

SIEMENS

#5

**EMERGENCY
URGENCE**

Admitting & Main Entrance
Admission et entrée principale



Business Case
Whitehorse,
Canada

[siemens.com/healthcare-services](https://www.siemens.com/healthcare-services)

Yukon Hospital Corporation

Siemens Guardian Program™ including TubeGuard helps keep medical imaging running smoothly at Whitehorse General Hospital



Whitehorse General Hospital

Address: 5 Hospital Road,
Whitehorse, YT Y1A 3H8, Canada

Number of beds: 55

Equipment in focus:

- AXIOM Iconos R200
- SOMATOM Definition AS128
- MAGNETOM Aera
- MAMMOMAT Inspiration
- SIREMOBIL Compact L
- Ysio

Whitehorse General Hospital (WGH) in Canada's Yukon Territory offers a wide array of patient services. Since WGH is the only major hospital serving the Yukon, it has a robust medical imaging department. "Although price is very important when we acquire imaging equipment, our real priority, and our focus in negotiations, is on the service," says Tanja Solberg, Manager, Medical Imaging Department. The WGH Medical Imaging Department has been doing business with Siemens Healthcare for more than 25 years. "Siemens Service has been extremely responsive, and we are very pleased with the level of service we get from them," adds Solberg. To resolve her concerns about CT scanner uptime and preventing unplanned outages, Solberg decided to subscribe to Siemens' TubeGuard service, which had just been introduced. "This turned out to have been the best case scenario," claims Solberg. "Siemens took care of absolutely everything, and everything lined up so smoothly that the impact on patient care and on services throughout the hospital was minimal."

Quality care in Canada's remote far north

The 55-bed Whitehorse General Hospital (WGH) in Canada's Yukon Territory serves the roughly 35,000 residents of the territorial capital and surrounding areas. It is the flagship facility of the Yukon Hospital Corporation, which also owns small community hospitals in Dawson City, 530 kilometers further north, and in Watson Lake near the British Columbia border.

With approximately 3,500 admissions and 33,000 emergency department visits each year, WGH is not busy by most hospital standards, but it's the only full-scale healthcare facility in the territory. As a result, it offers a wide array of patient services, most notably its Emergency Department, ICU, laboratory, pharmacy, Women's Clinic, Maternity Unit, a two-suite Surgical Unit, and its Medical Imaging Department.

Every day, the 350 staff at WGH face the daunting task of providing timely, quality healthcare to patients coming from communities across a vast catchment area encompassing roughly 500,000 square kilometers. Operations are especially challenging in winter months, when weather and a reduction in air carriers and flights serving the region severely hamper transportation efforts, significantly increasing the hospital's remoteness and isolation.

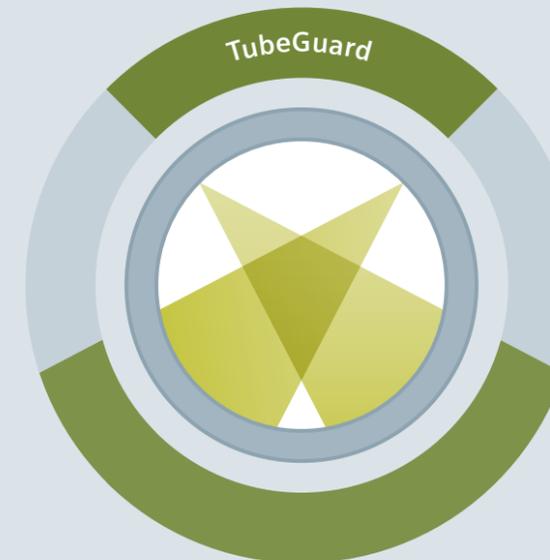
Service tops the equipment list of requirements

Because WGH is the only major hospital serving the Yukon, it has a robust medical imaging department, with 25 staff providing 24/7 services. It also has a fairly comprehensive roster of imaging equipment, even though a relatively low volume of only 30,000 images are required each year.

"Although price is very important when we acquire imaging equipment, our real priority, and our focus in negotiations, is on the service," says Tanja Solberg, Manager, Medical Imaging Department, Yukon Hospital Corporation. She explains that because the hospital is so remote and it doesn't have backup units or any other hospitals to turn to for key modalities like CT scanning and radiography, "We are dead stopped if our imaging equipment goes down. Our physicians are forced to decide if a patient can wait for imaging to become available, or if the patient needs to be airlifted to British Columbia or Alberta to have their imaging done, which is extremely expensive and impacts patients and families. As a result, good service and maintaining our equipment properly to ensure uptime are extremely important to us."

"The best case scenario – Siemens took care of absolutely everything."

Tanja Solberg,
Manager,
Medical Imaging Department,
Yukon Hospital Corporation



Sensor-based proactive prediction of the following tube failures:

- Emitter breakdown
- High voltage breakdown
- Cooling problem
- Vacuum loss
- Dose decay
- Focal spot stability
- Drive failure

“In the interests of safe patient care, [...] it was clear that this would be money well spent.”

Tanja Solberg,
Manager,
Medical Imaging Department,
Yukon Hospital Corporation

The WGH Medical Imaging Department has been doing business with Siemens Healthcare for more than 25 years, and because most of its imaging equipment is from Siemens – including the CT scanner and digital radiography and mammography units – it has developed a very good working relationship with the company.

“Siemens Service has been extremely responsive, and we are very pleased with the level of service we receive from them,” adds Solberg.

Unplanned CT outage felt hospital-wide

In December, 2010, about a year and a half after the hospital purchased a new Siemens SOMATOM Definition AS128 CT scanner, the x-ray tube failed, resulting in an unplanned outage that caught everyone off guard. Due to the remoteness of the location and the logistical difficulties of getting replacement parts and a Siemens technician up to Whitehorse in the winter months, the scanner was down for four days.

This event had a significant impact on numerous areas throughout the hospital, especially the Emergency Department (ED), where they are very dependent on imaging services – particularly when making critical decisions, for example, whether or not a trauma patient needs to be airlifted to another facility.

“We can do quite a bit for patients right here at Whitehorse General, but once a patient reaches a certain threshold, they may require specialty intervention by someone we don’t have on staff, such as a cardiologist or neurosurgeon. Our physicians rely heavily on imaging to guide their clinical decision making,” explains Solberg.

Without access to CT exams, the physicians chose to err on the side of caution, admitting patients to the hospital, where they stayed for up to four days, when they may not have needed to be there at all. On several occasions, physicians called in the territory’s medevac team to airlift patients to Vancouver for further treatment; and while this ensures that the patient receives the care they need, it has a huge impact on the patient and patient’s family – to say nothing of the significant cost to the Yukon Territorial Government for medevac transportation.

Adding that surgeons were also affected, and were a little reluctant to take patients to the OR without the benefit of having imaging, Solberg states, “When it comes to patient flow, medical imaging is often the first stop along the way, and because we are a small facility, a bottleneck in our department due to a CT problem quickly ripples throughout the hospital.”

“Immediately after this event, I was on the phone to Siemens to say that we need to ensure that nothing like what the WGH Medical Imaging Department has been going through ever happens again,” exclaims Solberg, who describes how their Siemens CT scanner is critical for clinical diagnosis as well as patient management and treatment. Perhaps most important, according to Solberg, is that patients need to be able to depend on the hospital’s imaging schedule. “In addition to its impact on critical cases, a CT failure like this creates considerable inconvenience and delays access to care for outpatients, who need to reschedule their exams,” adds Solberg.

TubeGuard protects imaging workflow

To resolve her concerns about CT scanner uptime and unplanned outages, Solberg decided to subscribe to Siemens’ new TubeGuard service, which the company had just introduced.

TubeGuard is an additional feature of the Siemens Guardian Program, a proactive monitoring service the hospital was already taking advantage of for its digital mammography and x-ray equipment. With the Siemens Guardian Program, WGH gets live, real-time, remote system monitoring by Siemens-certified technical engineers and early notification of potential problems.

With the addition of TubeGuard, the hospital received the added protection of proactive tube failure prediction for its Siemens SOMATOM Definition CT scanner. Software

installed on the scanner continuously monitors and reports on key tube parameters. Through a sophisticated algorithm, the central monitoring system is able to determine the residual life expectancy of the tube and predict the probability and moment of failure – usually four to five days before it occurs. If tube parameters deviate from predefined normal levels, the system automatically sends a message to the Siemens Customer Care Center, which contacts Whitehorse General to schedule the appropriate service.

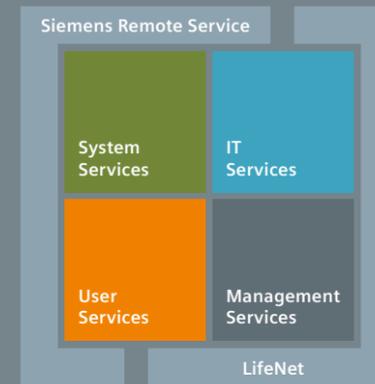
Together, the Siemens Guardian Program and TubeGuard gave the hospital proactive protection against imaging workflow interruptions due to increasing scan aborts, reduction in image quality, and ultimately, total tube failure.

“As manager of the imaging department and looking at the cost of a program like this, it’s similar to buying insurance,” suggests Solberg, who admits to having asked herself several times whether they really needed this service or if the tube failure was just a one-time fluke that is unlikely to repeat itself. “In the interests of safe patient care, and what the impact would be on Yukoners if this service did go down again for that length of time, it was clear that this would be money well spent.”

Solberg reports that hospital executive management thought so too, since every person on that team agreed that TubeGuard was well worth the investment.

“Our physicians rely heavily on imaging to guide their clinical decision making.”

Tanja Solberg,
Manager,
Medical Imaging Department,
Yukon Hospital Corporation



Siemens Customer Care. Closer to you.

Finding the most effective ways to provide the service and support you need is one of our highest priorities. Siemens Healthcare draws on a wealth of experience and knowledge to provide the innovative services you need to operate with optimized performance, get more from your investment, and improve patient care – and ultimately deliver sustainable health-care. Rely on us as your trusted partner to meet today's challenges and prepare for the demands of tomorrow.

For more information on our products, please contact your Siemens Healthcare Customer Care representative or visit us on the internet under siemens.com/healthcare-customer-services.

Hospital glides through planned CT downtime

On September 5, 2013, the Medical Imaging Department at Whitehorse General got a call from Siemens Customer Care, which had been alerted by the TubeGuard monitoring system that the hospital's CT scanner tube was predicted to fail within a few days.

This time, a totally different, totally positive scenario unfolded.

By the time Siemens made the call to Whitehorse, a replacement tube had already been ordered and arrangements made for a service technician to be on-site to make the repairs, which actually took place the next day.

As a result of the advance warning and planning, the CT scanner was only down for six hours and there was minimal impact on patient care. Fortunately, there were no critical cases from the Emergency Department or inpatient wards during that short six-hour period that could not wait: They could all continue to be treated until the scanner was back up and running.

"Last time, we didn't know we were going to be down for four days, so we just had to live through it moment by moment. This time, however, everyone knew about the planned outage and how long it would last, so we were better prepared to manage patients accordingly," says Solberg. And because the downtime was planned, Solberg's team was easily able to con-

tact the outpatients who were originally booked to have exams during that period and reschedule their visits.

According to Solberg, there was quite a bit of buzz throughout the hospital after they were able to glide smoothly through this planned maintenance outage. Everyone was very pleased, and it validated the 2010 decision to add TubeGuard to their Siemens Guardian Program.

"This turned out to have been the best-case scenario," claims Solberg. "Siemens took care of absolutely everything, and everything lined up so smoothly that the impact on patient care and on services throughout the hospital was minimal."

Patient care/experience top strategic priorities

Patient care and the patient experience continue to occupy the top spot in Whitehorse General's five-year strategic plan. After all, patients are the reason the hospital exists in the first place.

"Every employee of the hospital lives and breathes this philosophy," declares Solberg, "so we take it to heart when we can make decisions that improve the care patients receive." Among those decisions, Solberg includes the addition of TubeGuard to help her department deliver quality imaging services 24/7.

"We've had the same Siemens technicians coming up for quite some time, so we've developed a good relationship with them, and they are a really good group to work with."

Tanja Solberg,
Manager,
Medical Imaging Department,
Yukon Hospital Corporation

"When remoteness makes it a challenge to get people and parts to your site, and you don't have backup equipment or another hospital facility with imaging resources nearby, there is peace of mind knowing that with TubeGuard you are significantly limiting the potential of a CT outage that impacts patients."

Whitehorse General needs to get as much mileage out of its imaging equipment as possible, and Solberg and her team are well aware that how long it lasts and how well it performs depend on how well it is cared for. As a result, they are extra diligent about their Quality Assurance Program, taking steps that include routine quality control checks and warm-up procedures on all equipment, as well as scheduled preventive maintenance visits by Siemens technicians.

"We've had the same Siemens technicians coming up for quite some time, so we've developed a good relationship with them, and they are a really good group to work with," reports Solberg. She adds, "Overall, we are extremely pleased with the service department at Siemens."

She concludes by saying the Siemens field service engineers really understand them and the remoteness of their location – and therefore the importance of being able to deliver imaging services without interruption. "I have never once felt that this is just a job to them; rather, they really take pride in what they do and feel responsible to us. As a manager, that is exactly what you are looking for when service is so important."

The benefits at a glance:

- Predictable downtime, with less risk of unplanned workflow disruptions
- Proactive rescheduling of patients and staff
- Tube replacement performed as scheduled – at a time convenient for you
- Less risk of damaging your reputation or reducing patient satisfaction
- Potentially less revenue loss because you can plan downtimes in advance



Siemens Guardian Program including TubeGuard Predicting failures – boosting planning reliability

As an additional service offering of the Siemens Guardian Program, TubeGuard can predict the majority of potential CT tube failures within the SOMATOM Definition family. More than 10 sensors proactively monitor the tube functions via real-time data flow with Siemens Remote Service (SRS). Deviations can be detected before problems occur – making it possible to proactively and efficiently handle failures in advance.

Available for:

- SOMATOM Definition family
- Biograph mCT Systems

Related offerings:

- Siemens Guardian Program™
- Siemens Performance Plans

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 are 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.

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

Local Contact Information

Siemens Canada Limited
Healthcare
1577 North Service Road East
Oakville, Ontario
Canada L6H 0H6
siemens.ca

Siemens Healthcare Headquarters

Siemens Healthcare GmbH
Henkestr. 127
91052 Erlangen
Germany
Phone: +49 9131 84-0
siemens.com/healthcare