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Decision for Immediate Breast Reconstruction Dosurgeons Make Sensible Choices?

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I. Background

Having diagnosis of breast cancer is very difficult and facing mastectomy has large impact on women's self picture and confidence. Making the best decision about right timing of breast reconstruction following mastectomy can affect outcome and women's well being largely.[1]Current UK national guidelines recommend reconstruction discussion for all women undergoing mastectomy for breast cancer. The decision for immediate reconstruction lies with the surgeon, based on patient's choice, comorbidities and expected post operative adjuvant treatments. This should take into account specifically radiotherapy which may affect reconstruction outcome. [2]

II. Aims

The main aim of this study was to look at discussion about reconstruction following diagnosis of breast cancer and decision for mastectomy. This should have taken into account the surgeons' decision for immediate breast reconstruction and their form and ability to predict accurately post mastectomy radiotherapy. We had to take into account patients' view as there were patients who have been offered reconstruction but declined any due to personal reasons.

III. Methods

In the study, we have collected prospective data over period of 24 moths from a single oncoplastic unit. These data included all patients with breast cancer diagnosis who underwent mastectomy with or without reconstruction. We have focused on data consisting of: reason for mastectomy, pre-operative tumorcharasteristics, and reconstruction discussion, type of reconstruction and likelihood of post operative radiotherapy were noted. We have excluded all male patients because although there were quite a few requiring mastectomies, they were not offered reconstruction following this operation.

INCLUSION CRITERIA	prospective data
	from January 2016 to December 2018 (24 months)
	mastectomy for breast cancer
	female patients
EXCLUSION CRITERIA	male patients
	outside of timeframe
	wide local excision and other procedures except mastectomy

Table 1. Inclusion and exclusion criteria

Final outcomewasthe number of patients who had immediate reconstruction and needed post mastectomyradiotherapy.

IV. Results

We have collected data from 173 patients who underwent mastectomy for invasive and in situ breast cancer in single breast cancer unit (Portsmouth Hospital) over 2 years.

Out of 173 patients, 156 (90%) had documented discussion about reconstruction. From these 156 patients, immediate reconstruction at the time of surgery was offered to 130 patients. The immediate reconstruction was accepted by 95 of them. Following further discussion 53 patients (56%) opted for implant based reconstruction and 42 (44%) decided for autologousreconstruction.

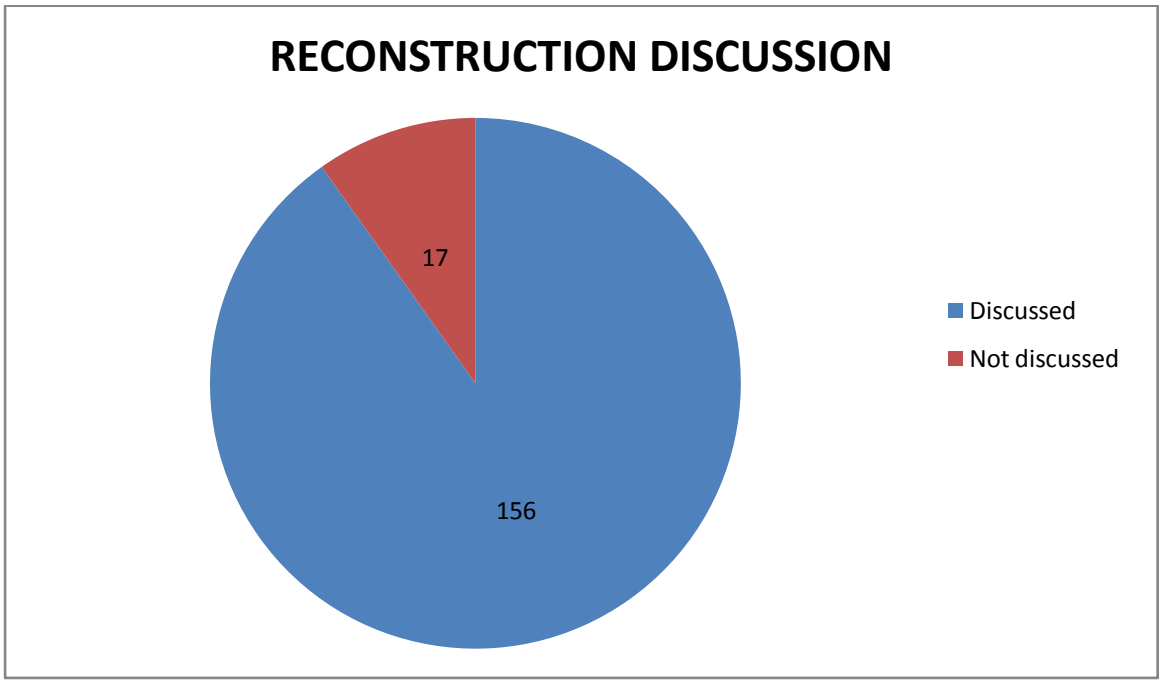
RECONSTRUCTION DECISION (130 patients)

ACCEPTED (95 patients) REFUSED (35 patients)

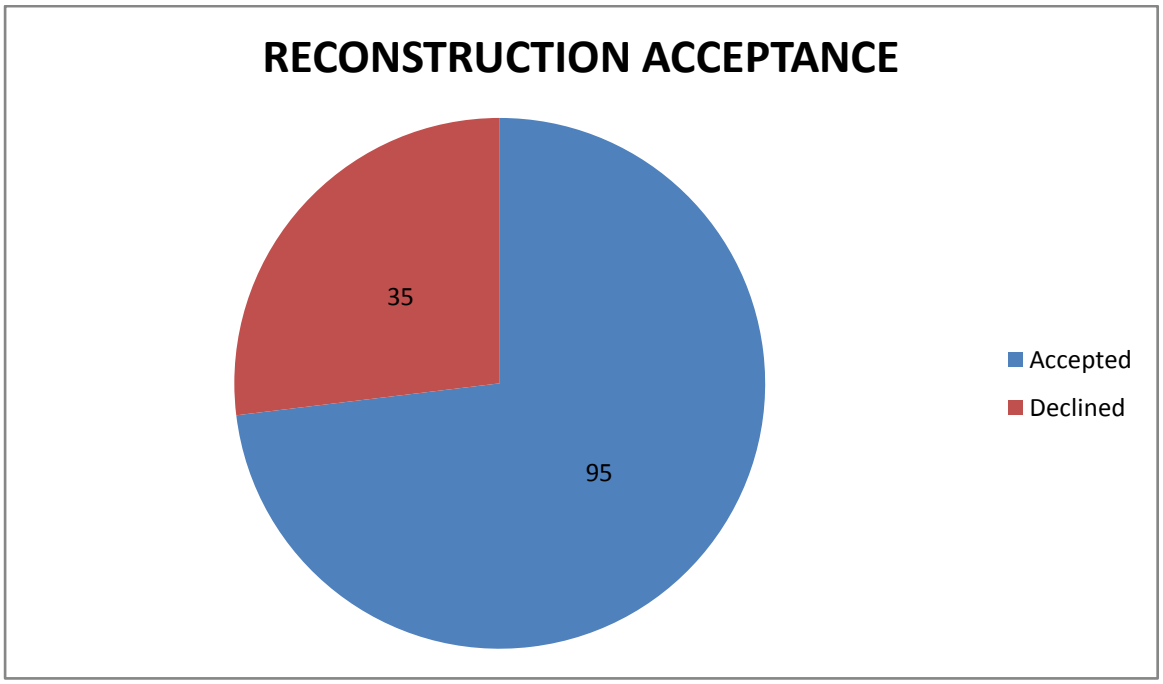
IMMEDIATE RECONSTRUCTION (95 patients)

IMPLANT BASE RECONSTRUCTION AUTOLOGUS RECONSTRUCTION

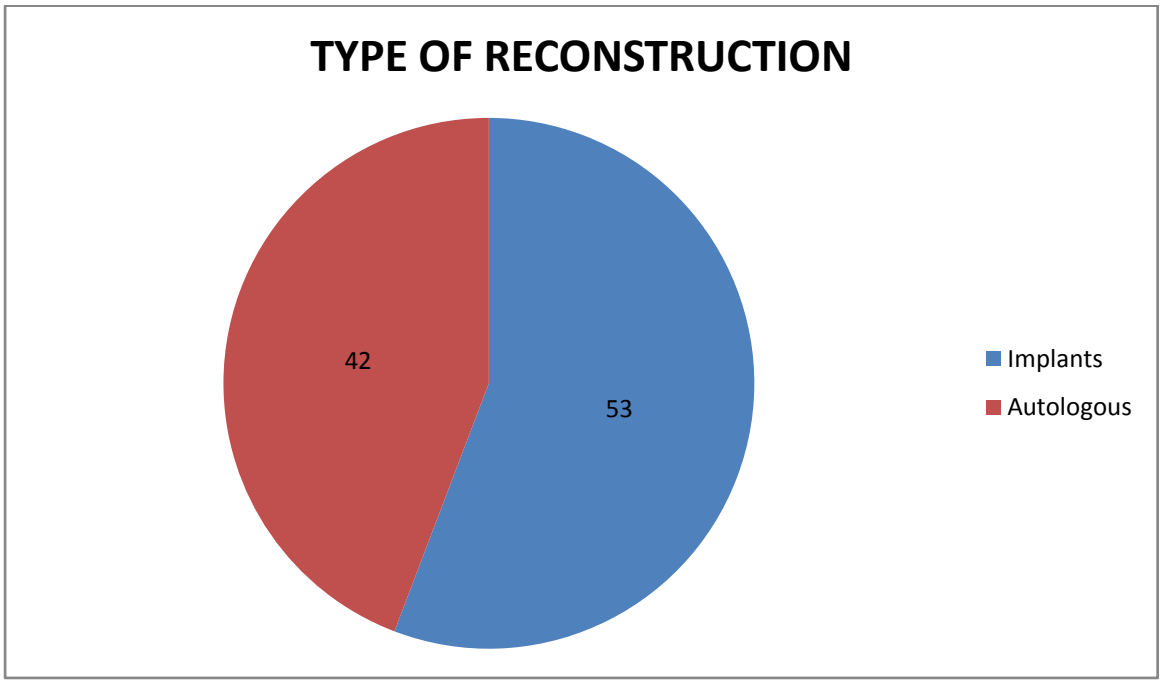
(53 patients) (42 patients)



Graph 1. Reconstruction discussion

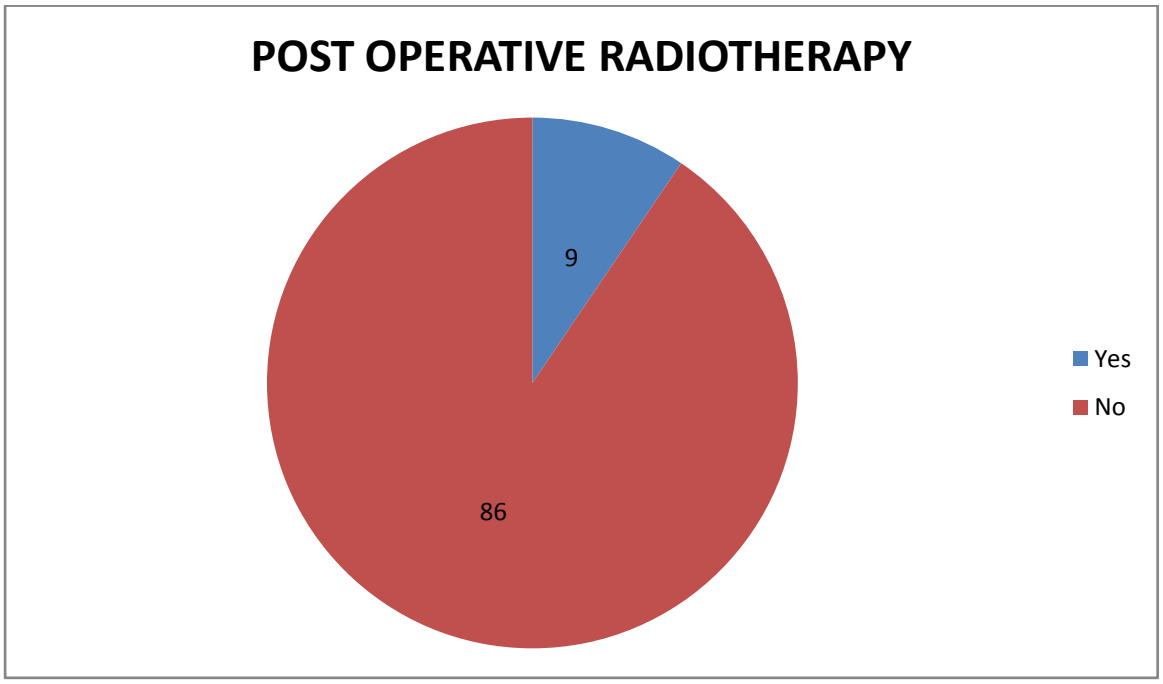


Graph 2. Reconstruction acceptance



Graph 3. Type of reconstruction

The main decision making process was based on the probability of patient needing post mastectomy radiotherapy. Such therapy may effect healing and cosmetic result of the reconstruction. Only 9 of these 95 patients required post-operative radiotherapy after MDT discussion.



Graph 4. Post operative radiotherapy

Statistical analysis showed surgeons were able to predict unlikelihood of radiotherapy in majority (90%) of immediate breast reconstruction patients (p=0.001).

V. Conclusions

Our practice is considered a high volume breast reconstruction unit within the UK. We have found that only a small number of our immediate breast reconstructions required post mastectomy chest wall radiotherapy.[3] This corresponds with good diagnoses and pre-operative grading/staging of the patients based on core biopsy, appropriate imaging and oncology and surgical experience discussion during MDT. With all those information, we are able to make appropriate prediction of need of post operative radiotherapy and therefore offer immediate reconstruction to suitable patients.

Surgeons are able to make appropriate reconstruction selection based on their predictability of radiotherapy for better informed decision making and to potentially avoid the associated cosmetic problems. This is beneficial for the patient as well as the surgeon.

There is no general tool to make this prediction more accurate. It is all based majorly on experience of the surgeon and oncologist and accuracy of biopsy diagnosis prior to surgery. Therefore the success rate of the predictability can differ from unit to unit. It would be useful to create a tool that would guide doctors to predict the probability of radiotherapy post mastectomy. [4]

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