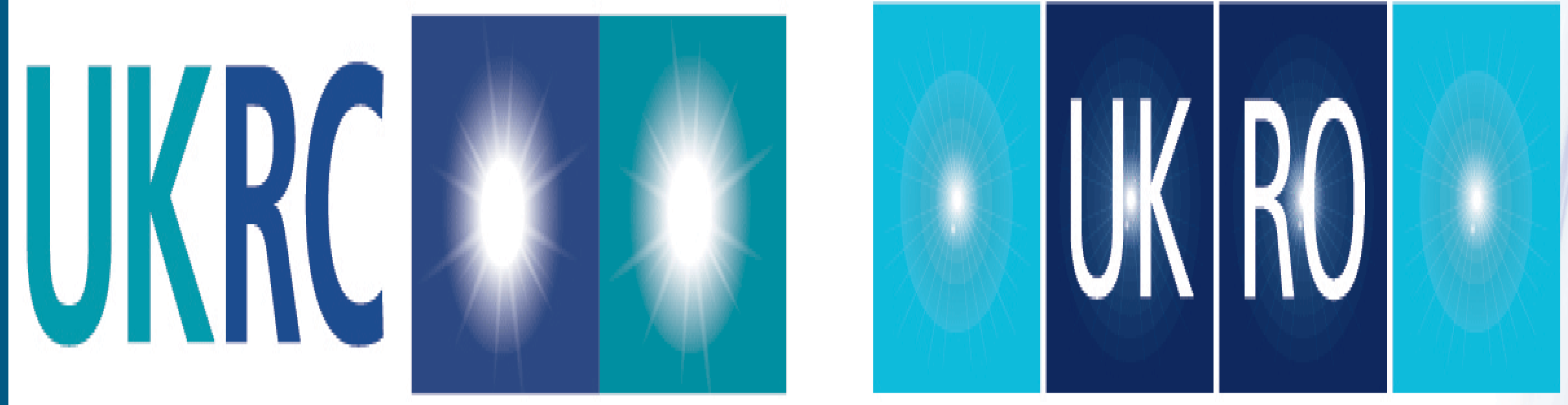


Axillary radiotherapy for breast cancer minimises overtreatment and has a low complication rate

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INTRODUCTION

Axillary lymph node dissection has been standard management of the involved axilla in invasive breast cancer with the rates of arm lymphoedema of up to 30%.^{5 6} However there is growing evidence that there is need to minimise the overtreatment of the minimally involved malignant axilla. 2 3 4 Consensus statements have stated that the axillary management of sentinel lymph node-positive disease can be adjuvant axillary radiotherapy. 1

AIM

This audit aims are

- to see if axillary radiotherapy reduces the complication rate
- to see the rate of axillary recurrence following radiotherapy.

METHOD

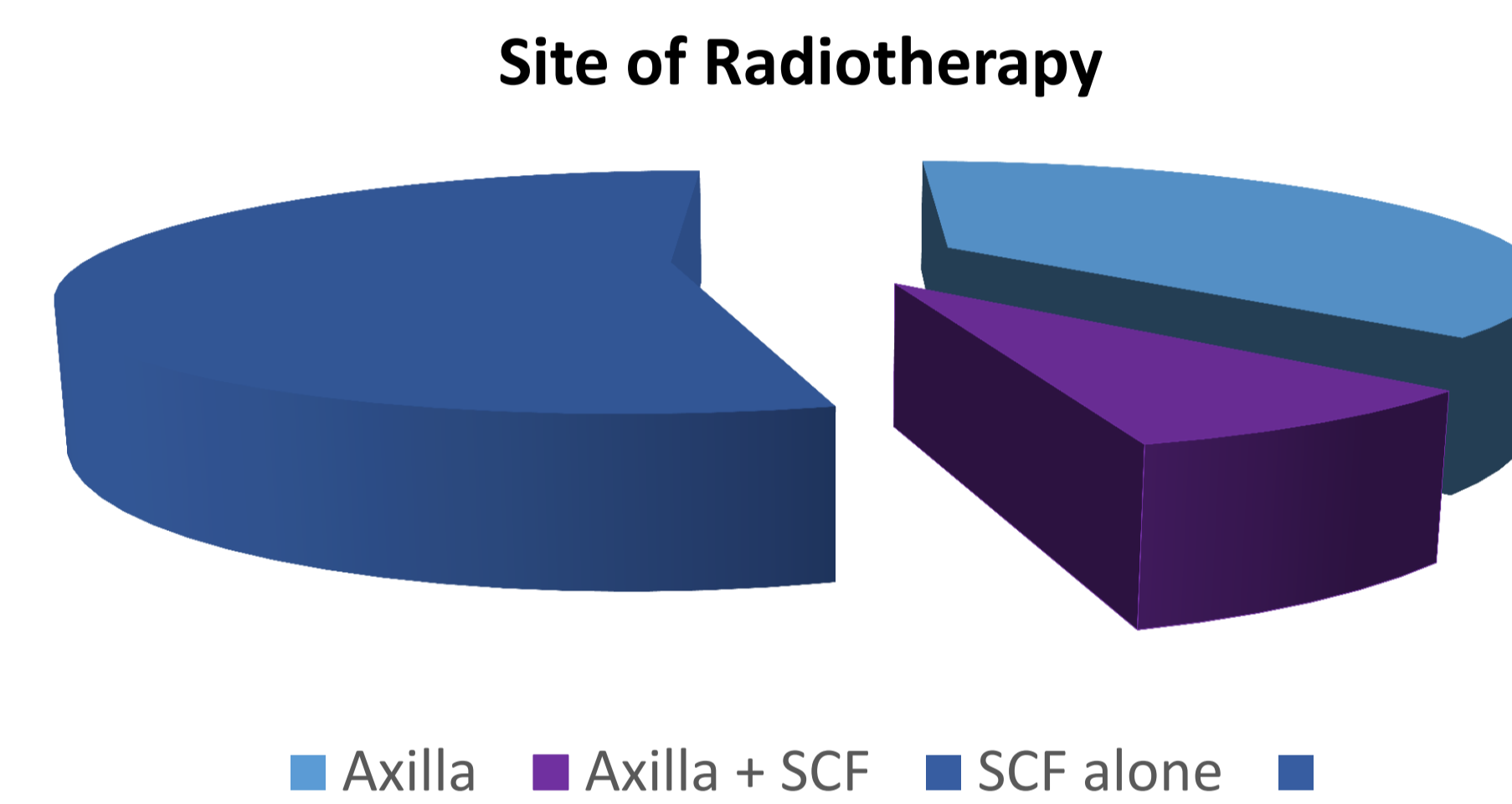
A 2 year audit of axillary radiotherapy for breast cancer patients was conducted at Shrewsbury and Telford NHS Trust between March 2015 and March 2017. Inclusion criteria was axillary radiotherapy alone or axillary radiotherapy with supraclavicular fossa (SCF) radiotherapy. Nodal volumes were contoured in accordance with RTOG atlas. Clinical Portal review for complications following treatment: arm lymphoedema, brachial plexus toxicity, shoulder problems, and axillary recurrence.

REGIONAL NODAL CONTOURING

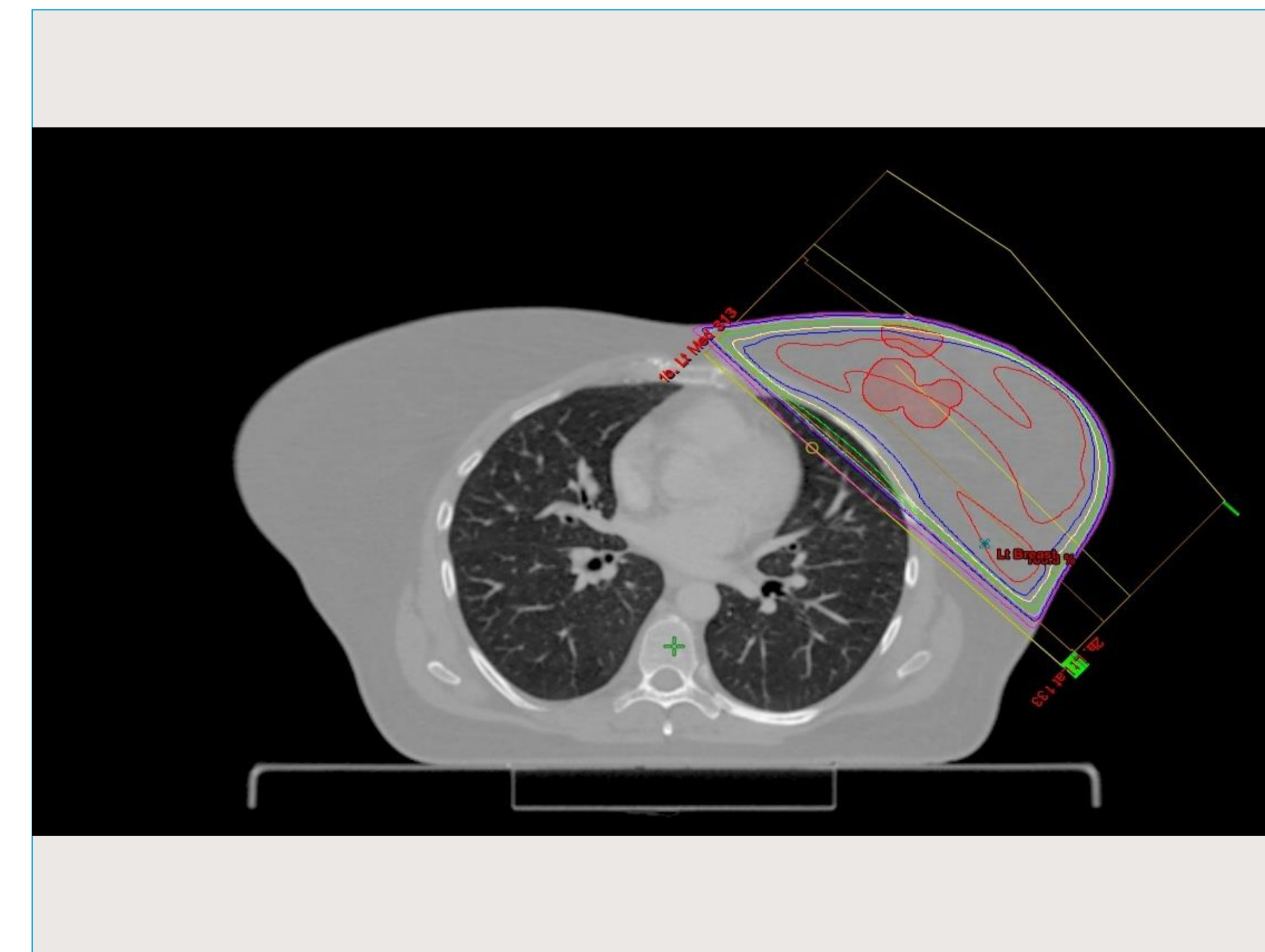
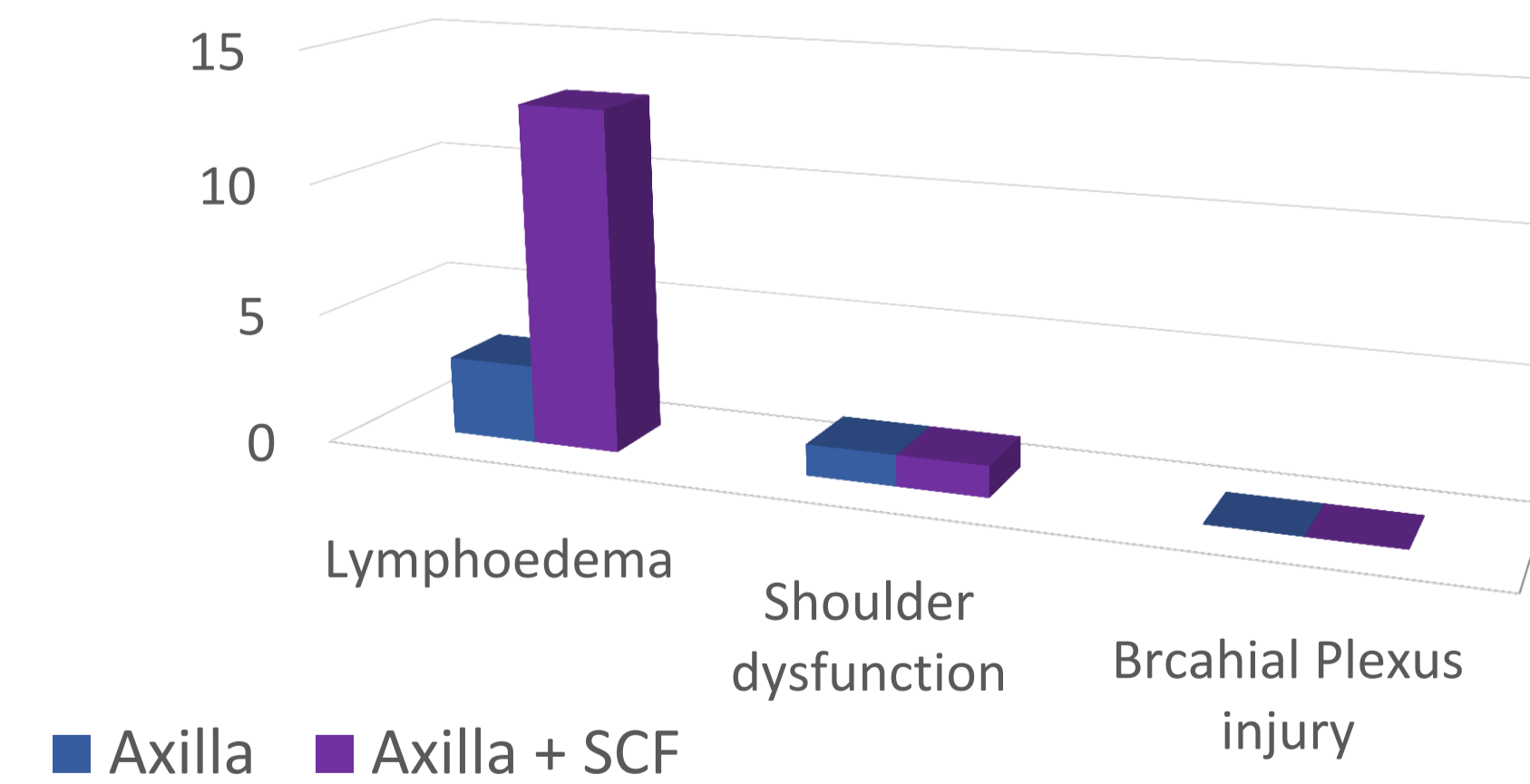
Supra-clavicular	Caudal to the cricoid cartilage	Junction of brachiocephalic axillary vns/ caudal edge clavicle head ^a	Sternocleidomastoid (SCM) muscle (m.)	Anterior aspect of the scalene m.	Cranial: lateral edge of SCM m. Caudal: junction 1 st rib-clavicle	Excludes thyroid and trachea
Axilla-Level I	Axillary vessels cross lateral edge of Pec. Minor m.	Pectoralis (Pec.) major muscle insert into ribs ^b	Plane defined by: anterior surface of Pec. Maj. m. and Lat. Dorsi m.	Anterior surface of subscapularis m.	Medial border of lat. dorsi m.	Lateral border of Pec. minor m.
Axilla-level II	Axillary vessels cross medial edge of Pec. Minor m.	Axillary vessels cross lateral edge of Pec. Minor m. ^c	Anterior surface Pec. Minor m.	Ribs and intercostal muscles	Lateral border of Pec. Minor m.	Medial border of Pec. Minor m.
Axilla-level III	Pec. Minor m. insert on cricoid	Axillary vessels cross medial edge of Pec. Minor m. ^d	Posterior surface Pec. Major m.	Ribs and intercostal muscles	Medial border of Pec. Minor m.	Thoracic inlet
Internal mammary	Superior aspect of the medial 1 st rib	Cranial aspect of the 4 th rib	- e.	- e.	- e.	- e.

RESULTS

182 patients had adjuvant radiotherapy to axilla or supraclavicular fossa (SCF) as treatment for breast cancer. 83 patients had axillary radiotherapy +/- SCF radiotherapy, 15 patients (axilla and SCF) and 68 patients (axilla alone). 99 patients had SCF alone and were excluded.



Arm lymphoedema rate was 4.8%, with 3% in axilla group and 13% in axilla and SCF group. No brachial plexus toxicities were reported. Shoulder dysfunction rate was 1.2%. Axillary recurrence rate was 1.2%. Results are preliminary as data collection and follow-up is on-going.



Planning CT slice showing radiation isodoses used to treat Breast Cancer



Arm Lymphoedema in Breast cancer patient following Axillary Node Clearance.

CONCLUSIONS

Axillary radiotherapy as adjuvant treatment for breast cancer is safe with a minimal complication rate and reduces the sequelae of arm lymphoedema.

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