

AlignRT® Beam Guide™ Module

CLINICAL EVALUATION OF ALIGNRT® BEAM GUIDE™ AT ROSEMERE CANCER CENTRE: ENHANCING PRE-TREATMENT VERIFICATION AND SETUP CONFIDENCE

Rosemere Cancer Centre evaluated the AlignRT Beam Guide Module as part of its clinical AlignRT workflow, assessing how projected beam visualization could further support treatment accuracy, efficiency, and staff confidence.

THE CLINICAL CHALLENGE

While SGRT and image guidance provide information regarding patient position, they do not directly visualize treatment field geometry in relation to the patient surface at the treatment unit. This can present challenges during complex setups, bolus placement, DIBH treatments, or situations where limited surface visibility impacts visual assessment of planned field coverage.

THE SOLUTION

Beam Guide extends AlignRT beyond setup and monitoring by displaying the planned treatment beam directly on the patient's live surface. By visualizing the relationship between patient anatomy and the intended treatment field in real time, therapists gain an additional layer of verification before and during treatment delivery.

CLINICAL OBSERVATIONS

1

- Provides a visual reference similar to traditional tattoo-based field verification while maintaining the benefits of a tattoo-free SGRT workflow.
- Helps therapists identify positioning issues that may not be apparent from delta values or postural video alone.

Enhanced Setup Confidence

2

- Eliminates the need to move between screens to verify field placement using skin views.
- Enables faster setup verification by displaying the projected treatment field directly on the patient surface.

Improved Workflow Efficiency

3

- Assisted with challenging non-bolus setups and helped streamline patient positioning.
- Enabled rapid assessment of beam coverage when positioning bolus, ensuring the treatment field remained fully covered.

Support for Complex Patient Setups



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- Allowed radiographers to quickly identify when treatment arcs could intersect the treatment couch joint and make corrections before treatment delivery.
- Improved confidence when treating patients with limited surface visibility, such as larger or barrel-chested patients, where portions of the ROI may not be visible to the cameras.

Additional Treatment Verification

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- Supported verification of patient positioning during both free-breathing and breath-hold workflows by visualizing projected beam placement on the corresponding patient surface.

Confidence in DIBH Treatments

KEY OUTCOME

Clinical users reported that Beam Guide provided an additional layer of visual verification, supporting assessment of treatment geometry, patient positioning, and potential setup inconsistencies prior to beam delivery. The team reported particular value in complex setups, bolus treatments, DIBH workflows, and non-imaging treatment days where additional confidence in patient positioning was beneficial.

CLINICAL APPLICATIONS EVALUATED

- ✓ Visualize planned beam geometry directly on the patient before beam-on
- ✓ Increase confidence in patient positioning beyond deltas and postural video
- ✓ Support complex and challenging treatment setups
- ✓ Improve bolus and field coverage verification
- ✓ Identify potential couch or geometry conflicts before treatment
- ✓ Enhance efficiency by reducing manual verification steps
- ✓ Provide additional confidence on non-imaging treatment days



"Beam Guide was straightforward to implement within our existing SGRT workflow and has become a routine component of treatment setup verification. We found particular value in complex setups, bolus treatments, and DIBH workflows, where projected beam visualization provided an additional layer of confidence prior to treatment delivery."

Lisa Laws
Therapeutic Radiographer Team Lead