

Interdisciplinary Tumor Board

Friday, April 28
2:45 pm – 4:30 pm

Mini-Topic Presentation

Breast MRI

Faculty

Steven Harms, MD

Local Staging Indications

- Infiltrating lobular and ductal carcinoma (ipsilateral and contralateral)
- Axillary adenopathy no known primary
- Post-operative with positive margins
- Post-operative tissue reconstruction
- Extension deep to fascia
- Neoadjuvant chemotherapy

Breast Conservation Issues

- Positive margins 40-60% of lumpectomies-MRI can reduce to less than 10%
- Serial section pathology of simulated lumpectomies reveal subclinical ca in 40%
- NSABP B-06
 - Lump+XRT=Mast=10% recurrence rate
 - Lump w/o XRT=40% recurrence rate
 - 60% do not recur w/o XRT-MRI may identify patients who do not need XRT

MRI and Breast Conservation

- Problem: Breast MRI may convert some lumpectomy candidates to mastectomy, yet the recurrence rate for BCT is now approaches 5% without MRI information
 - MRI also converts some mastectomy patients to BCT
 - Accurate definition of extent often results in better lumpectomy surgery for better cosmetic results
 - With better plastic surgery, mastectomy and reconstruction may be a more appropriate decision
 - Neoadjuvant chemotherapy may be used to convert to BCT

MRI and Breast Conservation

- Small foci of MRI enhancement may not be important in treatment planning. This may be the target of adjuvant therapy
- Questionable MRI enhancement often clears after neoadjuvant or adjuvant therapy (CTX, XRT, or hormonal)
- Major treatment changes should be based upon histology *not imaging alone*
- Key advantage of MRI: The treatment team can plan with the patient the appropriate procedure with her desires in mind before any intervention is initiated

Breast MRI Issues

- DCIS is not an indication in the ACR guidelines because DCIS is not reliably seen on low resolution, dynamic MRI techniques usually offered by most commercial vendors
- DCIS usually displays persistent (benign) dynamics
- Washout enhancement is only seen in about 20% of cancer, combined washout and plateau is only seen in about 60% of cancers
- MRI CAD depends upon dynamic enhancement curves to detect lesions

Breast MRI Issues

- Consistent image quality and interpretation remains a problem
- Technology is rapidly improving on a broad scale, but often poorly integrated
- Interdisciplinary guidelines define a minimum standard
- MRI should not be performed in centers without capability for MR-guided intervention
- MRI should be performed by breast imagers and integrated with other diagnostic procedures
- Reimbursement is now common, but problems haven't gone away