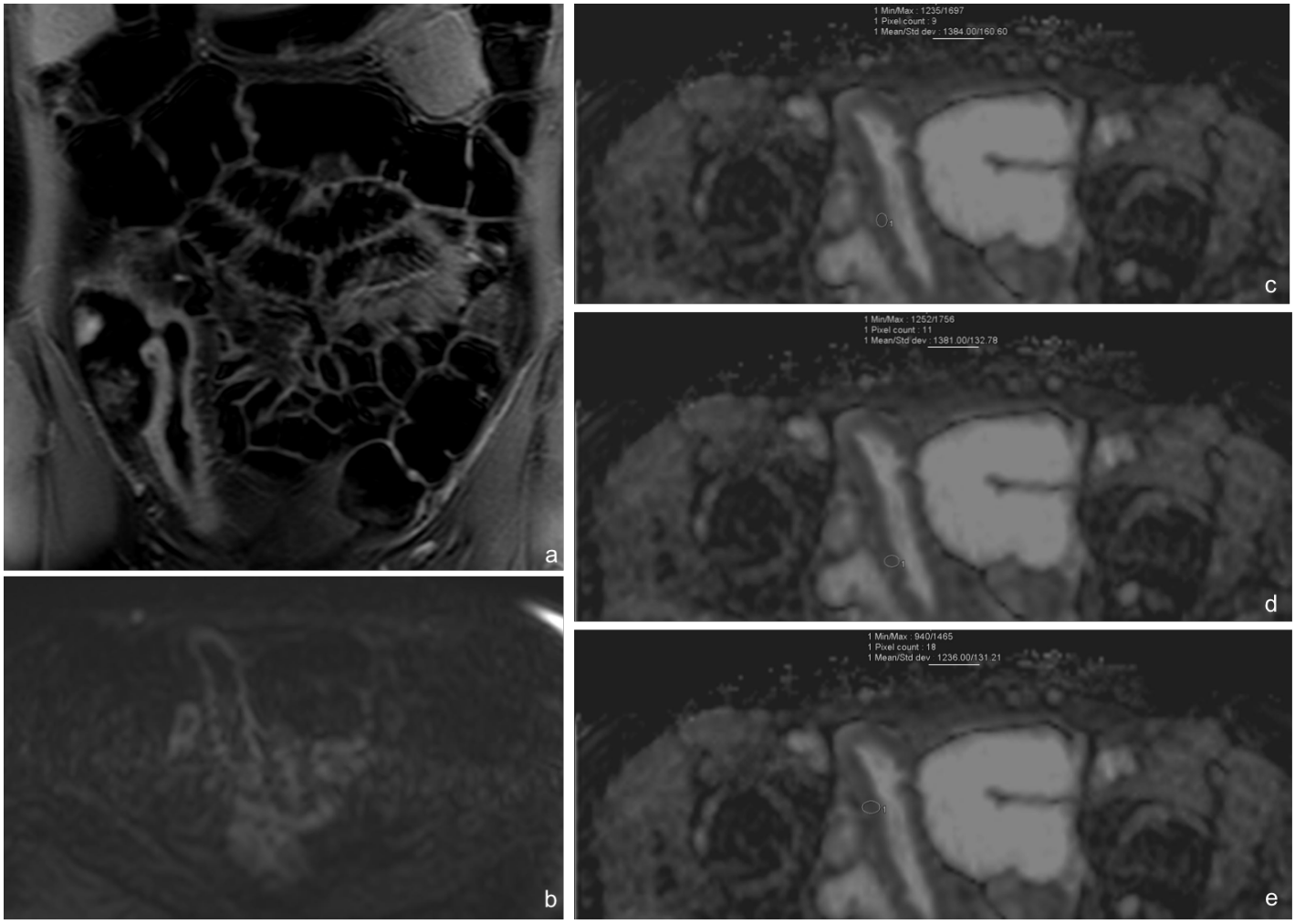
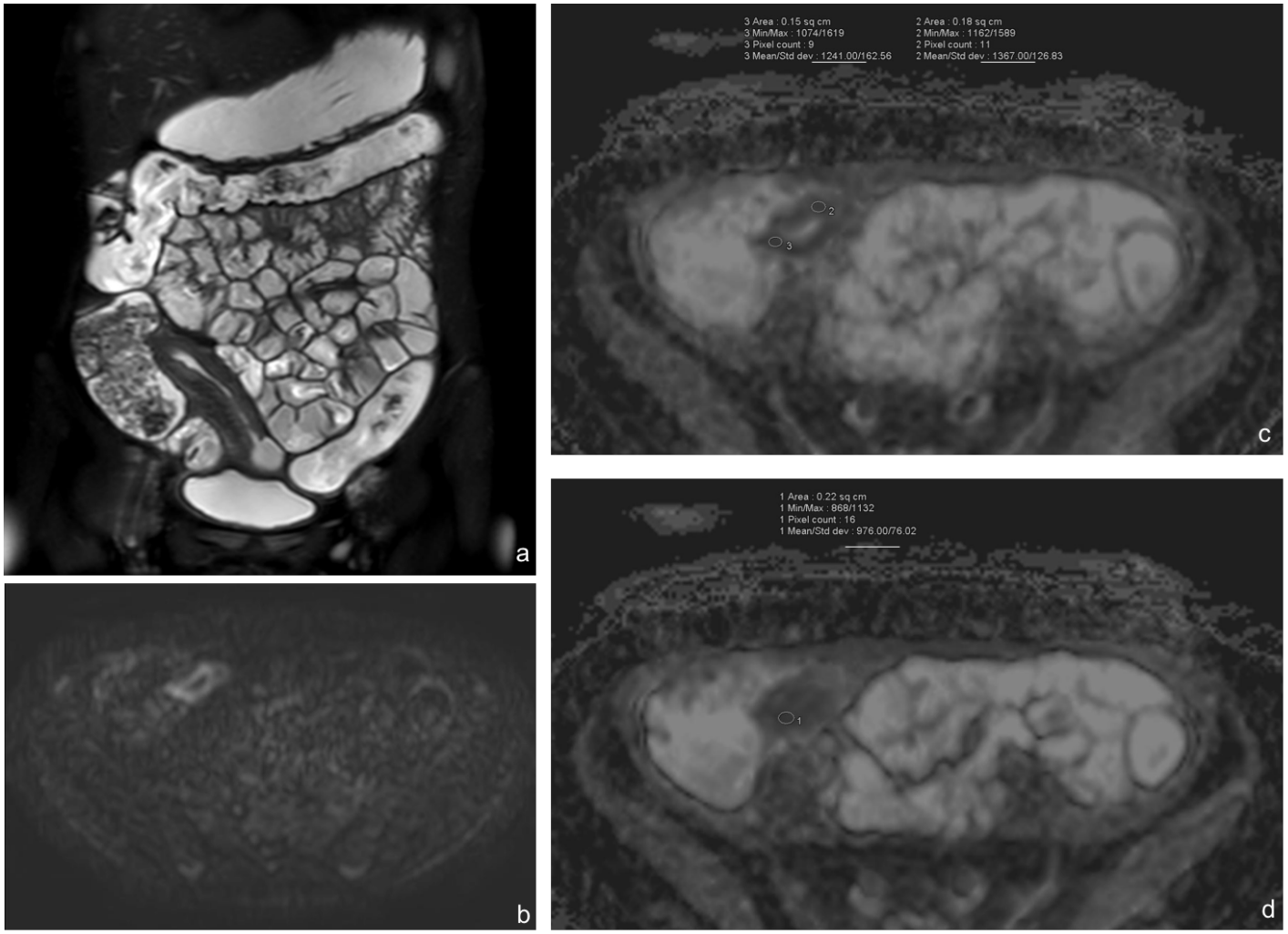
Supplemental Table: Clinico-laboratoristic data of the 34 patients included in our study.

	normal range	patients range	mean value		patients (n)	%
CRP (mg/l)	0-10	0,29 – 1680	58	elevated	7	20.6
				normal	27	79.4
ESR (mm/h)	3-13	normal – 120	41	elevated	24	70.6
				normal	10	29.4
HB (g/dl)	11-14	7.6 – normal	11	reduced	13	38.2
				normal	22	61.8
Faecal calprotectin (µg/g)	0-120	40 – 1000	326	elevated	17	50.0
				normal	17	50.0

Supplemental Figure 1: Magnetic Resonance Enterography performed at the 3T scanner. Apparent diffusion coefficient (ADC) quantitative assessment of Crohn Disease activity was calculated at the level of the terminal ileum. Mean ADC value was $1.33x10^{-3}$ mm^2/s. A, coronal T1 TFE SPIR post-contrast. B, axial DWI b 1000. C-E, axial ADC maps. ADC values in the three measurements are $1.38\ x10^{-3}$ mm^2/s, $1.38\ x10^{-3}$ mm^2/s and $1.23\ x10^{-3}$ mm^2/s respectively.



Supplemental Figure 2: Magnetic Resonance Enterography performed at the 1.5T scanner in a patient with Crohn Disease. Apparent diffusion coefficient (ADC) measurements were calculated at the terminal ileum. Mean ADC value was 1.19×10^{-3} mm^2/s. A, coronal T2 SPAIR. B, axial DWI b 1000. C-E, axial ADC maps. ADC values in the three measurements are 1.24×10^{-3} mm^2/s, 1.36×10^{-3} mm^2/s and 0.97×10^{-3} mm^2/s respectively.



Supplemental Figure 3: Post-contrast images show strong ileal enhancement with trilaminar pattern. Apparent diffusion coefficient (ADC) maps reproduce the same pattern with impeded cellular diffusion of the mucosa, highly infiltrated by inflammatory cells. A, Coronal post-contrast THRIVE and axial ADC map of a 13-years old girl with active Crohn Disease (CD) undergoing Magnetic Resonance Enterography (MRE) examination at the 3T scanner. C-D, Coronal post-contrast T1 TFE SPIR with subtraction and axial ADC map of a 15-years old with CD. MRE is performed at the 3T scanner at the time of symptomatic climax. Faecal calprotectin was 600 µg/g.