pathological Staging

• Clinical Staging
  • Most definitive size from imaging, physician examination, or biopsy
  • Biopsy of primary site, potentially nodal or mets biopsy

• Pathological Staging
  • Use clinical stage information together with
  • Operative findings and
  • Pathology report of resected specimen

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Posttherapy Staging

- Neoadjuvant therapy eligible based on NCCN guidelines
  - Operable - criteria for breast-conserving surgery except tumor size
  - Inoperable or locally advanced
- NOT neoadjuvant therapy: few days to 2-4 weeks of endocrine therapy
  - Few days or week to test response
  - Clinical trials using imaging assessment pre & post 2-4 weeks of Rx
- Early response may be surrogate for long-term endocrine benefit after surgical resection
- yc staging
  - Initial treatment must be neoadjuvant
  - Assessment by exam, imaging, biopsies
  - No stage group
- yp staging
  - Initial treatment must be neoadjuvant
  - All information from yp staging with pathology report of resected specimen
  - No stage group

Criteria for Clinical Classification - PreTreatment

- Patient undergoing diagnostic workup
  - Exam of breast, skin, and lymph nodes
  - Imaging of breast: mammogram, ultrasound, MRI
  - Diagnostic FNA, core needle biopsy, or surgical biopsy of breast
  - Diagnostic FNA or sentinel biopsy of nodes
  - Diagnostic FNA or biopsy of metastatic sites
  - Imaging of other sites, see NCCN or radiology guidelines
- Incidental finding during excision benign tumor
  - Start of diagnostic workup for malignant tumor
  - Not considered treatment for malignant tumor

Diagnostic vs. Treatment

- Diagnostic procedures
  - Sampling of breast tumor
  - Not intended to remove entire tumor
  - Not known if entire tumor is removed at this point
  - Do NOT change staging based on subsequent info
- Surgical treatment of primary site
  - Resection of breast tumor
  - Margin status does not determine whether considered resection
  - Margin status may necessitate re-excision
  - 20% of lumpectomies have re-excision
  - If nodal dissection not done, still considered treatment

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Treatment Satisfying Stage Classification

- Pathological staging
  - Excision of tumor
  - Intent is treatment, not sampling
  - Usually no macroscopic tumor left behind
  - Re-excision for margin involvement, both surgeries are treatment
  - Nodal dissection not required to qualify for staging

- Postneoadjuvant therapy staging
  - Must meet standard guidelines, such as NCCN or ASCO
  - Usually 4-6 cycles of chemo, sometimes more
  - Usually 4-6 months of endocrine therapy, may be up to 1 year
  - Short course endocrine therapy does NOT qualify
  - Rule for staging, not for registry treatment data items

Information and Questions on AJCC Staging

Timing is Everything

AJCC Stage Classifications
Defining Time Frame and Criteria

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AJCC Web Site

- https://cancerstaging.org
- General Information
  - Overview
  - Version 9
  - Cancer Staging Systems
    - AJCC 8th edition Chapter 1: Principles of Cancer Staging
  - Cancer Staging Education
  - FAQ & Resources

CAnswer Forum

- Submit questions to AJCC Forum
  - Version 9 Forum
  - 8th Edition Forum
  - Located within CAnswer Forum
  - Provides information for all
  - Allows tracking for educational purposes
- http://cancerbulletin.facs.org/forums/

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Thank You

Donna M. Gress, RHIT, CTR
Manager, Cancer Staging and Registry Operations
AJCC and Cancer Programs

cancerstaging.org  ACS Cancer Programs  @AJCCancer

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