

## **RSNA 2018 in Chicago: South Hall, Booth #4136**

### **Advanced Therapies at Siemens Healthineers**

With its Advanced Therapies (AT) segment, Siemens Healthineers is a leading global provider of highly integrated products as well as of solutions and services used by healthcare providers for therapy in various clinical areas. Advanced Therapies provides image-guided procedural therapy solutions. Its products enable minimally invasive and non-invasive treatment through the use of high-quality imaging before and during medical procedures. Advanced medical imaging is used to significantly improve patient outcomes and reduce therapy costs by facilitating routine and also complex minimally invasive procedures. The primary products and solutions in Advanced Therapies comprise innovative robotic and fixed C-arm angiography systems, mobile C-arms, recording systems, and multimodality solutions (Angiography systems integrated with CT, MRI or Ultrasound) leveraging the huge benefits of fused image information during patient treatment. Additionally the Business Area Advanced Therapies provides imaging systems (CT and MR scanners as well as PET molecular imaging systems) for radiation oncology.

Twenty years ago, open surgery was standard procedure, which resulted in long recovery times, high risk of complications and significant costs for hospitals. Now, minimally invasive treatment, as the new standard for a number of procedures, provides for lower risk of complications, smaller scars, faster recovery, less post-operational pain and shorter hospital stays, leading to lower overall cost in therapy. Prominent examples from recent years include minimally invasive valve treatment (TAVI, MVR, TVR, LAA closure), removal of blood clots from the brain using a catheter (thrombectomy), minimally invasive spinal fusion (spondylodesis), and endovascular aneurysm repair (EVAR, TEVAR). Such procedures require the best possible imaging for planning, guiding and monitoring treatment.

Minimally invasive procedures have experienced growth in recent years in areas such as cardiovascular care, interventional radiology, surgery, and oncology. “When developing our systems and software, the first rule is always: Above all, the new technology must bring about a better treatment outcome and faster recovery for the patient. Better treatment outcomes also benefit healthcare providers as well as the healthcare system and, ultimately, all of society,” says Michel Therin, head of Advanced Therapies. “Excellent patient outcome and high value care are also a top priority for our customers. That’s why we are striving to transform procedural treatments of major threatening diseases in segments such as cardiovascular care, interventional radiology, surgery, and radiation oncology to enable better treatment decision and therapies leveraging the entire portfolio of Siemens Healthineers. Because we speak our customers’ language, we can also provide comprehensive support for large projects to improve patient care, such as designing stroke units or cardiac centers,” Therin adds.

#### **Where is minimally invasive therapy headed?**

Sophisticated intraprocedural guidance tools will help to standardize and partially automate surgical and interventional procedures. Various augmented reality (AR) features will reduce surgical risk and intervention times.

AI will be used to identify pathologies earlier. It will help to establish and standardize new treatment pathways. To the benefit of the individual patient AI will support patient management teams in finding the treatment approach with the best prognostic outcome for the patient and to plan and simulate therapies based on reference cases. We will see self-learning guidance tools and a new generation surgical robots.

To prepare for a complex and risky procedure surgeons and interventionalists alike will combine high-resolution images from for example MRIs and CT scans, to create a three-dimensional digital model of the organ requiring treatment. This enables attending physicians to navigate inside the organ virtually before performing the actual procedure, thus identifying possibly critical anatomical abnormalities and weighing approaches for performing the complex procedure.

Workflow optimization technologies will enable customers from Siemens Healthineers to perform procedures faster, more safely, and with more precision. Sensor information and

AI are used to create “digital workflow twins” of individual procedures. This leads to intelligent ORs that “know” the stage of ongoing interventions and provide context-sensitive assistance by making certain tools available or by superimposing relevant information via AR/VR.

### **Michel Therin, head of Advanced Therapies**

On July 1, 2018, Michel Therin (56) took over as head of the Advanced Therapies business segment at Siemens Healthineers. Since 2005, Michel Therin has held various senior positions for development and strategy at Medtronic's Minimally Invasive Therapies Group. In his last post as Global Vice President and General Manager, he was responsible for the company's global business in minimally invasive therapies in general surgery. Michel Therin gained his doctor's degree in Biomedical Engineering in France at the Paris XIII University.

### **Latest news about Advanced Therapies**

Siemens Healthineers debuts RT Pro Edition for Magnetom Sola for aid in MRI radiation therapy planning

[www.healthcare.siemens.com/press-room/press-releases/pr-20181025038shs.html](http://www.healthcare.siemens.com/press-room/press-releases/pr-20181025038shs.html)

Cardiovascular MRI scanner from Siemens Healthineers redefines treatment pathways in cardiovascular medicine

[www.healthcare.siemens.com/press-room/press-releases/pr-20180824028shs.html](http://www.healthcare.siemens.com/press-room/press-releases/pr-20180824028shs.html)

At TCT 2018, Siemens Healthineers showcases advancements in both in vivo and in vitro cardiovascular solutions

<https://usa.healthcare.siemens.com/press-room/press-releases/tct2018.html>

NuVasive and Siemens Healthineers partner to transform spine surgery

[www.healthcare.siemens.com/press-room/press-releases/pr-20180809027shs.html](http://www.healthcare.siemens.com/press-room/press-releases/pr-20180809027shs.html)

New Cios Alpha mobile C-arm from Siemens Healthineers increases precision in surgery

[www.healthcare.siemens.com/press-room/press-releases/pr-20180423012hc.html](http://www.healthcare.siemens.com/press-room/press-releases/pr-20180423012hc.html)

New Cios Select mobile C-arm with flat-panel detector technology boosts precision in routine surgery

[www.healthcare.siemens.com/press-room/press-releases/pr-20180301004hc.html](http://www.healthcare.siemens.com/press-room/press-releases/pr-20180301004hc.html)

Nexaris Therapy Suites supporting precision medicine by providing direct access to MR, CT and angiography imaging

[www.healthcare.siemens.com/press-room/press-releases/pr-2017110090hcn.html](http://www.healthcare.siemens.com/press-room/press-releases/pr-2017110090hcn.html)

For further information on RSNA, please see [siemens-healthineers.com/press-rsna](http://siemens-healthineers.com/press-rsna).

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**Siemens Healthineers** enables healthcare providers worldwide to increase value by empowering them on their journey towards expanding precision medicine, transforming care delivery, improving patient experience and digitalizing healthcare. A leader in medical technology, Siemens Healthineers is constantly innovating its portfolio of products and services in its core areas of diagnostic and therapeutic imaging and in laboratory diagnostics and molecular medicine. Siemens Healthineers is also actively developing its digital health services and enterprise services.

In fiscal 2018, which ended on September 30, 2018, Siemens Healthineers generated revenue of €13.4 billion and adjusted profit of €2.3 billion and has about 50,000 employees worldwide.

Further information is available at [www.siemens-healthineers.com](http://www.siemens-healthineers.com).