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Thriving APAC medical imaging ecosystem boosts radiology market

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In conversation with Per Edlund, Head of Commercial Operations, Radiology Bayer Pharmaceuticals Division Asia Pacific

Even before COVID-19, the pressure to diagnose many patients speedily and accurately in the APAC region was increasing, and radiology departments need to be able to effectively handle a high number of patients. Asia Pacific accounts for half of the world's population and will have nearly 5 billion people by 2050. At the same time, its rapidly aging population – 1 out 4 people will be aged 60 years by 2050– will drive an increase in chronic medical conditions like cancer, and cardiovascular diseases. There is a strong need to image patients for faster diagnostic work, while maintaining a high level of accuracy and a strong focus on patient safety. Per Edlund, Head of Commercial Operations at Bayer Pharmaceutical's Radiology Division (Asia Pacific) shared more insights in this regard with Biospectrum Asia.

- **Could you give an overview of the challenges that surround the radiology landscape before COVID-19, and how this situation has changed during the pandemic?**

While the need for medical imaging to facilitate diagnosis, treatment decisions and therapy planning is growing exponentially, medical imaging data continues to increase and is becoming more complex at a disproportionate rate when compared with the number of available trained readers. Studies report that, in some cases, an average radiologist must interpret one image every 3–4 seconds in an 8-hour workday to meet demands. These trends drive a rising need for integrated solutions which support radiology suites to manage complexity seamlessly, and to deliver accurate diagnostic information more efficiently.

Since the pandemic, many aspects of radiology practice have changed. For one, many procedures were postponed by healthcare professionals in line with medical guidelines and society recommendations. This can delay critical diagnosis and treatment for severe diseases. In addition, the workflow is impacted, because radiology suites need to have more stringent hygiene protocols in place e.g. for the stratification of patients of different risks etc.

With healthcare workers and hospital infrastructure strained due to the pandemic, solutions that help radiology departments

be more efficient with their available resources, while still imaging patients safely and accurately, will be in high demand.

- **Medical imaging and diagnostic tools are prominently establishing a strong ecosystem in healthcare industry. How do you visualize this surge?**

Every successful treatment starts with the right diagnosis. Medical imaging is critical in confirming and assessing many diseases, and choosing the right treatment. Everyone deserves clear answers about their health, and the correct diagnosis, at the correct time, can support better patient outcomes and helps drive a more efficient healthcare system.

Today, cancer is the 2nd leading cause of death globally. Unfortunately, in APAC, liver cancer (3rd highest mortality rate) and colorectal cancer (2nd highest cause of mortality) are often diagnosed at a very late stage.

Computed tomography (CT) scans and magnetic resonance imaging (MRI) are essential tools in early cancer diagnosis, targeted treatment and monitoring disease progression. Screening can help identify abnormalities suggestive of a specific cancer or pre-cancer, even before physical symptoms are present. Early diagnosis and proper treatment can lower death rates, procedures and hospitalizations. For instance, breast MRIs may reveal additional breast cancers missed by standard mammography alone, especially in women with high breast density, which is more common in Asian women. Another example is liver cancer, where contrast-enhanced CT or MRI scans help detect the size, shape and location of liver lesions.

- **How essential are advanced radiology, AI or digital innovations to mitigate prevailing challenges at healthcare sphere?**

In times of strained healthcare workers and systems, there is a need for efficient and integrated diagnostic solutions, specifically designed to improve and automate workflow and hygienic safety, freeing radiology professionals to focus more on their patients, and keeping staff and patients safe.

Automated workflows can reduce the stress at busy radiology departments, for instance by personalizing injection protocols to specific patients, so that radiologists can spend less time monitoring machines. Such innovations allow clinics to serve more patients without compromising on patient safety and diagnostic accuracy.

Innovation can also help to reduce unnecessary invasive surgeries or procedures by delivering clearer images. For instance, liver-specific MRI contrast agent, which enables diagnosis of lesions of varying sizes in the liver, plays an important role in detecting liver lesions in both primary and secondary liver cancers, thus helping doctors with their treatment decision-making and early diagnosis in certain patients. It can be challenging to identify some of these smaller lesions before a surgery, and this contrast agent can help to differentiate between benign and malignant lesions, and in some cases, saving the need for invasive procedures like a biopsy.

In addition, digitalization and artificial intelligence (AI) have tremendous potential to advance the field of radiology and can help radiology suites become more efficient. Software solutions support radiology staff in tracking imaging procedures, contrast media injections and staff interactions from start to finish, maximizing resources to image more patients, potentially reducing clinic waiting times. AI can turn large amounts of data into valuable insights that support radiologists in diagnosis e.g. by filtering out scans that may require more attention.

Digital and AI-based software solutions also have great potential to seamlessly integrate imaging devices, fluid delivery systems, and contrast media innovations within a medical imaging workflow, which can improve the speed and accuracy of diagnosis, and create more efficiency by reducing workloads and patient waiting times. Collaborations such as Bayer's and Blackford Analysis' recently announced partnership aims to fulfill this, by establishing a platform to deliver one-stop centralized access to a toolbox of digital and AI-powered applications, which can holistically support the medical imaging workflow. This platform will curate digital clinical imaging and workflow applications, developed by Bayer and strategic health-technology partners, aimed at assisting with the complex decision-making processes of radiologists. Establishing a platform to deliver one-stop centralized access to a toolbox of digital and AI-powered applications can holistically support the medical imaging workflow. This platform will curate digital clinical imaging and workflow applications, aimed at assisting with the complex decision-making processes of radiologists.

- **What's your keynote towards encouraging investments and partnerships in the radiology landscape?**

Radiology is a very dynamic medical field, and continuing professional education is critical to advance patient care. Healthcare stakeholders like Bayer with the scientific profile and ability to connect people throughout the world are in a great position to foster scientific exchange between radiology professionals across different countries and specialties. In 2020, Bayer's Radiology team initiated an exchange between its Centers of Excellences in China with radiology clinics in Latin

America, Korea, Russia and Italy, to exchange experiences on how to handle the pandemic situation.

The value of collaboration is higher than ever to deliver breakthrough science, as evident in the accelerated development of novel vaccines during the pandemic. Partnerships such as those outlined above between Bayer and Blackford Analysis have the potential to radically transform the continued improvement of diagnosis and treatment of severe chronic diseases during the pandemic, to improve patient outcomes and lighten hospital workloads.