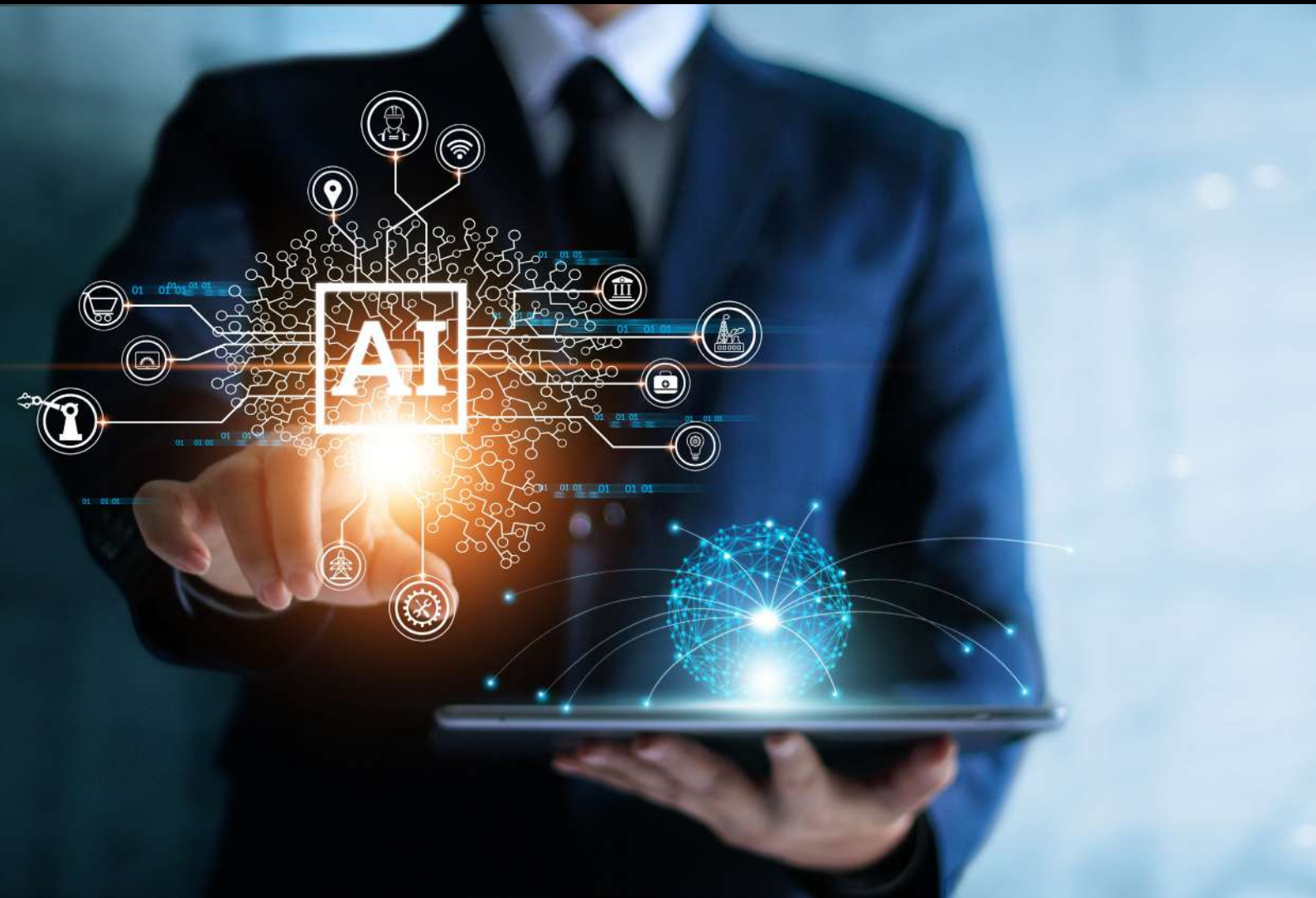# Intelligent **NR**
DEEP LEARNING

Canon's new AI image processing option uses an algorithm based on deep-learning to read and eliminate noise on clinical images.
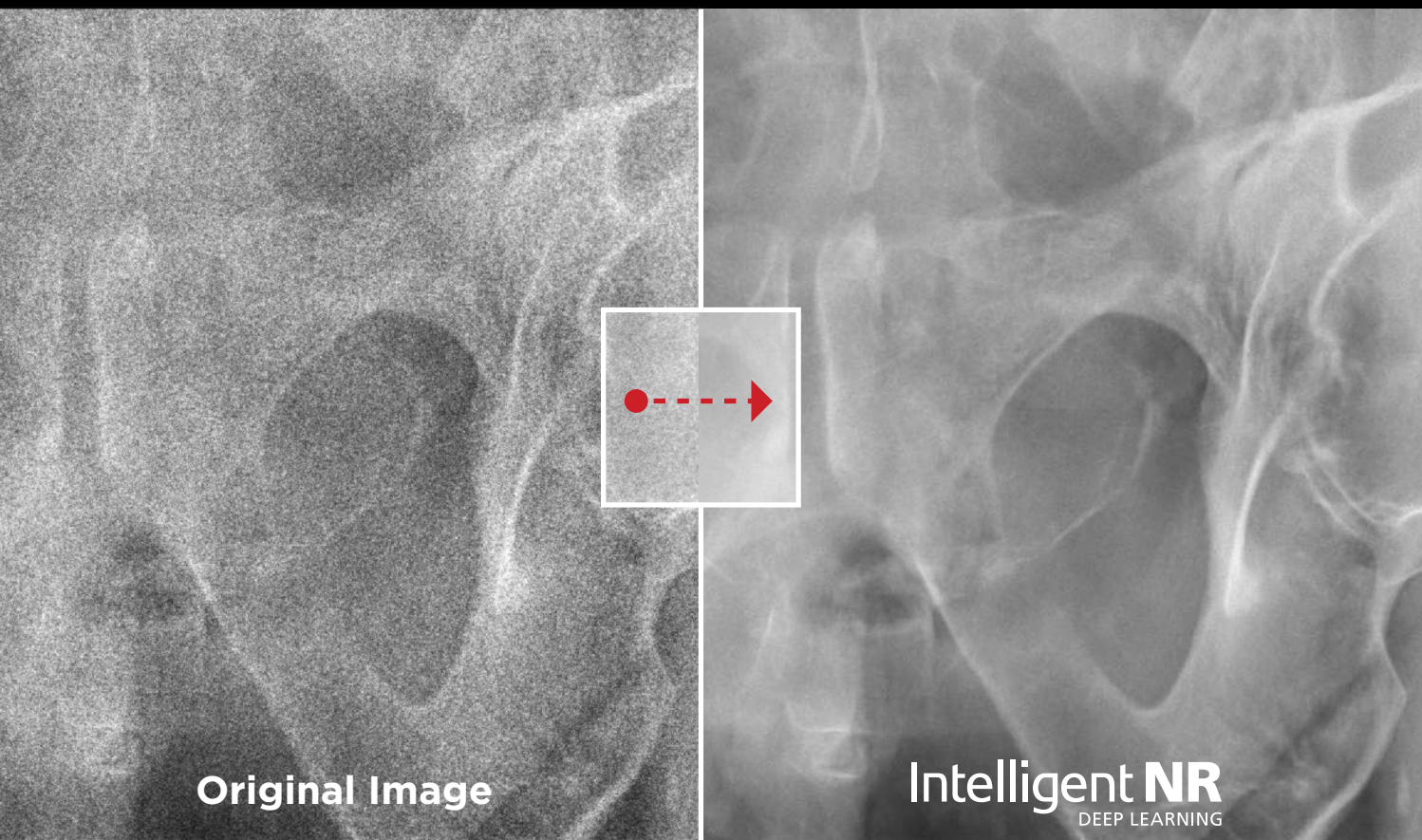
Canon

CANON MEDICAL COMPONENTS EUROPE B.V.

Intelligent Noise Reduction (Intelligent NR)

Intelligent NR delivers high quality diagnostic images by reducing noise with no noticeable loss of anatomical detail. This provides the potential for significant dose reduction, while maintaining superior image quality.
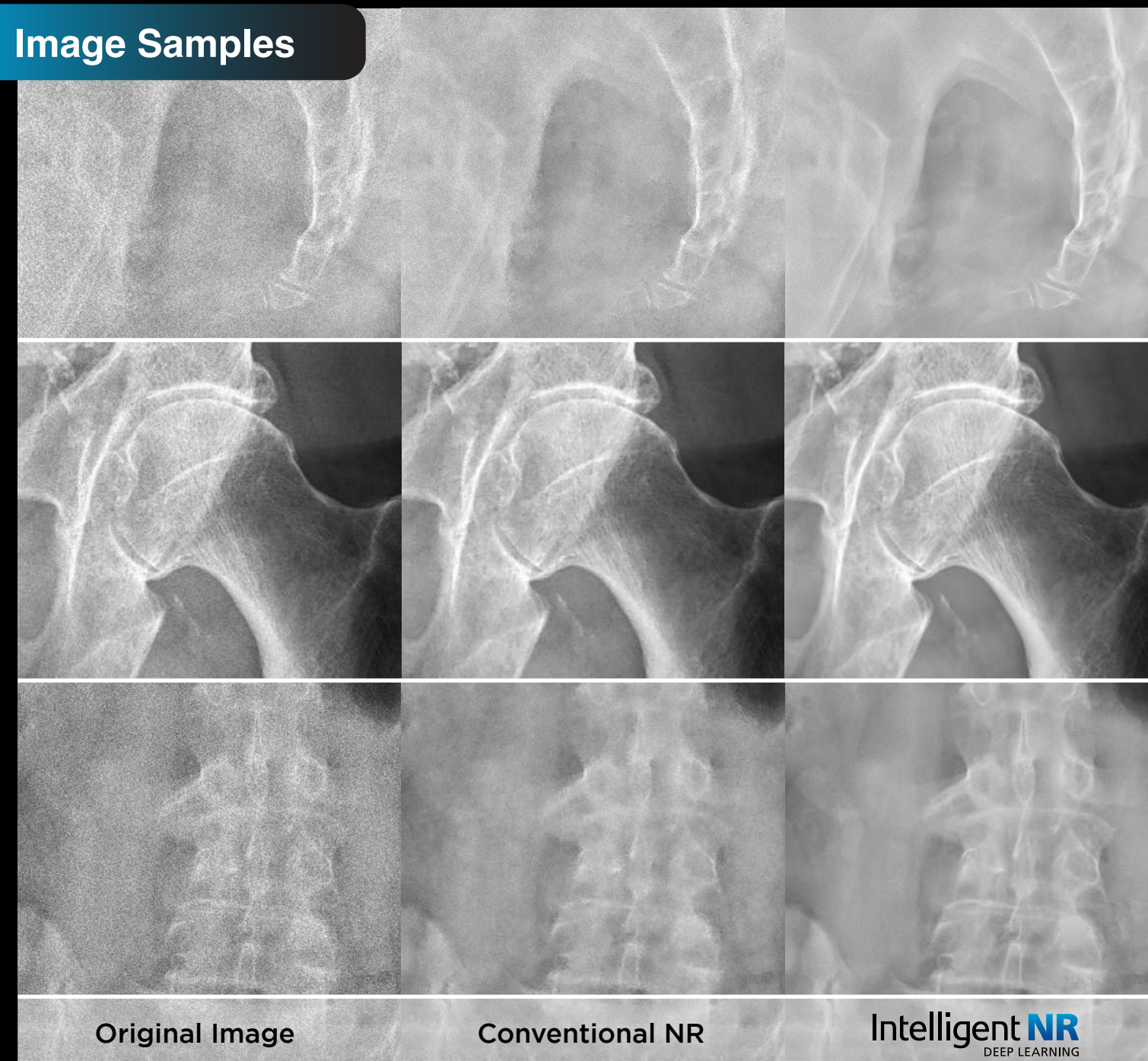

Original Image

Intelligent **NR**
DEEP LEARNING

Efficacy

Intelligent NR was developed using machine learning and an existing clinical image database to create a neural network for deep-learning. By identifying the characteristics of noise and applying the pre-learned neural network, a noise-reduced image is created.
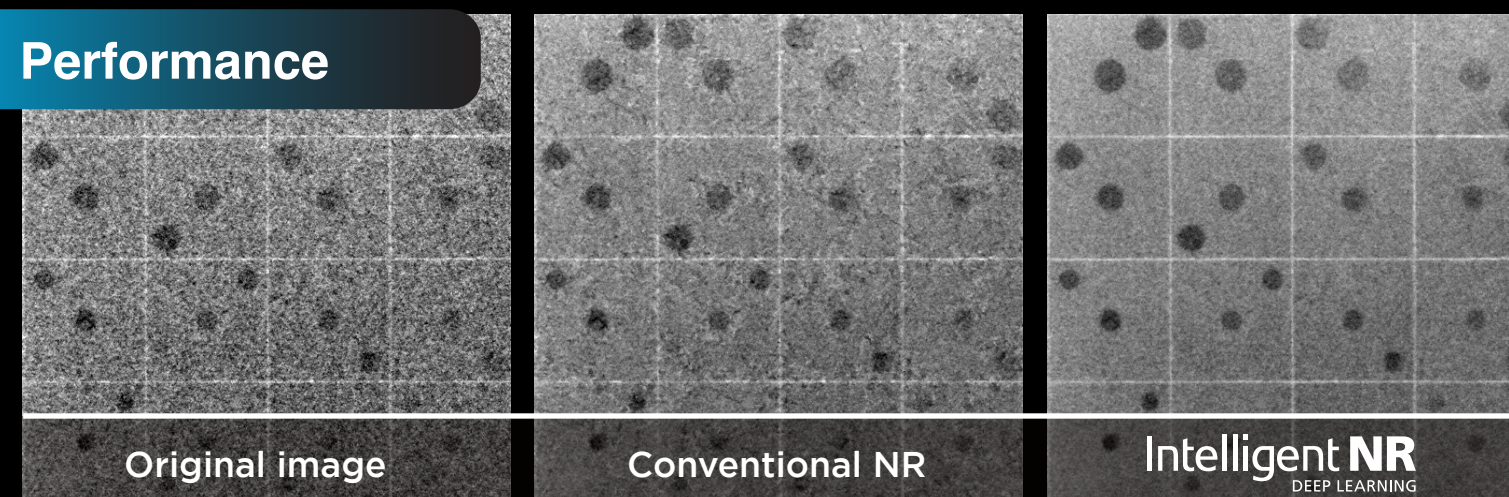
The software decreases the graininess of DR images by increasing the signal to noise ratio without loss of anatomical data, therefore, improving diagnostic value.

It complies with the ALARA principle by allowing for a possible reduction in radiation dose and improvement of diagnostic image quality.
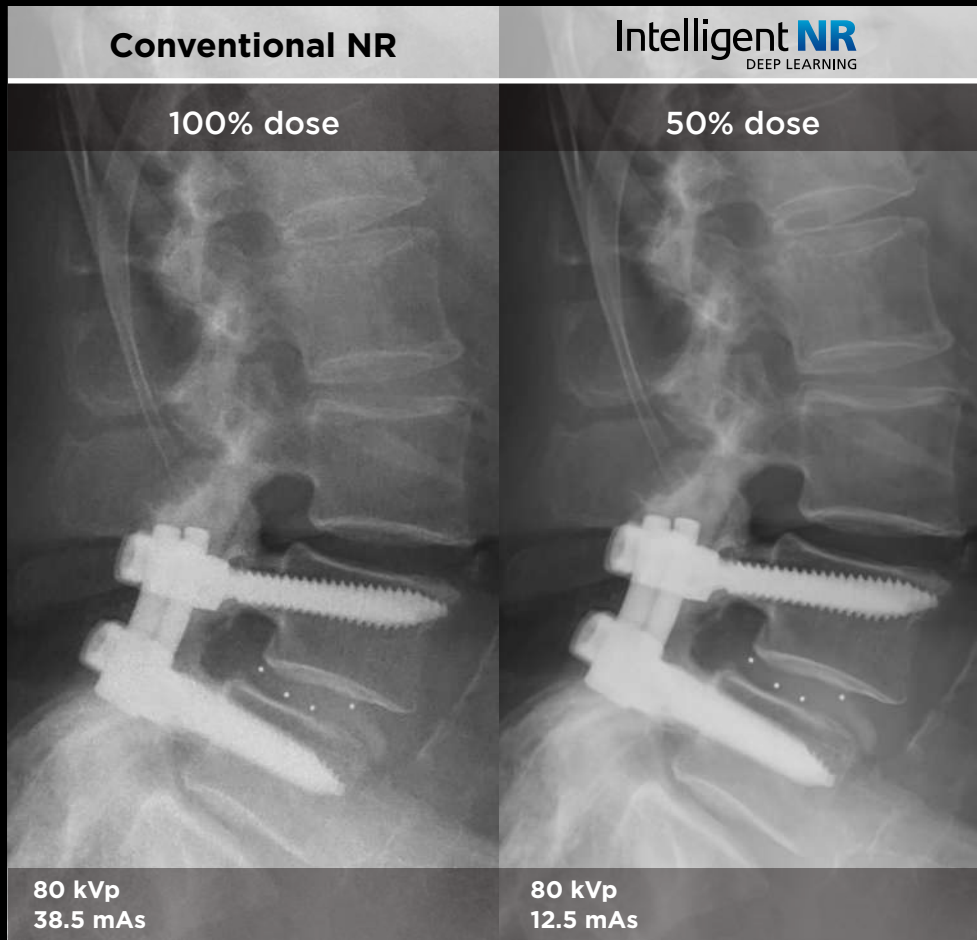
Image Samples

Original Image | Conventional NR | Intelligent **NR**
DEEP LEARNING

Performance

Original image | Conventional NR | Intelligent **NR**
DEEP LEARNING

Visible Results

Conventional NR	Intelligent **NR** DEEP LEARNING
100% dose	**50% dose**

80 kVp
38.5 mAs

80 kVp
12.5 mAs

Improved image quality at lower (half) dose with Intelligent NR
when compared to conventional NR at 100% dose.

Key Features

⚛ Possible dose reduction.

🖥 Complies with ALARA principle when improving image quality.

⏱ Increased image quality and fewer repeats- patients spend less time in x-ray department

🔧 Only available on x10 and Elite series. Available on NE 3.10 or higher. (Minimal PC specifications apply)

INR 052023 V1