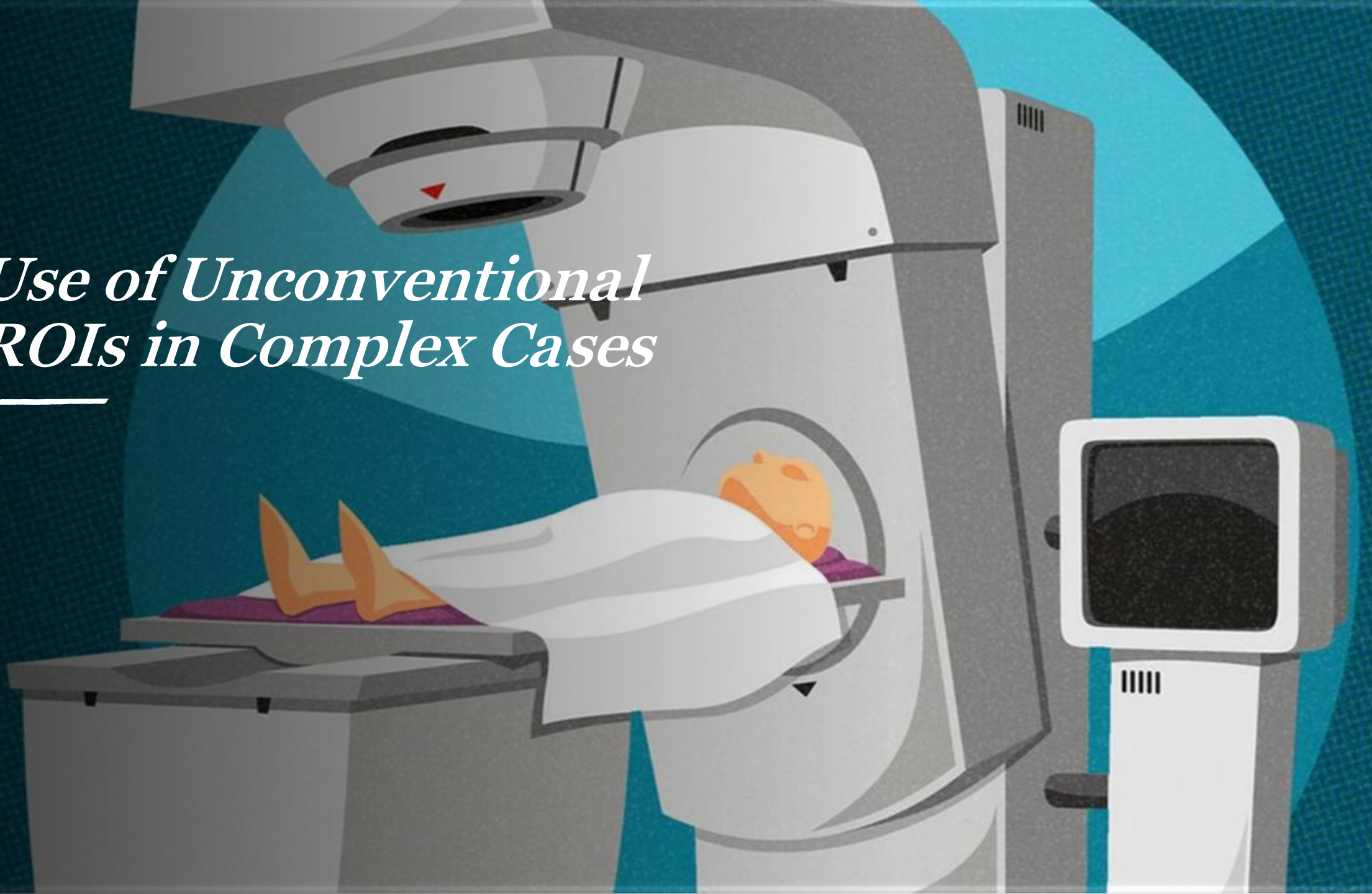


*Use of Unconventional  
ROIs in Complex Cases*

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# *Cone Health Cancer Center at Wesley Long*

Started out as test center for SGRT  
in 2012 breast and brain patients

Over the next several years we  
tested it on other body areas

We now use SGRT on every single  
patient, and thanks to SGRT, we  
are now a markless center.

SGRT has made us a more efficient  
center. We can now treat up to 144  
single isocenter patients in  
our standard work day.





## *ROI* *(Region of Interest)*

What should I consider  
when creating an ROI?

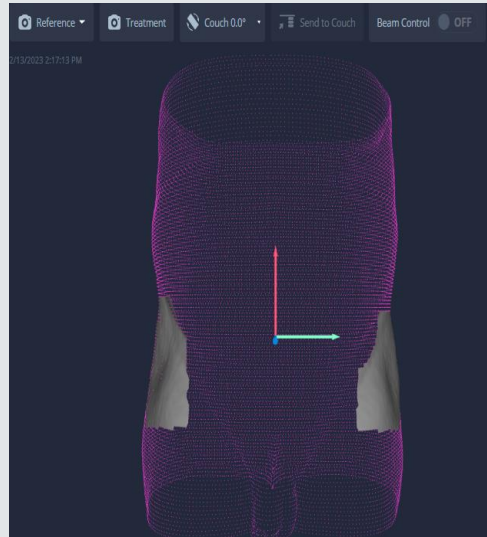
**Include the  
treatment  
area when  
possible.**

**Use a stable  
part of the  
body.**

**Ensure  
the ROI can  
be tracked by  
at least two of  
the three  
cameras at all  
times.**



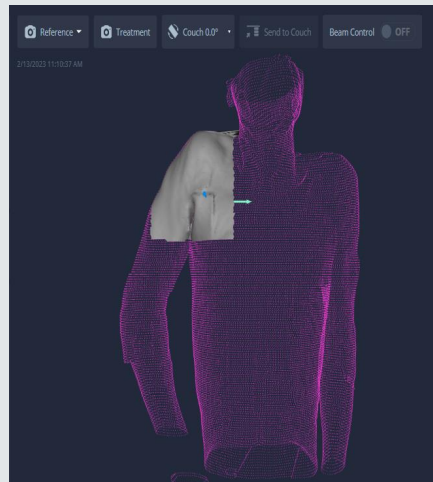
## Pelvis



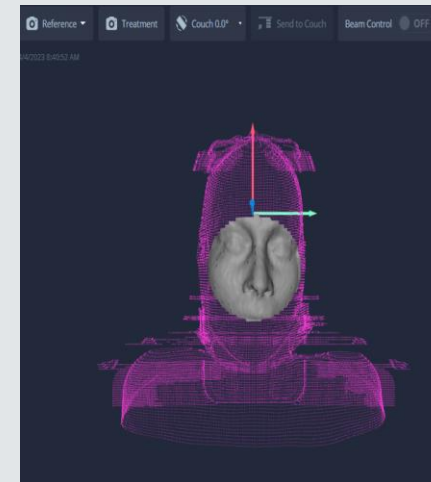
## Breast



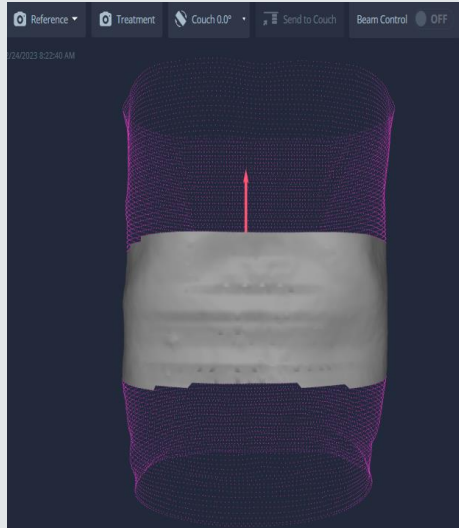
## Scv/Axilla



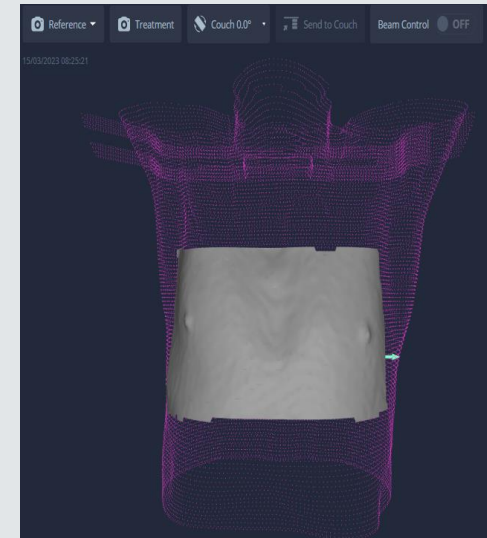
## Brain



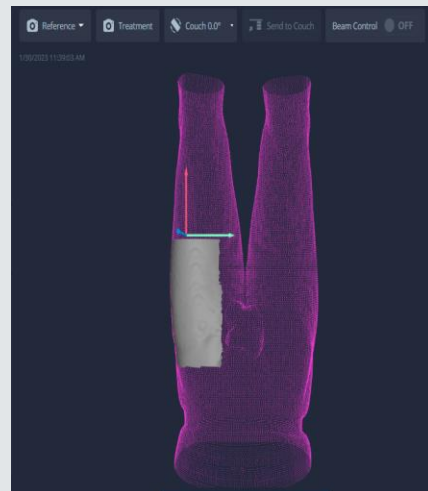
## Abdomen



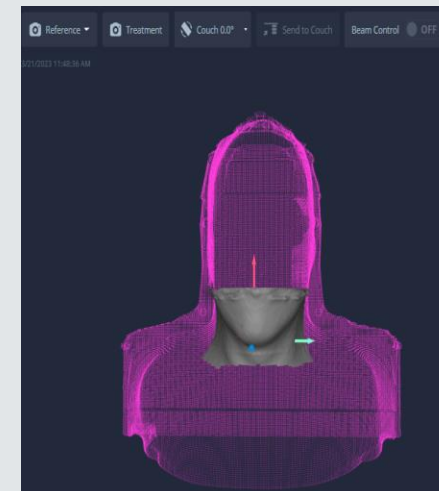
## Chest



## Extremity



## H/N



## *Case Study*

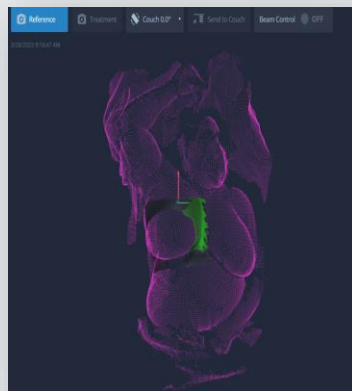
A 63 yo female patient was receiving radiation to their left breast with Deep Inspiration Breath Hold (DIBH) technique. Her Rx was for 21 fx, with a 15 fx primary of 2.66 Gy/day and a 6 fx boost of 2 Gy/day. This patient was on the boost portion of her treatment which consisted of 3 static fields. One of those fields was a 40° gantry angle that was blocking the camera on the patients left side as well as some of the front camera. Since this angle did not allow at least 2 of the SGRT cameras to visualize the ROI, it was necessary for us to make adjustments from our standard breast ROI to a more unconventional one.



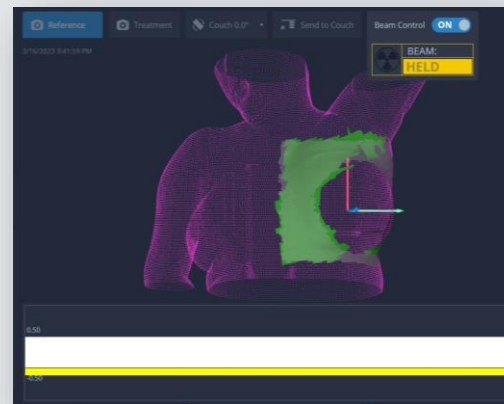


By adding more ROI across the chest and under the opposing breast, it allowed for 2 cameras to better visualize the needed area for treatment at all 3 treatment angles while the patient was holding their breath.

320°



40°

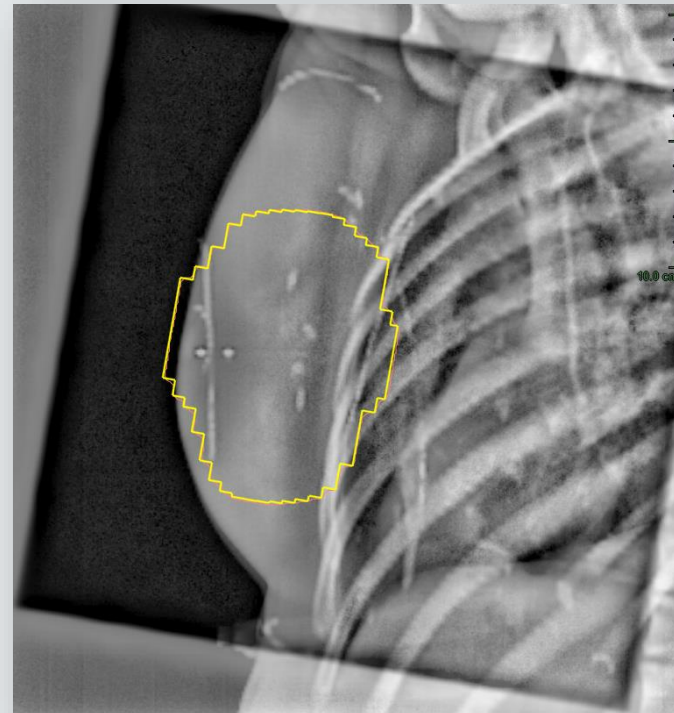


# *Verification Imaging*

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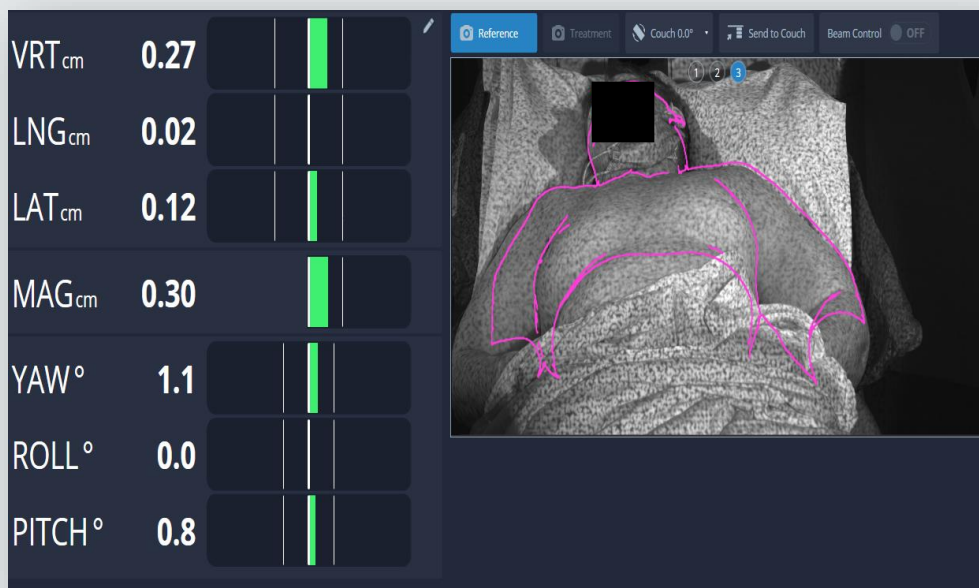
Performing imaging is one way to feel comfortable with treating after making an unconventional ROI. This specific patient had weekly port films that were used to verify the new ROI.

120° angle





## Video Function

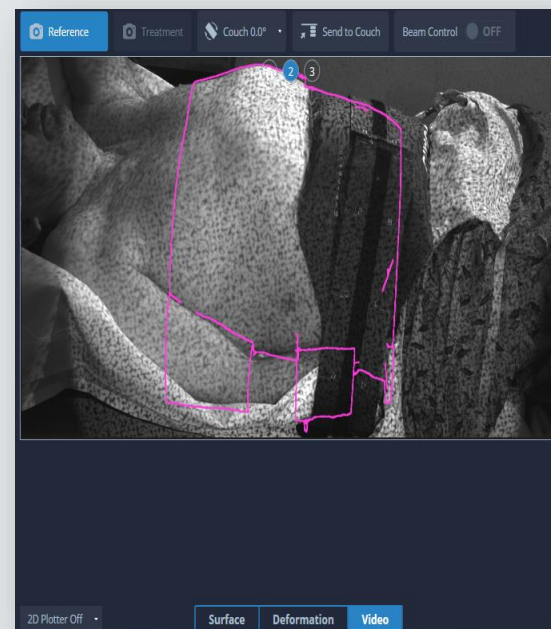
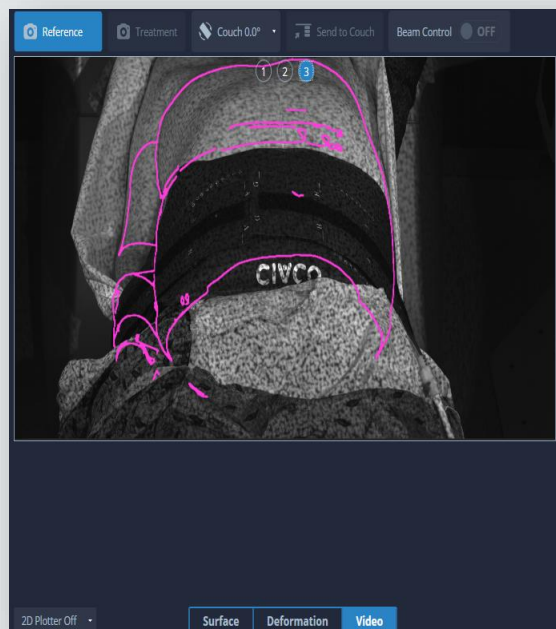
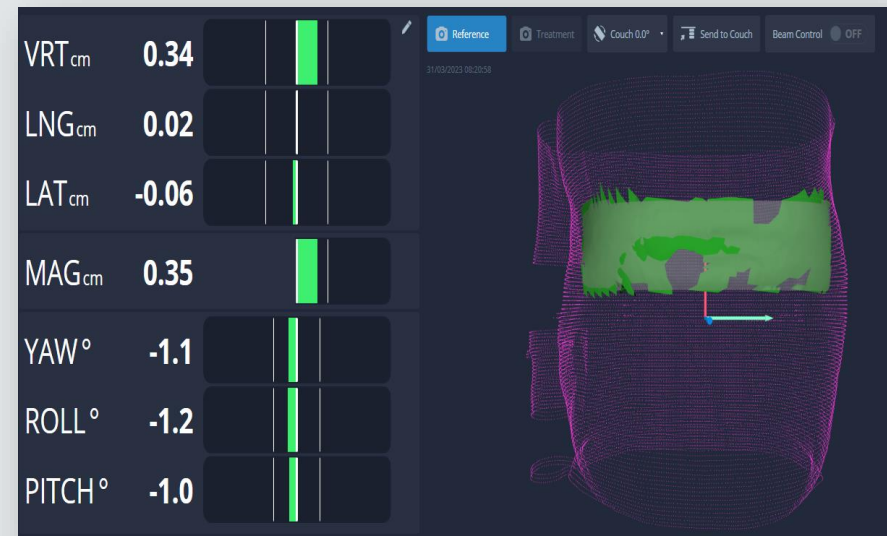
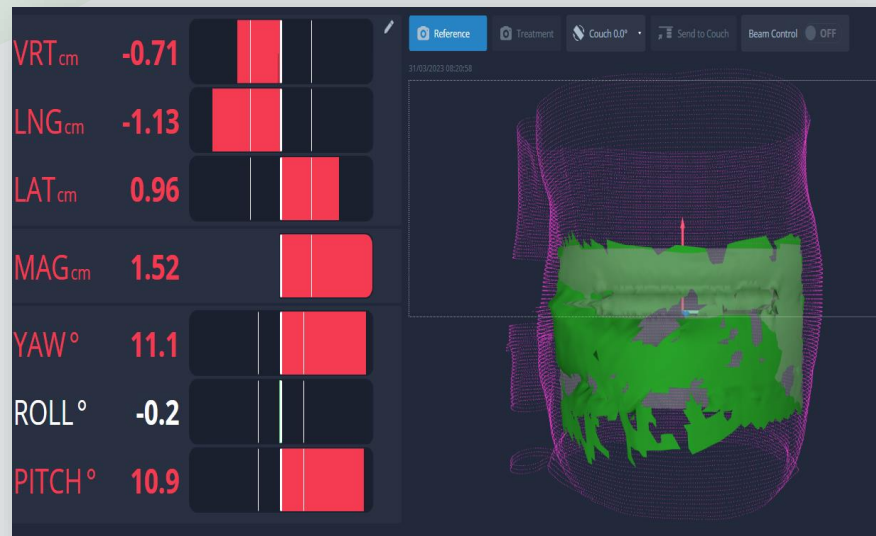


A great tool, especially for markless centers, that can help you in getting closer to isocenter if you are too far off for SGRT to pick up.

Shows contours from 3 different angles to be able to check arm placement, bolus placement, and other body parts for unconventional setups.

You can see if a patient has swelling or weight loss that is throwing the ROI off.

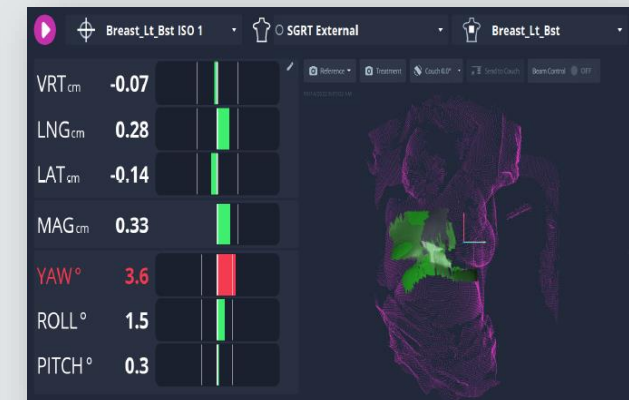
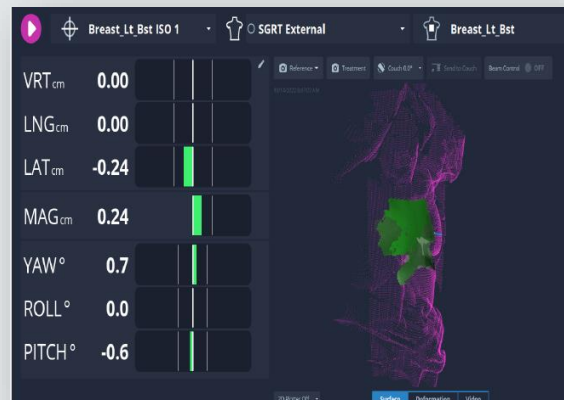
Great for DIBH patients to help ensure that they are holding their breath.



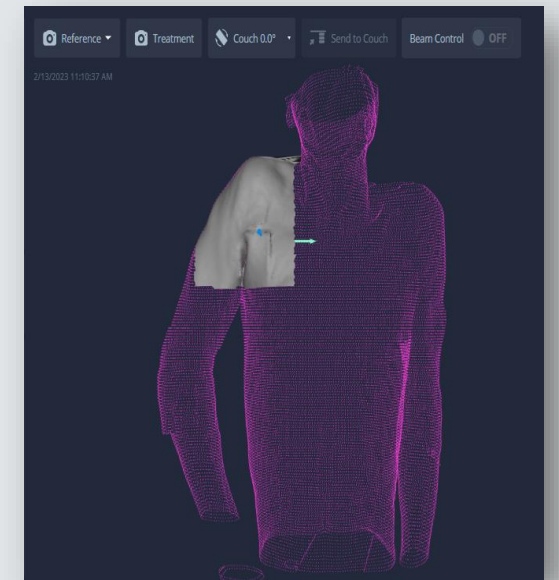
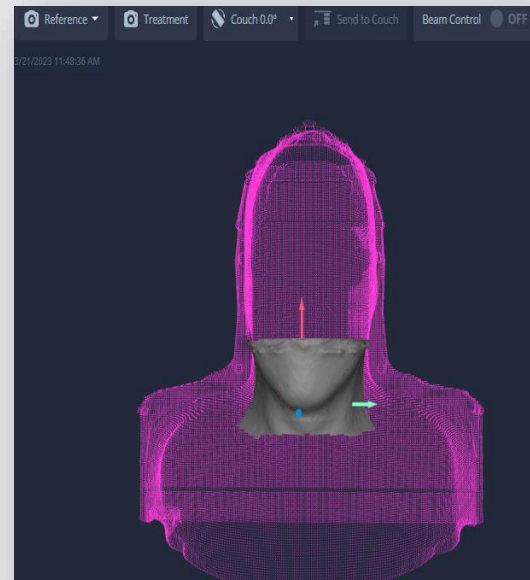
# Standard



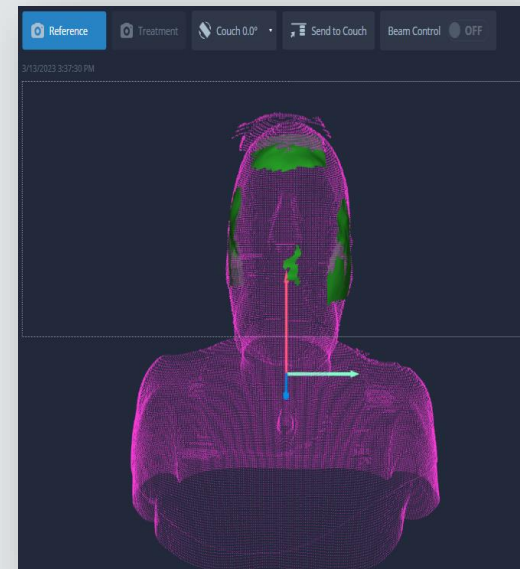
# Unconventional



*Standard*



*Unconventional*





## *Conclusion*

ROIs can be adjusted based on patients anatomy or treatment plan to increase the effectiveness of their setup.

A better setup will cause less shifts to be needed from imaging and lead to increased confidence in the ability to treat without marks.

SGRT is helpful with every type of patient. It has made the radiation therapy treatment experience better for therapists and patients!

*Thank You!*

