Efficacy and Safety of Lipomodelling and ADRC
Medium Term Follow Up

Lubna Noor, Colm Hennessy, Pud Bhaskar
University Hospital of North Tees, Stockton-on-Tees, UK

Introduction
- Coleman technique for fat grafting has been used for breast augmentation and contour corrections for decades.
- In 1980 advances in liposuction technique for harvesting fat and use of regenerative stem cells decreases the rate of fat resorption and need for multiple procedures.
- There are concerns regarding safety of fat grafting in patients with breast cancer or at higher risk of developing breast cancer, as long term safety is not established.

Methodology
- A prospective series, September 2008 - September 2012 at a District General Hospital, UK
- Use of cell enriched and non enriched lipofilling for breast procedures
- Patients were followed for 1 year (benign) and 5 years for breast cancer with breast imaging
- Satisfaction surveys conducted using six-point Likert scale for symmetry, size, shape, softness, scarring and overall satisfaction with treatment

Patient Groups (n=52)
- Breast conservation
- Post TRAM reconstruction
- Post LD reconstruction
- Implant contractures
- Congenital hypoplasia and benign breast biopsy defects
- Secondary procedure following autologous tissue transfer

Results
- Cell enhanced fat grafting was done in 40 and bilaminar filtration technique in 12 patients
- Graft volume ranges b/w 80 to 420mls (mean = 247mls)
- No immediate surgical complications seen.
- Fat resorption seen in 4 patients 3 underwent redo grafting
- Fat necrosis seen in 3 & oil cyst in 1 patient (confirmed on ultrasound)
- No mammographic abnormality found that needed biopsy
- At 21 month follow-up (1-48 months) no significant complications were seen
- Although 4 patients developed metastatic disease, but no local recurrences / new cancers identified

Advantages of Breast Reconstruction with Lipofilling
- Fat is easily available and molded with a natural feel and look and can be permanent
- Improves softness of breast tissue
- Reverses changes following radiotherapy
- Corrects contour defects due to capsular contracture
- Improves aesthetic outcome of oncoplastic techniques on breast

Conclusion
- Fat grafting with or without cell enhancement is a valuable tool
- Simple, safe and effective technique
- Good to excellent patient satisfaction and cosmetic outcome
- Increasing indications in aesthetic and reconstructive breast surgery
- We found it oncologically safe in patients with breast cancer at medium term follow up
- We recommend further clinical research with longer follow up to ensure that fat grafting is oncologically safe

References
- Coleman SR, Saboeiro AP. Fat grafting to the breast revisited: safety and efficacy. Plast Reconstr Surg 2007;119:775-785; discussion 786-787