

uMR Omega™ Installed in the Hospital Sisters of Charity



Located in the capital city of Zagreb, the teaching hospital Sisters of Charity is a prestigious medical institution boasting a tradition spanning over 180 years, making it one of the oldest and largest in the Republic of Croatia.

This state-of-the-art centre offers an extensive range of medical services while maintaining a strong focus on scientific research within the medical sciences. Moreover, it serves as an education hub for students, young doctors, and other healthcare professionals, nurturing the future generation of medical experts. Constituting a benchmark of medical excellence, the Clinical Hospital Centre Sisters of Charity brings together leading medical specialists to offer a comprehensive range of services. With a commitment to provide accessible and top-quality treatment, this esteemed institution admits annually innumerable patients with pathologies from various medical fields.

Always striving to adopt the latest advances in medical technologies, the centre has recently decided to install the [uMR Omega™](#), the first ever 75cm, ultra-wide-bore 3.0T MRI.

This unique piece of equipment reflects the latest developments in MRI technology, making it a cutting-edge and indispensable asset in the field of medical diagnostics and research. Its state-of-the-art features and precision enable healthcare professionals to achieve unparalleled levels of accuracy and provide patients with the best possible diagnostic process. Moreover, technologies such as ACS (Artificial Intelligence Compressed Sensing) and DeepRecon technologies reduce the time of the MR examination by up to 70%. In order to increase patients' comfort during the MRI exam without compromising the image quality and scan speed, the 75 cm ultra-wide bore offers patients 25% of additional space with a unique starlight environment. Such features not only increase overall comfort but also minimize the potential risk of a panic attack in claustrophobic patients. What is more, with painstaking attention to detail, [United Imaging](#) introduced next-generation ultra-flexible soft RF Coils to offer patients a blanket-like feeling.

The ultra-wide construction is also a crucial step toward making advanced imaging more easily accessible as the hospital will be able to offer the MRI for a larger number of patients without excluding any specific populations, therefore setting an equal standard of diagnosis for all. Last but not least, the vast space attributable to the wide construction opens up new ways of patient positioning, considerably expanding the diagnostic potential for joint examinations, large patients, and pregnant women.

From the state-of-the-art imaging guiding the diagnostic process, through the option of intraoperative use, to radiotherapy planning of unparalleled precision, the uMR Omega™ has been designed to be a comprehensive tool serving as a multi-functional resource for various medical applications. The diagnostic process has been enhanced through the development of higher-density coils, which allow for the hyper-resolution MR imaging of the musculoskeletal system or Ultra-short echo time (UTE) MR imaging in Pulmonary Metastases from Liver Cancer.

Considering the possibilities of artificial intelligence, United Imaging introduced the ACS (AI-assisted Compressed Sensing) to best balance speed and image quality, combining CS (Compressed Sense), HF (Half Fourier), and PI (Parallel Imaging). Furthermore, the reconstruction procedure has been ameliorated thanks to the cutting-edge deep-learning neural network.

The Qscan is a revolutionary feature that permits an approximately 97% reduction in acoustic noise. On top of that, its combination with AI technologies such as ACS and DeepRecon offers whole-body quiet scanning with no sacrifice of the scanning time. As a result, radiologists can obtain higher acceleration levels for MRI imaging and better depiction of small anatomical structures, allowing them to perform rapid breast MRI, whole Spine scans, high-resolution MSK, or, in the case of brain MRIs, greatly facilitating the diagnosis of acute cerebral infarction.

Fully integrated within MRI bore and unobstructed by clothing, the Dual-Source Millimeter-Wave Radar is the industry's first dual-source phased-array millimeter-wave radar solution for contactless sensing of patients' respiratory motions that renders the need for a respiratory belt obsolete. This pioneering technology offers the possibility of conducting free-breathing Renal non-contrast enhanced MRI or free-breathing liver MRI.

United Imaging is proud to cooperate with such an esteemed institution as the Sisters of Charity Hospital and work toward the common goal of offering top-notch quality diagnostic imaging while prioritizing patients' comfort and needs.

Source: [United Imaging](#)

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