

## Supplementary Fig. 1. Dose Volume Evaluation 26 Gy in 5 fractions Whole Breast<sup>1,2</sup>

### Dose Volume Evaluation 26 Gy in 5 fractions Whole Breast

Dose	95%	107%
26	24.7	27..82

Dose PTV	Fractions
26Gy	5

#### EVALUATION OF TARGET- Whole breast

**ENSURE TRUE TARGET COVERAGE IS ADEQUATE BY VISUALLY ASSESSING EACH AXIAL CT SLICE AS STANDARD**

Volume	Parameter	Optimal	Mandatory	Result
Breast PTV*	V <sub>95%</sub>	≥ 95%	≥ 90%	%
	V <sub>105%</sub>	≤ 5%	≤ 7%	%
	V <sub>107%</sub>		≤ 2%	%
	D <sub>max</sub>		≤ 110%	%

\*A field-based Breast PTV is generated by radiation therapists before any field segments are added. The Breast PTV is not a true PTV but a structure encompassing the 95% isodose line, which is cropped 0.5cm from lungs and skin surface. This is to be used for DVH evaluation.

#### EVALUATION OF OARs(13)

OAR	Parameter	Optimal Constraint	Mandatory	Result
Ipsilateral Lung	V <sub>30%</sub>	≤ 15%	≤ 17%	%
Heart	V <sub>5%</sub>		≤ 25%	%
	V <sub>25%</sub>		≤ 5%	%
If Electronic device present			D max	Gy

1. FAST-Forward Protocol Version 3.0: 08/07/2015
2. Planning Pack for the FAST-Forward Trial. Version 3

Accessed March 2020

Available at: [https://www.icr.ac.uk/our-research/centres-and-collaborations/centres-at-the-icr/clinical-trials-and-statistics-unit/clinical-trials/fast\\_forward\\_page](https://www.icr.ac.uk/our-research/centres-and-collaborations/centres-at-the-icr/clinical-trials-and-statistics-unit/clinical-trials/fast_forward_page)

**Supplementary Table 1: Radiation Dermatitis Scoring Criteria for Adverse Event (CTCAE) v.5**

	None	1	2	3	4
Radiation Dermatitis		1a: Faint Erythema  1b: Dry desquamation	2a: Moderate to brisk erythema, mostly in skin folds  2b: Moderate oedema	3a Confluent moist desquamation, other than skin folds  3b Bleeding induced by minor trauma	4a Skin necrosis or ulceration of full thickness dermis; 4b Spontaneous bleeding from involved site; 4c Skin graft indicated

## Supplementary Figure 2: Virtual Consultation

ACUTE TOXICITY ASSESSMENT							
Date Last Treatment :							
Patient's Assessment: Questions are in relation to how their skin has been in the last 7 days							
Weeks post treatment:	Base line	1	2	3	4		
Today's Date:							
Has your skin changed colour?						No	Grade 0
						Yes	Grade 1a = Faint red / pink Grade 2a = Bright red
Is your skin dry, flaky, or scaly?						Yes	Grade 1b
Are there moist or wet areas of skin breakdown?						Yes	Grade 2b = confined to skin folds Grade 3a = other areas
Does your skin bleed?						Yes	Grade 3b = minor trauma Grade 4a = spontaneously
Is your breast swollen						Yes	At least grade 2c
Are there areas of deep aggressive ulceration? Are there areas of muscle on show?						Yes	Grade 4b

**Supplementary Table 2 Radiation Quality Assurance- Analysis of radiation planning objectives for the 135 breast patients who underwent ultrafractionation at our Radiation Network (March – August 2020)**

	Breast PTV V95%	Breast PTV DMAX	Breast PTV V105%	Body V105%	Body V105% (cc)	Heart V5%	Heart V25%	i/l lung V30%
Median	96.3	105.5	0.1	0	0.2	2.1	0	11.5
Min	90.1	104	0	0	0	0	0	2.4
Max	99.8	109.2	4.8	0.2	109.2	24.8	5	17