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## Addressing Tomorrow's Radiology Workflow & Workforce Issues with Today's Technology



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Breast cancer is the most commonly diagnosed cancer in women, accounting for one in four annual cancer cases world wide <sup>1</sup> In Europe alone, 576,337 women were diagnosed with the disease in the year 2020<sup>2</sup> Breast cancer can have devastating effects on patients and the people around them, as the disease kills more European women than any other cancer.<sup>2</sup> In the ongoing absence of a cure, routine breast screening is essential to detect cancer early and maximize patient well being.

The COVID-19 pandemic has upended screening across Europe over the past year, leading to backlogs and delayed appointments for countless women. However, even beyond the pandemic, threats to breast screening still exist. Radiologists are the medical doctors who specialize in interpreting imaging and help guide patient care decisions, however recent research shows that European radiology workforce development is not keeping up with the growing demand for imaging. According to the 2020 annual census from the U.K. Royal College of Radiologists (RCR), the U.K. radiologist workforce is short-staffed by approximately 33% and needs nearly 2,000 more radiology consultants to ensure appropriate staffing as well as meet pre-pandemic levels of demand for imaging.<sup>3</sup> The RCR notes that clinical radiology workforce shortages have increased in recent years, potentially delaying diagnoses and negatively impacting patient care<sup>4</sup>

Workforce development shortcomings can perhaps be attributed to a lack of interest in pursuing clinical career pathways, as the high costs and long duration of medical education can pose significant barriers to potential applicants. In addition to difficulties with bringing new individuals into the healthcare workforce, existing professionals are also retiring, some earlier than initially intended due to the ongoing pandemic. A recent 2021 survey by the British Medical Association of U.K. doctors across various specialties found nearly one out of three respondents were more likely to retire early than they were last year.<sup>5</sup> Taken together, these compounding factors put immense pressure on European radiology, threatening providers and patients alike.

While recruitment campaigns and workforce development funding are critical to addressing these issues, it is equally if not more important to empower the people already working in European radiology suites today. Artificial intelligence (A.I.) in particular is a crucial component for women's healthcare, both now and moving forward, as it has the power to streamline radiology workflow and improve accuracy, helping to potentially address the problems caused by apparent staffing shortages. Rather than replacing personnel, A.I. can help to augment and elevate the everyday skill sets of those operating in today's health system.

Artificial intelligence innovations like Hologic's 3DQuorum™ Imaging Technology, Powered by Genius AI™, are designed to improve mammography efficiency and workflow without compromising image quality, sensitivity or accuracy. Commercially available in Europe, 3DQuorum reconstructs high-resolution 3D data to produce 6mm "SmartSlices," effectively reducing the number of 3D images to review by two-thirds and saving radiologists an average of one hour per eight hours of daily image interpretation time.<sup>6,7</sup> A.I.-enabled technologies have the

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ability to potentially remedy workforce issues by allowing current professionals to be more efficient and accurate, but they can also help address workflow problems.

The European Commission Initiative on Breast Cancer (EBIC) guidelines on breast cancer screening and diagnosis recently recommended for the first time the use of either digital breast tomosynthesis (DBT) or digital mammography in screening. Also known as 3D mammography, DBT provides radiologists with increased accuracy and insights compared to 2D mammography, helping to improve cancer detection while also reducing the need for additional imaging. However, the additional breast imaging slices generated by DBT can lengthen the image reading process for radiologists and potentially contribute to reader fatigue. Artificial intelligence technologies such as 3DQuorum are essential to ensuring that providers can effectively utilize medical innovations like 3D mammography and maximize their benefits for optimal patient outcomes.

Improving radiology workflow and efficiency through technology is crucial to women's health, both amidst pandemic-related screenings backlogs and in the future as digital breast tomosynthesis becomes the standard of care. Artificial intelligence and deep learning innovations are capable of enhancing cancer detection and operational efficiency, while also providing clinical decision support. To prepare for tomorrow's healthcare landscape, it's essential for providers and facilities to integrate today's technologies like 3DQuorum.

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