Ease-of-use and protocol optimization

Based on a webinar with Christopher Ahlers, MD, radiomed

Applying AI and deep-learning algorithms to MR image reconstruction is an exciting realization of technology that is enabling improvements in MR that haven't been possible using conventional reconstruction methods. Healthcare providers are using this technology to produce high-quality images with shorter scan times, overcoming the historical trade-offs in MR between scan time and image quality.

GE Healthcare's recent webinar featured a panel of clinicians discussing the impact of AI solutions on MR cases, from a clincial standpoint. They've seen improvements in productivity and return on investment (ROI) that impact their overall imaging operations and workflow.

The application of deep-learning reconstruction to MR imaging has resulted in superior image quality while reducing patients' time in the scanner. Christopher Ahlers, MD, a radiologist and managing partner at radiomed Practice for Radiology and Nuclear Medicine in Wiesbaden, Germany, noted that these types of clinical results are not only possible but also extremely easy to use. And this AI solution can be incorporated seamlessly into clinical practice without additional work for the radiologist. Dr. Ahlers presented cases using deep-learning reconstruction.

> **[With AIR™ Recon DL‡] we can drastically increase the contrast to noise ratio, which really improves lesion conspicuity. It allows us to push protocols or applications to levels that would otherwise be incompatible with conventional reconstruction and works in any anatomy.**
>
> **Christopher Ahlers, MD**
> radiomed

Dr. Ahlers also noted several new opportunities for imaging that are enabled by deep-learning image reconstruction, such as cardiac myocardial perfusion imaging, where he's been able to increase the spatial resolution in order to decrease artifacts, as well as free-breathing imaging sequences, which require virtually no cooperation from the patient and achieve great image quality with low noise levels (Fig. 3).

Use the QR Code to get access to the full AIR™ Recon DL webinar with our panel of experts
http://tinyurl.com/intelligentlyefficient

‡ Not yet CE marked on 1.5T. Not available for sale in all regions.

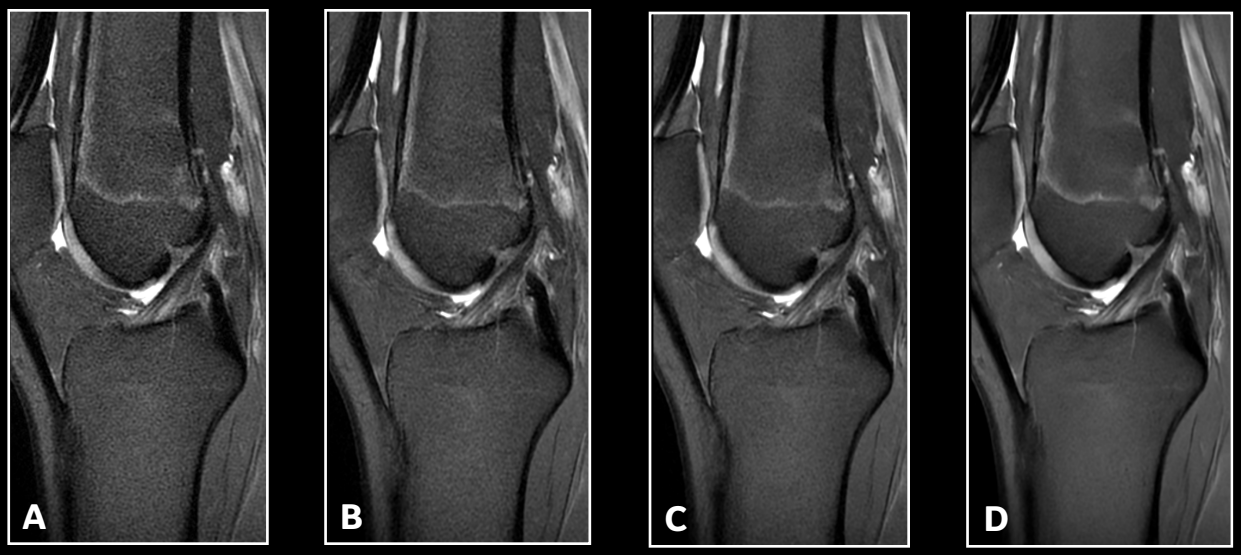

Figure 1. User selectable AIR™ Recon DL strength. Sagittal PD FS = FatSat FSE, 0.4 x 0.5 x 3.0 mm, 2:17 min. (A) Conventional reconstruction, (B) AIR™ Recon DL strength Low, (C) AIR™ Recon DL strength Medium, and (D) AIR™ Recon DL strength High.

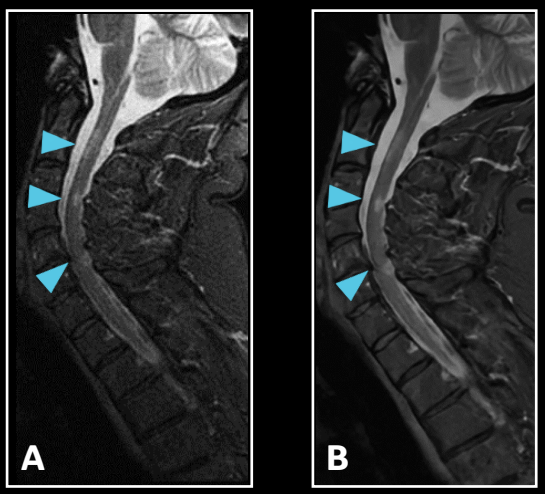

Figure 2. Cervical spine, Sagittal PD STIR, 0.9 x 1.0 x 3.0 mm, 1:26 min. (A) Conventional reconstruction, and (B) with AIR™ Recon DL High.

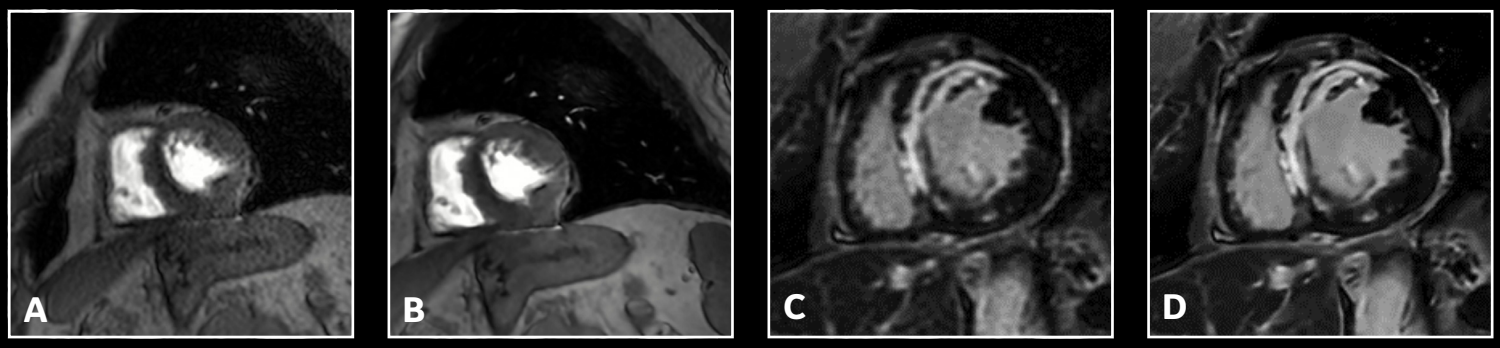

Figure 3. Cardiac exam. (A) and (B) Perfusion, (A) Conventional reconstruction, (B) with AIR™ Recon DL High, (C) and (D) Short axis MDE, (C) Conventional reconstruction, and (D) with AIR™ Recon DL High.

JB03495XX

To learn more, please contact your GE Healthcare sales specialist or visit us online:
www.gehealthcare.com/mr