Breast Conservation Therapy

Prof. Chintamani

MS, FRCS(Ed.), FRCS(Glas.), FRCS (Irel.), FACS, FICS(Surg. Oncol.), FIMSA

President Association Of Breast Surgeons Of India

Tutor & Examiner

Royal College Of Surgeons Edinburgh UK

Vardhman Mahavir Medical College

Safdarjung Hospital New Delhi
Newer trends in BCT

- BCS for early-stage invasive breast cancer provides survival equivalent to mastectomy
- Careful patient selection and surgical technique necessary to minimize local recurrence
- Extensive studies of BCT over last 15 years identified risk factors for local recurrence and previously in-eligible cases are being accepted for lumpectomy (Occult BC, LABC, macromastia, Pregnancy) may be done safely)
Recent trends to facilitate BCT

• Use of MRI & USG
• Touch pre-cytology for intra-operative margin evaluation can improve rates of BCT
• Brachytherapy may also improve BCT availability & shortening the duration of treatment
• Local recurrences developing after BCT should be managed aggressively as long term survival can frequently be achieved.
Halsteaden vs Fisher`s view

• More aggressive surgeries could not halt the progression of metastasis

• NSABP-B-04 & Milan Cancer Institute trials

• Abundandance of data regarding the safety of breast preservation for early breast cancer
NCI consensus statement

“Breast conservation treatment is an appropriate method of primary therapy for the majority of women with stage-I,II breast cancers and is preferable as it provides surgical equivalent to total mastectomy and axillary dissection”
Indian scenario !!

In theory there is no difference between theory and practice
But in practice there is

.....Snepschant
Indian scenario !!


Eligibility & exclusion criteria for BCT [factors]

- Capability to deliver breast irradiation (patient and center)
- Likelihood of achieving cosmetically acceptable result
- Ability to obtain a margin negative lumpectomy
- Capability to deliver Boost irradiation
Capability to give RT

- Access
- Medical conditions affecting tolerance and toxicity
- Pregnancy
Aesthetic results!!

• Can be altered by patient`s body habitus
• Tumour location
• Patient should be the one to define cosmetically acceptable result
American College of Radiology & ACS accepted standards

• Multicentric disease (tumours in separate quadrants => excessive tumour burden that cannot be controlled by RT)

• Multiple tumours confined to single quadrants of breast can be offered BCT if resection R0 for each, leaving cosmetically acceptable result.
American College of Radiology & ACS accepted standards

Diffuse malignant appearing microcalcifications appearing on the preoperative mammogram is a contraindication to BCT because the pattern probably suggests Extensive Ductal carcinoma in situ & predicts low likelihood of obtaining negative margins
ACR & ACS Guidelines

• Resecting more limited volume of microcalcification associated with breast cancer, mammography guided wire localallization lumpectomy should be done.

• These must also have post lumpectomy margin comparing absence of residual calcification before delivering RT even if lumpectomy margin is negative.
Guidelines contd.

- Lumpectomy in patients with indeterminate calcification should be considered with caution & whenever possible calcification should be included en bloc with lumpectomy.
- Prior therapeutic irradiations & Pregnancy.
- Positive margins on lumpectomy specimen & re-excision indicate excessive tumour burden.
- Multiple unsuccessful excisions indicate excessive tumour burden.
- Excessive tumor burden delays administration of Post op Chemo and affect cosmesis indicate
Guidelines contd.

• Medical diseases like collagen disease scleroderma, SLE associated with high RT toxicity.

• Clinical, pre-operative estimation of tumour size should be <5cm, or unacceptable cosmetic result (Tumour/breast ratio)
Special instances

- **Family history** [not found a risk factor n=1300..MD Anderson cancer center trial]
- **Primary tumour histology**: Invasive lobular cancers: notorious for their ability to present in an insidious manner
- **LCIS** in addition to invasive cancer treated with BCT may continue to express a long term increase in risk of new primary in the untreated breast
- The risk may be suppressed with **Tamoxifen** therapy
Margin evaluation

- **Margin** [the closest microscopic distance between the inked lumpectomy tissue edge and any cancerous tissue-invasive or DCIS]
- Obtaining a **negative margin** in the lumpectomy specimen of breast cancer patient is considered a basic prerequisite for **standard of care**.
- **Wider margins reduce local recurrence** *

*Milan Cancer Institute trial 2004*
Extensive intra-ductal component

• EIC is known or suspected => wider margins
• EIC predictor of likelihood => additional disease would be found in re-excision specimen
• EIC positive tumour associated with microcalcifications on mammographic evaluations, aggressive use of image guidance may facilitate the resection attempt
• Pre-op localization can bracket the span of suspected disease
• Intra-operative specimen mammography can direct additional margin resection
• Essential to follow with postoperative mammogram
“We are not retreating
We are advancing in another direction”
....Gen. Douglas Mc Arthur