Current Management of DCIS

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PGY-3
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DCIS

• Premalignant lesion
• Clonal proliferation of malignant mammary ductal epithelial cells within duct lumen and not invading through basement membrane.
• Heterogeneous and further classified based on grade, architecture, and +/- presence of necrosis
DCIS Dx

- Accounts for 15-50% MMG-detected neoplasms
  - Incidence on rise with advent of better MMG screening
- MC diagnosed as cluster of microcalcifications on MMG (75-90%), but can present as mass (20%).
- Up to 20% of DCIS diagnoses will have evidence of IMC on resection.
- Multifocal or Multicentric
- Role of MRI
DCIS Therapy

• Major therapeutic objective is to decrease rates of local recurrence for in situ or invasive CA following resection.
  – Mastectomy
  – Lumpectomy
  – Lumpectomy with XRT
  – +/- SLN biopsy
  – +/- Hormone therapy
Mastectomy

- Effective local control; long-term local recurrence rates 1-2%.
- Indications for mastectomy:
  - Lesions >5cm in size or large relative to total breast size
  - Multicentric disease
  - Contraindications to radiation (SLE, scleroderma, etc) or prior radiation therapy
  - Pregnancy
- Relative indications for mastectomy:
  - Younger women (<50 yo)
  - Larger lesions (3-5cm)
  - High grade lesions
  - Close margins
  - Extensive family history of breast CA
Lumpectomy vs. Lumpectomy with XRT

• NSABP B-17 Trial – compared lumpectomy alone with lumpectomy with XRT (7.5 yr f/u)
  – LR rate invasive CA: 13.4% vs 3.9%
  – LR rate in situ CA: 13.4% vs 8.2%

• EORTC-10853 Trial – lumpectomy alone vs lumpectomy with XRT (4 and 10 yr f/u)
  – 4 yr: 16% vs 9%
  – 10 yr: showed decrease in LR for all subgroups (grade, histology, etc.)
XRT for everyone?

- ECOG E5194 – ID women with low-risk DCIS and low risk of recurrence after lumpectomy without XRT.
  - Low grade, smaller lesions, with >3mm margins had an acceptably low rate of LR at 5 yrs (6.1%) vs 15.3% with high grade.

- USC/Van Nuys Prognostic Index (Silverstein, et al)
  - Scoring index for tumor and resection to determine need for adjuvant XRT
  - Score based on tumor size, margin width, tumor grade, +/- necrosis, and patient age
  - Score ranges dictate +/- radiation needs
XRT remains standard of therapy for DCIS with breast-conservation therapy.

Excision alone can be considered in select patients who are willing to pursue it:

- Age 70+
- Low or intermediate grade
- Lesions < 15mm in size
- Tumor free margins on excision
Role of MRI

• Imaging important to ID patients with multicentric disease who BCS may not be possible
• MRI has ↑ sensitivity for multicentric disease, but poorer specificity and increased risk of false positives – often requires additional workup prior to excision
• Consensus: MRI can be useful adjunct in selected cases, but not a standard part of DCIS management
Axillary Staging

• Pure DCIS has <1% incidence of axillary node metastases
• Can be useful in patients with “high risk” DCIS
  – Palpable mass
  – Multicentric disease
  – Large lesions
  – High grade lesions
  – Presence of necrosis
• Presence of these features are more likely to harbor areas of invasive CA
• Technetium injection in radiology
• Lymphazurin blue dye injected into dermis intraoperatively
• Techniques used in conjunction with one another to ID primary node(s) that drain area of concern.
• “Hot and Blue”
• All patients requiring mastectomy for DCIS should get SLN biopsy at time of mastectomy.
• Various models exist for prediction of invasive disease with DCIS on biopsy:
  – Lesion >5cm with high grade histology has a >50% positive predictive value for having axillary mets
• SLN bx possible after lumpectomy should pathology return with IMC.
Hormone/Endocrine Therapy

• NSABP B-24 trial – Tamoxifen reduced incidence of invasive breast cancer in ipsilateral breast (4.2 to 2.1%) and the contralateral breast (0.8 to 0.4%) per year.
  – Did not affect overall survival
  – Associated with multiple side effects (menopausal sx, endometrial/uterine CA, thromboembolic dz)

• UK / ANZ trial
  – Showed no reduction in LR following partial mastectomy with tamoxifen, except in women who did not receive XRT.

• Generally recommended for younger, premenopausal women with DCIS and higher risk of recurrence