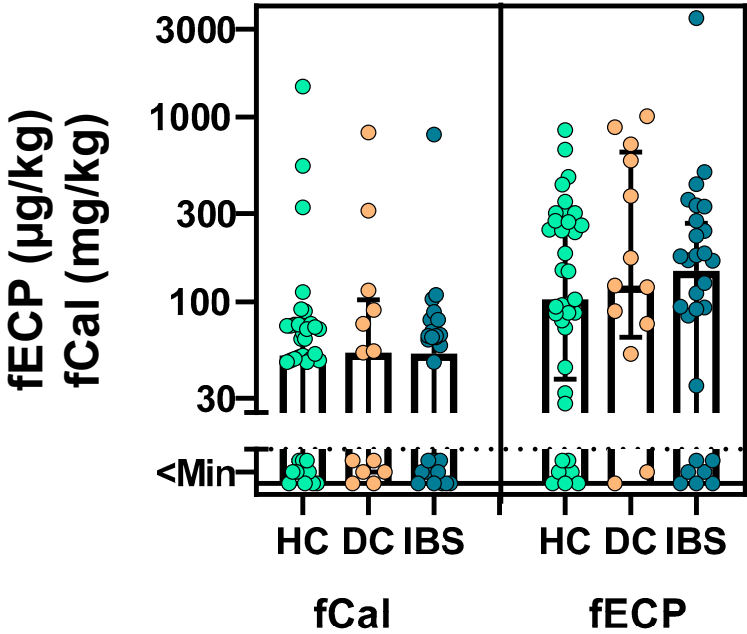


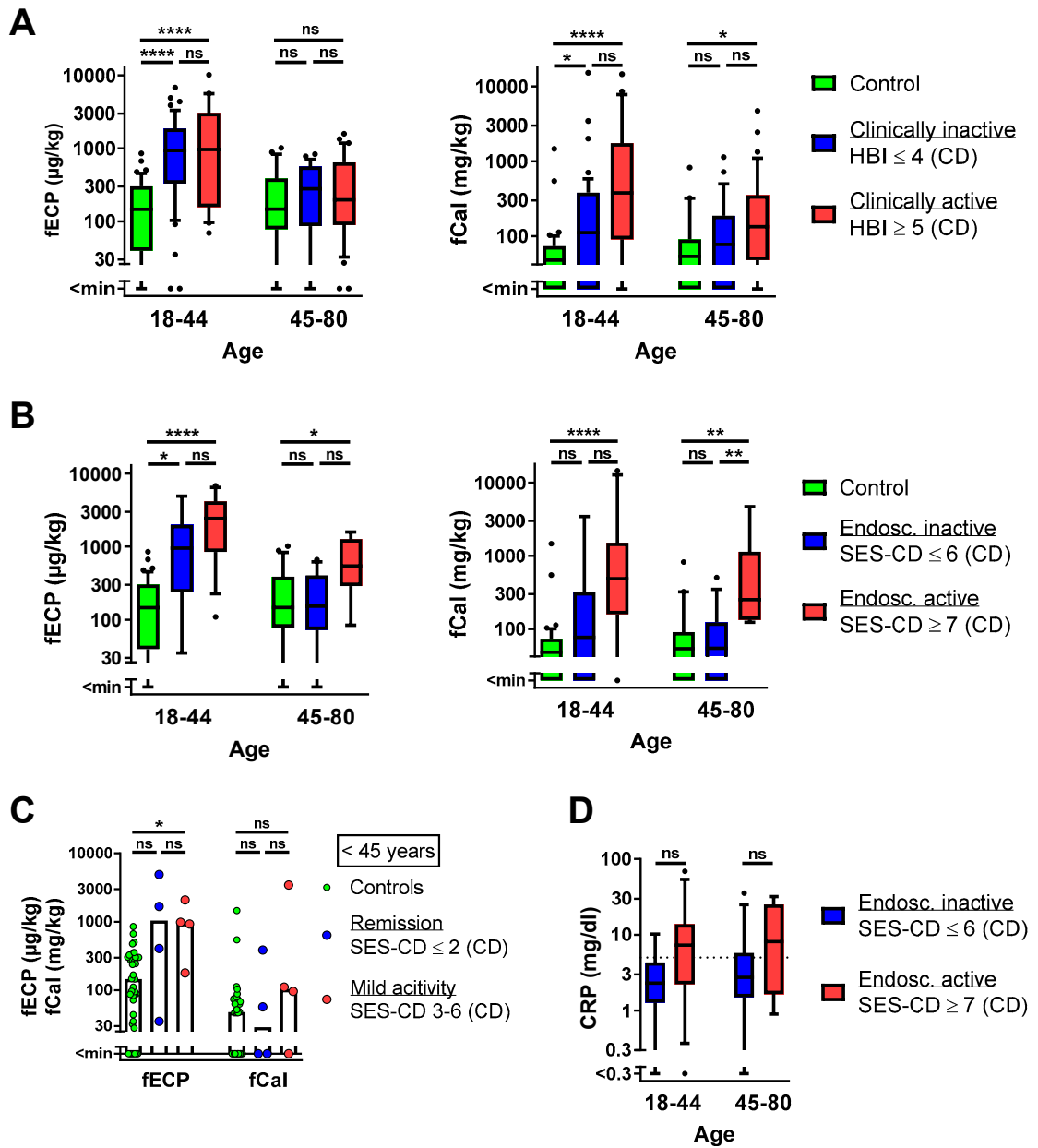
Supplementary data

Suppl. Figure 1



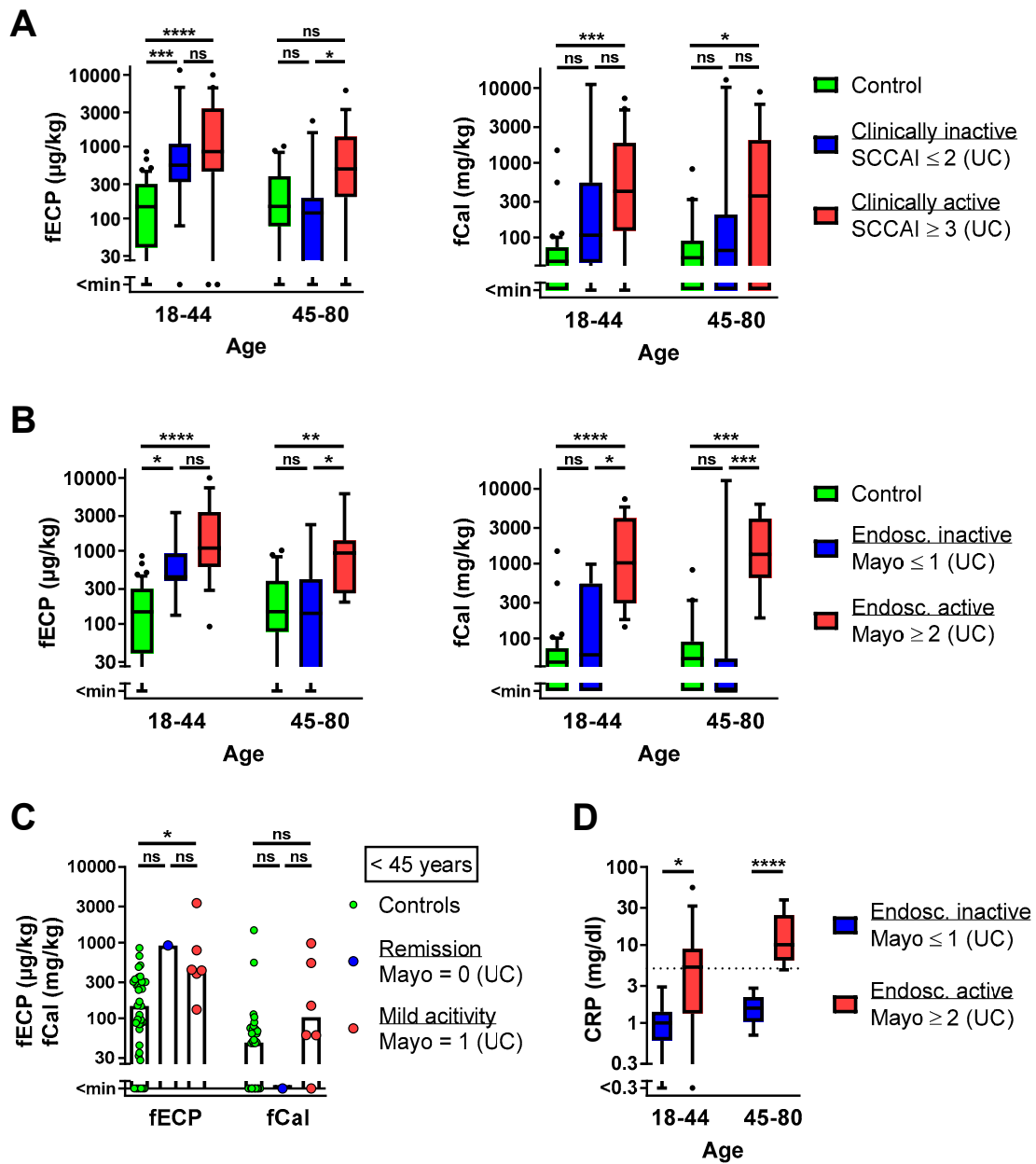
Suppl. Figure 1. fECP and fCal are similarly distributed in the different control groups (HC, healthy controls; DC, disease control; IBS, irritable bowel syndrome). Shown are single data points (dots), median (bars) and IQR (error bars). Because of the similar data distribution in the three groups, pooled data were used as a single control group throughout the study.

Suppl. Figure 2



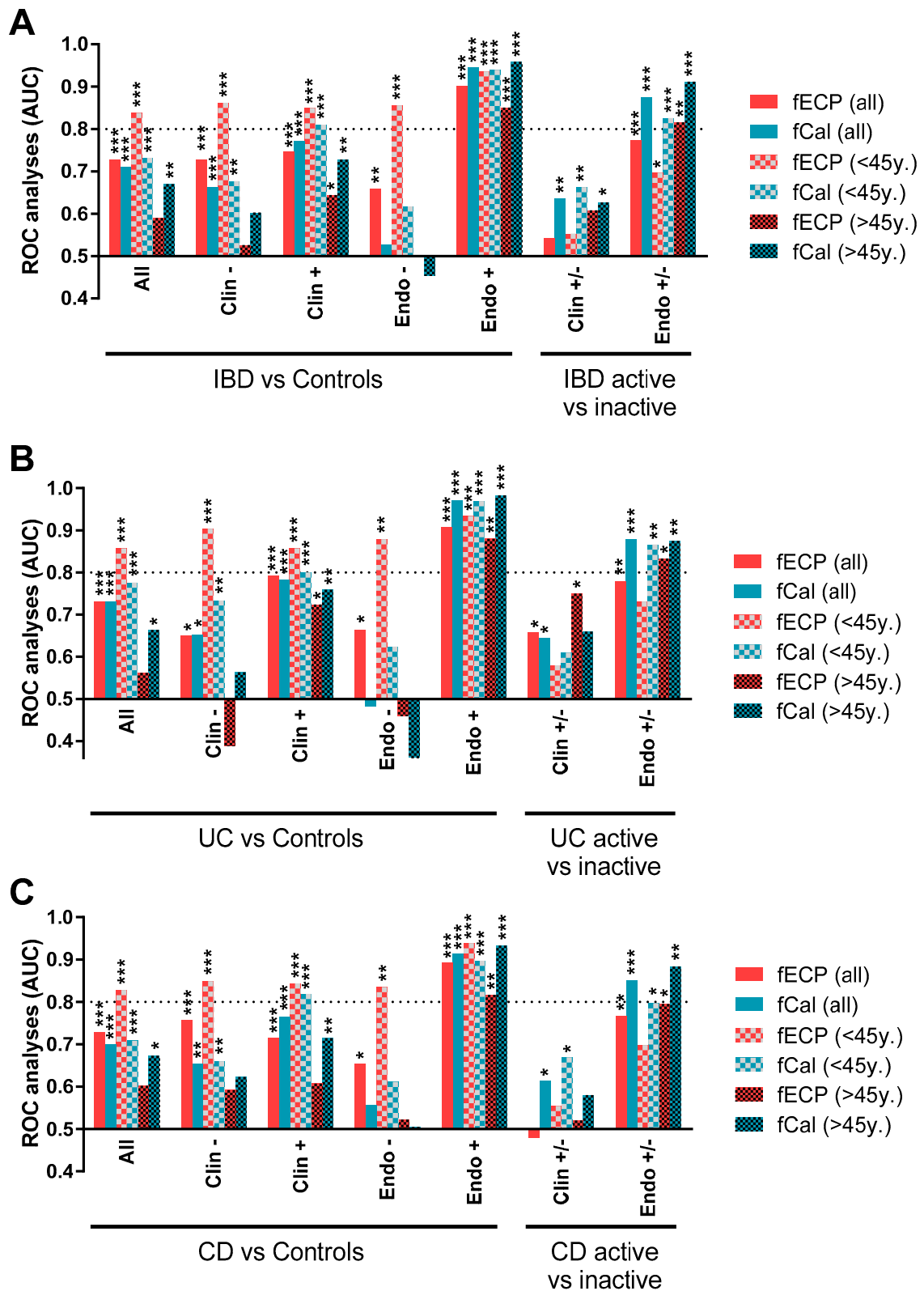
Suppl. Figure 2. Age dependency of fECP and fCal in CD patients. (A) fECP and fCal in controls (<45 y., n = 52; ≥ 45 y., n = 26) and clinically inactive (<45 y., n = 45; ≥ 45 y., n = 29) and active (<45 y., n = 23; ≥ 45 y., n = 43) CD patients according to the clinical score HBI. (B) fECP and fCal in controls (<45 y., n = 52; ≥ 45 y., n = 26) and endoscopically inactive (<45 y., n = 8; ≥ 45 y., n = 14) and active (<45 y., n = 12; ≥ 45 y., n = 8) CD patients according to the endoscopic score SES-CD. (C) fECP and fCal in controls (n = 52), CD patients in complete endoscopic remission (n = 4) and CD patients with mild endoscopic activity (n = 4) below the age of 45 years (bars represent median). (D) Serum CRP levels in endoscopically inactive (<45 y., n = 8; ≥ 45 y., n = 14) and active (<45 y., n = 12; ≥ 45 y., n = 8) CD patients. Kruskal-Wallis test followed by Dunn's post-hoc comparisons (3 groups) or Mann-Whitney-U test (2 groups); *, p < 0.05; **, p < 0.01; ***, p < 0.001; ****, p < 0.0001.

Suppl. Figure 3



Suppl. Figure 3. Age dependency of fECP and fCal in UC patients. (A) fECP and fCal in controls (<45 y., n = 52; ≥ 45 y., n = 26) and clinically inactive (<45 y., n = 15; ≥ 45 y., n = 13) and active (<45 y., n = 21; ≥ 45 y., n = 15) UC patients according to the clinical score SCCAI. (B) fECP and fCal in controls (<45 y., n = 52; ≥ 45 y., n = 26) and endoscopically inactive (<45 y., n = 7; ≥ 45 y., n = 8) and active (<45 y., n = 17; ≥ 45 y., n = 9) UC patients according to the endoscopic Mayo score. (C) fECP and fCal in controls (n = 52), UC patients in complete endoscopic remission (n = 1) and CD patients with mild endoscopic activity (n = 6) below the age of 45 years (bars represent median). (D) Serum CRP levels in endoscopically inactive (<45 y., n = 7; ≥ 45 y., n = 8) and active (<45 y., n = 16; ≥ 45 y., n = 9) UC patients. Kruskal-Wallis test followed by Dunn's post-hoc comparisons (3 groups) or Mann-Whitney-U test (2 groups); *, p < 0.05; **, p < 0.01; ***, p < 0.001; ****, p < 0.0001.

Suppl. Figure 4



Suppl. Figure 4. ROC analyses. Graphs show the area under the curve (AUC) values. Statistical significances are depicted by asterix above the bars. *, $p < 0.05$; **, $p < 0.01$; ***, $p < 0.001$. Definitions: Clin-, clinically inactive (SCCAI ≤ 2 / HBI ≤ 4); Clin+ (SCCAI ≥ 3 / HBI ≥ 5); Endo- (Mayo ≤ 1 / SES-CD ≤ 6); Endo+ (Mayo ≥ 2 / SES-CD ≥ 7); 45y; age 45 years. **(A)** All IBD patients (vs. controls). **(B)** Only ulcerative colitis (vs. controls). **(C)** Only Crohn's disease (vs. controls).

Suppl. Table 1. Best cut-off values and related sensitivity, specificity and accuracy for fECP and fCal

		n	Best cut-off (highest accuracy)		Sensitivity/specificity (accuracy ¹)	
			fECP (µg/kg)	fCal (mg/kg)	fECP (%)	fCal (%)
IBD vs. control	All	212/78	477	118	52/90 (71)	57/92 (75)
	All <45y	115/52	373	90	72/90 (81)	66/89 (77)
	All ≥45y	97/26	247	118	50/73 (61)	54/89 (71)
	Clinically inactive	102/78	309	94	62/80 (71)	51/87 (69)
	Clinically inactive <45y	59/52	309	93	81/83 (82)	58/89 (73)
	Clinically inactive ≥45y	43/26	200	118	51/65 (58)	40/89 (64)
	Clinically active	91/78	375	119	60/86 (73)	70/92 (81)
	Clinically active <45y	44/52	373	128	80/90 (85)	75/94 (85)
	Clinically active ≥45y	47/26	247	98	55/73 (64)	70/85 (77)
	Endoscopically inactive	37/78	358	94	49/85 (67)	32/87 (60)
	Endoscopically inactive <45y	15/52	373	93	80/90 (85)	47/89 (68)
	Endoscopically inactive ≥45y	22/26	128	98	59/50 (55)	23/85 (54)
	Endoscopically active	46/78	448	120	80/89 (84)	98/92 (95)
	Endoscopically active <45y	29/52	410	123	90/90 (90)	97/94 (95)
Endoscopically active ≥45y	17/26	247	120	88/73 (81)	100/89 (94)	
IBD subgroups	Clinically active/inactive	91/102	592	122	52/61 (56)	70/56 (63)
	Clinically active/inactive <45y	44/59	2124	143	39/80 (59)	75/56 (66)
	Clinically active/inactive ≥45y	47/43	834	122	28/93 (63)	66/63 (64)
	Endosc. active/inactive	46/37	451	118	80/65 (73)	98/76 (87)
	Endosc. active/inactive <45y	29/15	451	122	90/47 (68)	97/67 (82)
	Endosc. active/inactive ≥45y	17/22	183	114	94/64 (79)	100/82 (91)

¹ corrected for different group sizes. Accuracy >80 % in bold.