Staffing Challenges: Implementation in a small, rural Alaskan Radiation Oncology Clinic

Libby Torresani, B.S. R.T (T)
Peninsula Radiation Oncology Center
Radiation Business Solutions

Objectives

-Describe how AlignRT has helped a small rural clinic during times of staffing shortages

-Compare patient set up times before AlignRT and after AlignRT installation

-Determine how AlignRT has reduced repeat imaging and CBCT scans

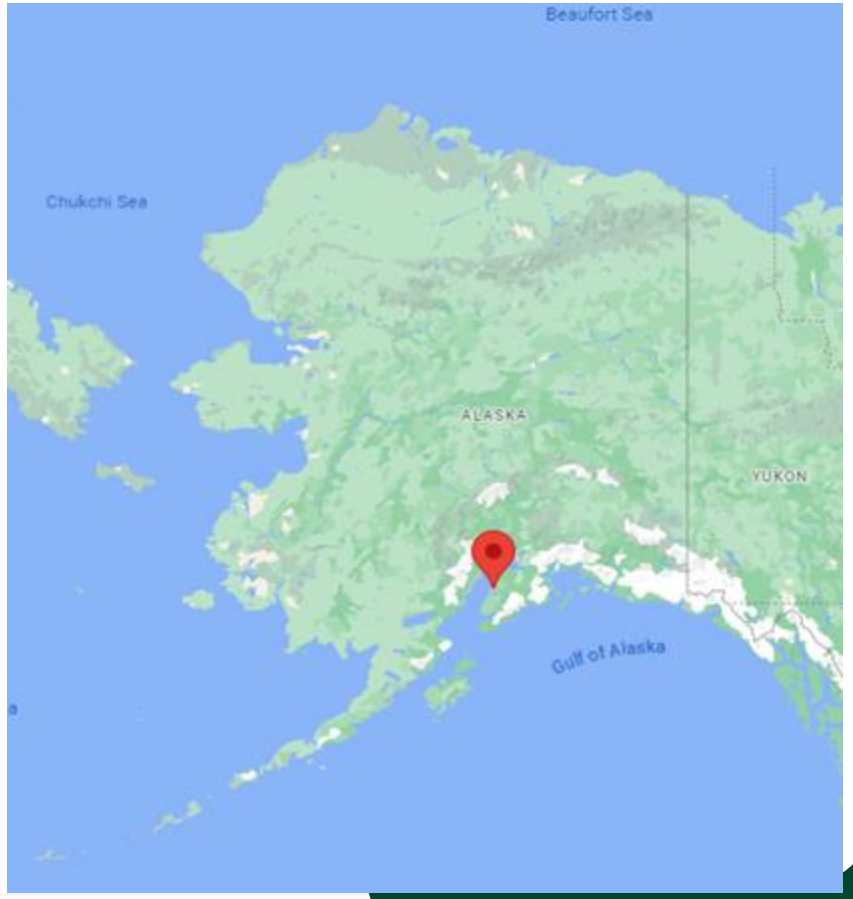
-Describe how AlignRT works with an Elekta Agility machine.

Radiation Business SOLUTIONS

Just a normal day at the office…

Radiation Business SOLUTIONS

A little bit about Alaska…



Radiation Business SOLUTIONS

A close up view

About the clinic

- Located in Soldotna, AK on the
- Kenai Peninsula: an area the size of West Virginia and serves a population of about 60,000 people
- Physics and dosimetry are remote.
- Treating 10-15 patients/ day on average
- 1 Elekta Agility linear accelerator
- share a Siemens CT scanner for sims with the hospital we rent space from

Radiation Business Solutions

↓

Radiation Business Solutions- Evolution

↓

Peninsula Radiation Oncology center

The goal: To bring cancer care and radiation treatments closer to home

- RBS-E's objective: to provide rural cancer care in areas where people have to drive 2 or more hours to the nearest treatment facility
  - Prior to Peninsula Radiation Oncology Center, patients had to drive 3-4 hours, stay in Anchorage for the duration of their treatment, and be far away from their family/friends and daily lives.
  - Now, patients can get care locally, with the maximum drive time ~1.2-2 hours with patient housing available.

Radiation Business SOLUTIONS

The Team

- 1 physician
- 2 radiation therapists
- 1 medical assistant and
- 1 receptionist
- 1 part time physician liasan

Staffing Challenges in Alaska

- 2 Radiation Therapist employed full time at PROC
- 2 full time traveling therapists in alaska to cover scheduled vacations over 5 clinics
- If a staff therapist is gone for fewer than 3 days we tend to treat solo depending on the patient load
- If a therapist calls in sick it is difficult to call in for back up. A traveling therapist may be at another clinic or located in another city.
- It can take a long time to fill an empty radiation therapist position in Alaska

Radiation Business SOLUTIONS

Staffing Challenges and AlignRT

AlignRT has significantly eased the burden of treating solo!
Installed at PROC early march of 2022.

Workflow prior to AlignRT

- Traditional method of tattooing reference points at CT sim or marking with sharpie and Tegaderm
- Mark isocenter from table shifts taken from treatment plan on first day of treatment
- Daily 3-pointing of patient to set up and make positioning corrections for pitch,roll, and yaw.
- Take CBCT or portal images depending on the Physician's orders
- Monitor patient on camera to make sure they don’t move.

Challenges of traditional methods and treating solo

- a lot of running around the table to 3 point patient
- If patient moves, or potentially moves→ re-image!
- difficult to keep up with 15 minute time slots
- only one set of eyes, easier for mistakes to be made

Workflow after AlignRT installation

- Patients do not get a 3 point of tattoos or tegaderm at time of CT sim.
  - We are a mark free center!
- We are no longer putting bbs on the patient to match with the lasers in the room
    - Cost saving→ we are no longer having to buy as many tegaderm or bbs, needles and ink
      - *Not every patient is a great candidate for AlignRT
- Patients are typically set up in 1 minute or less
- Fewer corrections for pitch,roll and yaw than with traditional set ups
- No more running around the table
- Less repeat imaging

AlignRT and its effects on repeat imaging

We have significantly reduced repeat imaging utilizing VisionRT

Before AlignRT:

- Take CBCT or portal image→ match patient hope they hold still→ if a patient moved or potentially moved→ reimage to verify positioning and correct for movement

After AlignRT:

- Aligning with SGRT→ take a CBCT or portal image→shift accordingly→ take reference capture image → If the patient moves we have a visual indicator they are out of position → move the table back to the correct position from reference capture, and know the patient is where they need to be without taking another CBCT because positioning has been previously verified.

AlignRT and its effect on R.T.(T) job satisfaction and patient satisfaction

- AlignRT has reduced patient set up time
  - Allows more time to prepare for the next treatment.
  - Treatments are safer when therapists don't feel rushed
  - AlignRT allows us to actually stay on schedule when we are treating solo

- Less stress during work = more time to relax and enjoy conversation with patients
  - Improved customer service and satisfaction
  - Less burnout
- Patients feel more secure during treatment
  - Visual indicator of tiny movements and beam will hold if they go out of tolerance

AlignRT and Elekta Agility

How many of you have worked on an Elekta machine?

Biggest concern before installing AlignRT: the imaging panels will block the cameras!
short answer- yes, they do (sometimes)
If there is camera blockage, it last for moments as the gantry and panels move. If needed, we can also run in and push the panels in.

- SBRT
- Breath hold
- VisionRT vs. ABC machine

Our Elekta machine also does not have the “auto couch” function on the pendant. With the True Beams you can just press a button on the pendant and the couch will move to it’s indexed parameters. Our Elekta doesn’t have that feature. We will check table parameters if the patient is indexed before we leave the room, but otherwise we visualize where iso is on the patient to get a starting point for AlignRT and adjust from there.

Questions

1) **What patient positioning corrections did we notice less of after using AlignRT?**
   a) Pitch
   b) Roll
   c) Yaw
   d) All of the above
2) **How large of an area does Peninsula Radiation Oncology Serve?**
   a) 24,752 mi^2
   b) The size of West Virginia
   c) 30,000 people
   d) A and B
3) **When a therapist is treating solo, how has AlignRT helped the most?**
   a) Less time spent setting patients up
   b) Less repeat imaging needed if patient moves
   c) Less stress on joints from rolling patients
   d) All of the above
4) **Where in Alaska is Soldotna located?**
   a) On the Kenai Peninsula
   b) In the interior of Alaska
   c) On an Island in the Inside Passage
   d) None of the above

Radiation Business SOLUTIONS

Answers

1) **What patient positioning corrections did we notice less of after using AlignRT?**
   a) Pitch
   b) Roll
   c) Yaw
   d) All of the above
2) **How large of an area does Peninsula Radiation Oncology Serve?**
   a) 24,752 mi^2
   b) The size of West Virginia
   c) 30,000 people
   d) A and B
3) **When a therapist is treating solo, how has AlignRT helped the most?**
   a) Less time spent setting patients up
   b) Less repeat imaging needed if patient moves
   c) Less stress on joints from rolling patients
   d) All of the above
4) **Where in Alaska is Soldotna located?**
   a) On the Kenai Peninsula
   b) In the interior of Alaska
   c) On an Island in the Inside Passage
   d) None of the above

Radiation Business SOLUTIONS

Thank you to RBS and RBS-E for investing in this technology and their commitment to bringing top notch cancer care to rural communities

Other Questions

Radiation Business SOLUTIONS

Resources

"What's the code for this?" https://www.fox8live.com/2023/04/07/whats-code-this-moose-wanders-into-alaska-hospital/ Providence Hospital, *Published: Apr. 7, 2023, Accessed April 8th, 2023*

Alaska Maps, Travel Alaska, https://www.travelalaska.com/maps, Accessed April 4th, 2023

Peninsula Radiation Oncology Center, http://www.peninsularadiation.com, Accessed March 27th, 2023

Peninsula Radiation Oncology Center, team http://www.peninsularadiation.com, Accessed March 27th, 2023

AlignRT, https://www.visionrt.com/alignrtadvance/, Accessed April 1, 2023

-All other images are personal photos.