

Supplementary materials

Supplementary Table S1. The statistical tests for $\Delta V_{95\%}$ where the parameters in bold show a statistically significant correlation ($p < 0.05$). The B-value is the regression coefficient.

Parameter	B-value	p-value
ΔWEPL	0.08	<0.01
Original V95%	0.08	<0.01
Tumor Group	0.02	0.93
Tumor Size	0.00	0.44
Baseline shift	-0.14	<0.01
Days between CT scans	0.01	0.46

Supplementary Table S2. The statistical tests for ΔD_{95} where the parameters in bold show a statistically significant correlation ($p < 0.05$). The B-value is the regression coefficient.

Parameter	B-value	p-value
ΔWEPL	0.08	<0.01
Tumor Group	-0.06	0.71
Tumor Size	0.00	0.04
Baseline shift	-0.13	<0.01
Days between CT scans	-0.01	0.12

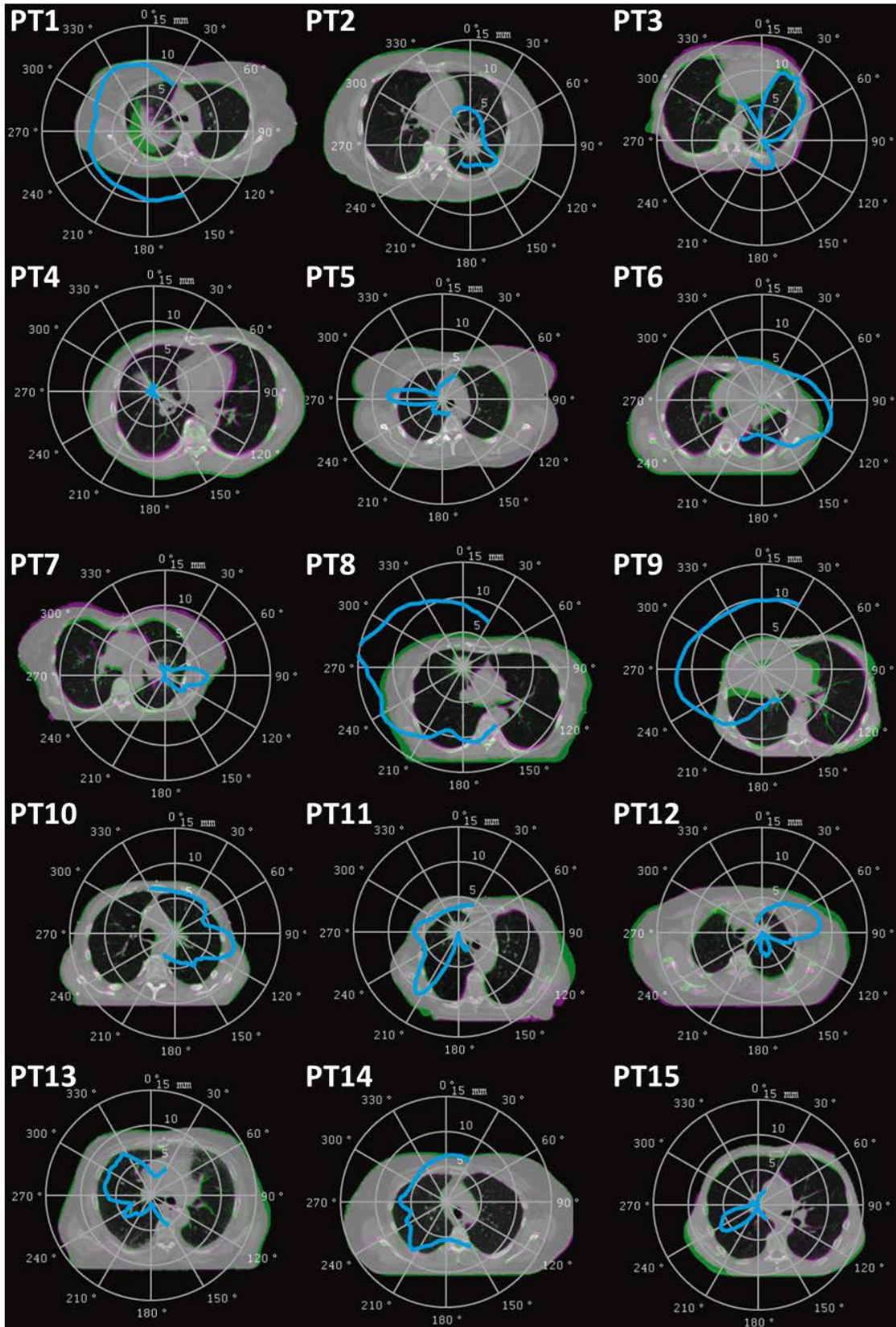
Supplementary Table S3. The statistical tests for Δ mean dose where the parameters in bold show a statistically significant correlation ($p < 0.05$). The B-value is the regression coefficient.

Parameter	B-value	p-value
Δ WEPL	0.01	0.05
Tumor Group	0.19	0.046

Tumor Size	0.00	0.15
Baseline shift	-0.06	<0.01
Days between CT scans	0.01	<0.01

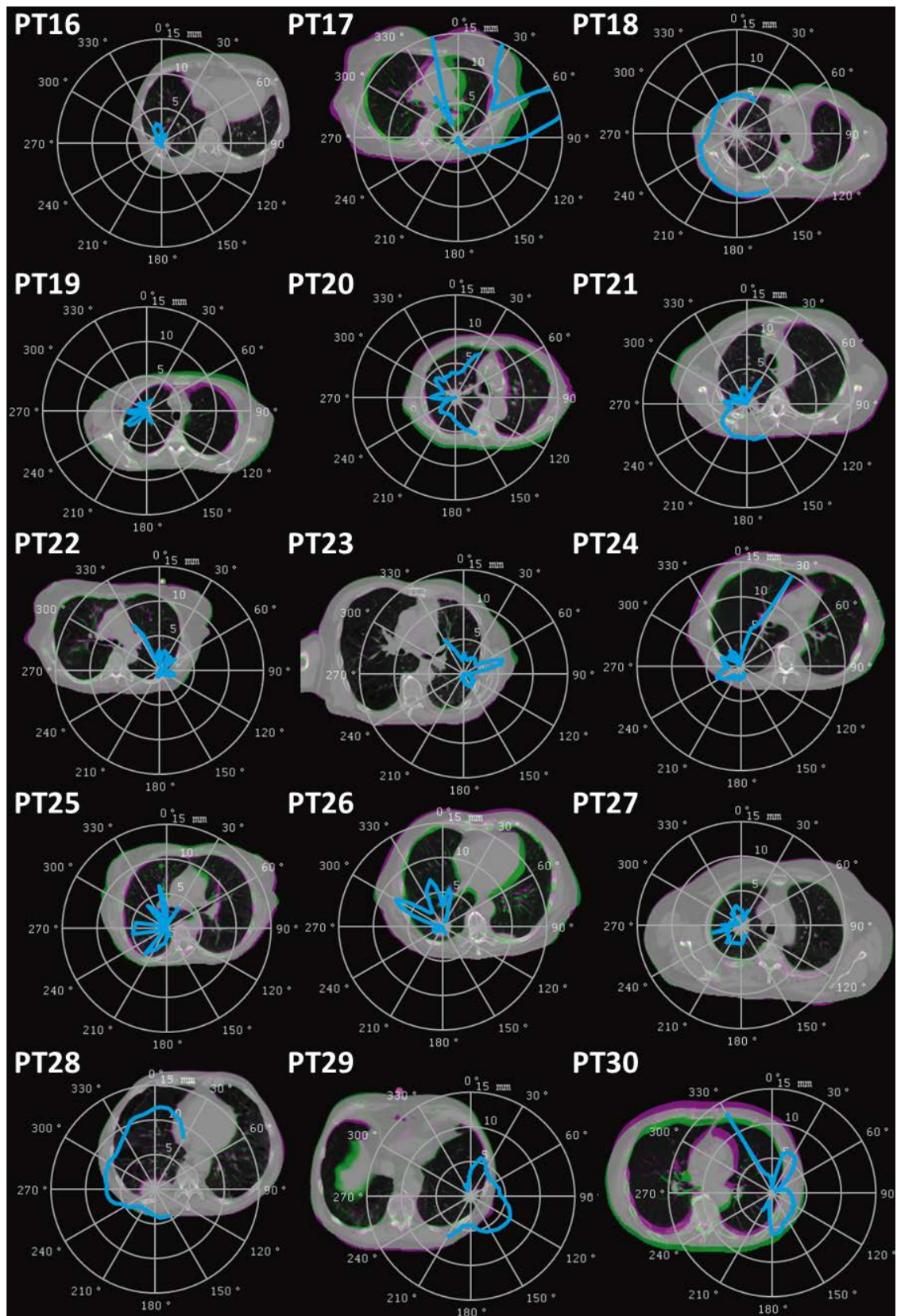
Supplementary Table S4. The statistical tests for Δ WEPL where the parameter in bold show a statistically significant correlation ($p < 0.05$). The B-value is the regression coefficient.

Parameter	B-value	p-value
WEPL on planning CT	0.08	<0.01



Supplementary Figure S1. Polar plots of Δ WEPL as a function of beam angle (blue line) overlaid on the image registration result of planning (green) and end-of-treatment

(magenta) BHCT for the locally-advanced patient cohort (patients 1-15). Δ WEPL are larger than 10 mm for 6/15 patients (patients 1, 3, 6, 8, 9 and 11).



Supplementary Figure S2. Polar plots of Δ WEPL as a function of beam angle (blue line) overlaid on the image registration result of planning (green) and end-of-treatment

(magenta) BHCT for the non-locally-advanced patient cohort (patients 16-30). Δ WEPL is larger than 10 mm for 4/15 patients (patients 17, 24, 28 and 30).