### Supplementary Video 1 link:

# (a) https://www.youtube.com/watch?v=r2\_jXqEte6Q

#### (b) https://www.youtube.com/watch?v=7CKdrLCjhAg

### (c) https://www.youtube.com/watch?v=t4xtnUj0-6A

Supplementary Video 1. Videos of consecutive images from an 18-year-old man with active Crohn's disease who underwent dynamic enteric phase contrastenhanced T1-weighted magnetic resonance enterography. Three sets of images were obtained and reformatted in the axial plane with a 1.4-mm slice thickness: (a) with conventional reconstruction and no image filter (original); (b) with conventional reconstruction and image filter (filtered); and (c) with deep-learning reconstruction (DLR) at the noise-reduction level of 75% (DLR). The videos were taken from all image sets at a fixed window level (2.666 HU) and width (5.320 HU). The DLR images (c) better visualize active inflammation in the ascending colon with lower noise, a sharper margin of the bowel wall and vascularity, and better contrast of bowel wall stratification compared with the other two images (a, b). In the qualitative analysis, the DLR image was given a higher score (5) by the two readers regarding overall image quality, contrast, sharpness, and motion artifacts than the other two images (both 4). The key images of the same patient are presented in Figure 2.

#### Supplementary Video 2 link:

## (a) https://www.youtube.com/watch?v=reRKonWDGBM

## (b) https://www.youtube.com/watch?v=Qo75KqG9Ql4

Supplementary Video 2. Video of consecutive images from a 27-year-old woman with active Crohn's disease who underwent dynamic enteric phase contrastenhanced T1-weighted magnetic resonance enterography. The coronal images (**a**) were obtained using deep-learning reconstruction at the noise-reduction level of 75% and then reformatted to axial images (**b**). In the coronal images, an inflammatory mass in the ileocecal area (Im) is noted with two fistulous tracts connected to bowel loops (red/white arrows in a). In the axial images, one of the fistulous tracts (red arrows in b) reveals a connection between the inflammatory mass and the cecum, whereas the other tract (white arrows in b) is a bidirectional fistula communicating between the cecum, the terminal ileum, and the inflammatory mass. Two fistulas are demonstrated more caudal to the ileocecal valve. Note that the relationship of the bidirectional fistulous tract between the bowel loops is clearly visible in the axial images, which help clarify anatomic detail when reviewed along with coronal images. The key images of the same patient are presented in Supplementary Figure 6.