

‘A new era for ultrasound’: European healthcare professionals react to new ultrasound technology.

Prominent European ultrasound specialists have described how new approaches to diagnosis and management of serious conditions could become possible, following the launch of an advanced ultrasound system by international health technology provider Mindray.

The Resona A20, unveiled in Naples late last year at the 35th congress of the European Federation of Ultrasound Societies in Medicine and Biology, was developed by Mindray to allow healthcare professionals to have a “deeper comprehension of the human body”, and to enable early detection of illness with new levels of confidence. It is the first premium ultrasound system to be developed by the company.

Clinical experts who have had the opportunity to test the technology have remarked on increased levels of confidence in lesion detection, and an ability to assess patients in new ways.

‘The highest level of confidence for complex cases’

Professor Vito Cantisani, president of the European Federation of Societies for Ultrasound in Medicine and Biology, remarked he was “positively impressed” with the new technology as one of the world’s first users. “I found this new equipment very useful to evaluate deeply complicated cases,” he said. “The Resona A20 brings the best image quality for the highest level of confidence.”

Professor Cantisani, who is also chairman of integrated advanced imaging at University Sapienza, Rome, remarked how software in the Resona A20 supported multi-parametric evaluation, helping to deliver “a comprehensive evaluation of my patients”. “We are entering a new era,” he said.

He pointed out that one significant improvement is the multi-parametric liver study, helping to comprehensively study any pathology. He added that the technology enables all requested information to be displayed in real-time in one shot.

“The A20 smart thyroid tool gives automatic real-time lesion detection, which helps to be fast and precise,” Professor Cantisani added.

“HD Scope” is very useful because it increases the level of confidence, enhancing the border delineation, the eco-structures, the presence of calcification of the lesion that I study, such as breast and thyroid lesions, where it is really important to depict clearly and properly any of those features.”

Microvasculature study functionality was also described as important. A ‘slow flow’ often suggests that there might be a problem with the small blood vessels. Professor Cantisani said: “The ultra micro angiography provides a very high sensitive depiction of the slow flow.”

The new technology is expected to support daily clinical activity, research, and education, with the potential to enhance the role of ultrasound in the diagnostic imaging landscape.

Dynamic tumour information, and new pathways

The new high frame rate of the Resona A20 could make a “major difference” for healthcare professionals in delivering a correct diagnosis quickly for kidney, liver and oncology patients, and could help to transform clinical pathways, according to Prof Dirk-Andre Clevert, head of the

Interdisciplinary Ultrasound Centre, Department of Radiology, University of Munich-Grosshadern Campus.

“The A20 gives us the opportunity for super resolution,” he said. “Five hundred frames a second means a very, very high resolution, and a lot of dynamic information, additional information for the tumour which doesn’t exist or can be missed in conventional contrast examination.”

New diagnostic pathways could become possible for different patient cohorts, he added. For kidney transplant patients, it was now possible to show a “tiny kidney infarction not clearly visible by a contrast enhanced ultrasound examination”.

For liver patients, the need for additional imaging, could potentially now be avoided, he added. “Around 30% of my liver examination patients need to have CT or MRI, and further contrast enhanced ultrasound,” said Professor Clevert. “There might be an option for a shortcut, to start with super resolution before going to MRI or CT – to save both time and money.”

‘A huge amount of data’: A new perspective for doctors

The new ultrasound system uses an acoustic intelligence technology platform, combined with Mindray’s next-generation transducers to improve acoustic focusing, and support precise diagnosis. This helps healthcare professionals to visualise often unseen details.

Professor Clevert said that the Resona A20’s option for super resolution meant “more frames in a shorter time, with additional information like dynamic flow direction”, in addition to providing results of image analysis on the same system, preventing the need to transfer information to external computers.

“You have the option to see very tiny vessels which are not normally visible,” he said. “You can see the flow direction, you get information regarding time of arrival, so how fast the contrast has arrived. It’s not only super resolution, we have vascular information, dynamic information.”

He described the potential for a “very big power insight”. “If you can acquire 500 frames in a second, and you can store 30 seconds, this means you have around 15,000 frames. This is a huge amount of data.”

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Notes to editors

About Mindray

Mindray is a leading developer, manufacturer, and supplier of medical device solutions and technologies used in healthcare facilities around the globe. The company empowers healthcare professionals through innovative, high-value solutions that help create the next generation of life-saving tools of patient monitoring and life support, in-vitro diagnostics, and medical imaging. For more information, please visit <http://www.mindray.com/en>

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