

Press Release

November 30, 2021

Science fiction becomes reality with technologies developed by the publicly traded company MedApp

CarnaLife Holo has already supported doctors in almost 200 complex medical procedures. In recent days, the team led by prof. dr Jerzy Sacha, cardiologist at the University Clinical Hospital (USK) in Opole and professor at the Opole University of Technology, performed another innovative procedure in “mixed reality” using the CarnaLife Holo technology of holographic visualizations, such as those we have known so far from “Star Trek”, the popular science fiction media franchise.

“Using MedApp’s unique CarnaLife Holo technology, we obtained holographic images of the inside of the heart, which we used to perform a minimally invasive mitral valve repair procedure without opening the chest, using the MitraClip system. The unique nature of this procedure was that a 3D holographic image of the heart’s internal structures was used in real time, i.e., during mitral valve repair surgery. So far, holography has mainly been used at the stage of preparation for surgery,” explains prof. Jerzy Sacha, head of the Hemodynamic Research Laboratory at USK in Opole.

The hologram was displayed in the operating room by MedApp's CarnaLife Holo software, paired with special HoloLens 2 glasses from Microsoft.

“The operating physician was able to visualize the internal structures of the patient’s heart in great detail, as well as to rotate, zoom in, and cut through a virtually working heart using their own hands and head movements. This raises great prospects for performing procedures in the new reality, which provides visualizations that had been unavailable with standard methods,” comments prof. Jerzy Sacha.

“CarnaLife Holo is a breakthrough technology for three-dimensional visualization of medical imaging data, providing access to images in the form of holograms throughout the surgery, which can significantly reduce its duration and thus bring measurable benefits to the patient, medical staff and the hospital,” adds Krzysztof Mędrala, CEO of MedApp S.A.

The hospital in Opole is the second medical center in the world which performed a MitraClip procedure using holographic imaging, after the team from one of the largest hospitals in Europe - AKH in Vienna. **The solution has already been recognized by the international medical community, receiving an honorable mention as "Best Case 2021" at the PCR London Valves 2021 international conference.**

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The procedure at USK in Opole was performed by: prof. dr Jerzy Sacha, dr Krzysztof Krawczyk, and dr Jarosław Bugajski (cardiologists); dr Mateusz Stanisław (anesthesiologist); Monika Świdorska and Małgorzata Werner (assistants); Danuta Radiszewska (anesthesiology nurse); Filip Żuczek (X-ray technician); Szymon Dziejdz (Abbott company). Technological support was provided by Jakub Kasprzak and Kacper Pabianek from MedApp and Tomasz Ogonowski from GE.

"We are proud that the pioneering procedure, using the latest medical and supportive technologies, was carried out at our hospital," comments Dariusz Madera, General Manager of USK in Opole. *"Congratulations to the entire team, led by Professor Jerzy Sacha."*

It is also worth noting that this was not the first innovative minimally invasive interventional cardiology procedure carried out at USK in Opole. Recently at conferences in Orlando, USA and London, prof. Sacha presented the results a heart assist pump (Impella) implantation and aortic valve implantation with TAVI through the subclavian artery.

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MedApp is a NewConnect-listed technology company whose innovations are revolutionizing the way patients are diagnosed and treated both in Poland and in foreign markets. The company offers unique software solutions to support diagnostic imaging and next-generation digital medicine services. The key products offered by our company are: CarnaLife Holo, HoloComm, CarnaLife System and Digital Clinic. MedApp has partnered with international technology and medical leaders such as Google, Microsoft, or GE Healthcare to provide our clients with secure Big Data collection, analysis and visualization.

MedApp S.A. shares are listed on the NewConnect market in Warsaw and on the Börse Frankfurt. More information about the company and the innovations we are developing is available at: www.medapp.pl and [our LinkedIn](#).

The University Clinical Hospital in Opole is the largest medical institution in the Opole Voivodeship. It provides multi-specialty medical services and interdisciplinary care. For 4 years, as a unit of the University of Opole, it has been educating future doctors, conducting scientific research, and implementing pioneering treatments using the latest technologies. More information at: www.usk.opole.pl, [Facebook](#), [LinkedIn](#).

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