Opposing Oncologic and Cosmetic challenges for breast conserving surgery for retro-areolar primary cancer lesion.
Breast conservation with radiation therapy has now become the standard surgical management for patients with stage 1 and 2 breast cancer in the 21st century.
• Approximately 5-20% of breast cancers are located centrally, and these tumours are traditionally treated with a mastectomy.
Oncological Safety Net

• Oncology reigns supreme
• Clear margins as per unit protocols
• Multi-disciplinary management
• Radiation therapy decisions are determined prior to starting primary chemotherapy
• Clips for surgical beds
• Locally advanced central tumours, which have had a good response to primary chemotherapy, are not contraindications for central breast excisions and reconstruction.
Radiology
Translational radiology

• Mammograms, ultrasound, MRI scanning and now breast tomosynthesis to gain as close to a 3D idea of position of the tumour in the breast

• Size of the lesion and extent of intraduct component prior to planning oncoplastic procedures
Surgical Safety Net

• Breast and tumour size are closely related,
• Depth of the tumour to the nipple areolar complex should also be assessed
• Discuss with patient about nipple areolar complex loss probabilities
Psychology

• Issues around cancer recurrence with breast conservation, loss of nipple areolar complex, radiation complications, future radiological follow-up and patient anxiety all play a role in determining choice of procedure and reconstruction.

• All options highlighting the advantages and disadvantages of each procedure and the technical challenges should be discussed with the patient.
Patient Factors

• General patient factors, medical and social (diabetes, obesity and smoking, and prosthesis
• contra-indications for radiation should be assessed prior to offering any procedure
General Principles

• Discussion in oncoplastic, clinical radiology meetings prior to procedure
• Pre-operative skin markings denoting technique most likely to be used for that parenchymal excision
• Evaluation of the most likely technique (volume displacement or replacement) to be used
• Risk to nipple areolar complex, and best adaptation of the central breast mound
• Need for opposite breast symmetrisation, and selection of incisions, and techniques and scar placements for the opposite side
Volume displacement techniques
Retaining Nipple Areola

- Tumours that are located deep to the nipple areolar complex, may if intraoperative margins are clear result in retention of the nipple areolar complex
- Again care to ensure blood supply to the nipple areolar complex is retained is essential in performing this procedure
Volume replacement techniques

• In women, who prefer breast conservation surgery, but whose tumour to breast ratio prevents a volume displacement technique, the use of loco-regional flaps may be employed for central lesions.
The Nipple

• Reconstruction of nipple areolar complex can be performed at the same procedure or at a later stage
• Delayed reconstruction is generally safer, and should be performed 6 months post radiation
Conclusions

- Central breast carcinomas are no longer required to be treated by mastectomy, and the use of a variety of oncoplastic techniques are available today to ensure a satisfactory cosmetic outcome while ensuring minimum complications and good long term oncological safety.