

## CASE STUDY ELIMINATION OF PLAN VERIFICATION PROCEDURE WITH ALIGNRT

Isocenter localization time reduced 50%  
Overall setup accuracy improved 38%  
Supraclavicular accuracy improved 28%



## CHALLENGES FACED IN HIGH WORKLOAD HOSPITALS

One of the challenges faced in high workload hospitals is keeping procedures safe while meeting the high demands of a heavy workload. Some of these hospitals keep the practice of plan verification, a safety check, in place to ensure that treatments are delivered accurately. This procedure checks plan isocenter prior to treatment. While this ensures the plan isocenter is correct, it is an additional step that sometimes increases the number of trips to the hospital for patients. This procedure also further increases the workload of the hospital.

Sun Yat-Sen University Cancer Center aims to safely eliminate this process with the help of AlignRT, starting with breast cancer patients.

## OVERVIEW:

**Institution Type:** Government Hospital  
**Location:** Guangzhou City, Guangdong Province, China  
**SGRT System:** AlignRT x 2  
**Years with system:** Elekta (3 years)  
**Cancer types treated:** All cancer types



## GOALS

1

### ELIMINATE PLAN VERIFICATION PROCEDURE

To eliminate plan verification procedure but maintain an isocenter check in place for patient safety.

2

### REDUCE TIME TO LOCALIZE ISOCENTER

Find a method that aids therapists to localize and verify that treatment isocenter is correct.

3

### INCREASE SETUP ACCURACY

This method of isocenter localization improves setup accuracy.



## SOLUTION

Sun Yat-Sen Cancer Center developed a dual-guided process in which surface guidance acts as an additional set of eyes to ensure correct localization of isocenter, and CBCT fine tunes and double check patients' position.

### TRAINING PROGRAM

Vision RT's Clinical Application Specialist provided the accessibility and on-site training that helped Sun Yat-Sen Cancer Center initiate their implementation of AlignRT in SRS. From there, they began to implement SGRT applications in different areas including breast, DIBH, and pelvis.

1

### EXPLORATION WITH ALIGNRT

Since their first implementation with SRS in 2020, they have explored AlignRT in various applications. They have innovated their own immobilization devices to ensure the best setup result with surface guidance such as open face mask with mouth bite, prone pelvis board with vac-lok and also non-reflective customized bolus.

2

### DATA COLLECTION AND VERIFICATION

To ensure feasibility of new technique, they conducted a study on 81 patients (41 with plan verification, 40 with dual-guided localization process). Study shows that the method not only reduced time spent on isocenter localization, but also improves setup accuracy.

3

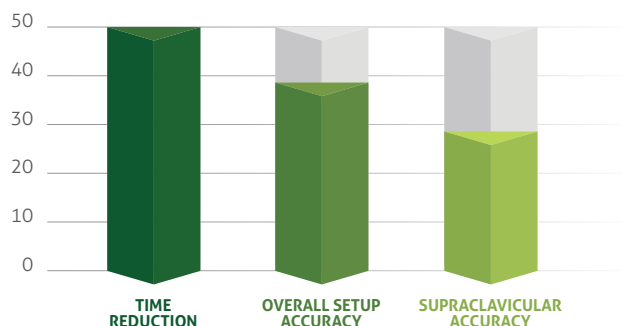
*"We believe in solving clinical problems through research and innovation and hope our staff will find meaning and value in their role through exploring new techniques and technology."*



**Chi Feng**  
Chief Radiation Therapist

## RESULTS

1. Eliminated Plan Verification Procedure
2. Isocenter localization time reduced from an average of 8 min to 4 min: **50%**
3. Overall setup accuracy improved **38%**
4. Accuracy of Supraclavicular region improved through treatment capture: **28%**



## FUTURE PLANS

Sun Yat-Sen Cancer Center has achieved a lot with Vision RT since its implementation in 2020. They have published 4 abstracts in ESTRO and ASTRO, as well as 3 papers regarding AlignRT and its various applications. Future plans include expanding this method of isocenter localization to other treatment sites.



US Vision RT  
Phone Number: 866.594.5443

Vision RT, Inc.  
580 Howard Avenue  
Somerset, NJ 08873