



"...Early, accurate diagnosis of orthopedic patients is sometimes even more important than treatment. Faster, more precise diagnoses lead to significant morbidity and mortality reduction and lower costs for the health care systems as well as the patients."<sup>1</sup>

## Exceptional Detail for Orthopedic Imaging



"In combination with the SEMAR algorithm of the CT system and the post-surgical control examination, the images provided are incredible in (the) case of metal implants."<sup>2</sup>

— Prof. Bellelli  
Head of the Interventional  
Radiology Department,  
San Pietro Hospital,  
Rome, Italy

# High resolution and detail for diagnostic confidence

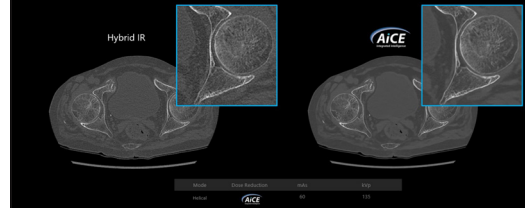
## SEMAR (Single Energy Metal Artifact Reduction)



Supports improved visualization of implants and the adjacent soft tissue:

- Automated metal artifact reduction
- No dose penalty
- Compatible with AI-powered reconstruction

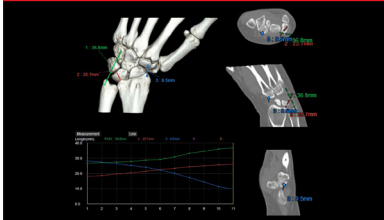
## AiCE (Advanced intelligent Clear-IQ Engine)<sup>3</sup>



Fully integrates Deep Learning Reconstruction (DLR) for sharp, clear and distinct images

- AiCE distinguishes true signal from noise to deliver exceptional images at low dose
- Fast reconstruction speed and easy workflow

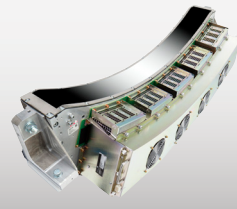
## Dynamic Volume Imaging<sup>5</sup>



Dynamic Volume Imaging captures joint motion during the scan:

- Dynamic joint studies help identify areas of interest or immobility
- Provides information in an interactive, high resolution 4D CT image

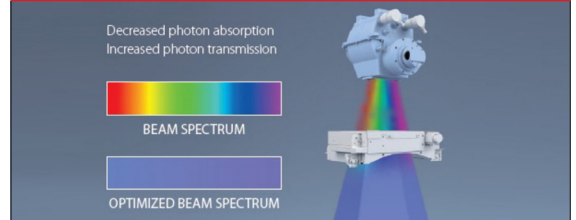
## PUREViSION Detector



Supports improved image quality, especially at low doses:

- Advanced detector technology with 40% better light output
- True 0.5 mm slice resolution
- Noise reduction at all dose levels

## PUREViSION Optics



New levels of image detail and low contrast resolution:

- Patient specific beam shaping filters provide an optimized beam spectrum and more homogenous distribution
- Improves low contrast detectability at equivalent dose
- Reduces beam hardening artifacts, potentially improving imaging of larger patients

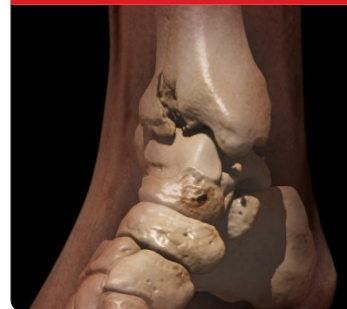
## Deep Learning Spectral Technology<sup>4,5</sup>



Rapid kV switching Spectral CT with Deep Learning Reconstruction:

- Up to 16 cm one rotation volume scan coverage and 50 cm full axial field of view
- Fully integrated end-to-end workflow is easy to use and can be conveniently incorporated into protocols
- Interactive composition analysis<sup>3</sup>

## Global Illumination<sup>3,5</sup>



- 3D/4D rendering for photorealistic views
- Invaluable tool for oncologists, surgeons and forensics

<sup>1</sup> Ashkani, MD, S. (2021, January 4). Artificial intelligence improves orthopedic diagnosis. Mass General Advances in Motion. <https://advances.massgeneral.org/ortho/article.aspx?id=1330>

<sup>2</sup> The clinical results, performance and views described are the experience of the clinicians. Results may vary due to clinical setting, patient presentation and other factors.

<sup>3</sup> Optional

<sup>4</sup> Available on Aquilion ONE/PRISM systems

<sup>5</sup> Requires Vitrea Advanced Visualization

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