

Tattoos and Marks:

HOW SGRT MAKES THEM UNNECESSARY
FOR TREATMENTS

Kelsey Tech

Current Clinic Equipment

- ❖ 2 TrueBeams with 6 DOF couches
- ❖ Both machines have AlignRT
- ❖ SOMATOM go.platform

What's on the agenda?

The accuracy
of SGRT

Benefits of
markless
setups

Various forms
of data
supporting
markless
setups

Possible cons
of markless
setups



SGRT Accuracy

The system reads the physical surface of the patient, is anything more accurate than the patient themselves?

The cameras account for all six degrees of freedom

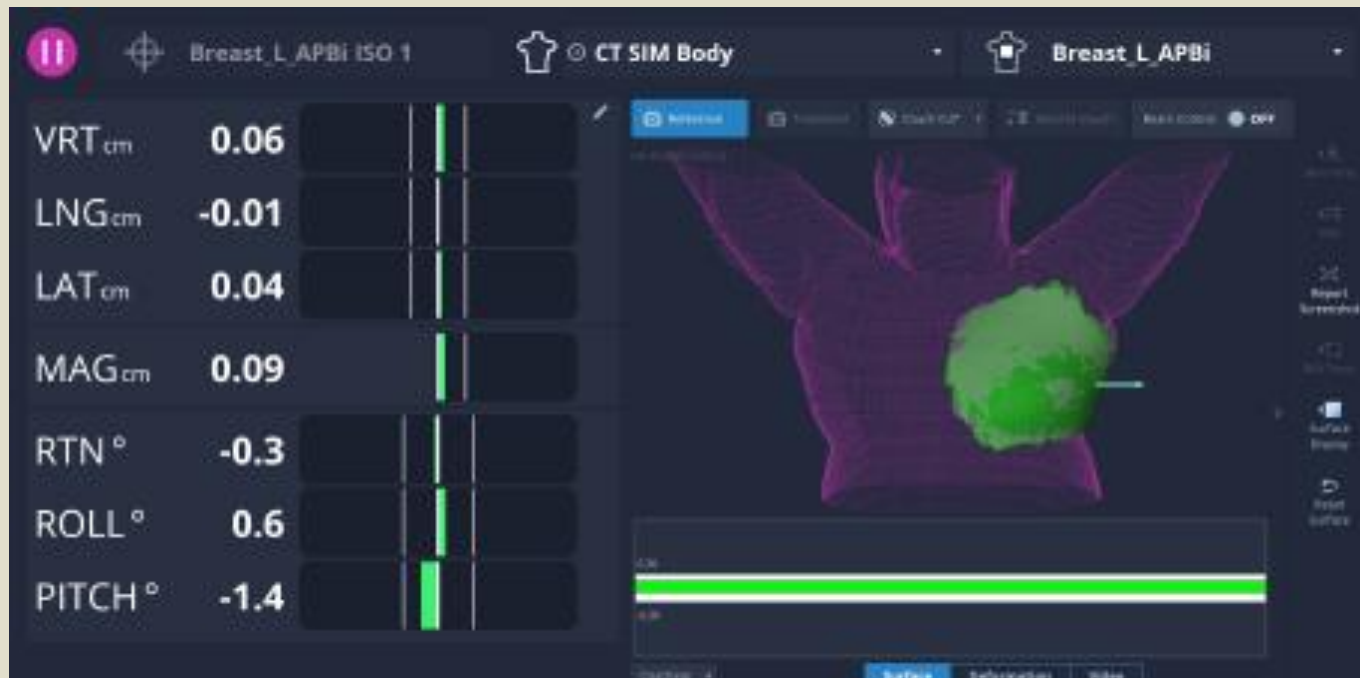
Additional tools like Postural Video and Treatment Capture assist in correct patient alignment

Imaging with Markless SGRT

What does the imaging look like going from markless setup to treatment?

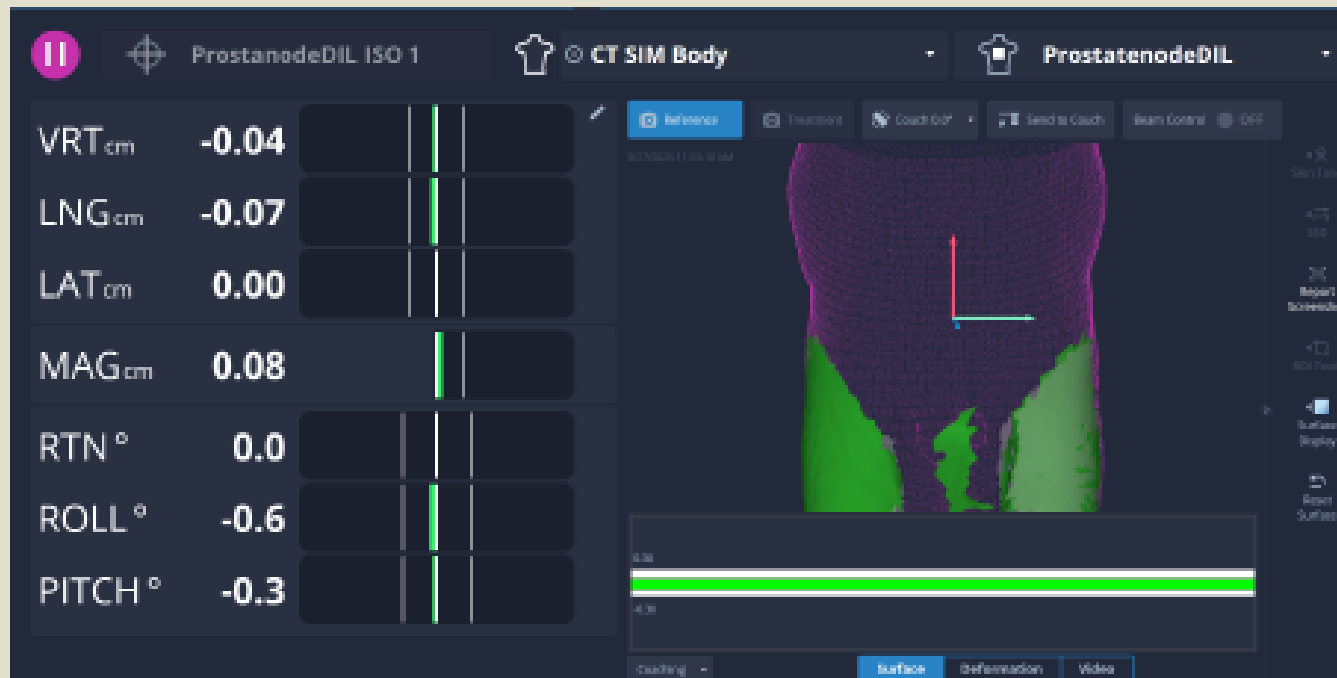
Are the shifts minimal?

Example Image



Representation		Isocentric Standard	
Match Type		Online Match	
Vrt	-0.09	cm	
Lng	0.00	cm	
Lat	-5.14	cm	
Rtn	-0.7	°	
Pitch	+0.1	°	
Roll	+0.2	°	

Example Image



Representation		Isocentric Standard	
Match Type		Online Match	
Vrt	-0.32	cm	
Lng	-0.18	cm	
Lat	+0.17	cm	
Rtn	-0.3	°	
Pitch	+0.6	°	
Roll	-1.6	°	

Benefits of Mark and Tattoo Free Setups

01

Patients don't have to worry about keeping marks

02

No mark or tattoo searching on day one

03

No incorrect shifting from marks or tattoos to isocenter, because math is hard

04

Patients spend less time on the table

Show me the Proof

Timing Criteria

Evidence based statistics

Overall time difference between marks vs markless setup

Timing Criteria for Setups

Patients' setup using marks

- New Start:
 - Marks
 - Shifts
 - AlignRT
- Daily Treatment:
 - Marks
 - Auto-enter
 - AlignRT

Timing Criteria for Setups

Patients' setup using markless

- New Start:
 - Treatment Area
 - AlignRT
- Daily Treatment:
 - Auto-enter
 - AlignRT

DATA

Pelvis

Marks:	Markless:
24:51 total	23:17 total
17 setups	37 setups
1:28 average	0:38 average

Chest/Abdomen

Marks:	Markless:
16:27 total	5:33 total
14 setups	8 setups
1:11 average	0:42 average

DATA

Breast

Marks:	Markless:
20:05 total	12:29 total
8 setups	9 setups
2:31 average	1:23 average

Breast DIBH

Marks:	Markless:
25:45 total	12:35 total
8 setups	6 setups
3:13 average	2:06 average

MORE DATA – NEW STARTS

Site	Pelvis	Breast	Breast DIBH	Chest/Abdomen
Marks	1:51	3:12	3:54	2:05
Markless	1:04	1:38	N/A	0:34

Average day in the clinic with marks and without them

Based on the averages:

- Marks – spent an average of 32:06 setting up patients
- Markless – spent an average of 18:45 setting up patients

Cons of not having marks

- No physical backup on the patient
- Additional imaging if the system is not functioning
- Reliance on Technology

Conclusion



Faster Setups



Less Table Time



Less Stress



Improved Patient
Experience

Sorry, No Questions