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US SGRT ANNUAL MEETING

Implementing SGRT for Pelvis Treatments: Common Pitfalls & How to Overcome Them



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TWA

SGRT

Use of surface guidance to improve the safety, effectiveness and efficiency of the *entire* radiation therapy workflow.

SIMULATION



4D AND BH CT

PLANNING



CLEARANCE MAPPING

TREATMENT



MOTION MANAGEMENT
DOSE VISUALIZATION
4D TREATMENT

IMPLEMENTING SGRT FOR PELVIS TREATMENTS: COMMON PITFALLS & HOW TO OVERCOME THEM

BY EMMY WELLS BHART (R) (T)

LEAD RADIATION THERAPIST

SCL HEALTH NOW WITH INTERMOUNTAIN HEALTH

PEAKS REGION

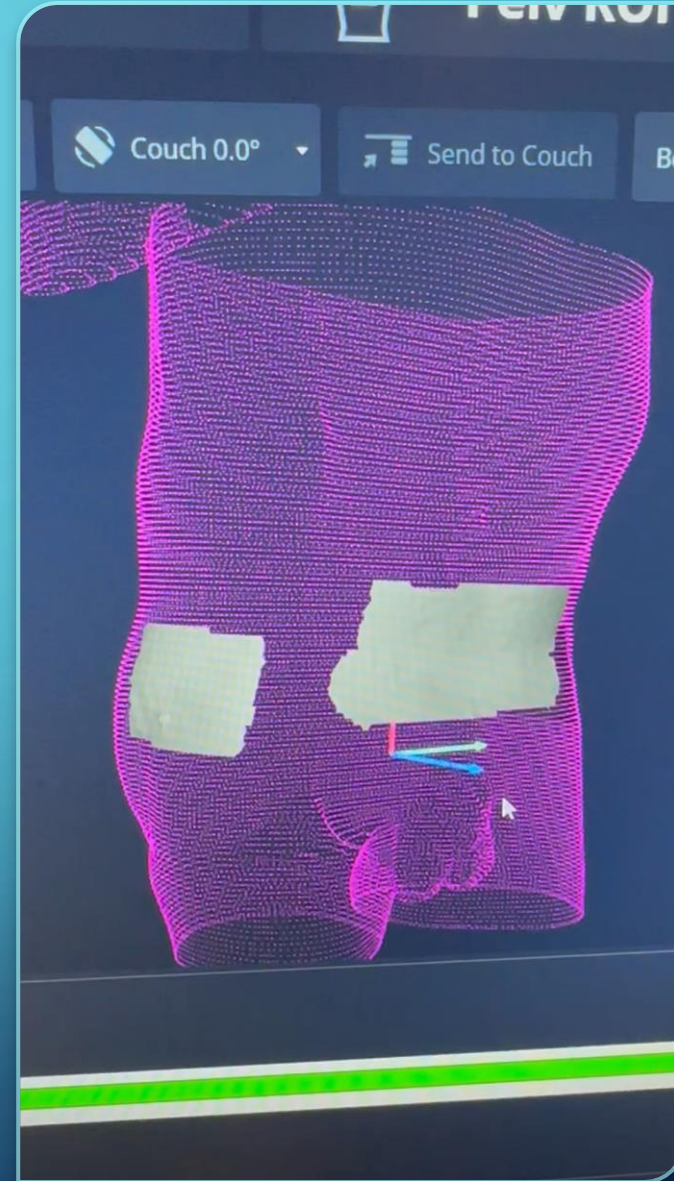


- Align RT has slowly become our main tool for our daily treatments



ALIGN RT W/ PELVIS TREATMENTS

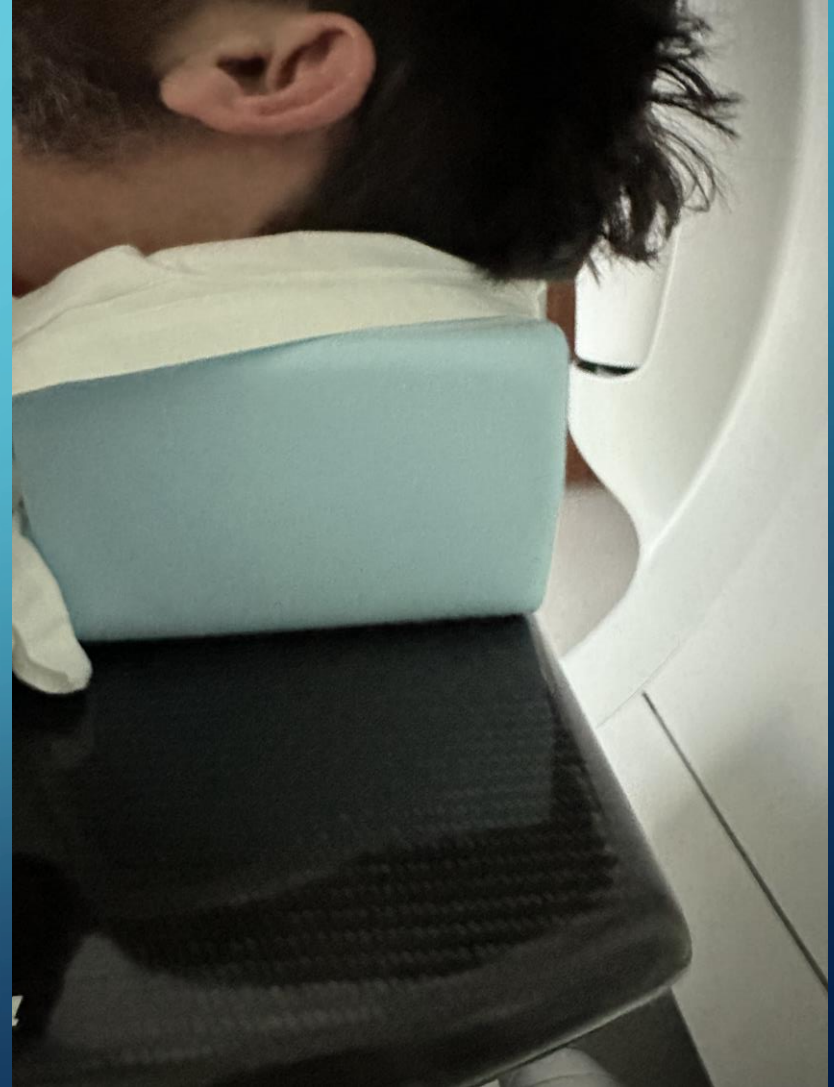
- This is what we have evolved to- as much as we can have on the front with a fair amount on the laterals
- Not every patient is shaped the same, so we have and will continue to modify ROIs to get the optimal set up and monitoring.



COMMON PITFALLS

- Our set up style
- Patients being too covered
- ROI too big/too small
- Skin folds/ Belly breathing motion
- False pitch
- Therapists standing in the way of the side camera!

OUR SET UP STYLE





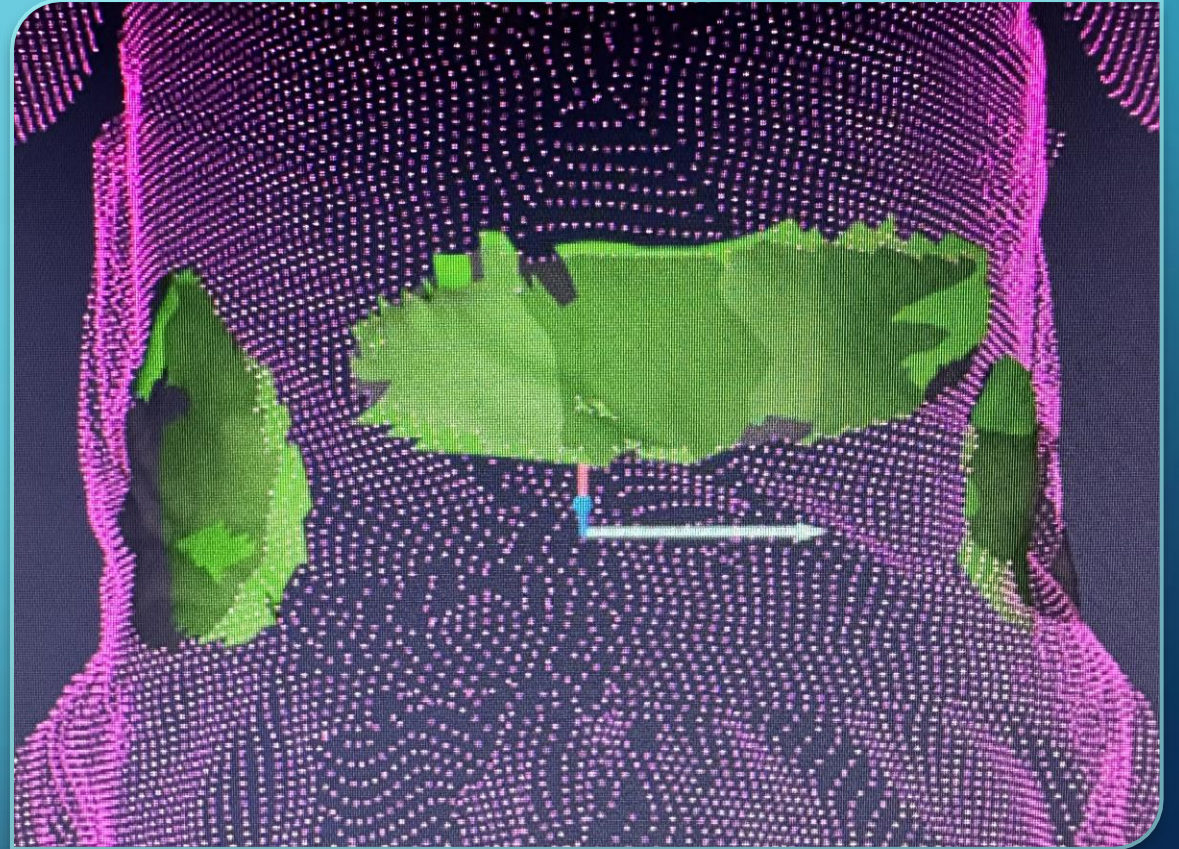


PATIENT IS TOO COVERED UP

PATIENT IS TOO COVERED UP

- Loin cloth covering
- Education on this is important
- Blotchy ROI

Look for the darker shade on the ROI and in the video, it is jumpy



PATIENT IS TOO COVERED UP

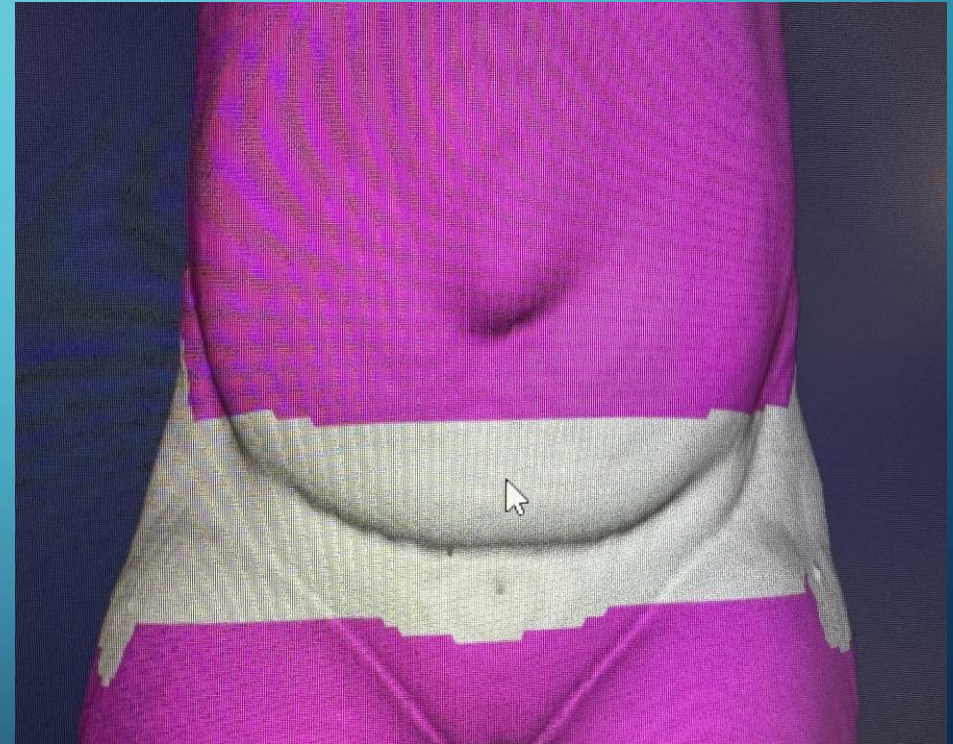
- Jumpy red & green bars
 - When more than a pillowcase is used, such as a warm blanket, the top camera has a hard time seeing the anterior ROI.
- For us, 90% of the time when we see jumpy ROIs, the loin cloth is too high, covering the anterior portion of the ROI

The background is a blue gradient with decorative white circuit-like lines in the corners. These lines consist of straight segments and small circles, resembling a stylized electronic circuit board.

ROI TOO BIG OR TOO SMALL

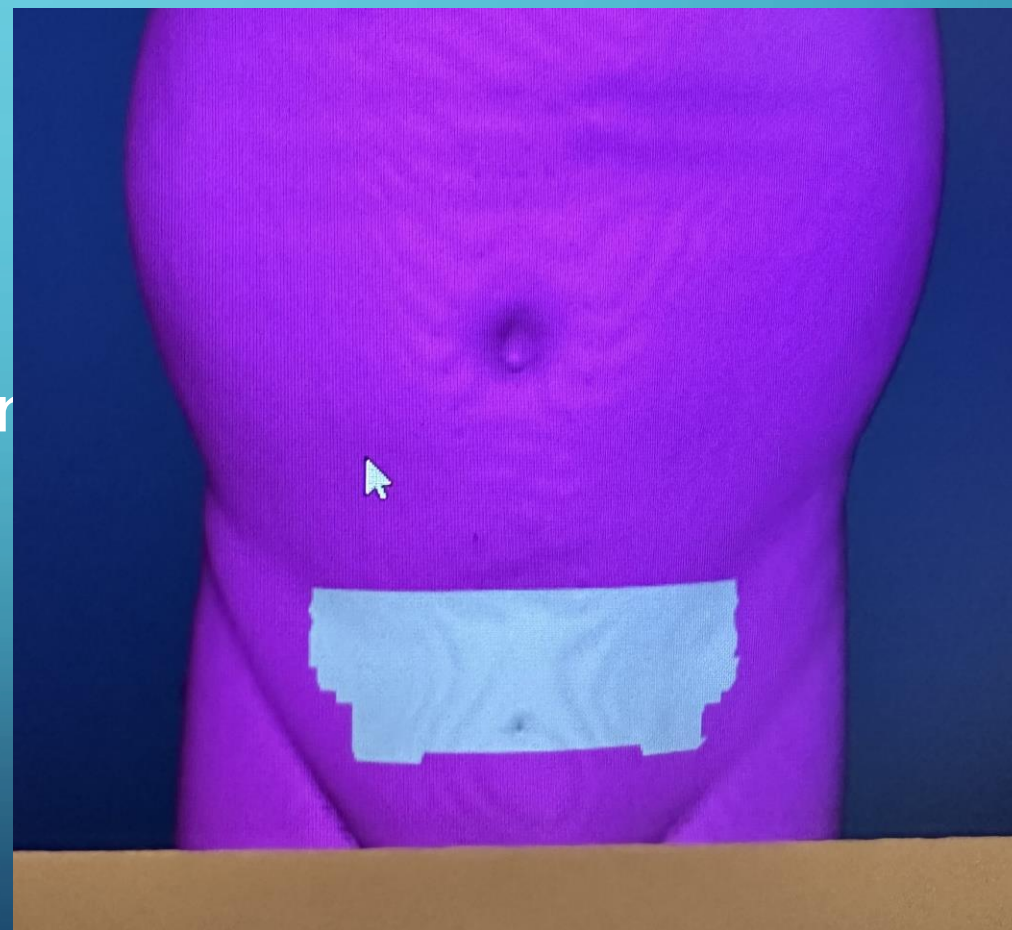
ROI TOO BIG OR TOO SMALL

- Too big-
 - If you are making big ROIs, it is likely you are including skin folds
- Do not include lots of adipose tissue
- Belly tissue is not reproducible



ROI TOO BIG OR TOO SMALL

- Too Small
 - This doesn't give the system enough information
 - The green and red bars will be very jumpy



ROI TOO BIG OR TOO SMALL

- Slow frame rates- Larger ROIs mean slower framerates
- If the frame rate is less than 1 frame per second, you need to edit the ROI
- The frame rate is located in the bottom right side of the screen under the surface



SKIN FOLDS/ BELLY BREATHING

SKIN FOLDS/ BELLY BREATHING

- Like all other sites, with pelvis patients we avoid skin folds
 - The camera can't see in them
- Avoid ROIs on the belly due to breathing motion.
 - This makes ROIs very jumpy and unreliable

FALSE PITCH

FALSE PITCH

- This is where Maryelisabeth from VisionRT needs a round of applause!
- She came back for our 1-year training, and we were telling her our issues with pelvis ROIs and she pointed out our ROIs were going to far down the leg!!



FALSE PITCH

- She showed us how to manipulate the knee roll to eliminate the pitch if it was real, or how to change the ROI if it was false.





THERAPISTS STANDING IN THE WAY OF
THE SIDE CAMERA!

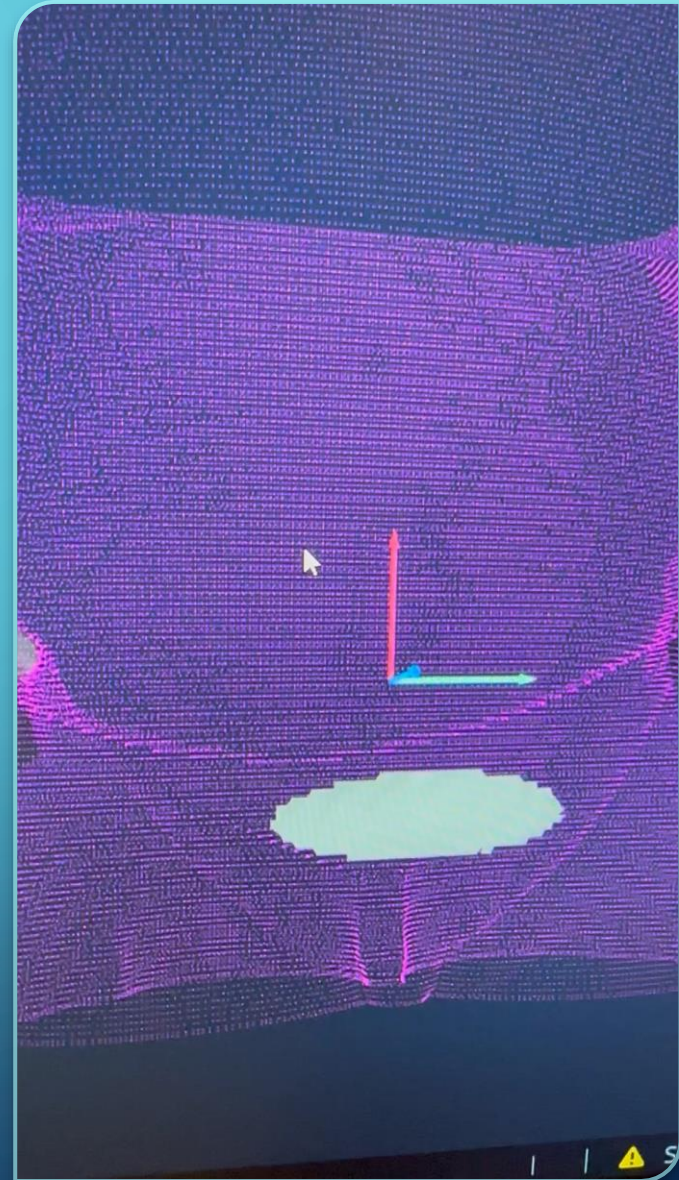
THERAPISTS STANDING IN THE WAY OF THE SIDE CAMERA!

- This one tends to be me!!
- Where I stand with my foot on the base of the table, my broad shoulder tends to be in the way of whatever side I am standing on!!!

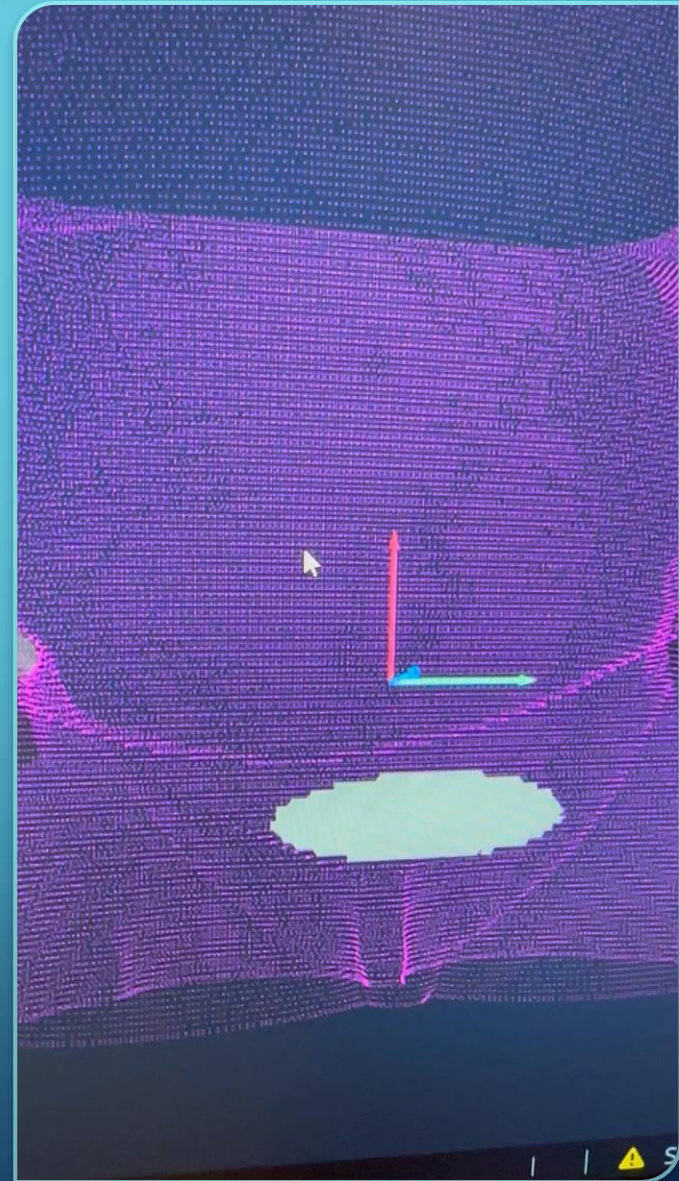
The background is a blue gradient. In the corners, there are white line-art illustrations of circuit boards or neural network connections. These lines are thin and connect to small circles, resembling nodes or components of a system.

HERE WE WILL LOOK AT EXAMPLES

- Too small without laterals! Then we edited to add sides, but had to avoid folds.



- We've used this one but have modified it since then...



- What we currently use!

