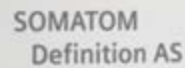




SIEMENS



SOMATOM  
Definition AS



Achieving Low-Dose Leadership  
with the Stellar Detector

Canton-Potsdam Hospital

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Case Study:  
Options and  
Upgrades

# Achieving Low-Dose Leadership with the Stellar Detector

## Canton-Potsdam Hospital



Led by the vision of its chief of the medical staff, radiologist G. Michael Maresca, MD, Canton-Potsdam Hospital is well-known in its region for being resolutely focused on patient safety. The first center in the St. Lawrence, New York, area to offer the Siemens SOMATOM® Definition AS 128-slice CT scanner with Stellar Detector, Canton-Potsdam is building a competitive advantage around low-dose imaging.

Canton-Potsdam Hospital is the centerpiece of the St. Lawrence Health System. Its imaging department provides multimodality services to 12 hospitals and six outpatient centers, covering urgent care, mammography, ultrasound, orthopedics, bone density, X-ray, and cardiology.

## A Significant Difference. A Powerful Differentiator.

"We want to be at the forefront of imaging and the Stellar Detector helps put us there," says G. Michael Maresca, MD, imaging department chair and chief of the medical staff for Canton-Potsdam Hospital.

Through its ability to deliver exceptional image quality at extremely low doses, the Stellar Detector is helping Canton-Potsdam expand its reputation for exceptional patient care, increase its referral business, and recruit top-notch physicians to its relatively remote segment of upstate New York.



*“We have a number of low-dose, high-resolution, volumetric protocols that are now very fast and efficient, and the improvement in the quality of the images helps make my diagnoses better.”*

— G. Michael Maresca, MD  
Chair of Imaging, Chief of the Medical Staff  
Canton-Potsdam Hospital

“We’re a small community hospital,” says Stacie Woodward, director of imaging services, “but with two universities and two colleges within a ten-mile radius, we have a highly educated patient base. That means expectations are very high, too. With radiation dose reduction being so prominent in the news and on social media, Dr. Maresca has stated that we need to be at the front of that curve.”

## Greater Sensitivity at a Lower Dose.

Through its TrueSignal Technology, Stellar Detector minimizes electronic noise and cross talk in the detector. This produces sharper and clearer images despite a reduced dose.

Due to its full electronic integration, Stellar Detector also benefits from an extended dynamic range. This unique feature, called HiDynamics, eliminates the need to switch bandwidth the way conventional detectors require. It increases the sensitivity of the detector for visualizing finer structures, especially for low kV datasets.

“The technology makes for a much more sensitive detector,” says Dr. Maresca, “and that’s an extremely brilliant way of lowering the dose. It’s made a significant difference in a number of areas: cardiac and coronary cases, chest pain management, and the ability to scan the breast with upper dosing of the same region from the back [with X-CARE]—so that we get full penetration of the chest while sparing breast tissue.”



## Higher Image Quality. Quicker Scans. Faster Diagnoses.

The Stellar Detector provides a homogenous slice profile with the same spatial resolution and signal-to-noise ratio (SNR) across the entire field of view, providing radiologists with consistently high image quality. This is particularly advantageous in such complex diagnoses as stroke perfusion, with the improved differentiation in grey and white matter leading to much faster diagnoses than were previously possible.

Dr. Maresca notes that upgrading the SOMATOM Definition AS from 64 to 128 slices and adding Stellar Detector also supports the latest advances in cardiac procedures. "Now, when a patient comes into the emergency room with chest pain, we can perform a triple rule-out (TRO) much faster.

We can do a gated study for the entire chest and be able to look at the aorta, coronary arteries, pulmonary arteries, and adjacent intrathoracic structures all at one time."

The productivity benefits of the upgraded system are seen every day at Canton-Potsdam. With one radiologist responsible for reading at such a high-volume facility, an efficient workflow is an absolute necessity.

The department can now process more scans in less time. As Woodward points out, "The images come from the scanner to the screen faster, so we can turn them around much faster too. The wait times are very minimal in our department. We try to keep them under five minutes, and we usually do."



### CT Angiography of Peripheral Arterial Disease

kV = 100

Rotation Time = 0.33

Collimation = 128x0.6mm

CTDIvol = 6.41mGy

Image courtesy of Canton-Potsdam Hospital.



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— G. Michael Maresca, MD  
Chair of Imaging, Chief of the Medical Staff  
Canton-Potsdam Hospital

## Achieving the Upgrade with No Capital Expense.

As a small community hospital in a rural area, Canton-Potsdam does not have the budget it would usually take to fund all the capital expenses its leadership position demands. Yet, Siemens found a way to enable the hospital to upgrade to a 128-slice SOMATOM Definition AS with Stellar Detector.

The solution: incorporating the cost of the upgrades into a newly extended lease. This not only proved to be economically attractive, it also confirmed a fundamental reason the hospital chooses to work with Siemens: expandability. As Dr. Maresca explains, “Siemens tends to maintain its platform rather than changing its products completely, which allows us to take much smaller steps and add on new features as the technology advances. Upgradability is one of the reasons we tend to have Siemens equipment throughout our facilities.”

## Stellar Detector: High spatial resolution, exceptional detail, increased dose efficiency

The Stellar Detector delivers innovations in CT imaging with ultra-thin slices, very high spatial resolution, and previously unseen detail.

The first fully integrated detector with TrueSignal Technology, the Stellar Detector significantly reduces electronic noise for uncompromised diagnostic outcomes at a low dose.

It offers improved spatial resolution, image quality, and dose efficiency—expanding the dynamic range of a scanner.







*“Siemens’ service has been phenomenal. They will bend over backwards to make things right, and it just seems they always have a solution for us.”*

— Stacie Woodward  
Director of Imaging Services  
Canton-Potsdam Hospital

## Top Equipment Helps Recruit Top Physicians.

Another challenge facing community hospitals in remote areas is the ability to bring in top-level physicians. Yet, in one month, Canton-Potsdam added a pediatric endocrinologist, a new medical oncologist, a rheumatologist, and an allergist.

According to Woodward, one of the prime attractions is the quality of the hospital’s imaging technology. “When you’re trying to recruit high-level providers or specialists, you have to show them that you’re consistently committed to supporting their practice. They’re saying, ‘If I’m going to see my patients here, I want to keep them here. So if I’m going to be ordering specialized tests, can you deliver on them?’ The quality of the Stellar Detector and our Siemens CT systems helps assure them they’ll get what they want.”

## Educating Patients on Low Dose

As part of its outreach program to patients, Canton-Potsdam has created a pamphlet describing its patient-first approach. The following is an excerpt taken directly from its pages:

***At Canton-Potsdam Hospital, we’re committed to minimizing your exposure to harmful rays.***

*While all CT scanners use X-rays to capture detailed images of the body, their precise imagery makes them an indispensable diagnostic tool. The Siemens SOMATOM® Definition CT scanner now at Canton-Potsdam Hospital offers an optimal combination of low radiation exposure and short examination times while maintaining excellent image quality.*

*Ask your doctor about the safest CT scanner in the North Country, or visit Imaging Services at [CPHospital.org](http://CPHospital.org)*



## The Siemens Partnership.

“Siemens’ service has been phenomenal,” says Woodward. “They will bend over backwards to make things right, and it just seems they always have a solution for us. They understand the needs of our facilities, and we can trust them to sit down with our staff and listen, not just sell us a piece of equipment. That type of approach is what made getting the Stellar Detector possible for us.”

Dr. Maresca is a firm believer in the Siemens partnership as well. “There’s simply nothing that compares with Siemens in the imaging world. With the addition of the Stellar Detector, we knew we had a product that put our imaging centers at a competitive advantage. We’re on the cutting edge, and with Siemens service, quality, and upgradability, we can continue to stay there.”

## Customer Development: Options and Upgrades

Siemens offers a variety of innovative, cost-effective options and upgrades to enhance the performance and extend the life of your imaging equipment. Maximizing the potential of your installed systems with clear upgrade paths to our latest technology helps you reduce costs, expand clinical capabilities, improve process efficiency, be more competitive, and more—without having to invest in new systems.

We can help with complimentary Asset Planning Sessions that combine your knowledge of your business and market with our expertise in system capabilities and optimization. The result is a multi-year plan and budget for the options and upgrades that best support your business and clinical goals based on your current system configurations and the projected market demand for imaging services.

For more information, please visit

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The outcomes achieved by the Siemens customer described herein were achieved in the customer's unique setting. Since there is no "typical" hospital and many variables exist (e.g., hospital size, case mix, and level of IT adoption), there can be no guarantee that others will achieve the same results.

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