



Imagine Now & Next

FUJIFILM Healthcare redefining frontiers for orthopaedic clinicians and their patients

Orthopaedic departments require access to a variety of imaging solutions – including MRI, ultrasound and X-ray – to support diagnosis of injuries and disorders affecting bones and soft tissues. Efficient imaging can streamline patient flow through a department, reduce pressure on radiographers, radiologists and clinicians, and improve diagnosis and the overall hospital journey for patients.

The perfect match

At FUJIFILM Healthcare, we are driven to provide innovative, sustainable and economical imaging solutions to orthopaedics departments, through our comprehensive portfolio. With over 80 years of expertise and experience in medical technology, we're proud to offer individualized workflows coupled with comprehensive knowledge, working with busy orthopaedics departments to ensure the best clinical outcomes and patient experiences.

The future of diagnostics

A recent report from the Deloitte Centre for Health Solutions – [The future of diagnostics: Technology driven personalised and preventative healthcare in Europe](#) – discusses a number of advancements in the field of medical diagnostics, and the importance of appropriate and timely testing, to provide cost-saving opportunities and improve patient outcomes across the whole healthcare system. In the area of radiology, it highlights how artificial intelligence (AI) will enhance the future of radiology, by automating screening to assist in triaging patients in populations which have limited or no access to radiologists, and by using advanced analytics to streamline workflows and take the pressure off radiologists. It gives the example of BoneView, and the collaboration between Fujifilm and GLEAMER, which provides AI software integrated to Fujifilm's imaging systems to identify bone trauma more efficiently at the point of acquisition, thereby enabling a further enhancing of patient care. At Fujifilm, we are proud to be advancing the future of medical imaging for patients and clinicians with solutions like BoneView.

AI for orthopaedics

Currently, AI such as that found in BoneView can be applied to the analysis of 2D images, such as X-rays, where it uses deep learning in combination with big data gathered from the analysis of millions of X-ray images to identify suspicious lesions in bone structures. This supports the diagnosis of fractures and microlesions, especially those that are small and can be easily missed. Each image is analysed pixel by pixel to identify areas of concern. Compared to manual review of X-rays, this system of AI image analysis:

- accelerates diagnosis of fractures by reducing reading time per patient;¹
- increases accuracy and reduces missed lesions;²

- helps to enhance patient outcomes;
- helps to improve reading comfort for radiologists;
- helps to optimise efficiency in the radiography department;
- helps triage and prioritising of cases;
- supports busy doctors and radiographers.

From software to hardware

As digital radiography (DR) has developed, it has been Fujifilm's mission to provide the highest quality images while balancing the minimum possible radiation doses for patients, and this is as true in orthopaedics as it is for every other specialty. The [FDR-D-EVO III™](#) is our latest digital X-ray detector, with a world's first glass-free design that makes it one of the lightest and most durable detectors available. The lightweight nature of the detector provides optimum handling, without compromising high-quality imaging. By combining practical hardware solutions with innovative software, our aim is to improve the workflow for radiographers and radiologists, helping them to support their clinical colleagues in orthopaedics.

Improving the patient MRI experience

It is also extremely important in orthopaedics to minimise pain and discomfort for patients while they are being manipulated for imaging procedures. For this reason, Fujifilm has innovated MRI to enhance diagnostics, image quality, patient comfort and speed, and now offers a portfolio of open musculoskeletal MRI solutions including the [AIRIS™ Vento](#), [APERTO™ Lucent](#) and [OASIS™ Velocity](#). The open design of these scanners does away with the traditional enclosed structure – which can be uncomfortable and claustrophobic for some patients – and allows patients an unrestricted view, making it more comfortable for individuals of all shapes and sizes, with the added benefit of letting parents accompany their children for what can be a daunting experience. The three machines vary in size, cost, and functionality, offering departments the option to choose a system that best meets their requirements. Moreover, the SynergyDrive™ Automation Suite workflow ensures a fast patient throughput for all systems, helping to both achieve high image quality and to maximise efficiency in the department.



For more information about Fujifilm's innovative orthopaedic solutions, visit <https://seelearn-emea.fujifilm.com/orthopedic-solution-uk/>

References

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2. Duron L, Ducarouge A, Gillibert A, et al. Assessment of an AI Aid in Detection of Adult Appendicular Skeletal Fractures by Emergency Physicians and Radiologists: A Multicenter, Cross-sectional Diagnostic Study. *Radiology*. 2021;300(1):120-129. doi:10.1148/radiol.2021203886

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