

INTRODUCTION

Mayo Clinic in Arizona implemented AlignRT into our practice in November of 2019. Our department consists of four Varian Truebeam Accelerators.

Over the years, we have taken thoughtful steps towards the goal of tattoo-free treatments for our patients.

The concept of going tattoo-free seemed scary and hard to embrace at first, however we pulled through and have expanded our use to include tattoo-free treatments. Factors that made the transition challenging included training 20+ therapists, overcoming traditional use/setup with tattoos, practicing convergence for immobilization for Photon and Proton treatments and multiple approvals required by other departments before implementation.

With much excitement, in July 2022, the therapy team made the transition to tattoo-free setups for our supine breast patients. This process was planned over an 8-month period.

This journey has led our team to embrace the great benefits of tattoo-free treatments for our patients. Our team of therapists now can look to the future and realize we can accomplish this goal for additional treatment sites and our pediatric population.

OBJECTIVES

STEPS

Therapist Champions were essential in designing treatment workflows and supporting staff buy-in. The working team consisted of 5 Therapists, 1 Therapist Team Lead, 1 Therapist Supervisor and 1 Physicist. **See Table 1 for timeline.**

- In first 2 years using AlignRT system, treatment workflows were established to reduce staff confusion and to standardize care for patients. Workflows included anatomical sites; steps for daily image guidance/no image guidance; and allow the team to choose to use tattoos or not. Specifically, cases without daily image guidance obtained MV ports of treatment fields for the first 3 days to ensure imaging and AlignRT were consistent.
- In November 2021, the team modified workflows to force the team to ignore tattoos for setup and solely use AlignRT to guide patient setup. This enhanced patient experience and efficiency for treatment.
- For the next 6 months, meetings were held 2 times a month to followup on workflows and ensure the Therapy team was building their confidence. At this point, the Therapist Champions felt confident we could move forward with Breast patients as our first tattoo-free treatment. Between 6 and 8 months, multiple meetings were held with Therapist champions, simulation therapists, physics, dosimetry, and physicians to ensure this change was well-coordinated. The Therapist champions helped design Standard of Practices for Simulations and Treatments.
- On July 18, 2022, Breast patients went tattoo-free. Prone breast, cases receiving comparison planning for proton and photon, and Chabner bra cases were excluded. Contingency plans were also developed in the event the VisionRT server was down and for cases that may need CT re-simulation. Our physicist worked through the contingency plans with a phantom to verify best method.
- October 3, 2022, Lung and Esophagus treatments became tattoo-free.

OBJECTIVES CONTINUED...

CONTINUAL THERAPIST TRAINING

Advancing Therapist skills, with the AlignRT system, was instrumental in moving towards tattoo-free treatments. Building the teams' confidence in their skills came with time. Several key tools were used to provide this support, which included:

- Early on, with AlignRT implementation, meetings were essential and were held with Therapist Champions, Team Lead, and Physicist. The meetings occurred weekly, then progressed to monthly and finally quarterly.
- For the past 3 years, a VisionRT Clinical Applications Support Specialist has come onsite every 4 months and held 2-day refresher sessions with the Therapy team. The specialist would also review workflows and help the team troubleshoot setup issues.
- One Physicist was designated as our point person to help the Therapy team troubleshoot issues and identify patterns across multiple machines.
- Ten Therapists and two physicists completed Phase 1 training for AlignRT. This was critical to develop a deeper knowledge of the system and establish a good foundation for critical thinking skills.

BUILDING BLOCKS

Looking towards the future with AlignRT is exciting and presents many opportunities for our team and patients. Staying on the cutting edge of technology is important in any field. We will continue to strive to provide effective and safe treatments with AlignRT. Mayo Clinic in Arizona plans to implement new treatment sites as tattoo-free in these areas:

- Pelvis (Summer 2023)
- Abdomen (Future date to be determined)
- Pediatrics (Future date to be determined)

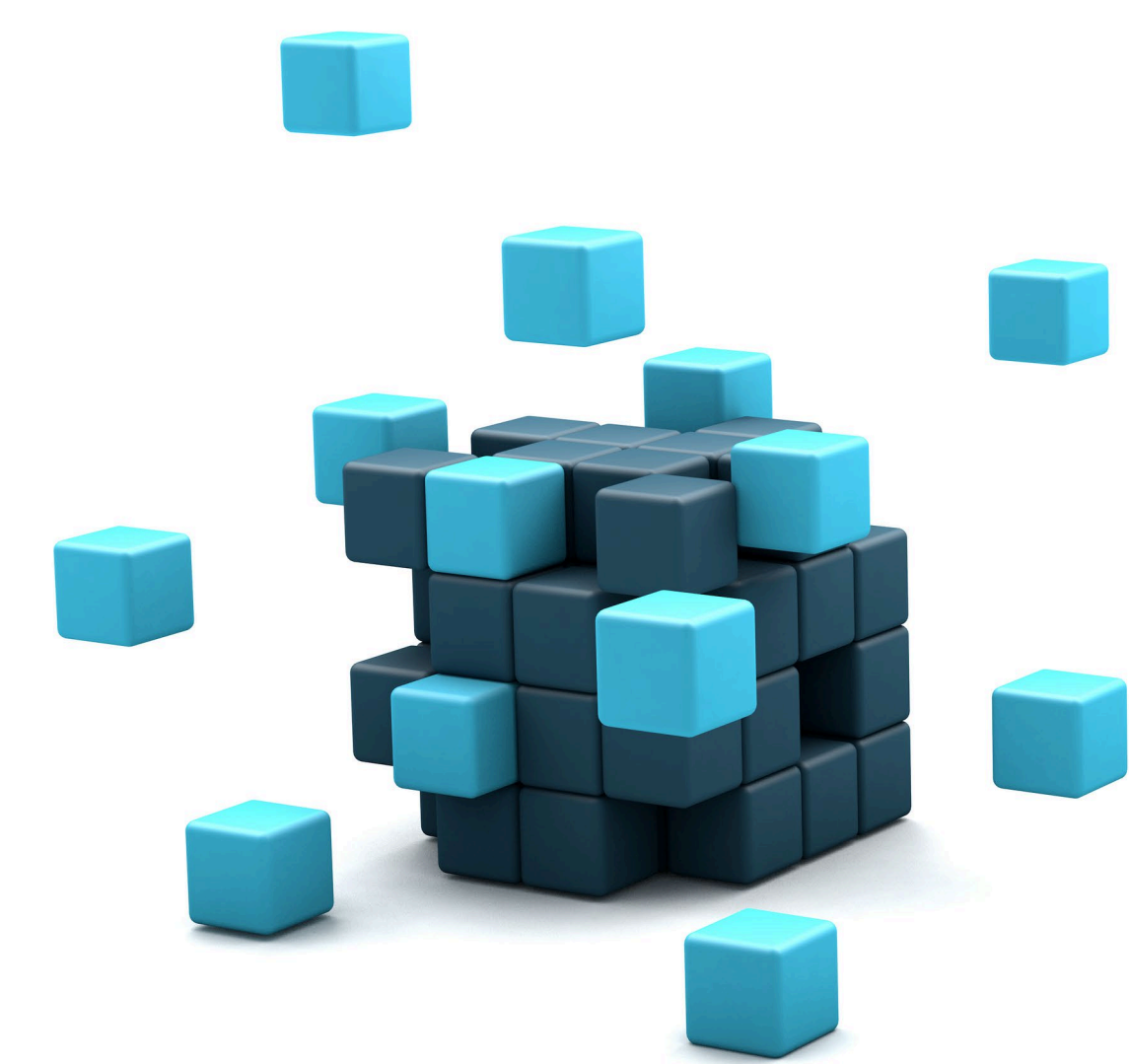


TABLE 1: Timeline of AlignRT



METHODS AND MATERIALS

The journey to tattoo-free treatments used a variety of methods: establishing Therapist Champions, continued follow-up meetings with the therapy team, physics support and onsite training with VisionRT specialists.



RESULTS

- Reduced CT simulation time by 5-10 minutes
- Reduced patient pre-positioning time by 5 minutes
- Therapists enhanced skills and reduced confusion amongst team with AlignRT
- Patients no longer have a cancer tattoo reminder
- Potential infection from tattoo process reduced
- Improve patients' experience during cancer care

CONCLUSION

Transitioning towards tattoo-free is achievable and is the future of Radiation Therapy treatments. With continued support and team follow-up, any Radiation Oncology center can make the transition to tattoo-free setups with the use of **SURFACE GUIDED RADIATION THERAPY**.