stryker

Capture it all
with Airo® TruCT®

Diagnostic image quality

Dose modulation

Large scan volume

Highly mobile

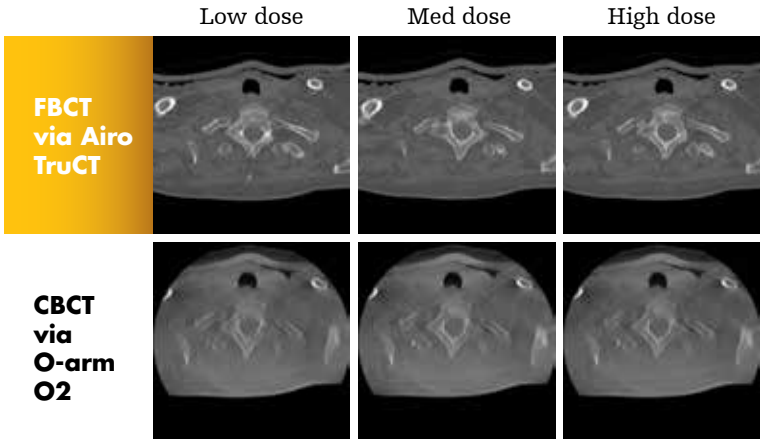
Imagine the best of both worlds:
Higher image quality and lower radiation[1]

Key findings from a pre-clinical test report:
One cadaver specimen evaluated by four surgeons[1]

Airo TruCT = FBCT
Medtronic O-arm O2 = CBCT

100% "excellent" scores for post-op cervicothoracic image quality
FBCT at L-M-H dose protocols[1]
(**0%** "excellent" scores for CBCT despite higher radiation at all scan protocols)

83% "excellent" scores for pre-op cervicothoracic image quality
FBCT at L-M-H dose protocols[1]
(**16%** "excellent" scores for CBCT despite higher radiation at all protocols)



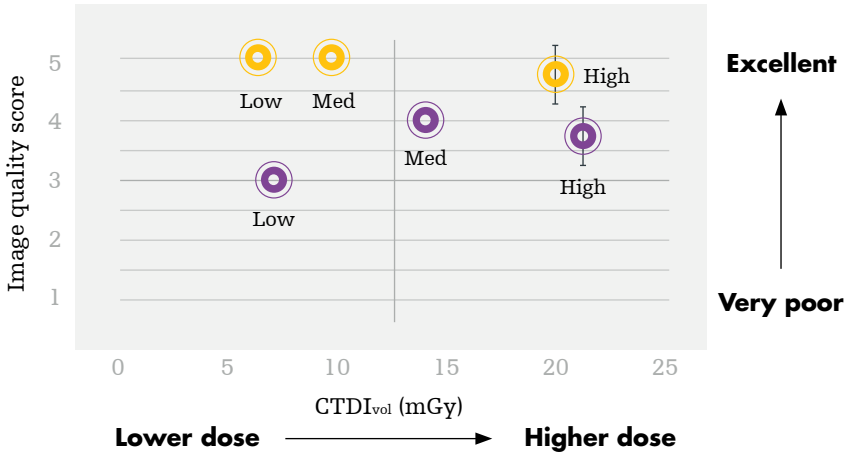
▲ Pre-op axial images at the T1 level

3x less radiation with "excellent" image quality
(6.4 mGy for FBCT vs. 21.2 mGy for CBCT)[1]

Up to 30% reduction in measured $CTDI_{vol}$ values[1]
over CBCT across L-M-H settings[1]

~2.5 – 3.5x less
cumulative scatter dose than CBCT[1]

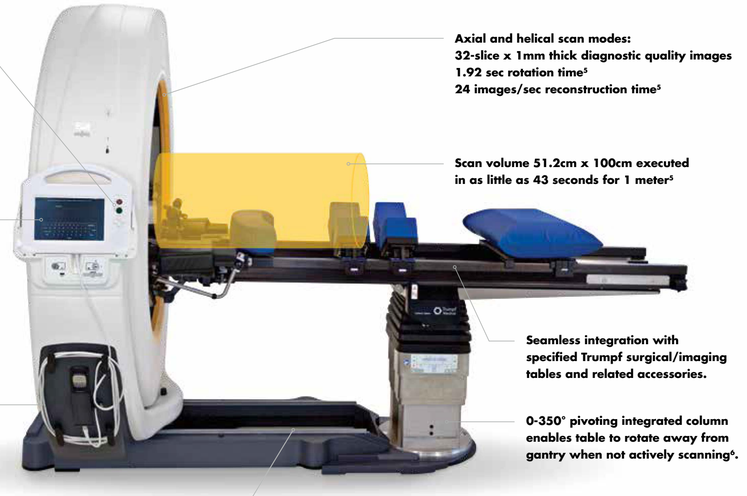
FBCT via Airo TruCT outscored CBCT via O-arm O2 in all dose protocols tested[1]



Airo TruCT: low (L) = 30%, medium (M) = 50%, high (H) = 100% of normal dose

Airo TruCT:
Delivering more

Airo TruCT supports the demanding requirements of intra-operative imaging in spine surgery. With fan beam CT technology at its core, Airo TruCT is able to provide high quality intra-operative imaging in challenging areas such as the cervicothoracic junction. Imaging this junction is challenging given overlying soft tissue, the need to perform imaging through the shoulders, obesity in >40% of U.S. adults, and its long scan length.[1-4] Airo TruCT can help you tackle these challenges. With a 51.2cm field of view and full meter of scan length, it delivers diagnostic-quality images of the cervico-thoracic region in a single helical scan. Along with the features outlined here, intraoperative CT imaging can assist with hardware placement by imaging and treating the patient in the same position — plus potentially saving you time by eliminating the need to transport patients to radiology for post-operative scans.



Clinical value

- Can assist with hardware placement by imaging and treating the patient in the same position[5]
- Allows for integration with surgical navigation systems
- System mobility and 107cm inner bore allows for use across multiple specialties, including mobile or fixed general radiology, emergency department, intensive care unit, operating room, clinic or office

Tailored scan protocols

- Standard protocols defined according to patient age and body regions including, but not limited to: full body, chest (thorax), abdomen and head[7]
- Custom protocols offer tailored and tunable scan acquisition techniques for helical and axial CTs to help accommodate different applications[7]
- Automatic Exposure Control (AEC) offers two techniques for radiation reduction: X-ray tube current modulation and weight adaptation

Workflow benefits

- 51.2cm x 100cm scan volume is able to capture long spine constructs in a single scan
- May help save time and effort by reducing the need for multiple scans, repositioning patient and image overlays/stitching
- Imaging at the point-of-care can potentially eliminate the need to transport patients to radiology for confirmatory imaging
- Airo pendant eliminates the need for control room equipment or separate work station
- Seamless integration via DICOM with surgical navigation systems and hospital RIS/PACS[6]

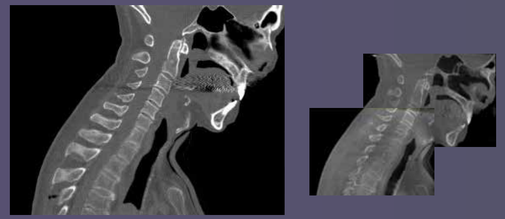
Software features available for additional capabilities and scan flexibility

- Metal artifact reduction
- Dose modulation
- Pediatric protocols

Airo TruCT outperformed O-arm O2 on[1]

- Image quality
- Lower radiation
- Scan volume

*Pre-clinical test report utilizing a cadaver specimen; evaluated by four surgeons[1]



▲ Airo TruCT easily captures C1-T4 in a single scan, thus avoiding two scans and image overlays required by cone beam CT[1].

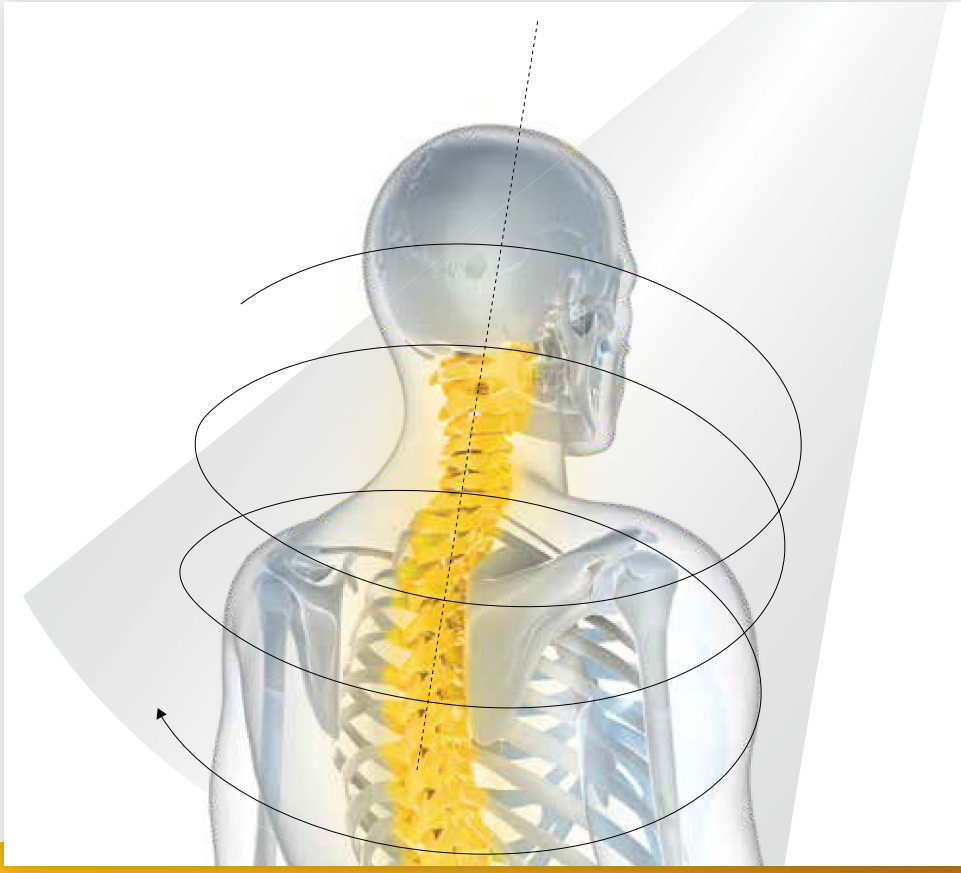
Mobility made easy

- Enables flexible or temporary setup across multiple operating rooms and hospital departments
- Ultra-small footprint (229cm x 59.8cm)
- Internal batteries self-propel device via "transport mode"
- Forward-facing camera helps visualize your path
- Left/right hand grips help you maneuver
- Fits through standard facility doorways
- Weight compatible with standard hospital transport elevators

Become a fan of fan beam CT with Airo TruCT

It is a common misconception that high radiation dose is required to achieve high quality images. With Airo TruCT you don't have to compromise. Airo TruCT is designed with dose minimizing features, specified anatomical protocols that can be adapted for patient age and weight, and the ability to customize a protocol depending on the imaging needs of the user.

- Airo TruCT, which utilizes Hounsfield Units, enables visualization of soft tissue[8]
- Airo TruCT is not limited by flat panel detectors or detector sizes and can translate while acquiring the image, resulting in a larger scan volume
- Fan beam may be less susceptible to some scanning artifact in comparison to CBCT [8]



To learn more about Airo TruCT diagnostic imaging, contact your Spine Enabling Technologies sales representative, by calling **978 796 5068** or visit **stryker.com/airotruct**

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1. Stryker test report: MI-48-0492 Rev 1 AIRO - Preclinical Imaging Study 2021 2. Simon S, et al. "CT imaging techniques for describing motions of the cervicothoracic junction and cervical spine during flexion, extension, and cervical traction." *Spine*. 2006; 31(1):44-50. 3. Singh, H. et al. "Novel fluoroscopic technique for localization at cervicothoracic levels." *J Spinal Disord Tech*. 2009; 22(8):615-618. 4. Habib, N. et al. "Use of Intraoperative CT Improves Accuracy of Spinal Navigation During Screw Fixation in Cervico-thoracic Region." *Spine*. (2020) 5. MI-42-0001 - Airo User Manual 6. MI-42-0165 Updated Trumpf Column Supplement 7. MI-42-0005 Application Guide Protocols and Principles 8. Lechuga, L. et al. "Cone Beam CT vs. Fan Beam CT: A Comparison of Image Quality and Dose Delivered Between Two Differing CT Imaging Modalities." *Cureus*. (2016)

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