AJCC Staging Moments

AJCC TNM Staging 8th Edition

Breast Case #1
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Breast Case # 1
Presentation of New Case

• Newly diagnosed breast cancer patient

• Presentation at Cancer Conference for treatment recommendations and clinical staging
Breast Case # 1
History & Physical

• 85 yr old female who presented with an abnormal screening mammogram, no palpable breast masses, axillary nodes not palpable

• No family hx, no HRT (hormone replacement therapy)
Breast Case # 1

Imaging Results

- Mammogram-0.5cm area of microcalcifications in central left breast mid depth
- Suspicious by magnification and spot compression views
- Stereotactic core needle biopsy recommended
- No further imaging performed

ML view: magnification mammogram

Used with permission. Washington University School of Medicine
Breast Case # 1

Diagnostic Procedure

• Procedure
  – Stereotactic core needle biopsy central left breast

• Pathology
  – Ductal carcinoma in situ, cribriform and solid type
  – G2, intermediate nuclear grade
  – Estrogen receptor positive
  – Progesterone receptor positive
  – HER2 negative
Breast Case # 1
Clinical Staging

• Clinical staging
  – Uses information from the physical exam, imaging, and diagnostic biopsy

• Purpose
  – Select appropriate treatment
  – Estimate prognosis
Breast Case # 1
Clinical Staging

• Synopsis: elderly patient with 0.5cm DCIS lesion only visible on imaging, axilla is neg on exam and imaging

• What is the clinical stage?
  - T____
  - N____
  - M____
  - Grade____
  - HER2____
  - ER____
  - PR____
  - Stage Group____
Breast Case # 1
Clinical Staging

• Clinical Stage correct answer
  – cTis (DCIS)
  – cN0
  – cM0
  – Grade 2 (DCIS nuclear grade)
  – HER2 negative
  – ER positive
  – PR positive
  – Stage Group 0

• Based on stage, treatment is selected
• Review treatment guidelines for this stage
Breast Case #1
Clinical Staging

• Rationale for staging choices
  – cTis (DCIS) for ductal in situ disease
  – cN0 for negative nodes on exam and imaging
  – cM0 nothing to suggest distant metastases
  – G2 nuclear grade used for in situ ca
  – Grade, HER2, ER & PR do not play a role in assigning stage group
Breast Case # 1
Treatment Options

• Review treatment guidelines for this stage

• Discuss appropriate treatment plans for this patient
Breast Case # 1
Surgery & Findings

• Procedure
  – Image-guided wire localized left partial mastectomy (lumpectomy)
  – No lymph nodes excised

• Findings
  – Specimen radiograph reveals microcalcifications and clip in center of specimen

• Final pathology deferred to permanent pathology
Breast Case # 1
Pathology Results

• DCIS, cribriform and solid type, nuclear grade 2

• Invasive ductal carcinoma – 1mm

• Invasive cancer Nottingham Grade 1

• Margins of resection free – closest margins inferior at 5mm

• HER2 negative
Breast Case # 1
Pathological Staging

• Pathological staging
  – Uses information from clinical staging, operative findings, and resected specimen pathology report

• Purpose
  – Additional precise data for estimating prognosis
  – Calculating end results (survival data)
Breast Case # 1
Pathological Staging

• Synopsis: patient with 0.5cm DCIS and a 1mm infiltrating duct ca, no nodes removed

• What is the pathological stage?
  – T____
  – N____
  – M____
  – Grade____
  – HER2____
  – ER_______
  – PR_______
  – Stage Group_______
Breast Case # 1
Pathological Staging

• Pathological Stage correct answer
  – pT1mi
  – pNX
  – cM0
  – Grade 1
  – HER2 negative
  – ER positive
  – PR positive
  – Stage Group unknown

• Based on pathologic stage, there is more information to estimate prognosis and adjuvant treatment is selected
Breast Case # 1
Pathological Staging

• Rationale for staging choices
  – pT1mi is microinvasion <1mm in size
  – pNX because sentinel or axillary nodes were not removed, pathological staging cannot be completed
  – cM0 - use clinical M with pathological staging unless there is microscopic confirmation of distant metastases
  – Grade 1 for invasive cancer using Nottingham
  – HER2 negative
  – ER positive
  – PR positive
Prognostic Factors/Registry Data Collection

• Applicable to this case
  – Estrogen receptor: percent positive, Allred score
  – Progesterone receptor: percent positive, Allred score
  – HER2: IHC and FISH results
  – Ki67:
T1mi
tumor 1mm or less in greatest dimension

T1 is defined as a tumor 20 mm or less in greatest dimension
T1mi is a tumor 1 mm or less in greatest diameter (not illustrated)
T1a is defined as tumor more than 1 mm but not more than 5 mm in greatest dimension
T1b is defined as tumor more than 5 mm but not more than 10 mm in greatest dimension
T1c is defined as tumor more than 10 mm but not more than 20 mm in greatest dimension

Breast Case # 1
Recap of Staging

• Summary of correct answers
  – Clinical stage  cTis cN0 cM0 Gr 2 HER2- ER+ PR+ Stage Group 0
  – Pathological stage  pT1mi pNX cM0 HER2- ER+ PR+ Stage Group unknown

• The staging classifications have a different purpose and therefore can be different. Do not go back and change the clinical staging based on pathological staging information.
Staging Moments Summary

• Review site-specific information if needed

• Clinical Staging
  – Based on information before treatment
  – Used to select treatment options

• Pathological Staging
  – Based on clinical data PLUS operative findings and resected specimen pathology report
  – Used to evaluate end-results (survival)