

Go-live with tattoo and mark free may help with learning and embedding new behaviours

Go-live with tattoo and mark-free treatments

Kenton Thompson, Sally Soteriou, Katie Davidson, Karen McGoldrick

Introduction

Our organisation decided to go-live with tattoo and mark free with the aim to reduce the tug between existing clinical workflows and changes to these workflows caused by SGRT.

Methods

- 25 August 2021 (AlignRT go-live) to 18 November 2021
- CDR Systems Sabella Flex™ breast board
- Paired kV/kV with Varian OBI on TrueBeam®
- Shift data from Elekta MOSAIQ® OIS

Conventional

- 3-point localisation with tattoos +/- Varian RPM™ (DIBH)

SGRT

- Tattoo and mark free using AlignRT
- Use advanced features including Postural Video™ and Send to Couch (Fig. 1)

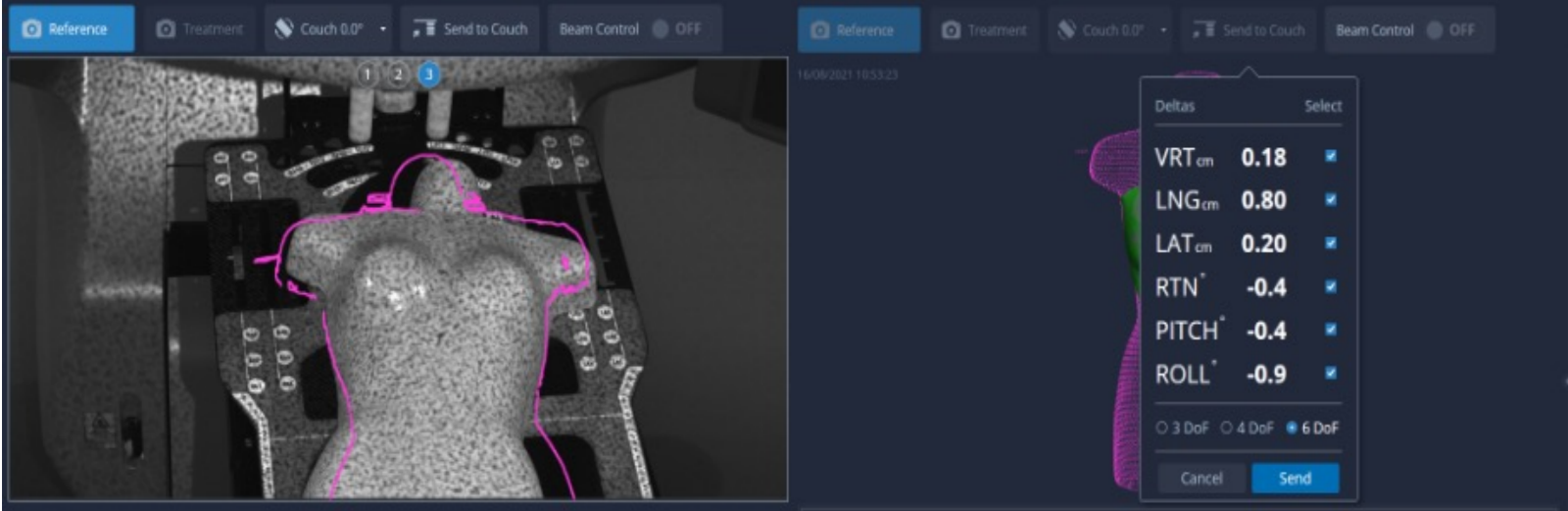


Fig. 1 Postural Video (left) and Send to Couch (right)

kenton.thompson@petermac.org

@kenton_thompson

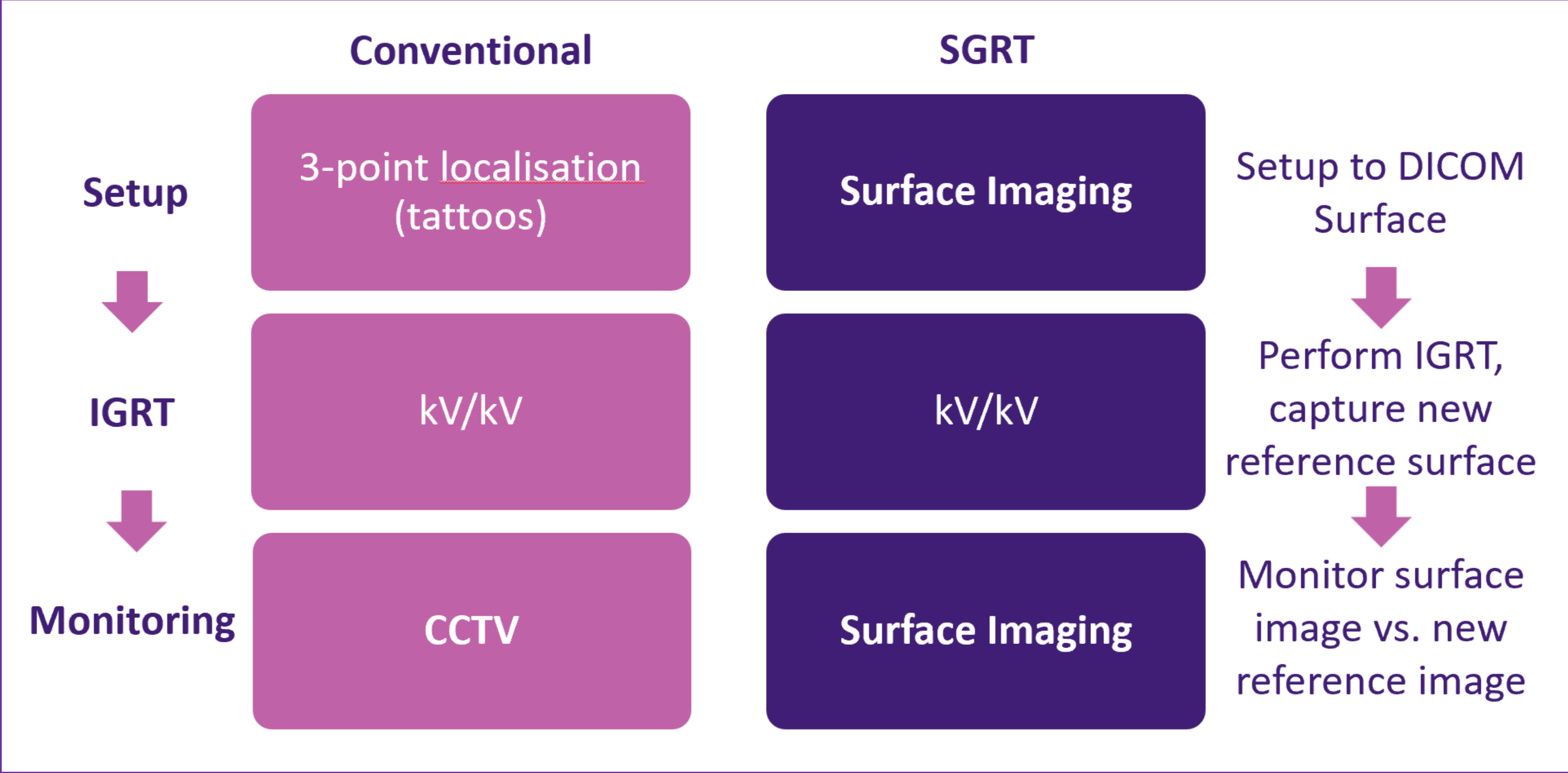


Fig. 2 Conventional workflow vs. tattoo and mark free SGRT workflow

Result	Take home
Radiation Therapists have embraced the technology	Making the jump to tattoo and mark-free may help to reduce conflict with conventional treatment
More streamlined process	Removing complexity makes it easier to learn and trust
Feedback suggests it is more efficient	Efficient processes (not adding time) helps with buy-in
New scenarios take some time to problem solve	Experience increases with time
Shift data demonstrates reduction in mean setup error	More accurate despite recent adoption

Fig. 3 Results from go-live with tattoo and mark free SGRT workflow

Results

- 852 fractions in conventional arm and 918 fractions in SGRT arm respectively
- Translational shifts for SGRT compare favourably with conventional (Fig. 4)
- Mean vector of displacement reduced for SGRT (Fig. 5) from 5.7mm to 4.3mm (p < 0.05, Wilcoxon Test)

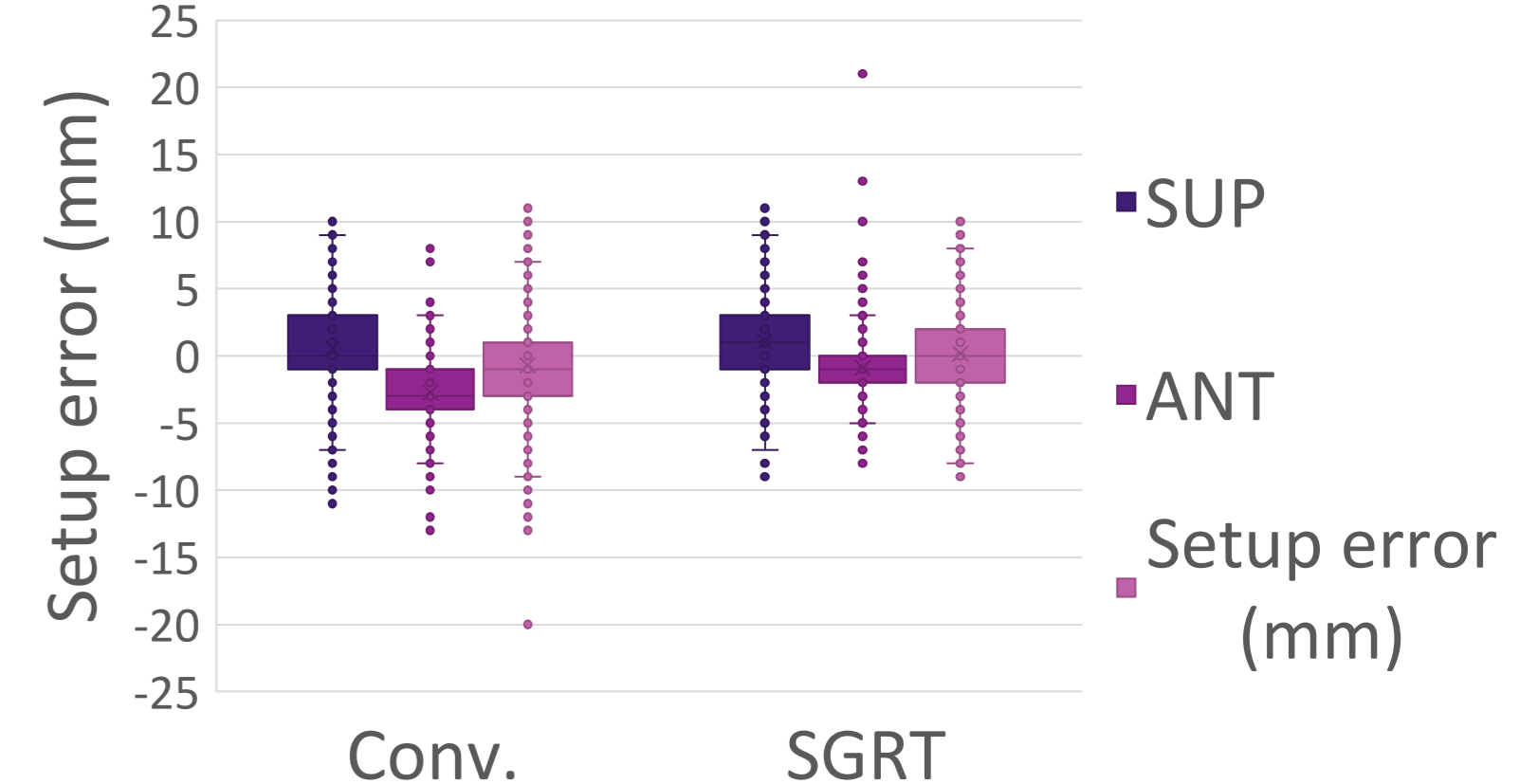


Fig. 4 Translational setup error for breast patients

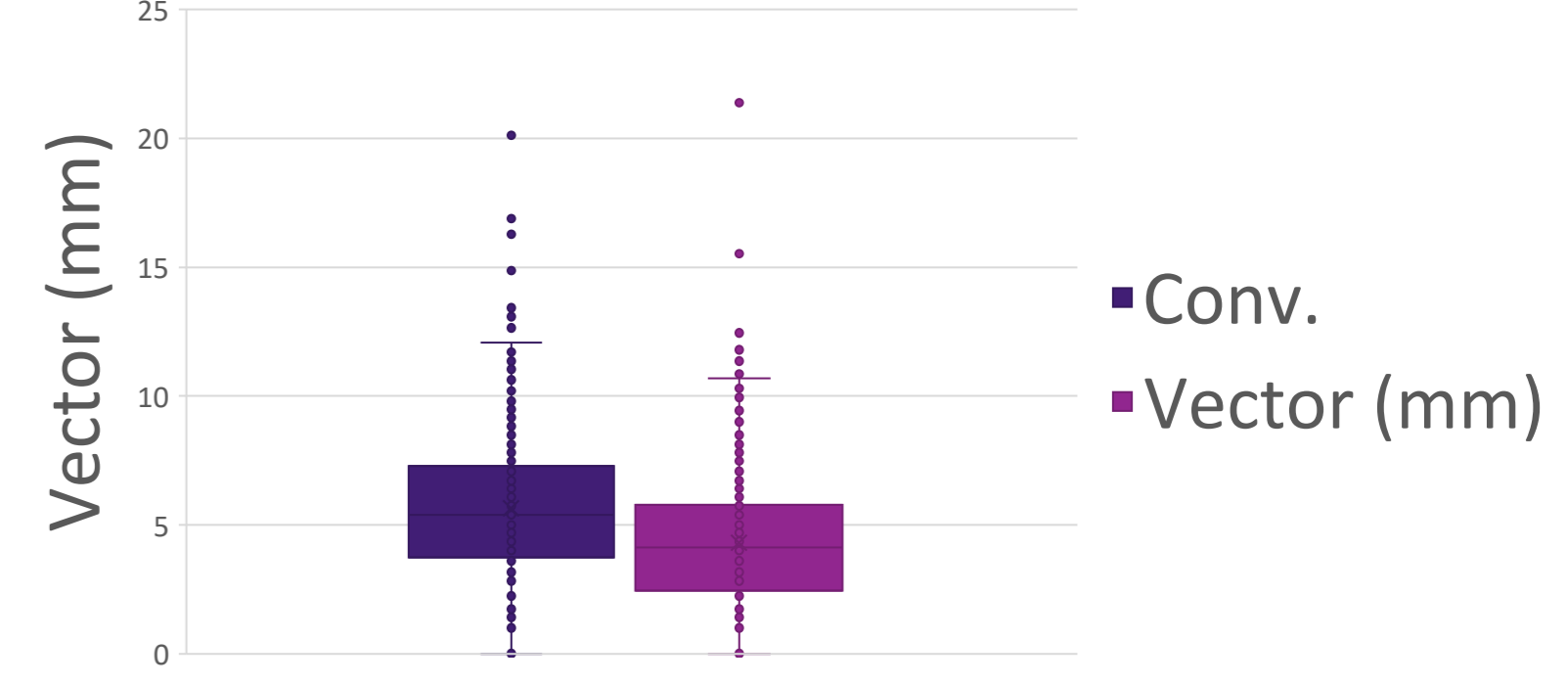


Fig. 5 Vector of displacement for breast patients

Conclusion

- Development, validation and training are important for safe and effective implementation
- Tattoo and mark-free with AlignRT improved mean vector displacement compared with conventional 3-point localisation for breast patients



Peter Mac
Peter MacCallum Cancer Centre
Victoria Australia