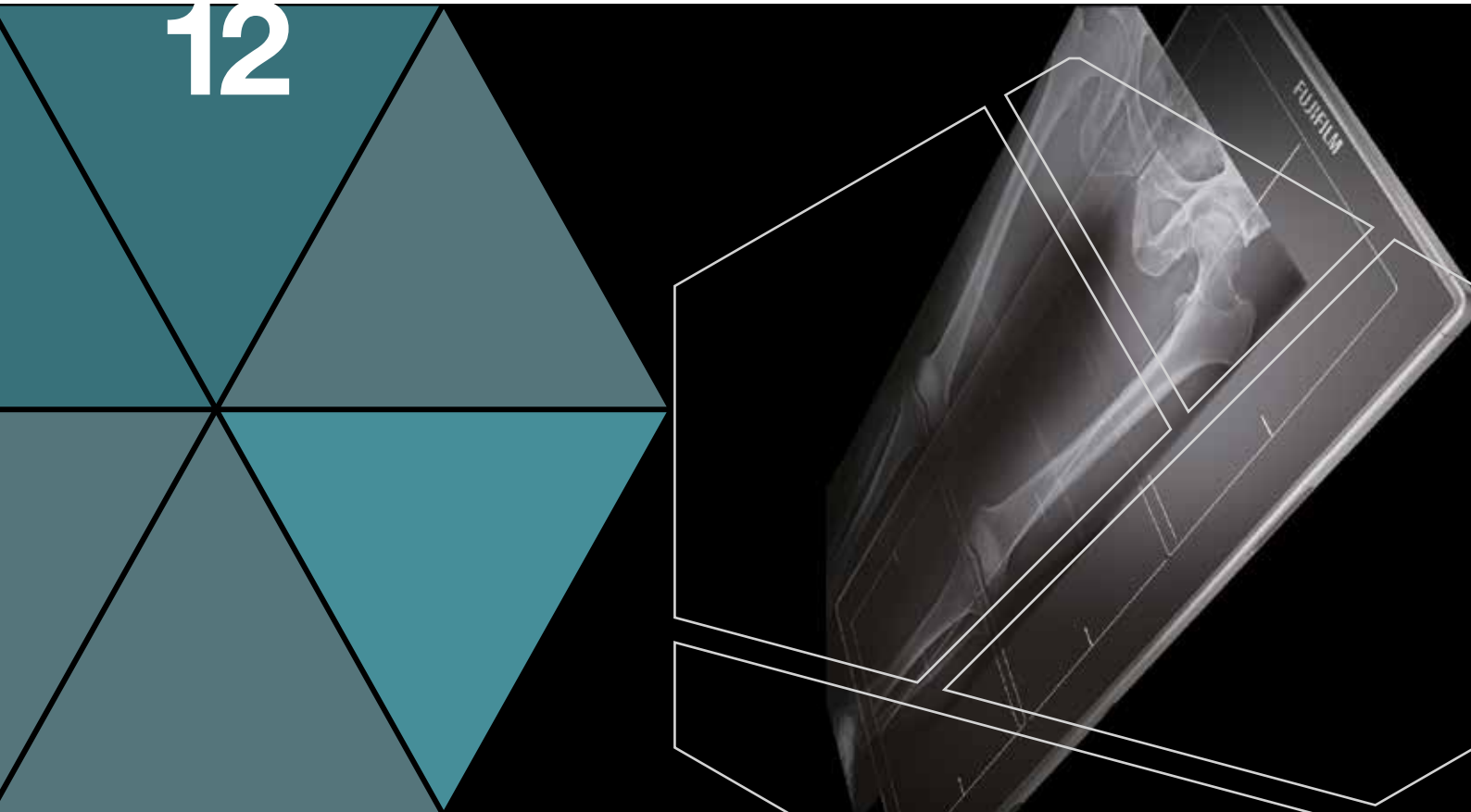


FDR D-EVO GL USER'S VOICE

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Digital Radiography

FDR D-EVO GL has cut the examination time by half and reduced the radiation dose maintaining good image quality.

by PernilleKlenz Andersen, Radiographer, Clinic of Radiology, Copenhagen University Hospital (Rigshospitalet) Jonny Fugl Madelung, Chief of Radiography, Clinic of Radiology, Copenhagen University Hospital (Rigshospitalet)



The Copenhagen University Hospital, Rigshospitalet, was Denmark's first real hospital, first opened in 1757 under the name "Royal Fredriks Hospital" offering free care and treatment for poor Copenhageners. The Department of Diagnostic Radiology has 270 employees and carries out diagnostics and treatment at a highly specialized level, receiving patients from the entire country as well as the Faroe Islands and Greenland, as well as teaching radiography and medical students. With 255 000 examinations per year, the Department of Diagnostic Radiology at Rigshospitalet in Copenhagen is the largest radiology department in Denmark. About 3 000 scoliosis examinations are carried out annually on patients from all over Denmark, as most forms of progressive scoliosis are referred to Rigshospitalet. In June 2017, Rigshospitalet introduced Fujifilm's 43x125cm detector "FDR D-EVO GL" and has been evaluating it for scoliosis and hip/knee/ankle examinations since its introduction and is very satisfied with the result. "Many of our patients find it difficult to sit or stand; it causes them pain or they need someone to support them. Conventionally, the examination with DR image stitching requires 2-3 exposures and takes more than ten seconds, which gives stress to patients and causes motion artifacts in the image (Fig. 1). On the other hand, the use of single shot long CR cassettes causes a long waiting time for the patients to know if the examination is



PernilleKlenz Andersen, (Left), Line Willemoes Poulsby (Right)

well done. The examination with D-EVO GL long panel is very fast, as it only requires a single exposure and it takes less than half the time, sometimes even faster to carry out the examination, reducing the stress and artifacts. Many patients have said 'Wow, that was fast!' They are relieved that they do not need to sit or stand for a long time," says Pernille Klenz Andersen, radiographer at Rigshospitalet. When Pernille started at Rigshospitalet eleven years ago she saw that many scoliosis patients suffered from having a long wait to see that the result of the exposure was successful. "At the ECR held in Vienna ten years ago, I went round asking the exhibitors if anyone had developed a direct digital long panel. Everyone said no. Some years passed, and then I was very glad to hear the news that Fujifilm were developing a long detector. I and the chief of radiography Jonny held a discussion with them on the requirement for the detector" says Pernille. Apart from saving time and stress on patients, Pernille and her colleagues have enjoyed two other major ergonomic benefits of FDR D-EVO GL while they have carried out 700 scoliosis examinations since mid-June, 2017; time-saving for staffs and reducing dose while maintaining good image quality. Handling a



Copenhagen University Hospital (Rigshospitalet)

48-year-old patient, slightly bigger than average



109kV, 100 mAs with FCR



102kV, 80 mAs with FDR D-EVO GL

stitching partition for DR stitching system or long cassettes which contained the image plates is not necessary for acquisition with FDR D-EVO GL. This reduces time for technologists to prepare for examinations while increasing time for patient care, and ultimately led the department to taking more patients per day and reduce waiting lists.

Also, with the long panel we are able to use a lower radiation dose while obtaining at least as good an image quality. "Equipped with Fujifilm's proprietary Irradiated Side Sampling technology (Fig.2), the D-EVO GL significantly suppresses scattering and increases attenuation of X-ray signals, improving efficiency to produce sharper images at lower doses. Thanks to this unique technology, the dose for scoliosis examination could be reduced. "The dose is lowered when comparing to patients' previous examinations performed on CR. When using the same exposure as previously used, the images turn out less noisy and "sharper" (clearer). On some patients, we're even able to reduce dose and still obtain a better image quality than before. Overall, FDR D-EVO GL contributes to the hospital in all aspects; patient satisfaction, more possibility to accept patients and high image quality with lower dose. The hospital is now planning to make a further investigation on the possibility of minimization of dose.

Fig. 1

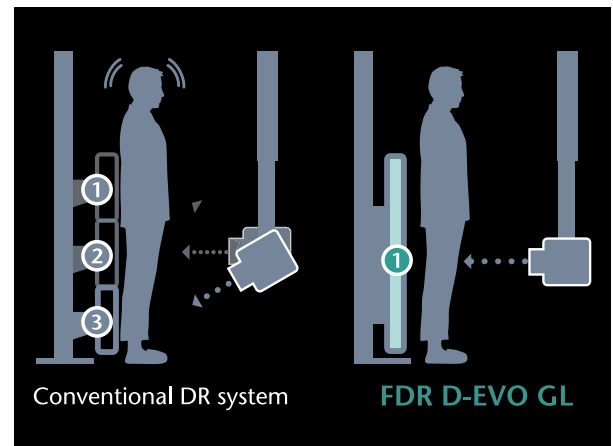


Fig. 2

