



Customer case study

Saving time and money while providing better patient experiences

WakeMed maximizes use of *syngo.via* solutions
and AI-Rad Companion

siemens-healthineers.us/syngo.via-solutions

About *syngo.via* solutions

*syngo.via*¹ solutions are a family of intelligent, integrated imaging software. They offer multimodality reading and fast 3D results to speed up daily routine. It includes the latest innovations and Artificial Intelligence (AI) -enabled features to take your reading to the next level.

The *syngo.via* solutions subscription is a comprehensive, predictable business model. It enables healthcare providers to subscribe to *syngo.via* solutions for clinically specialized to enterprise-wide Advanced Visualization and routine reading. For large hospitals, hospital networks, and IDNs, the *syngo.via* solutions subscription can simplify long-term planning, subscriptions, and budgeting. This can help your organization operate efficiently while improving health outcomes and addressing the growing needs of the community you serve.

With this solution, you can:

- Make budgeting transparent and predictable
- Keep the system and users up-to-date with a complete service, upgrade, and education plan
- Leverage the full range of advanced visualization applications² and easily expand as your goals evolve

[Click here to learn more about *syngo.via* solutions](#)

About AI-Rad Companion

AI-Rad Companion provides automated image post-processing of medical images by integrating AI algorithms. The results generated by AI-Rad Companion can be sent to predefined systems that can receive DICOM objects.

AI-Rad Companion Chest CT automatically highlights abnormalities, characterizes anatomies, and matches results with reference values. As a result, reporting quality and clinical confidence in case evaluation may increase.

[Click here to learn more about AI-Rad Companion](#)

Executive summary

Doing more with less through automated and standardized workflow

WakeMed is based in Raleigh, NC and includes three acute stand alone 24/7 emergency departments. It is the only Level I Trauma Center in Wake County and, as a result, needs to provide clear imaging answers under time constraints for trauma cases. Despite CT technology advancements, providers like WakeMed can still encounter challenges with consistency and efficiency when it comes to reconstruction and advanced visualization — particularly for the trauma patient.

Meeting the growing needs of its community is not easy. With a heterogeneous advanced visualization (AV) landscape WakeMed juggled multiple service contracts and education from various manufacturers. Managing several software packages and protocols resulted in data silos and unwarranted variations, which proved to be costly and inefficient. Further, the disparate, disconnected systems stood in the way of achieving organizational goals. The WakeMed team needed a single, effective solution and decided to consolidate with an unlimited *syngo.via* solutions subscription. This solution assisted in transforming care delivery, reduced study time, enabled a higher scan volume, and ultimately helped optimize clinical outcomes. In addition, AI-Rad Companion Chest CT automatically detected incidental findings like lung nodules and sent the results to the PACS.

Specifically, WakeMed achieved:

An immediate **40% decrease** in costs of AV solutions by consolidating multiple software solutions to a single subscription 

 More **timely diagnosis** and more **consistent results** thanks to automated trauma workflows

Improved overall patient experiences and reductions in patient radiation exposure as findings of incidental lung nodules improved 

The provider

WakeMed has three acute care hospitals, a physical rehabilitation hospital for a total of 970-beds, three Healthplexes with stand-alone, 24/7 emergency departments, and a variety of outpatient services throughout the region. Its physician practices are home to more than 450 physicians representing nearly every specialty in multiple locations across North Carolina. WakeMed is also the only Level I Trauma Center in Wake County.³

To continue to deliver best-in-class care to its growing community, the WakeMed team consolidated its AV footprint to seamlessly connect systems across the current and future enterprise. Embarking on *syngo.via* solutions and AI-Rad Companion meant a paradigm shift for WakeMed but it resulted in opportunities to realize savings in AV solutions, streamline operations, and reduce variations.

The challenges

Financial

Maintaining multiple decentralized AV solutions also involved hidden costs such as multiple service contracts and continuous training for the 3D reconstruction staff. Given the institution's size and volume, the operational cost of keeping cross-departmental staff trained and knowledgeable became a challenge, especially due to the COVID-19 pandemic leading to increased staff rotation, which added more training costs and scheduling difficulties.

Embarking on *syngo.via* solutions and AI-Rad Companion meant a paradigm shift for WakeMed but it resulted in opportunities to realize savings in AV solutions, streamline operations, and reduce variations.

Operational

The average image reconstruction time for trauma patients was 8-10 minutes. This included study processing and sending to PACS. Due to the lack of automation, technologists had many manual steps until radiologists and trauma surgeons could see the results in the PACS. This caused the scanner to be idle while the technologist finished post-processing and archiving. To mitigate the delay in archiving, the trauma surgeons were often present in the post-processing room to observe the scan and see post-processing results immediately. The archiving delay in PACS also led to idle radiologists.

Clinical

The clinical use of multiple decentralized and manual AV systems resulted in unwarranted variations between exams and users. Workflows were not always standardized and, as a result, the data was not always comparable. This led to inefficiencies and variability that could impact diagnoses and treatment. Other areas such as lung nodules required additional manual reads which added valuable time to turn around trauma patients.



The results

Almost immediately after implementation, *syngo.via* solutions and AI-Rad Companion generated tangible results and created new opportunities in all key areas.

WakeMed can now provide automated post-processing of results and offer patients screening for incidental findings in less time. This increases the throughput of the scanner and the turnaround time for critical care trauma surgeons and radiologists.

Financial

Immediate return on investment

Reducing the number of AV solutions to *syngo.via* solutions eliminated previous hidden costs such as training and service contracts. The total costs including software upgrades, hardware, service costs and education training decreased by 40%.



Operational

Shorter post-processing and more scan slots, thanks to automatized workflows

The standardization of trauma workflows and automated archiving resulted in immediate, seamless, collaboration-friendly results. On average, the automated post-processing time was reduced by more than 60%. With that, additional slots are now available, enabling greater scan availability and more patients who can be screened in a day. The automated workflow also supports higher employee satisfaction and availability since it requires fewer and shorter training hours.

The automated archiving in the PACS system allows radiologists and trauma surgeons to read results in just moments anytime and anywhere, enabling collaboration and simplifying care.



Previously: 8-10 minutes post-processing time

Now: 3-4 minutes post-processing time

More than 60% average time reduction

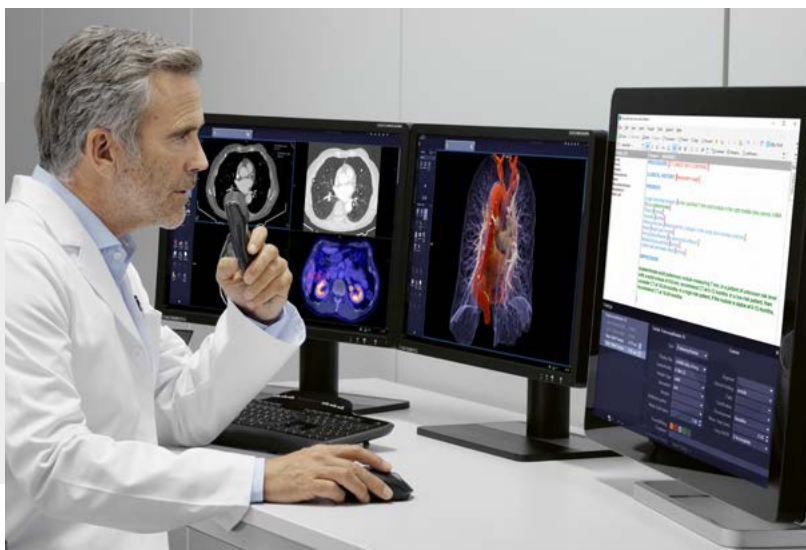
Getting results almost immediately after exam completion with PACS-Ready result generation

Clinical

Saving time, saving lives

The automatic post-processing and opportunistic screening for incidental findings improves patient care and overall health outcomes. AI Rad-Companion's ability to detect incidental findings, such as lung lesions, at an early stage allows for prompt medical intervention. The technology also enables physicians to monitor the progression of these lesions over time, providing an opportunity to intervene at the earliest signs of progression.

Moreover, AI Rad-Companion can help physicians make more informed treatment decisions. By providing detailed information on the size, location, and characteristics of the detected lesions, physicians can tailor treatment plans to individual patient needs.



Additional resources

Click below for more information about digital health solutions.

[➤ Learn more](#)

At Siemens Healthineers, we pioneer breakthroughs in healthcare. For everyone. Everywhere. Sustainably. As a leader in medical technology, we want to advance a world in which breakthroughs in healthcare create new possibilities with a minimal impact on our planet. By consistently bringing innovations to the market, we enable healthcare professionals to innovate personalized care, achieve operational excellence, and transform the system of care.

Our portfolio, spanning in vitro and in vivo diagnostics to image-guided therapy and cancer care, is crucial for clinical decision-making and treatment pathways. With the unique combination of our strengths in patient twinning*, precision therapy, as well as digital, data, and artificial intelligence (AI), we are well positioned to take on the greatest challenges in healthcare. We will continue to build on these strengths to help overcome the world's most threatening diseases, enable efficient operations, and expand access to care.

We are a team of more than 73,000 Healthineers in over 70 countries passionately pushing the boundaries of what is possible in healthcare to help improve the lives of people around the world.

** Personalization of diagnosis, therapy selection and monitoring, aftercare, and managing health.*

Further information is available at www.siemens-healthineers.com.

The outcomes and statements provided by customers of Siemens Healthineers are unique to each customer's setting. Since there is no "typical" hospital and many variables exist (e.g., hospital size, case mix, and level of service/technology adoption), there can be no guarantee that others will achieve the same results.

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

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

Individual results of Rapid Results are subject to hospital settings.

References

¹ *syngo.via solutions consist of a broad variety of software options, which are medical devices in their own right. syngo.via solutions-based software options are not commercially available in all countries. Due to regulatory reasons, their future availability cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details.*

² *All applications might not be available in every country. Applications that require third-party licenses are optionally available and have to be purchased as add-ons.*

³ *As of publication date, 2023*

Siemens Healthineers Headquarters

Siemens Healthineers AG
Siemensstr. 3
91301 Forchheim, Germany
siemens-healthineers.com

USA

Siemens Medical Solutions USA, Inc.
Healthcare
40 Liberty Boulevard
Malvern, PA 19355-9998, USA
siemens-healthineers.us