

CARING FOR PATIENTS' SKIN DURING RADIOTHERAPY BEFORE IMMEDIATE AUTOLOGOUS BREAST RECONSTRUCTION – A TEAM BASED APPROACH

Background -

Our aim was to improve the skin quality post radiation treatment so that the risk of surgical complications secondary to radiation could be reduced. Patients often report radiation skin reactions are a main concern before treatment begins, and as radiation skin reactions are fairly prevalent, we thought this was an important area to improve nursing practice at Genesis Care at the Mater Hospital.

The nursing team introduced a new skin care protocol using mepitel film to prevent radiation skin reaction in this patient cohort. Mepitel film provides protection from mechanical protection forces, therefore allowing this tissue to repair from daily radiation treatment.

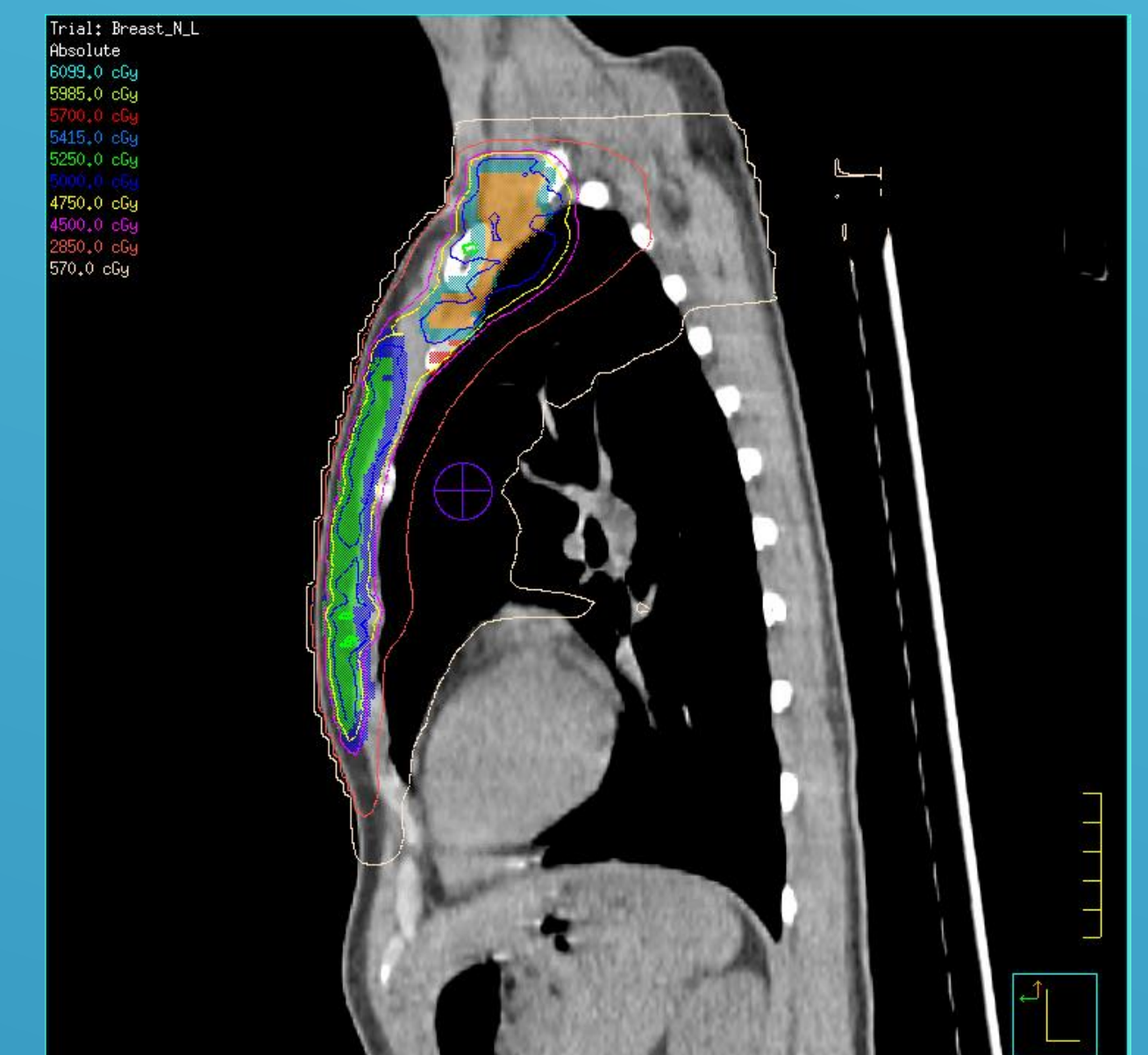
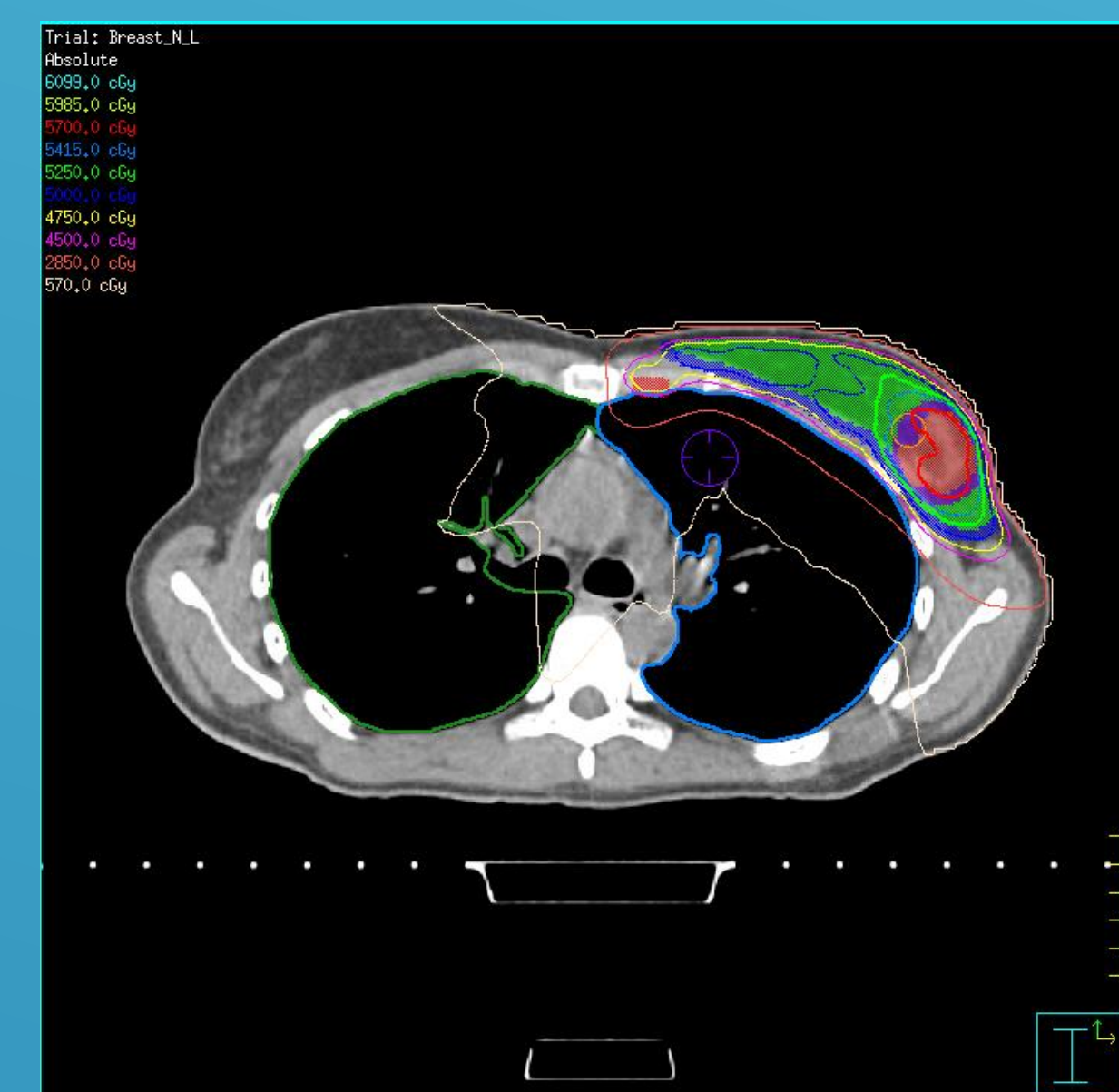
We used the CTCAE version 3 grading tool to assess radiation skin reaction at the completion of treatment



The radiation prescription and plan – 50Gy in 25 #s +/- boost
Patients received hybrid IMRT or VMAT beam technology to improve beam homogeneity and minimise skin hot spots.

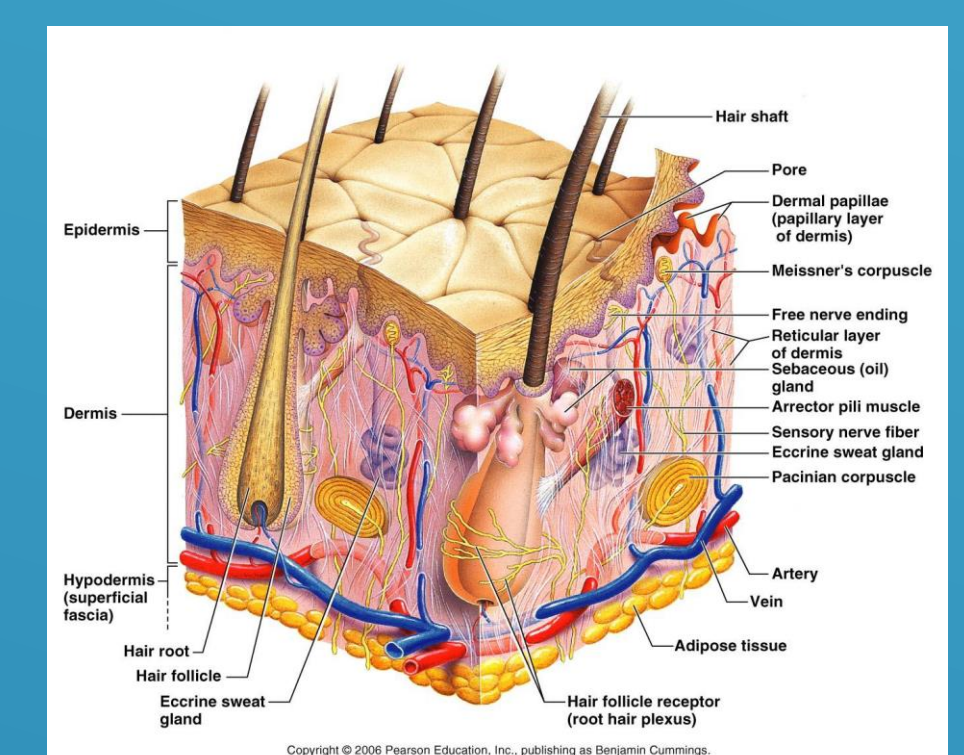
Sample characteristics:- a total of 7 patients having neoadjuvant radiation treatment and immediate autologous reconstruction were followed during 2018 and 2019 at the Mater Hospital.

All patients received IMRT and VMAT radiotherapy techniques having 50Gy over 5 weeks +/- boost and cardiac sparing breath hold was used for all left sided breast cancer.



How the skin responds to radiation treatment:-

- Weeks 1 – 2 vasodilation and inflammation (around 20Gy)
- Weeks 2 – 3 mild to moderate erythema – (around 20 – 40Gy)
- Week 4 – dry desquamation / pruritus – (around 45Gy)
- Week 5 – moist desquamation – (around 45 – 50Gy)



Follicular grade 1 skin reaction



Grade 3 skin reaction with bright erythema and desquamation



Grade 2 skin reaction at completion of treatment

Results: Our results relating to radiation skin reactions at the completion of treatment:-

- 4 of 7 patients developed a grade 2 skin reaction,
- 2 of 7 developed a grade 1 skin reaction
- 1 of 7 developed a grade 3 skin reaction

All skin reactions had completely healed at the first post treatment visit at 4 weeks.

5 of 7 patient went on to have DIEP reconstruction, 1 had TRAM reconstruction and 1 patient had a simple mastectomy without reconstruction.. All surgery was completed 6 weeks post radiation treatment.

2 patients had complications post op cellulitis requiring further antibiotics. The surgeon & plastic team feedback was very positive, with each patient achieving excellent cosmesis.

Conclusion: This project was founded upon teamwork and collaboration within the radiation oncology team and surgical and reconstructive team colleagues.