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Radiology congress: prostate cancer in the cross hairs and up to 30% lower incidence of long-term disability after stroke now possible

New diagnostic approach for prostate cancer, biomarkers for even more closely targeted cancer treatments and arteriosclerosis, and a new area of stroke treatment for radiologists: from 2-6 March more than 20,000 experts from over 100 countries will get together to compare notes on the latest medical advances at the European Congress of Radiology at the Austria Center Vienna.

- **Diagnostic milestones in cardiology and oncology**
- **Biomarkers revolutionising radiology**
- **New radiological stroke treatment saves up to 30% more lives**

Radiology is set to retain its position as the **central diagnostic discipline** used in modern medicine. “We are seeing huge advances, particularly in **computed tomography (CT)**. This technology generates sectional images which, contrary to standard x-ray pictures, enable **continuous imaging**. Thanks to **new contrast media**, the patient’s **body** is subjected to lower levels of radiation (**around 10%**), while the **quality** and **performance** of the **equipment** is increasing all the time, which is helping to deliver more **accurate results** and more precise diagnoses. While we once had to insert a heart catheter at a relatively early stage of the diagnostic procedure before deciding which approach to take, this step has since been rendered largely obsolete by **heart CT** scans. Advances like this significantly reduce the risks for patients,” explained leading Viennese expert Professor Wolfgang Schima, President of the Austrian Roentgen Society and head of the Department of Diagnostic and Interventional Radiology at the Göttlicher Heiland, Barmherzige Schwester and St. Josef hospitals in Vienna.

MRT used for prostate cancer screening

A series of **major milestones** have also been reached in the diagnosis of **prostate cancer**. Whereas it was once only possible to reach a diagnosis based on tissue samples taken more or less blindly, it is now possible to use imaging to determine the presence of carcinoma. This advance has been made possible by next-generation multiparametric magnetic resonance tomography (MRT), which is able to detect significant prostate cancers and determine how dangerous they are using a newly developed scoring system – a form of diagnosis that **significantly reduces** the burden placed on the patient. “For me, the importance of this **new prostate imaging** technology for men is **comparable** to the advent of **mammograms** for women. It is a genuine breakthrough,” Schima added.

Biomarkers revolutionising radiological diagnostics

For a long time radiological diagnosis was limited to morphology, i.e. capturing images of the shape of cells, but new advances in the use of **biomarkers** that illuminate the **distribution of cells in the tissue** (diffusion) and the **circulation within cells** (perfusion) have made it

possible to arrive at wider-ranging and more accurate diagnosis. “Measurements from the inside are now being used to complement external measurements, opening up additional levels of perspective to us and allowing us to target possible treatment options more accurately,” the experienced Viennese physician noted.

While it once doctors were only able to monitor changes in the **size of a tumour** as treatment progressed, they are now able to determine whether the **number of cancer cells in the tissue is declining** and identify changes in such **cells’ blood supply**. “In the past, the primary objective of any treatment was always to shrink tumours to the greatest possible extent. But new imaging methods allow us to focus on innovative therapies that are designed to cut the supply of blood to cancer cells, thereby preventing them from spreading to other parts of the body,” said Schima.

Biomarkers are also being used to diagnose vascular calcification, or **arteriosclerosis**. These indicators are used to precisely map **deposits on the arterial walls**, and make it significantly easier to assess the risk they pose to patients and help identify the presence of **blood clots** at an earlier stage. “Ultimately, with the support of the right therapeutic approaches, it will enable us to prevent blood vessels from bursting,” the President of the Austrian Roentgen Society explained.

Interventional radiology: diagnosis and treatment of strokes

In recent years the role of the radiologist has expanded significantly to cover the provision of treatment in the immediate aftermath of a diagnosis. Examples include inserting **catheters** into affected blood vessels in the brains of **stroke** patients and helping to **extract blood clots**. With only a very short space of time available to save a stroke patient’s life or prevent life-changing disability, every second counts. Interventional radiology plays a major role in making the most of this narrow window. Three international studies confirm that **13-30% more patients** that receive the treatment are now **surviving strokes without long-term disability**. “Right now we are working intensively on standards and **specialist interventional radiology training**, to ensure nationwide coverage,” **Schima concluded**.

About the ECR

The ECR is the annual meeting of the European Society of Radiology, which represents more than 63,000 radiologists. Attracting more than 20,000 participants each year, the ECR is one of the largest medical conferences on the planet. It is also one of Europe’s largest industry exhibitions, with more than 300 international companies showcasing the latest medical technology on more than 26,000m².

About IAKW-AG

Internationales Amtssitz- und Konferenzzentrum Wien, Aktiengesellschaft (IAKW-AG) is responsible for maintaining the Vienna International Centre (VIC) and operating the Austria Center Vienna. The Austria Center Vienna is Austria’s largest conference centre, with 24 halls, 180 offices and meeting rooms, and some 42,000 square metres of event space (including 22,000 square metres of exhibition space), and is one of the top players on the international conference circuit. IAKW-AG and the Austria Center Vienna are headed by Chief Executive Officer Susanne Baumann-Söllner.



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Contact

IAKW-AG – Austria Center Vienna
Claudia Reis
Press Officer

T+43 (0)1 26069-331
claudia.reis@acv.at
www.acv.at