**A new level of 3D fluorescence information for real-time neurosurgical decisions**

**Evolved ARveo 8 surgical microscope leads to clinical value creation for 3D brain-tumor visualization and enables freedom of movement with a surgical headset**

**24 January 2024, Wetzlar, Germany –** Leica Microsystems, a world leader in microscopy and scientific instrumentation, has launched an evolved version of its ARveo 8 digital visualization microscope for neurosurgery. The ever-growing ecosystem, ARveo 8, enhances surgical visualization through the application of a 3D view and Augmented-Reality (AR) fluorescence. For brain-tumor surgery, the new GLOW400\* 3D AR fluorescence helps surgeons to achieve a new level of clinical value creation with clear visualization of both anatomical structures and a wide range of fluorescence information. In vascular surgery, they can now visualize fluorescent vascular flow in 3D with the GLOW800 AR fluorescence. The wide range of surgical information offered by the ARveo 8 is now also accessible with the new MyVeo all-in-one surgical visualization headset. The headset frees surgeons and assistants from having to stay in front of oculars or external monitors, giving them more ergonomic comfort and a new level of surgical workflow efficiency.

"The continuously evolving ARveo 8 is once again pushing the boundaries of neurosurgery," said Walid Beylouni, Vice President Medical Division at Leica Microsystems. "It opens up a new level of continuous access to clinical applications and digital capabilities. Surgeons will see more information that leads to clinical value creation while performing critical procedures. The result is more confident, real-time surgical decisions."

The new GLOW400 AR fluorescence for brain-tumor surgery takes visualization of suspected Grade III and IV Glioma to another level. Anatomical details are shown more clearly thanks to the multispectral imaging technology of the GLOW400 Anatomy View. Even details, such as vessels and bleeding, that were previously hidden under a veil of blue light can be seen.

Additionally, surgeons can observe a wider range of fluorescence intensities with the GLOW400 Highlighted Fluorescence View. During tumor resection, they can repeatedly check for traces of remaining visible fluorescence, particularly lower-intensity fluorescence signals of the marked tumor.

Digital real-time fluorescence images are visualized with high resolution in 2D or 3D on a large 55-inch monitor which is available with the evolved ARveo 8.

With the all-in-one surgical visualization headset, MyVeo, surgeons can now wear the future of digital surgery. It unlocks surgeons and their team from the microscope, overcoming the challenges surgeons face spending long hours in uncomfortable positions. The headset's displays provide surgeons with a wide range of real-time information in 3D depth perception, including all GLOW400 views, the GLOW800 digital AR-application and the white light view of the surgical field. This is accompanied by 2D views from compatible navigation systems and endoscopes. At the same time, it makes the teaching and learning experience more impactful by the simultaneous use of three headsets. The surgeons and assistants are no longer stuck in front of oculars or fixed screen positions.

From the beginning, the ARveo 8 digital visualization microscope has been designed to accommodate new advances over time. Its gradual evolution continues to provide access to the latest digital capabilities and once again pushes the boundaries of neurosurgery. The Leica EnhancePath Concept allows surgical teams to add the latest Leica technologies and clinical applications into the ARveo 8 ecosystem.

\*Note for readers from the United States of America:

FDA 510(k) clearance for GLOW400 is pending and the product is currently not available for sale.

**For more information, please visit**

<https://www.leica-microsystems.com/company/news/news-details/a-new-level-of-3d-fluorescence-information-for-real-time-neurosurgical-decisions/>

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**About Leica Microsystems**

Leica Microsystems develops and manufactures microscopes and scientific instruments for the analysis of microstructures and nanostructures. Ever since the company started as a family business in the nineteenth century, its instruments have been widely recognized for their optical precision and innovative technology. It is one of the market leaders in compound and stereo microscopy, digital microscopy, confocal laser scanning microscopy with related imaging systems, electron microscopy sample preparation, and surgical microscopes.

Leica Microsystems has six major plants and product development sites around the world. The company is represented in over 100 countries, has sales and service organizations in 20 countries, and an international network of distribution partners. Its headquarters are located in Wetzlar, Germany.