



## SOMATOM Definition Family Meets Diverse Needs—from Pediatric to Interventional

**Ridgeview Medical Center**

Case Study

[www.usa.siemens.com/healthcare](http://www.usa.siemens.com/healthcare)

**SIEMENS**



## Key Benefits



### Clinical:

Outstanding image quality including angiographic studies combined with dose-reduction features designed to help protect patients from unnecessary dose.



### Workflow:

Comfortable 78-cm gantry allows for faster patient positioning and comfortable imaging even for the most challenging patients.



### Financial:

Peace of mind that comes with an investment in a CT that will serve the whole population, including obese patients.



### Partnership:

Confidence of system uptime with proactive service including remote monitoring.

With a 4-slice CT system close to end of life, the chief of radiology, imaging director, and the lead CT technologist at the 109-bed Ridgeview Medical Center in Waconia, MN, knew it was time for an upgrade. But to what? While they were able to perform some interventional CT procedures, the time it took to perform them was lengthy, preventing the scanner from being used for other purposes. In addition, they wanted to expand their services to include high-end cardiac imaging.



“We feel like Siemens is by all means working with us and giving us the training and customer service we need to utilize our new equipment for the benefit of our patients.”

Cindy Steenstra, Imaging Director

“With the Definition AS family, the Siemens sales team was able to present a tailored offer based on our need and not just focus on a particular slice configuration.”

David Gross, MD, Chief of Radiology



David Gross, MD  
Chief of Radiology

“The system we had was reliable but it just wasn’t able to do the interventional work we needed to do,” says David Gross, MD, chief of radiology. Ridgeview considered four different vendors and ultimately selected a SOMATOM® Definition AS+ 128-slice, a SOMATOM Definition AS 40-slice, and a SOMATOM Definition AS 20-slice CT system. “With the Definition AS family, the Siemens sales team was able to present a tailored offer based on our need and not just focus on a particular slice configuration,” Gross added.

By leveraging three systems from the SOMATOM Definition portfolio, Ridgeview is able to perform both advanced imaging for its angiography procedures and basic imaging for its interventional and therapy planning cases. “From our perspective, the AS 128 is our bread-and-butter scanner,” says Cindy Steenstra, imaging director. “We get patients through quickly on it and, most importantly, we get great image quality. We also use it for advanced procedures like cardiac angiography.”

“We were also very interested in the interventional package that came with the AS 40,” continues Steenstra. “Having the three systems is an effective combination. They fit very well together and satisfy different needs for our hospital.”

## Increasing Efficiency for Staff, Patients

One of the biggest challenges with some older CT models is the time it takes to perform an interventional procedure. With so many facilities under greater pressure to become more efficient, time unnecessarily spent doing one procedure can significantly impact workflow, utilization, and patient and staff satisfaction. “Previously, if a radiologist was performing a biopsy or more involved procedure, our other patients were waiting,” says Steenstra. “And, the ER was waiting.”

The SOMATOM Definition AS 40 offers automated 3D measuring for fast evaluation of needle placement and a customized viewing layout with multiple planes. It features a small footprint, for better space utilization, and a 78-cm opening for greater patient

access. “The CT interventional package for the SOMATOM CT scanner has dramatically reduced the amount of time it takes to perform our procedures,” says Dr. Gross. “The 78-cm opening allows for more room to work and greater patient comfort.”

Now, patients—and referring physicians—no longer wait. If a procedure is taking longer than expected in one room, Ridgeview’s patients can be taken to another CT room. “What’s really nice is having a referring physician call and say they wonder if they can get a CT scan done today,” says Dr. Gross. “I’ve been told by numerous referring physicians that our staff tells them to send their patients right over.”



“The CT interventional package for the SOMATOM CT scanner has dramatically reduced the amount of time it takes to perform our procedures. The 78-cm opening allows for more room to work and greater patient comfort.”

David Gross, MD, Chief of Radiology

## Effectively Handle Diverse Patient Needs

With the addition of the SOMATOM Definition AS+, Ridgeview can also handle a wide variety of patient sizes and conditions. Approximately 10 to 15 percent of its patient volume through the ER is pediatric cases. And, where previously the hospital could only do pulmonary angiography, now, it can do nearly any type of angiography needed.

“The quality of our angio work has significantly improved,” says Dr. Gross. “And with our pulmonary embolus protocols, for example, we have been able to lower the dose. We used to give 150 cc and now we can give 75 cc and get a beautiful study. It’s all because of the speed with which we’re able to acquire our images with the 128-slice system.”

Dose, in fact, is a keen concern of Ridgeview’s referring physicians. Many, particularly those with pediatric patients, will express their concern for dose. Being able to assure them that Ridgeview’s CT systems feature dose modulation with CARE Dose4D™ for the lowest possible dose often alleviates any concerns.

Ridgeview is also running Siemens Neuro Best Contrast, which is fully integrated into the image reconstruction process and provides enhanced tissue contrast without significantly increasing noise or impacting clinical workflow. It allows for dose reduction of at least 20 percent and can be combined with Iterative Reconstruction in Image Space (IRIS\*), CT image software that offers up to 60 percent additional dose reduction.

“The dose features on the SOMATOM Definitions have been a positive selling point for us,” says Dr. Gross. Not only is dose limited but there are fewer suboptimal contrast-enhanced exams thanks to the high image quality. As such, Ridgeview’s staff is able to give a more definitive diagnosis and reduce the need for repeat imaging—which saves the staff time, reduces hospital costs, and enhances patient and referring physician satisfaction.

\*In clinical practice, the use of Iterative Reconstruction in Image Space (IRIS) may reduce CT patient dose depending on the clinical task, patient size, anatomical location, and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task.



## A Partner from Installation to Training and Beyond

For several years prior to the installation of its SOMATOM Definitions, Ridgeview had been with another vendor. As such, its staff had been used to another system. Yet, staff members found the switch easy. "The system operations are very smooth and the Siemens training was very good. Our staff is very comfortable on the system. In fact, I don't think you could get them to switch back," says Steenstra. "We feel like Siemens is by all means working with us and giving us the training and customer service we need to utilize our new equipment for the benefit of our patients."

"I don't change my mind very well and, before we researched it, I really thought we were going to go with another brand," says Dr. Gross. "But I am really pleased with Siemens. I absolutely think we made the right decision."

Now available, the **syngo**® CT 2010B software upgrade for the SOMATOM Definition Family includes:

### Dose Warning

Alerts users if a preset radiation limit will be exceeded by a scan range

### Neuro Best Contrast

Enhances the contrast in neuro imaging through better gray-white differentiation

### Iterative Reconstruction in Image Space (IRIS)

Improves image quality with less dose

### CARE Contrast II

Injection parameters are automatically transferred to the patient protocol

### 4D Noise Reduction

Significantly improves image quality and reduces radiation dose by up to 50% for perfusion exams

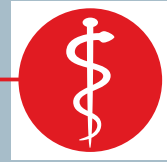
### Adaptive Signal Boost (ASB)

Improves the signal-to-noise ratio by selectively optimizing lower signals



“The quality of our angio work has significantly improved. And with our pulmonary embolus protocols, for example, we have been able to lower the dose. We used to give 150 cc and now we can give 75 cc and get a beautiful study.”

David Gross, MD, Chief of Radiology



On account of certain regional limitations of sales rights and service availability, we cannot guarantee that all products included in this brochure are available through the Siemens sales organization worldwide. Availability and packaging may vary by country and is subject to change without prior notice. Some/All of the features and products described herein may not be available in the United States.

The information in this document contains general technical descriptions of specifications and options as well as standard and optional features which do not always have to be present in individual cases.

Siemens reserves the right to modify the design, packaging, specifications and options described herein without prior notice. Please contact your local Siemens sales representative for the most current information.

Note: Any technical data contained in this document may vary within defined tolerances. Original images always lose a certain amount of detail when reproduced.

#### **Local Contact Information**

Siemens Medical Solutions USA, Inc.  
51 Valley Stream Parkway  
Malvern, PA 19355-1406  
USA  
Phone: +1-888-826-9702  
[www.usa.siemens.com/healthcare](http://www.usa.siemens.com/healthcare)

#### **Global Business Unit**

Siemens AG  
Medical Solutions  
Computed Tomography  
Siemensstr. 1  
DE-91301 Forchheim  
Germany  
Phone: +49 9191 18-0  
[www.siemens.com/healthcare](http://www.siemens.com/healthcare)

#### **Global Siemens Headquarters**

Siemens AG  
Wittelsbacherplatz 2  
80333 Muenchen  
Germany

#### **Global Siemens Healthcare Headquarters**

Siemens AG  
Healthcare Sector  
Henkestrasse 127  
91052 Erlangen  
Germany  
Phone: +49 9131 84-0  
[www.siemens.com/healthcare](http://www.siemens.com/healthcare)

#### **Legal Manufacturer**

Siemens AG  
Wittelsbacherplatz 2  
DE-80333 Muenchen  
Germany

[www.siemens.com/healthcare](http://www.siemens.com/healthcare)