

The Positive Impact of SGRT

The Berkshire Cancer Centre Experience

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Once Upon a time in a Hotel in Hendon



Compassionate Aspirational Resourceful Excellent

2017..... to the present day

- 30% vacancy rate
- Machine and software upgrades and replacements
- 2/3/4 Systems
 - 2 versions
- Slow IT network
 - No central database
- COVID



What has SGRT done for us?

- Removed tattoos
 - Delayed awaiting Prosoma upgrade due to issues with body surfaces with holes
 - Not a single tattoo since 2022
- Breast VMAT (DIBH)
 - COVID
 - New MDT guidelines developed
 - UK breast Cancer Group, British Society of Breast Radiology, Association of Breast Pathology
 - Decrease in nodal dissection



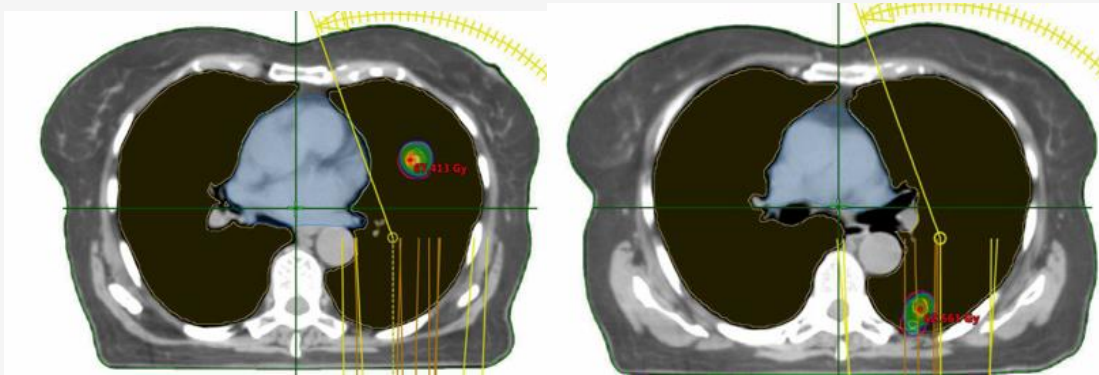
What has SGRT done for us?

- SABR with confidence
 - We don't have FFF (yet .. ?? 2024)
 - Long treatments
- Improved treatment for larger breasted ladies
 - Chabner bra
- Shell less H&N
- Shell less DIBH Butterfly VMAT



SABR confidence

- Patient who became uncomfortable on the couch
- 2 small volume lesions.. 2 PTVs.... 2 plans ...4 arcs



- 45 minutes on the couch
- Circle hands and feet
 - Monitoring showed no movement

VRT _{cm}	0.01			
LNG _{cm}	-0.02			
LAT _{cm}	0.01			
MAG _{cm}	0.02			
YAW°	0.0			
Roll°	-0.1			
Pitch°	-0.1			



SABR Confidence

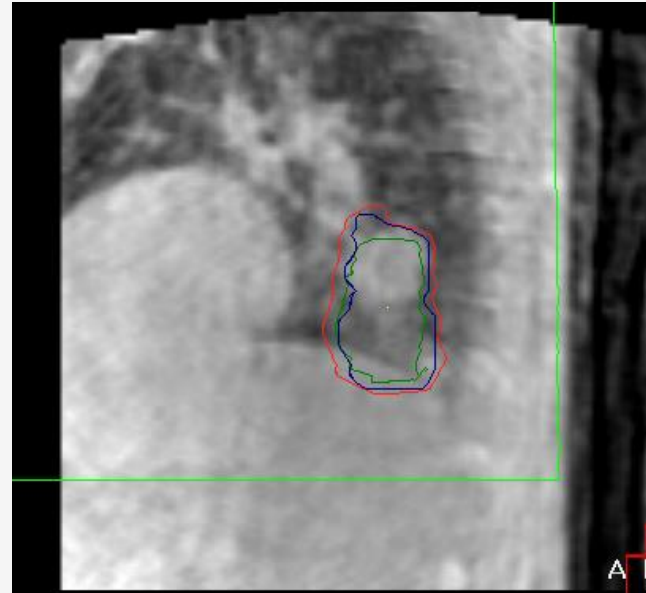
- 60 yr old male, Ca Rectum, oligomet lung lesion
- At #1 & #2 large S/I discrepancy in tumour position found on mid treatment XVI
- XVI out of tolerance.....
- but On Post treatment CBCT Coverage was good
- So what was occurring as ARC1 = ARC2
- Treatment paused
 - ?Replan with conventional radiotherapy



SABR Confidence

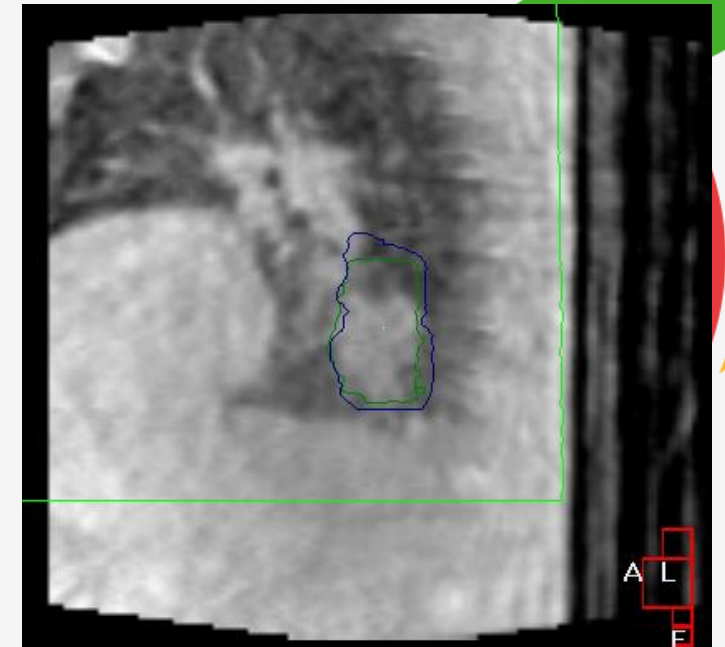
- MID CBCT

#	X (cm)	Y (cm)	Z (cm)
1	-0.13	0.93	-0.40
2	-0.11	0.88	-0.29



- Post CBCT

#	X (cm)	Y (cm)	Z (cm)
1	-0.05	-0.03	-0.01
2	-0.03	0.1	-0.02



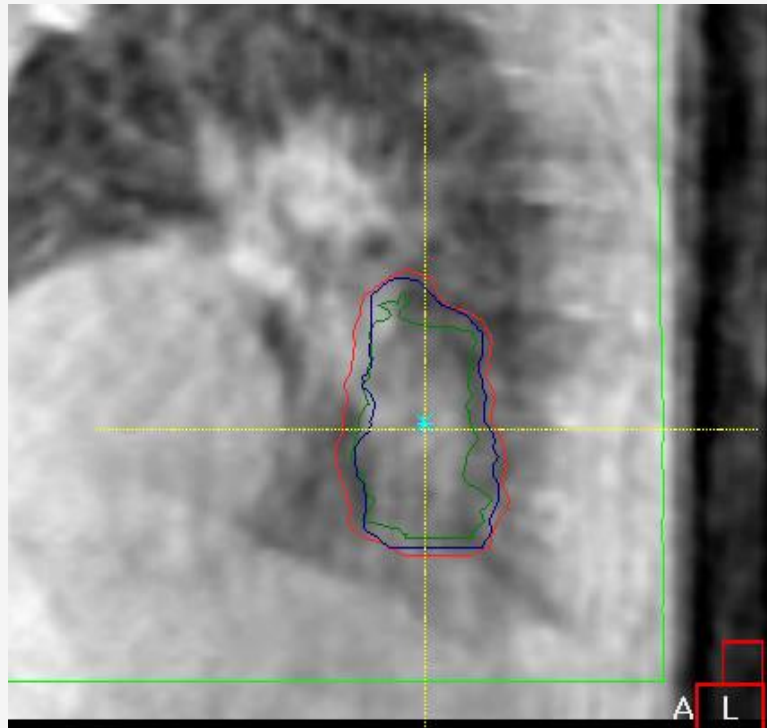
SABR Confidence

- SGRT deltas were well within tolerance
 - Was SGRT wrong.....
- ? Why was the CBCT not
- 2D plotter... watched his breathing
- Patient cycled to department was warm and the room cold
- Left patient on the couch for 15 minutes



SABR Confidence

Mid scan #3



#	X (cm)	Y (cm)	Z (cm)
3	-0.01	-0.16	-0.11



Shell less head and neck patient

- 47 year old male stage II lymphoma Rt neck
- Head teacher
- Anxious and claustrophobic +++
- Review with clinician with door open
- Could not be in clinic room with the shell.
- Refused treatment with any shell



Shell less head and neck patient

“If I have to wear one of them I would rather die”



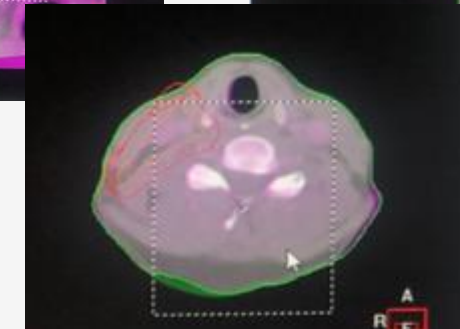
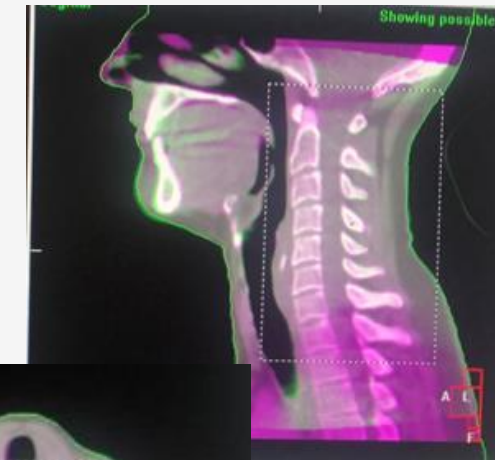
Shell less head and neck patient



Shell less head and neck patient

- Results
 - VMAT plan with standard margins
 - 15 treatments
 - 17 images taken, 2 reset ups
 - Set up less than 2 minutes
 - Average XVI shift 3mm

Translation (cm)		Rotation (deg)	
X	0.34	X	0.8
Y	0.28	Y	359.6
Z	0.03	Z	359.5



- Improved accuracy over our current full shell

Shell less DIBH Butterfly VMAT

- 30 year old male
- Dx Stage II Hodgkins
 - Rt cervical and mediastinal lymph nodes
- Post chemo, requires radiotherapy
- Clinician... butterfly technique in DIBH
- Discussions
 - Intact Head and shoulders shell..... No DIBH
 - Head and shoulders shell and cut sections out..
 - Head and neck board does not support chin straps

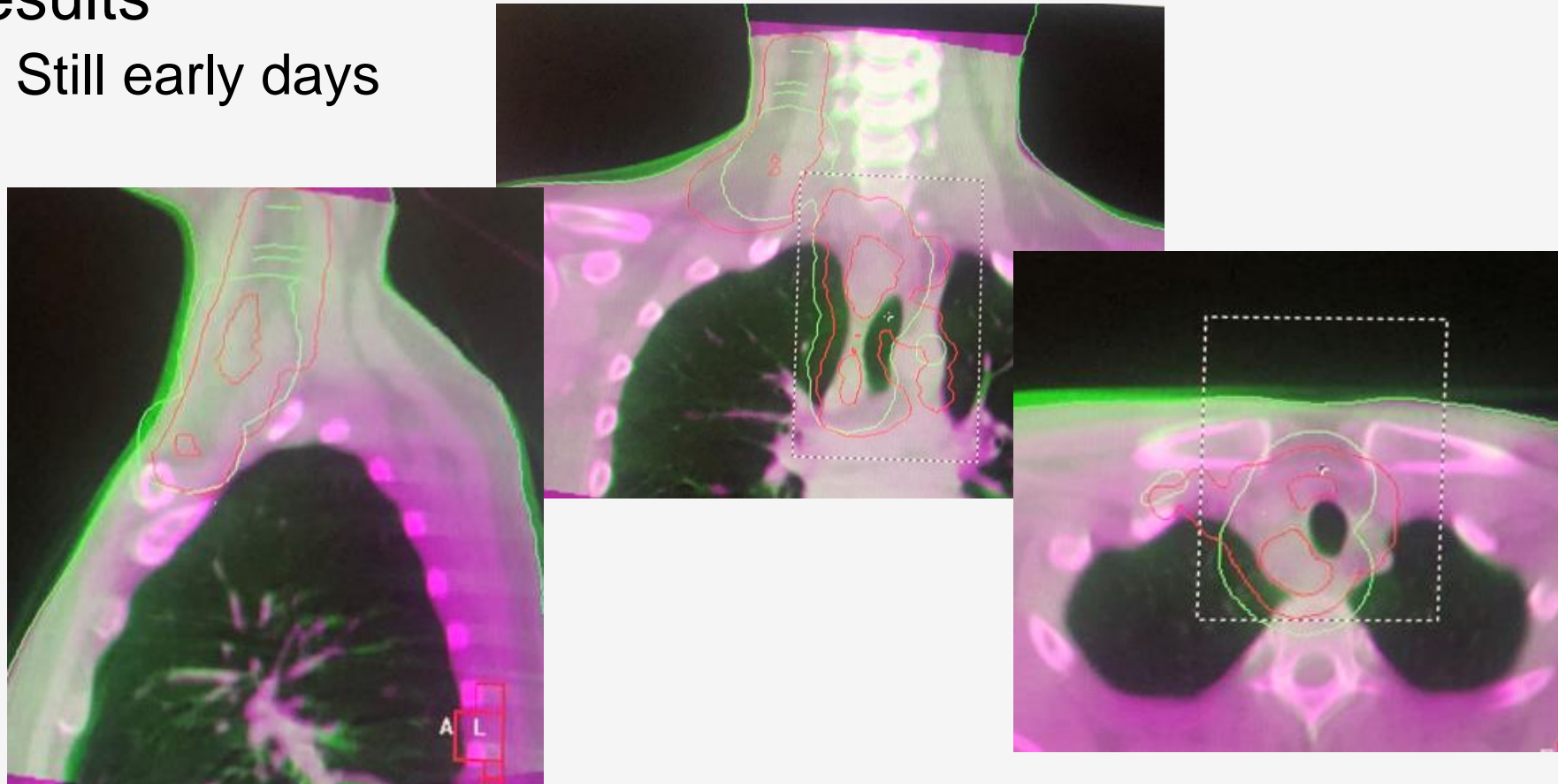


Shell less DIBH Butterfly VMAT



Shell less DIBH Butterfly VMAT

- Results
 - Still early days



So where next for the BCC

- What is left?.....
- Advance upgrade
 - Done with no reduced capacity
- Faceless masks
 - Decision to make
 - Do we need shells at all?
 - Huge cost saving
 - Can we copy Mike Tallhammer and team from the USA?
- Go rogue
 - Individualized to the patient



..... happily ever after.




Compassionate Aspirational Resourceful Excellent

Questions??



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