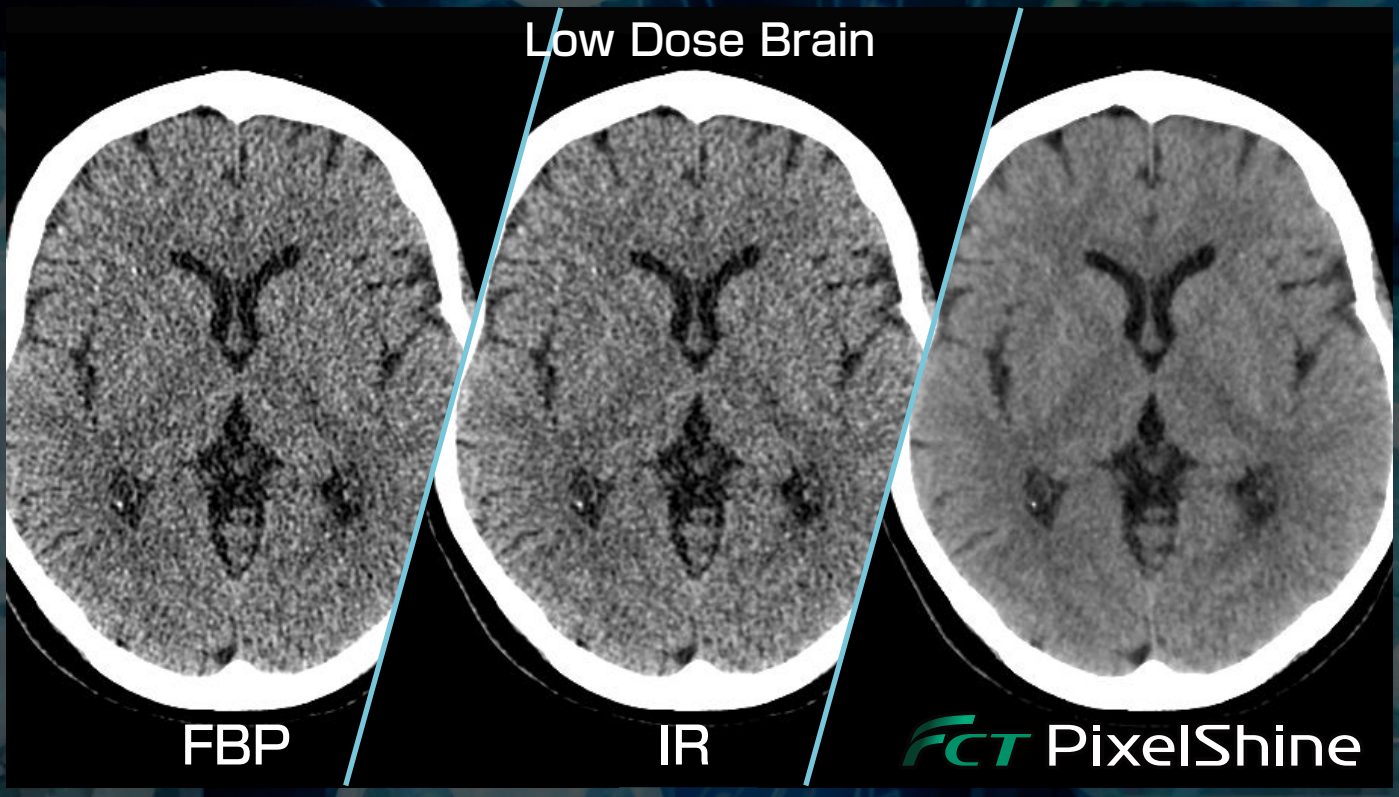
FUJIFILM
Value from Innovation

FCT PixelShine

Powered by AlgoMedica

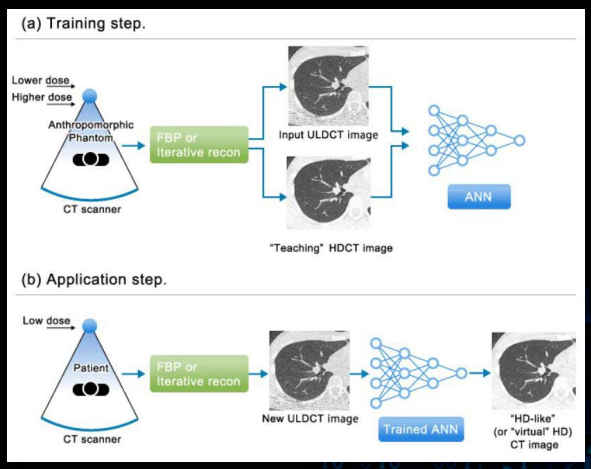
Deep Learning based Image Processing Software



- High quality images without blurring
- Natural-looking CT images
- Processing time - typically less than a minute
- No dedicated hardware required (Requires standard PC hardware only)
- FDA 510(K) cleared. CE marking obtained.

Manufacturer : AlgoMedica, Distributed by FUJIFILM

Deep Learning Based Image Processing

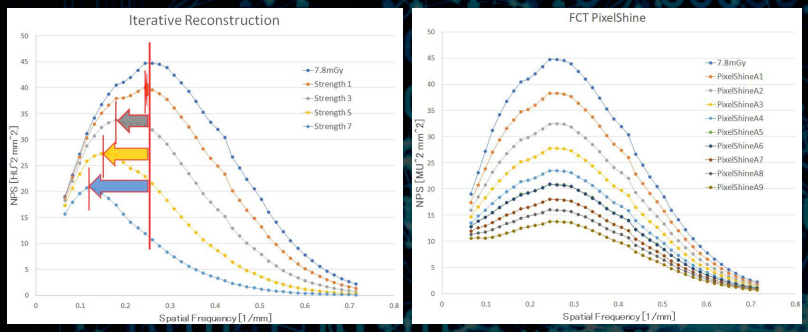


Deep learning technology was used to train FCT PixelShine to improve the reconstruction of low dose CT images. During the training, an extensive number of noisy low and high quality standard-dose CT image pairs were presented to FCT PixelShine. After the training, FCT PixelShine successfully acquired the mapping function between noisy low dose images and corresponding high quality standard-dose images.

Difference from Iterative Reconstruction

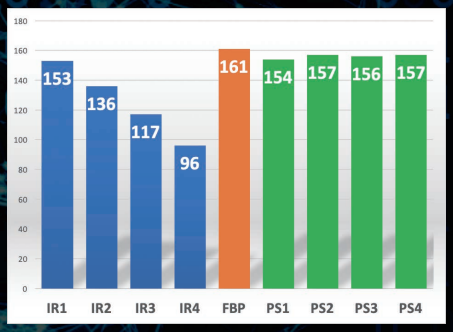
- **Less blurriness**
- **Better CT value preservation of small objects**

Noise Power Spectrum (NPS)



The above NPS curves indicates that FCT PixelShine reduces noise without blurriness. On the other hand, Iterative Reconstructions tends to introduce more blurriness by more noise reduction. NPS curve indicates noise magnitude by area under the curve and noise texture by its curve shape. .

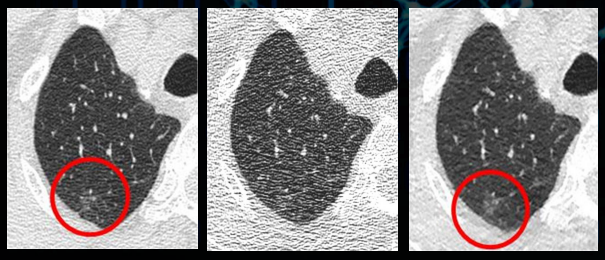
Coronary Artery Calcium CT Value



FCT PixelShine preserves coronary artery calcium CT values regardless its processing strength. Contrarily, Iterative reconstruction decreases calcium CT values by its strength.

Patient-friendly Examination

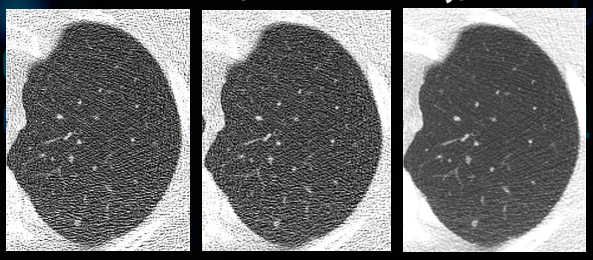
Low dose CT



CTDIvol : 12.4mGy IR | CTDIvol : 1.3mGy IR | CTDIvol : 1.3mGy FCT PixelShine

The 1.3 mGy image (middle) is much noisier than the 12.4mGy image (left) and a ground glass nodule (GGN) was not recognizable in the 1.3 mGy image. FCT PixelShine successfully denoised the 1.3 mGy image and made the GGN visible (right).

Ultra Low dose CT (CTDIvol : 0.2mGy)



FBP | IR | FCT PixelShine

0.2 mGy is equivalent to a chest X-ray image and is about 1/10 radiation dose compared to the current lung cancer screening. FCT PixelShine successfully cleaned up noise in the image.

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