



High quality visualization of the anatomy is critical during diagnosis and treatment of Coronary Artery Disease (CAD).

Image artifacts may hide or mimic pathology and can lead to underdiagnoses or overtreatment.<sup>1</sup>

## Enable Confident Diagnosis for Cardiology

**“We are able to scan more complicated patients who would otherwise get poor quality images, such as patients:**

- With irregular or fast heart rates
- Unable to perform a prolonged breath hold
- Unable to lay still for extended periods of time.”<sup>2</sup>



— *Catalin Loghin, MD*  
*Professor of Cardiovascular Medicine*  
*McGovern Medical School at*  
*UTHealth Houston, TX*

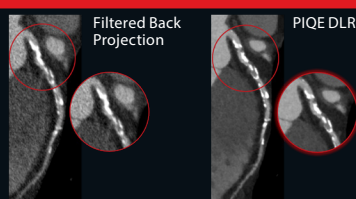
# Cardiac Excellence with Every Heart Covered and imaging for all patients.

## AiCE Deep Learning Reconstruction – Advanced intelligent Clear-IQ Engine<sup>3</sup>



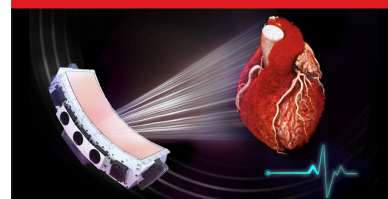
- Fully Integrates Deep Learning Reconstruction (DLR) for sharp, clear, and distinct images at low dose
- AiCE distinguishes true signal from noise to deliver exceptional image quality without compromising on dose
  - Fast Reconstruction and easy workflow

## Precise IQ Engine (PIQE)<sup>3,4</sup>



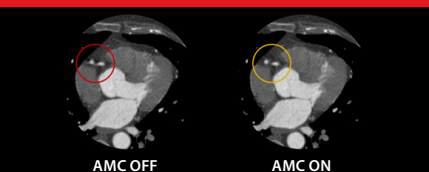
- Improved visualization for more diagnostic confidence
- Super resolution<sup>5</sup> Deep Learning Reconstruction cardiac imaging
  - Lower noise and clearer, more accurate cardiac imaging
  - Better visualization with sharper anatomical details

## Real-Time Beat Control<sup>3</sup>



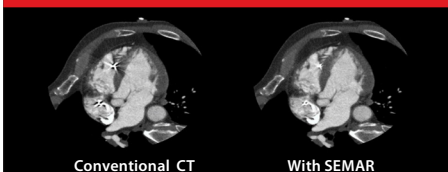
- Monitors the patient's heart rate in real-time
- Controls the exposure timing for consistent and accurate care delivery

## Cardiac Adaptive Motion Correction<sup>3</sup>



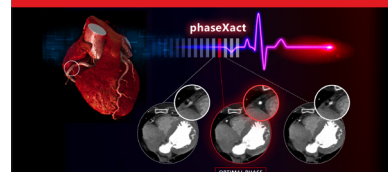
- Enhance the visibility of the coronary segments with motion
- Reduces cardiac motion for patients with higher heart rates

## Single Energy Metal Artifact Reduction (SEMAR)<sup>3,6</sup>



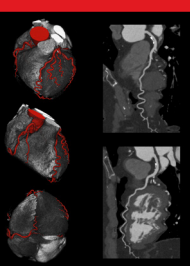
- Improves the visualization of cardiac devices such as pacemaker leads and the adjacent soft tissues
- Reconstruction technique to reduce metal artifacts
  - No dose penalty
  - For clearer and more confident diagnosis

## PhaseXact<sup>3</sup>



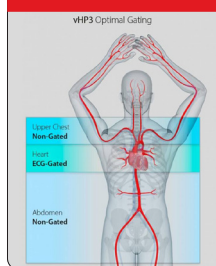
- Determines the optimal cardiac phase for motion-free reconstruction
- Fully automated phase selection reconstruction and image transfer
  - Performed in the raw data space with no-operator intervention or setup

## Arrhythmia Detection Algorithm<sup>3</sup>



- Ensure a safe and reproducible diagnostic study with every cardiac scan
- Recognizes irregular cardiac rhythms
  - Controls scan exposure in real-time
  - Volume<sup>7</sup> / Helical<sup>8</sup> Arrhythmia detection

## vHP 3-Phase Cardiovascular Scan<sup>3</sup>



- Allows 3 scans to be performed in a single acquisition
- Seamlessly transition between:
    - Scan parameters optimized for each body region
    - ECG gating on and off during cardiac scan
  - Can optimize contrast media<sup>9</sup> and lower radiation dose

<sup>1</sup> Kalisz et al. Artifacts at Cardiac CT: Physics and Solutions. RadioGraphics. 2016 November-December; 36(7): 2064-2083. doi:10.1148/rg.2016160079

<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> Only available on the Aquilion ONE / PRISM Edition

<sup>5</sup> PIQE is designed to fully utilize the maximum resolution of the detector

<sup>6</sup> Only available on the Aquilion ONE / PRISM Edition and the Aquilion ONE / GENESIS Edition

<sup>7</sup> Only available on the Aquilion ONE / PRISM Edition and the Aquilion ONE / GENESIS Edition

<sup>8</sup> Only available on the Aquilion Prime SP

<sup>9</sup> Optimization of contrast usage is only recommended within the dosing ranges that appear in approved iodinated contrast drug labeling

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