

YaleNewHavenHealth
Smilow Cancer Hospital

EXTENDED SSD USE IN METASTATIC MELANOMA TREATMENT – RIGHT FEMUR

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DISCLOSURES

▶ I have nothing to disclose

Several thin, white, parallel diagonal lines are located in the bottom right corner of the slide, extending from the right edge towards the center.

OUR HEALTH SYSTEM

- ▶ Network of locations spread across CT
- ▶ Six Radiation Oncology locations
 - ▶ Main campus and 5 satellites
- ▶ 14 Linear accelerators
 - ▶ Reflexion X1
 - ▶ 7 CT Simulators
 - ▶ Gamma Knife
 - ▶ 3 HDR
 - ▶ 1 Orthovoltage
- ▶ **Smilow Cancer Hospital Care Center - Greenwich**
 - ▶ **TrueBeam v. 2.7- 6DoF couch**
 - ▶ **AlignRT Advance v. 6.3 – Postural Alignment, 3D Photo, and ROI Metrics**
 - ▶ **Tattoo-less & Mark-less**



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CT SIM



Feet First with Foot fix set at F7C. Indexed at H3 on the table.
Vac-lok with a black angled wedge under the right knee.
2 Pillows under her head.
Small knee roll under the left leg.
BUBBLE WRAP between legs to avoid skin fold.

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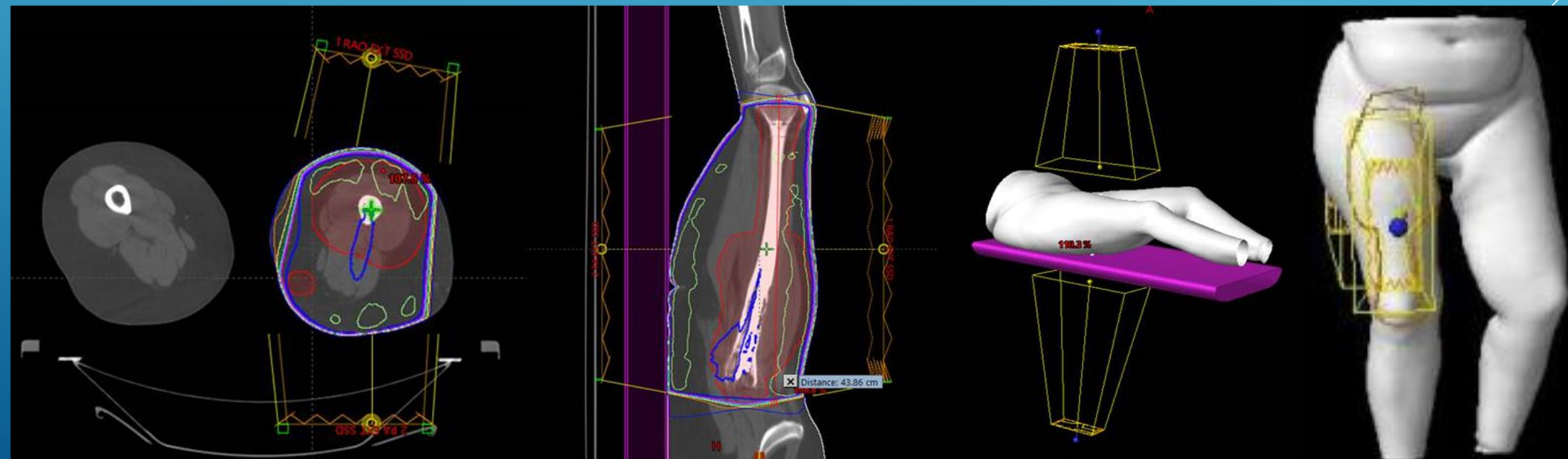
CT SIM



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Treatment plan

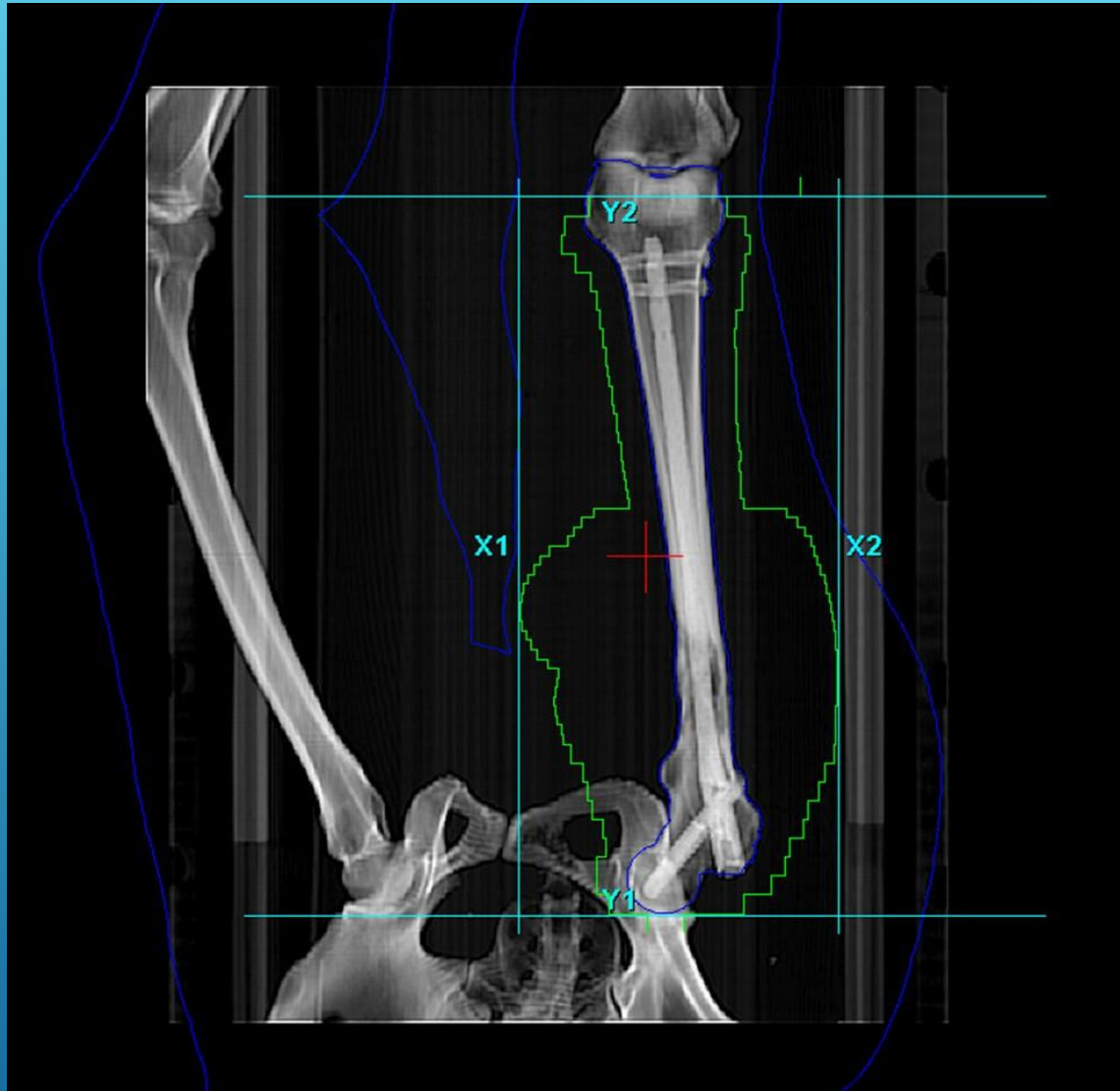
- ▶ One plan: Two Iso technique
- ▶ Two parallel opposed beams (RAO & PA) at 6MV.
- ▶ 3000 cGy @300 cGy x 10
- ▶ Dose dynamic MLCs with the 'Field in Field' technique.
- ▶ Field size of 15.9 cm x 38.1 cm
- ▶ Extended distance of 110 SSD for each field
- ▶ Daily imaging included AP/PA KV setup fields and Portal Images.



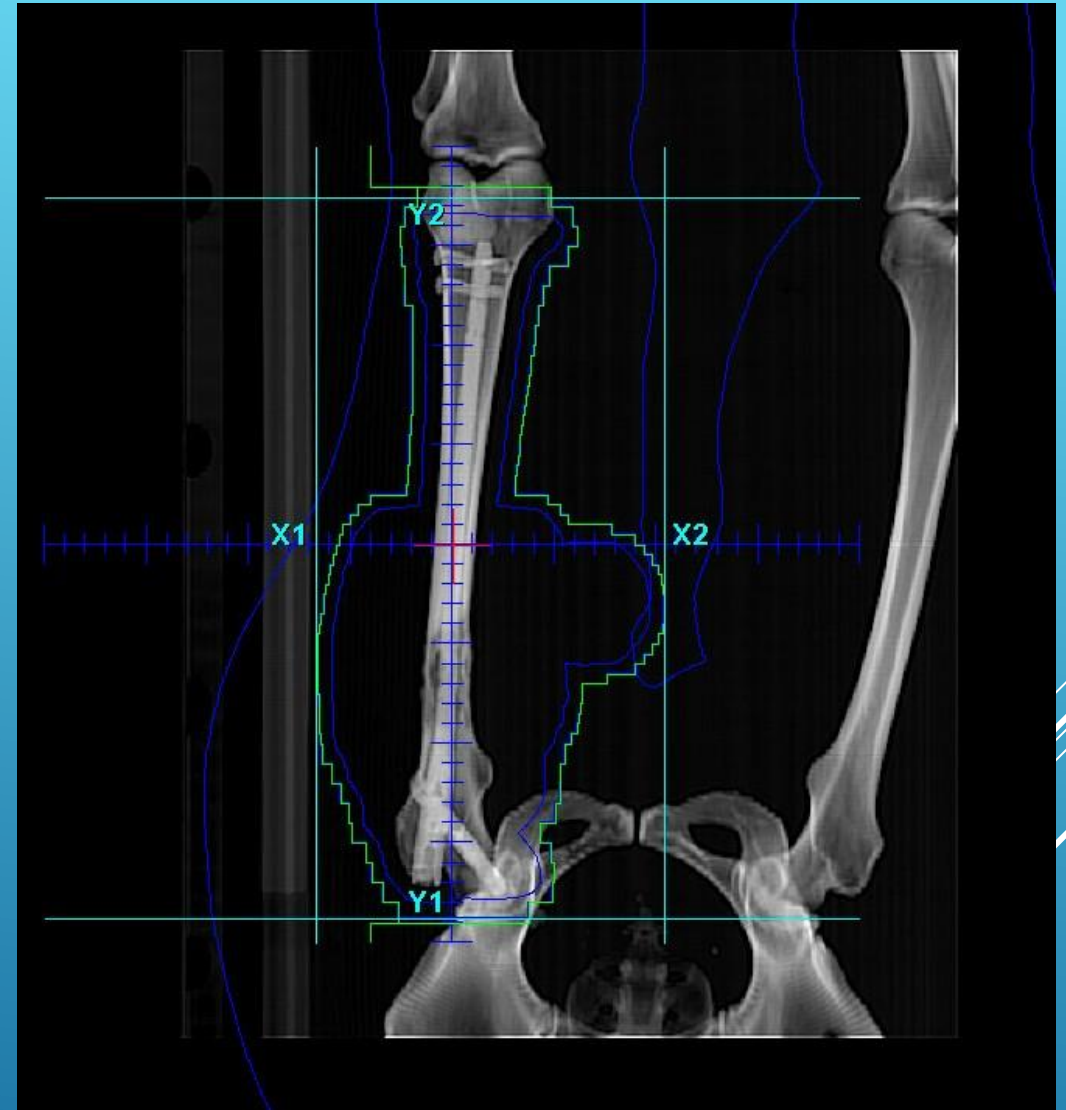
CHALLENGES

- ▶ *Multi Iso treatment*
- ▶ *Visibility*
- ▶ *Agreement*
- ▶ *Patient comfort*

AP



PA



WORKFLOW

RAO

- Straighten patient
- Drive couch
- Perform shift
- Set-up patient
- Clearance check
- Daily Imaging
- Apply shifts
- Reference capture
- Check ROI
- Treat
- Acquire couch positions

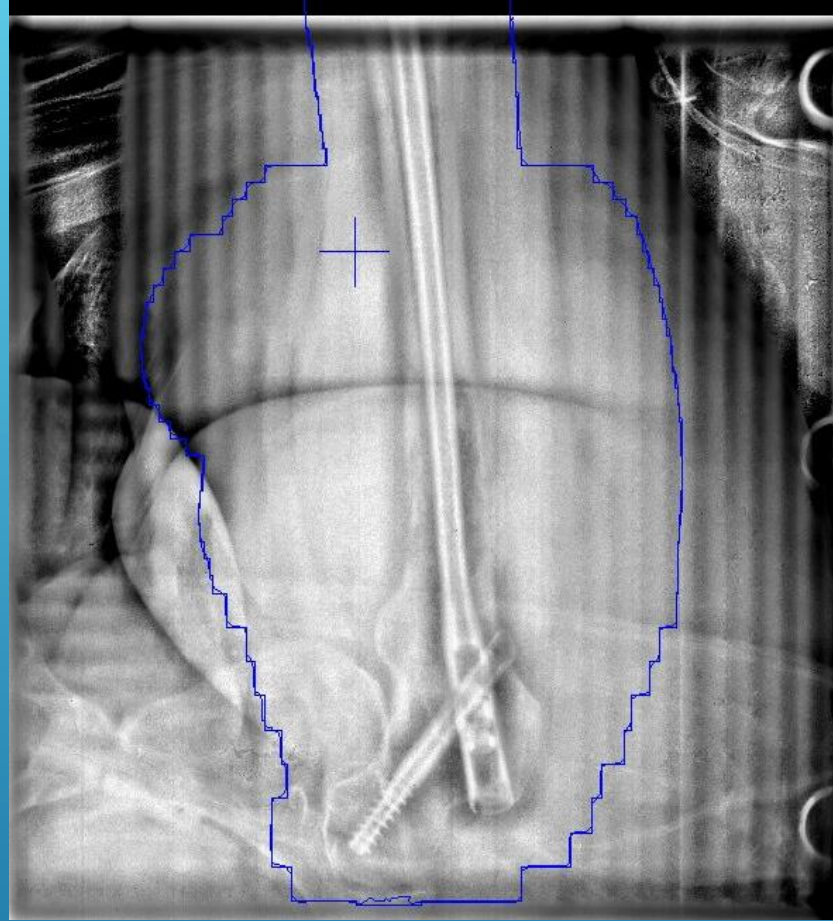
PA

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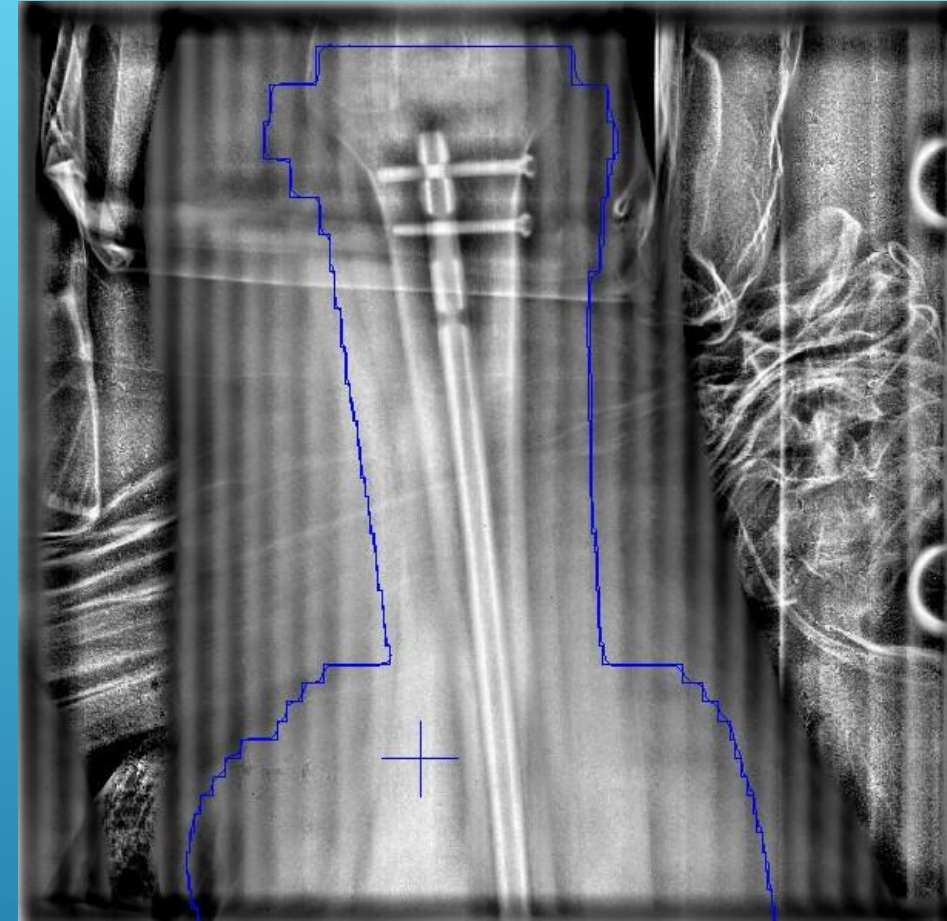
RAO



AP



PF - Superior



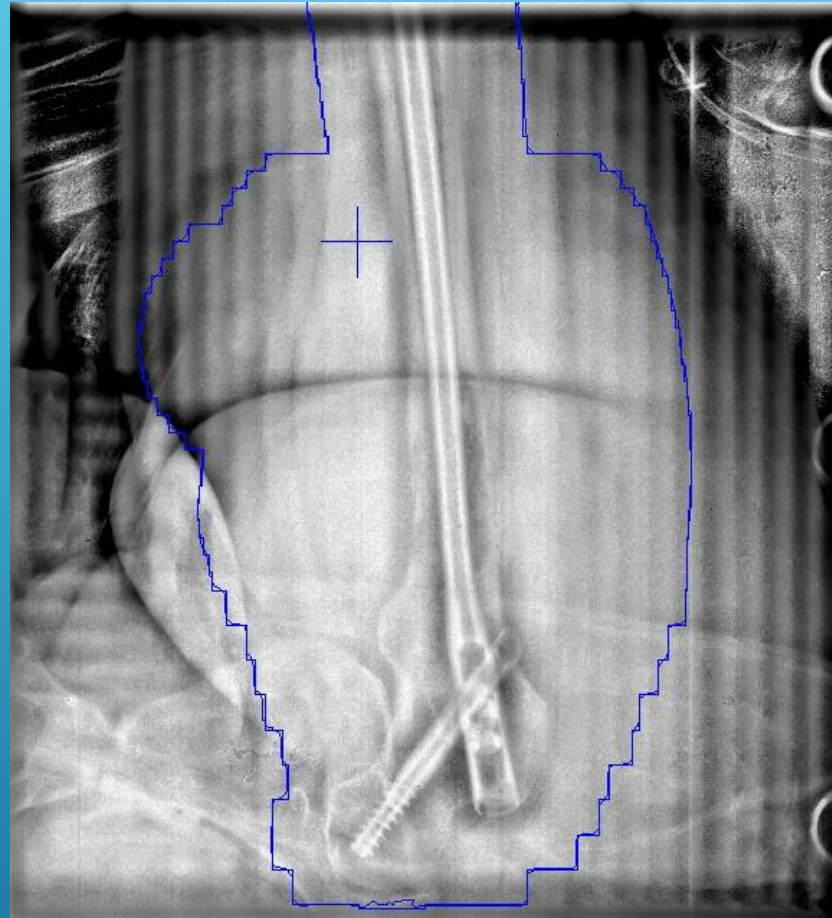
PF - Inferior

0.4cm Inferior shift

PA

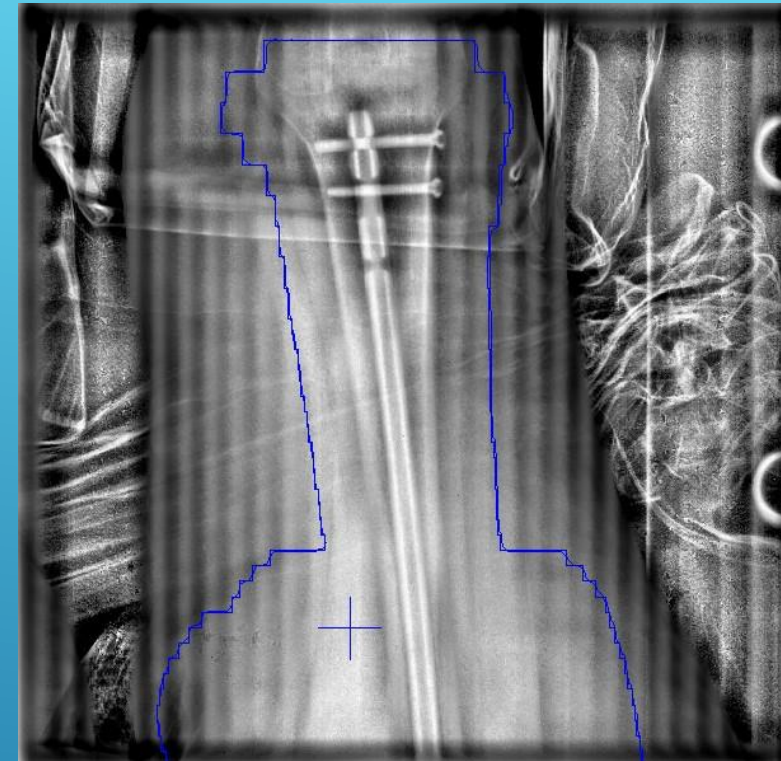


PA

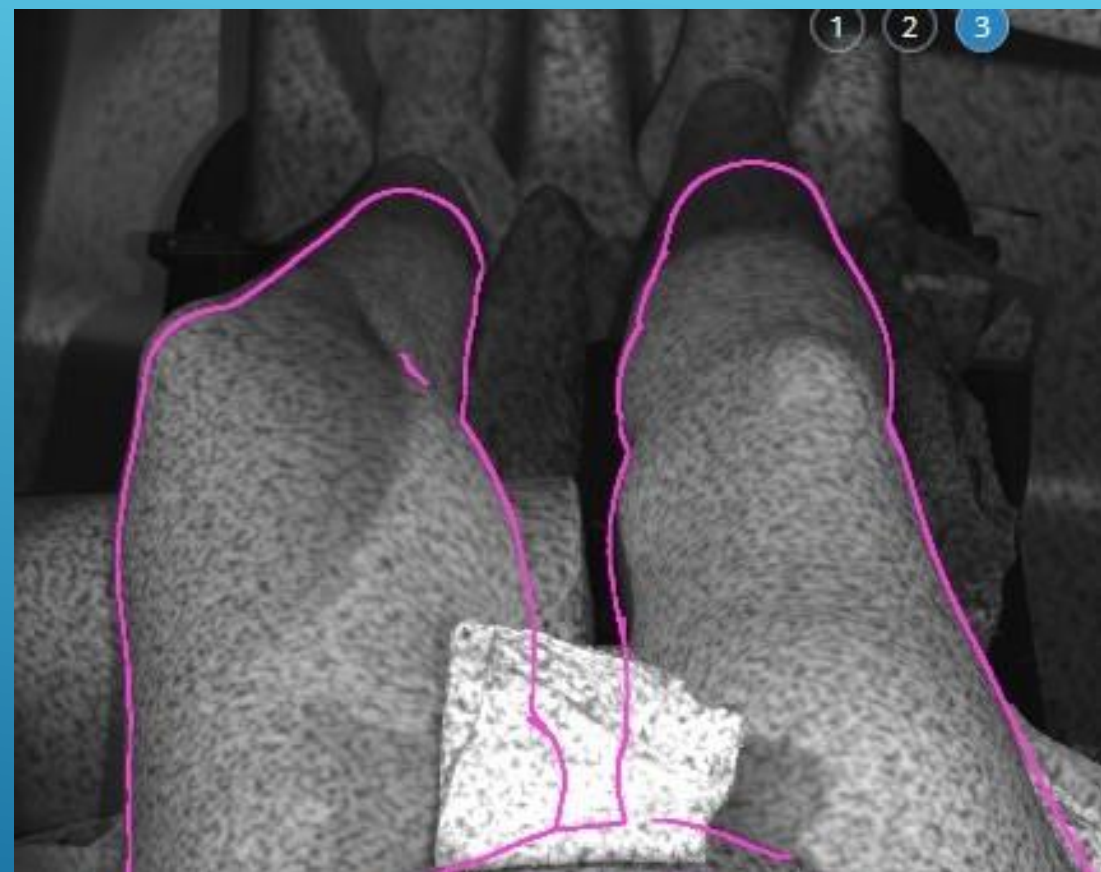
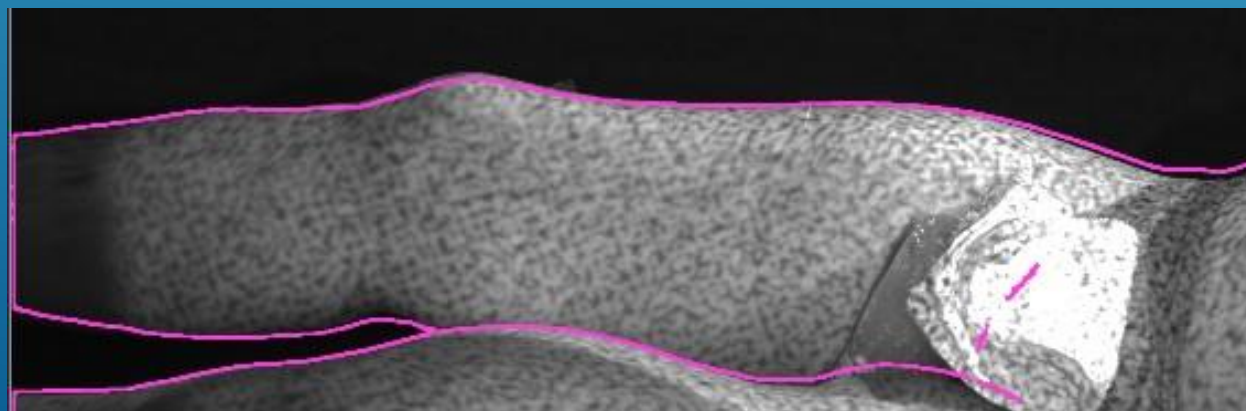
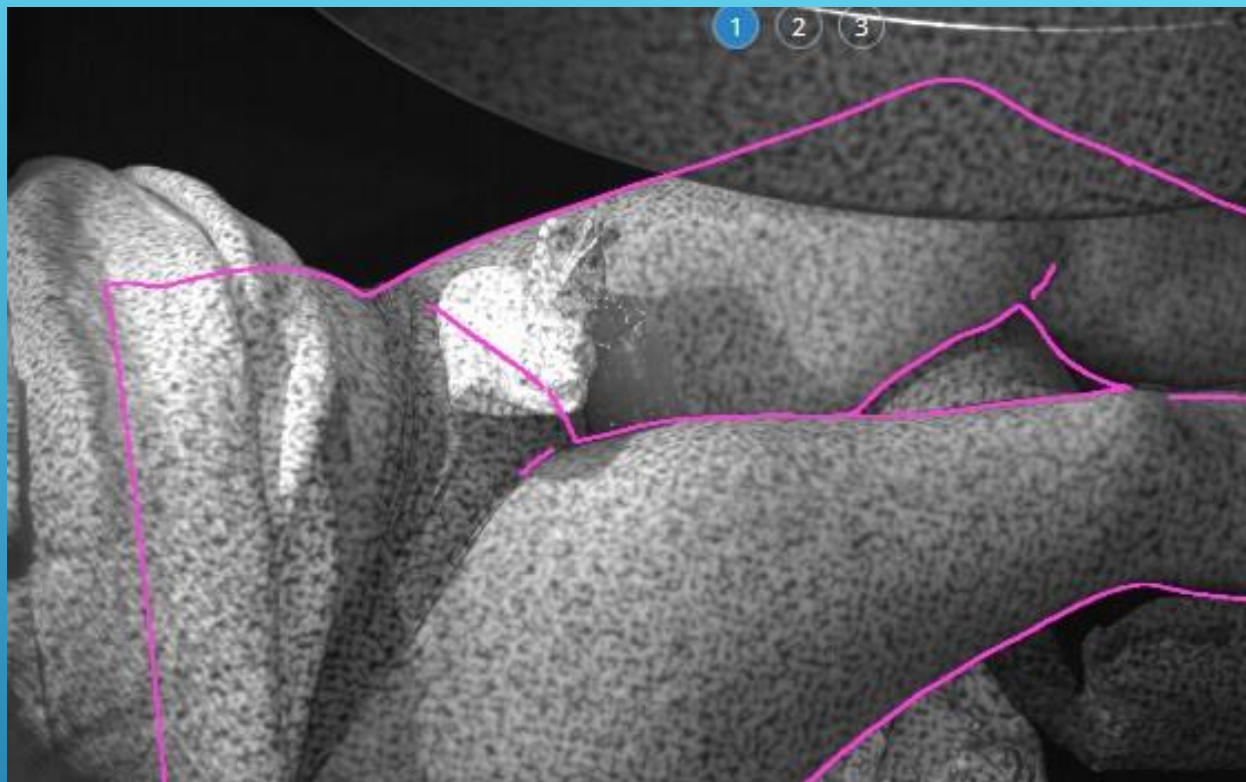


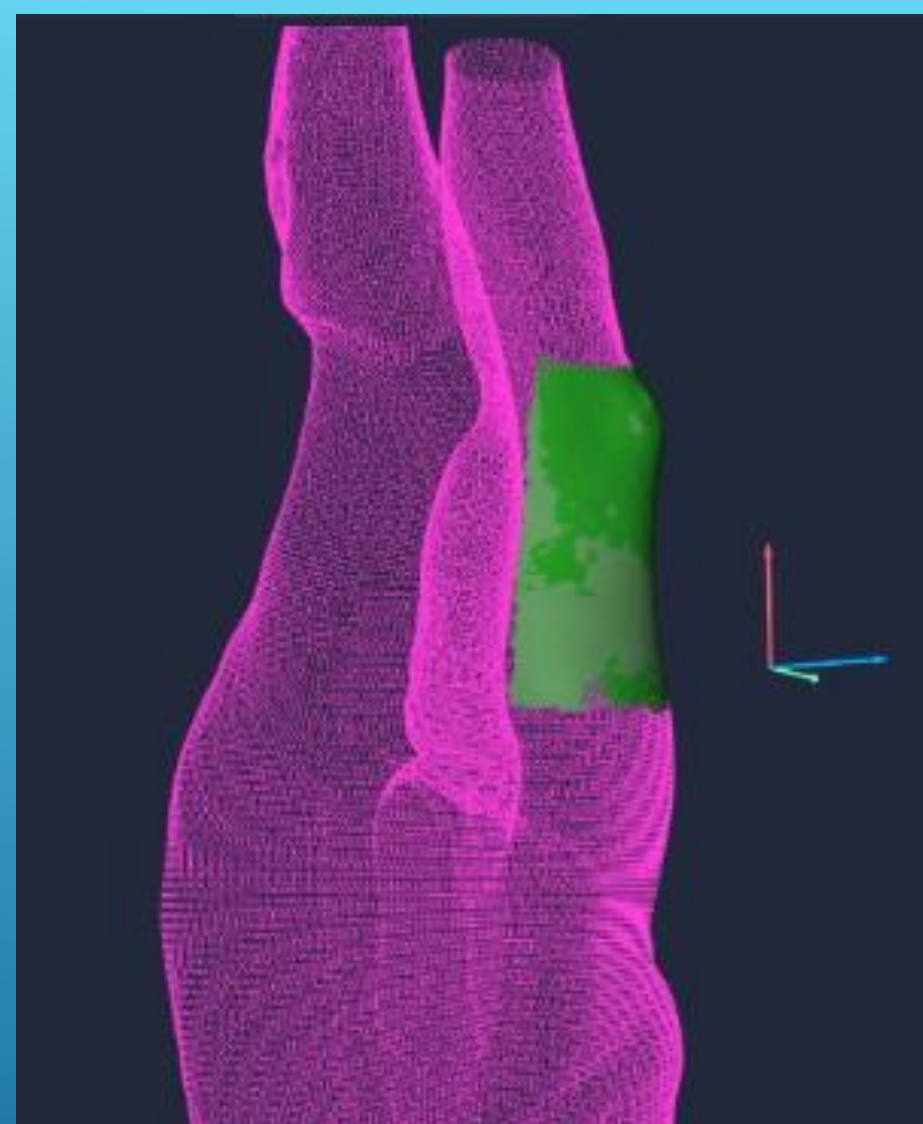
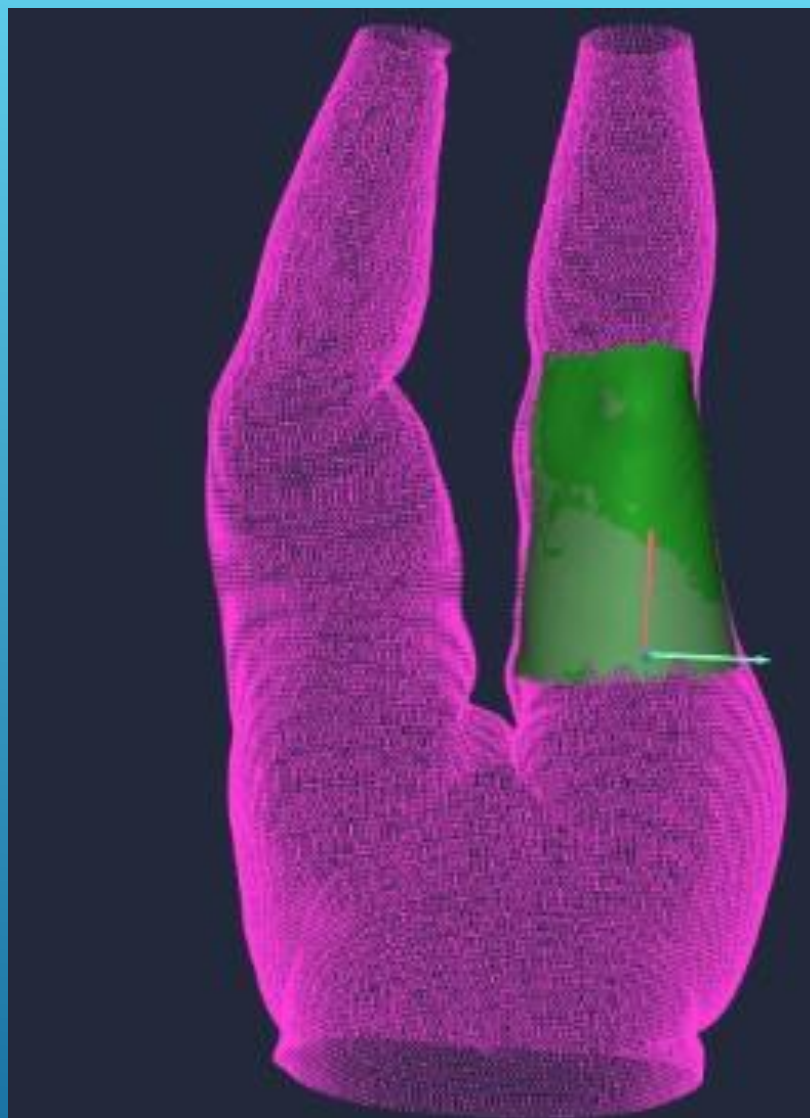
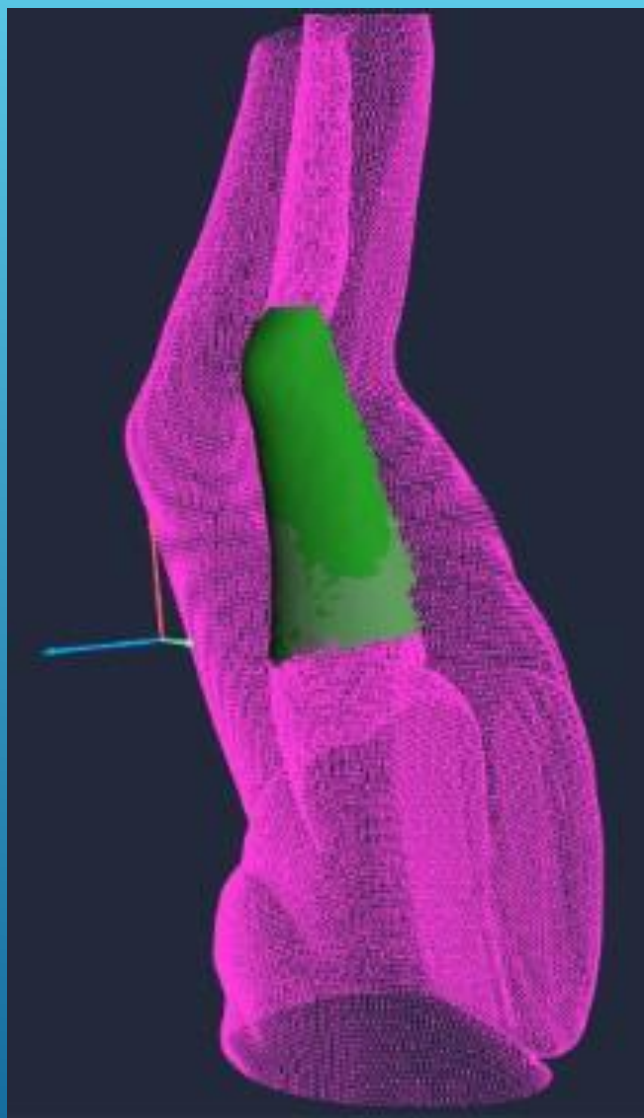
PA - Superior

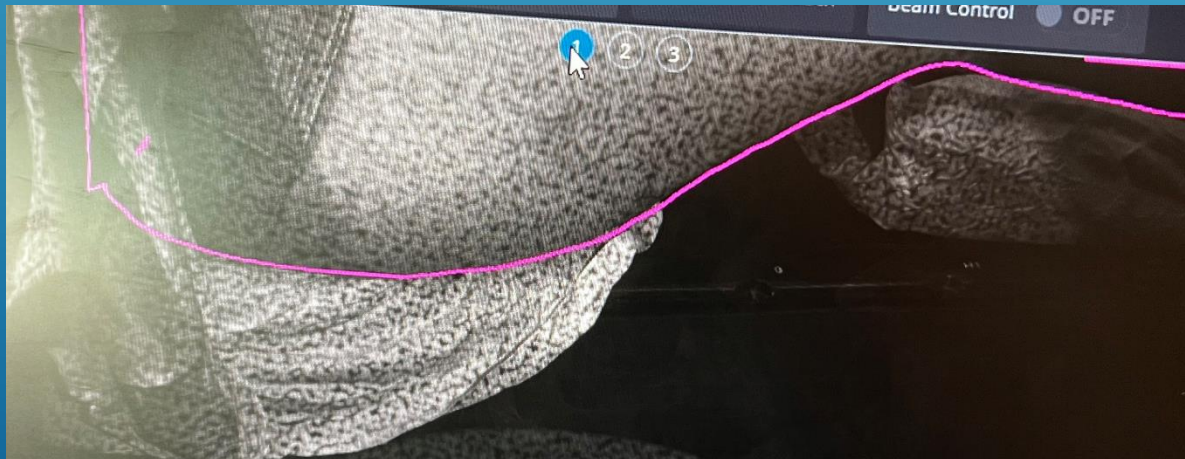
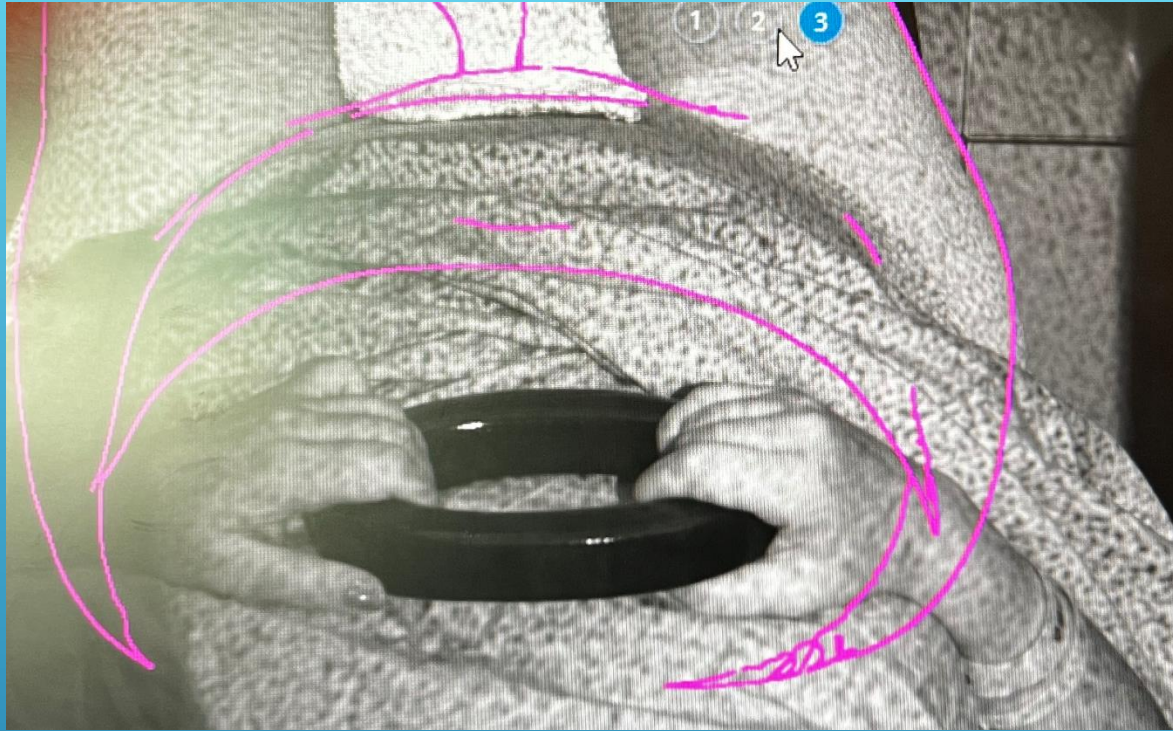
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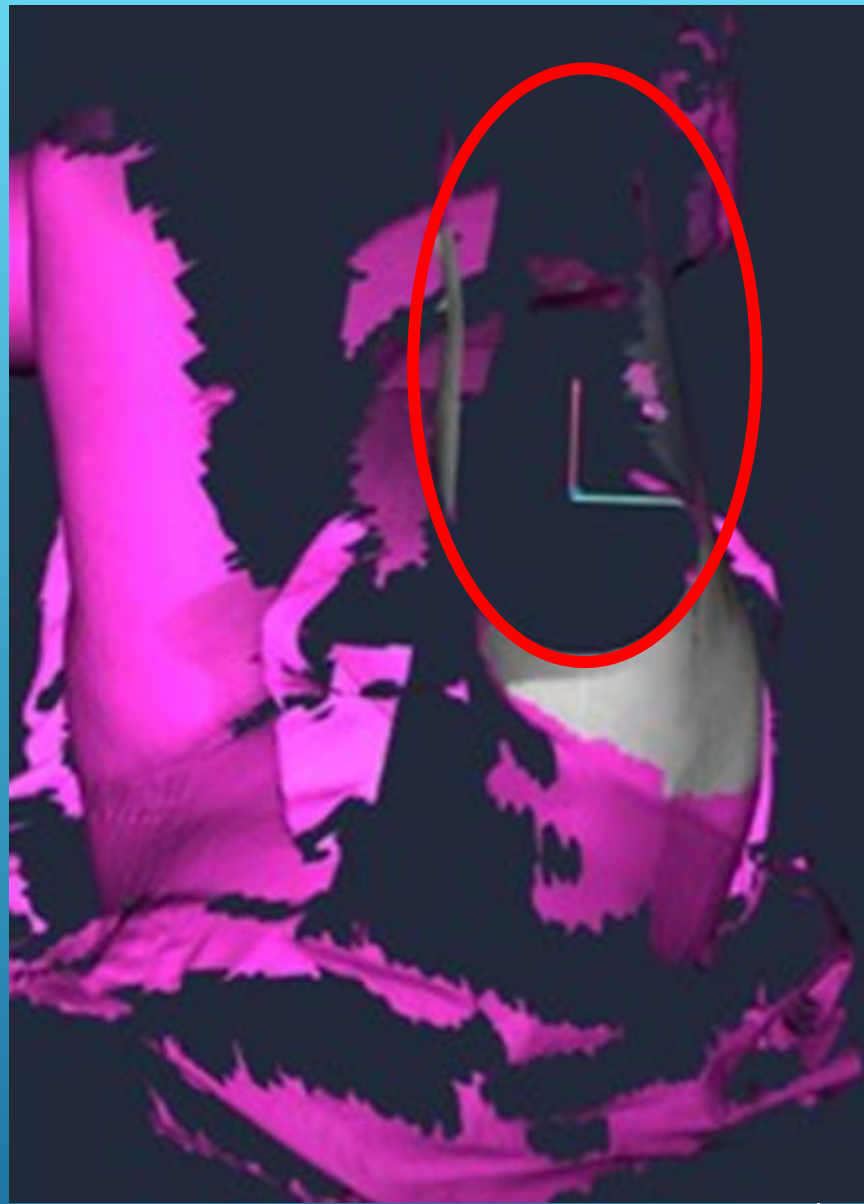
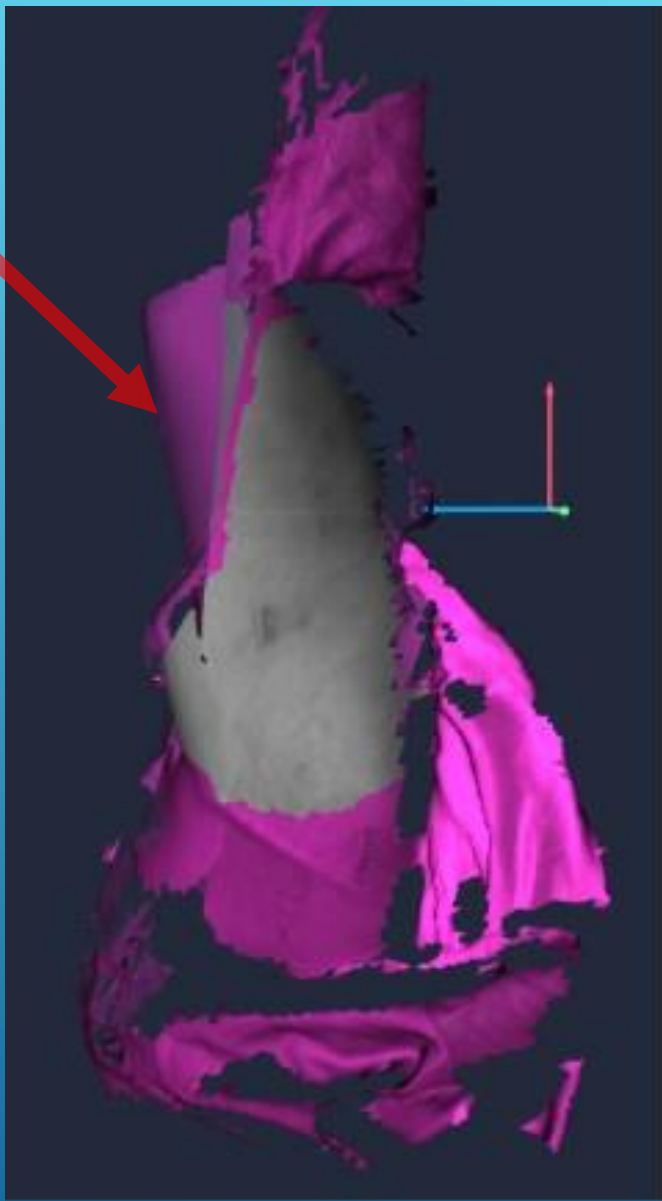


PA - Inferior









SUMMARY

- ▶ Patient position confirmation
- ▶ Postural Alignment
- ▶ Minimal shifting
- ▶ SSD verification
- ▶ Average shift Mag = **0.6 cm**
- ▶ Median shift Mag = **0.4 cm**
- ▶ Average treatment duration = **19:30 min**
- ▶ Fastest treatment duration = **18 min**

ACKNOWLEDGMENTS

- ▶ Thank you to the entire team at Smilow Greenwich for all their help and continued support!