



Supplementary Figure 1. Receiver operator curve analysis was carried out to determine the best EEsAI PRO score cutoff value to detect endoscopic fibrotic remission (A) and deep remission (B) in EoE patients that underwent esophageal dilation in the last 12 months before inclusion. The EEsAI PRO score of 25 points had an overall accuracy of 77.4% to detect patients in endoscopic fibrotic remission. The EEsAI PRO score of 25 points had an overall accuracy of 71.7% to detect patients in deep remission. Deep remission defined as combined endoscopic fibrotic and inflammatory remission as well as histologic remission (cutoff value of <20 eosinophils/mm²). OPT, optimal.

Supplementary Table 1. Endoscopic and Histologic Findings in Proximal and Distal Esophagus^a

Characteristic	Proximal		Distal		Overall	
	n	%	n	%	n	%
Endoscopic findings						
Fixed rings						
Absent	105	39.0	81	30.1	74	27.5
Mild	89	33.1	100	37.2	100	37.2
Moderate	59	21.9	74	27.5	78	29.0
Severe	13	4.8	13	4.8	17	6.3
Missing	3	1.1	1	0.4	0	0
Strictures						
Absent	221	82.2	194	72.1	179	66.5
Present	42	15.6	74	27.5	90	33.5
Missing	6	2.2	1	0.4	0	0
Exudates						
Absent	205	76.2	184	68.4	178	66.2
Mild	49	18.2	69	25.7	75	27.9
Severe	14	5.2	14	5.2	16	5.9
Missing	1	0.4	12	0.7	0	0
Furrows						
Absent	137	50.9	105	39.0	102	37.9
Present	131	48.7	163	60.6	167	62.1
Missing	1	0.4	1	0.4	0	0
Edema						
Absent	141	52.4	115	42.7	114	42.4
Present	127	47.2	153	56.9	155	57.6
Missing	1	0.4	1	0.4	0	0
Histologic findings						
Peak eosinophil count/mm ²						
0–16	107	39.8	80	29.7	73	27.1
17–64	35	13.0	40	14.9	37	13.8
65–320	78	29.0	110	40.9	108	40.1
>320	32	11.9	38	14.1	51	19.0
Missing	17	6.3	1	0.4	0	0
Abscesses						
Absent	226	84.0	225	83.6	216	80.3
Present	38	14.1	42	15.6	53	19.7
Missing	5	1.9	2	0.7	0	0
Basal layer enlargement						
<14%	101	37.5	82	30.5	79	29.4
14–33%	93	34.6	94	34.9	96	35.7
34–66%	50	18.6	62	23.0	66	24.5
>67%	14	5.2	23	8.6	25	9.3
Cannot be evaluated	7	2.6	7	2.6	3	1.1
Missing	4	1.5	1	0.4	0	0
Lamina propria						
Absent	131	48.7	108	40.1	96	35.7
Present, can be evaluated	128	47.6	152	56.5	164	61.0
Present, cannot be evaluated	6	2.2	8	3.0	9	3.3
Missing	4	1.5	1	0.4	0	0
Lamina propria fibrosis ^b						
Absent	16	12.5	9	5.9	11	6.7
Mild/moderate	78	60.9	115	75.2	110	66.7
Severe	34	26.6	29	19.0	44	26.7

^aThese findings were also summarized for esophagus overall.

^bSeverity of fibrosis is given for those patients, in whose biopsies lamina propria was present and could be evaluated (n = 128 for proximal esophagus; n = 152 for distal esophagus; n = 164 for esophagus overall).

Supplementary Table 2. Endoscopic and Histologic Findings in Patients That Underwent Dilation in the 12 Months Before Enrollment and in Those That Did Not

Characteristic	Dilation		No dilation	
	n	%	n	%
Endoscopic findings				
Fixed rings				
Absent	10	18.9	63	29.6
Mild	14	26.4	86	40.4
Moderate	24	45.3	53	24.9
Severe	5	9.4	11	5.2
Strictures				
Absent	25	47.2	153	71.8
Present	28	52.8	60	28.2
Exudates				
Absent	32	60.4	144	67.6
Mild	16	30.2	59	27.7
Severe	5	9.4	10	4.7
Furrows				
Absent	21	39.6	81	38.0
Present	32	60.4	132	62.0
Edema				
Absent	23	43.4	90	42.3
Present	30	56.6	123	57.7
Histologic findings				
Peak eosinophils count/mm ²				
0–16	14	26.4	57	26.8
17–64	6	11.3	31	14.6
65–320	22	41.5	85	39.9
>320	11	20.8	40	18.8
Abscesses				
Absent	34	64.2	179	84.0
Present	19	35.8	34	16.0
Basal layer enlargement				
<14%	23	43.4	55	25.8
14–33%	15	28.3	80	37.6
34–66%	10	18.9	55	25.8
>67%	4	7.5	21	9.9
Cannot be evaluated	1	1.9	2	0.9
Lamina propria				
Absent	17	32.1	76	35.7
Present, can be evaluated	34	64.2	130	61.0
Present, cannot be evaluated	2	3.8	7	3.3
Lamina propria fibrosis ^a				
Absent	5	14.7	6	4.6
Mild/moderate	19	55.9	91	69.5
Severe	10	29.4	34	26.0

^aSeverity of fibrosis is given for those patients in whose biopsies lamina propria was present and could be evaluated.

Supplementary Table 3. Test Characteristics of the EEsAI PRO Score in Detecting Endoscopic and/or Histologic Remission in Patients That Either Underwent Esophageal Dilation in the Last 12 Months Before Inclusion or Did Not

Outcomes	Dilation (n = 53)			No dilation (n = 213)		
	AUC	Optimal PRO value	Sensitivity, specificity, accuracy, %	AUC	Optimal PRO value	Sensitivity, specificity, accuracy, %
Endoscopic inflammatory remission	0.603	30	58.3, 72.4, 66.0	0.631	21	55.4, 65.3, 61.0
Endoscopic fibrotic remission	0.768	25	68.8, 81.1, 77.4	0.631	21	48.9, 64.6, 54.9
Total endoscopic remission (inflammatory and fibrotic)	0.814	27	83.3, 80.5, 81.1	0.638	19	56.7, 65.8, 62.9
Histologic remission (cut-off value <20 eosinophils/mm ²)	0.524	30	46.2, 60, 56.6	0.630	19	60.0, 66.0, 64.3
Histologic remission (cut-off value <60 eosinophils/mm ²)	0.522	30	52.6, 64.7, 60.4	0.627	19	57.0, 67.9, 63.8
Deep (total endoscopic and histologic) remission ^a	0.863	25	100, 70, 71.7	0.646	15	60.5, 64.6, 63.8

^aDeep remission was defined as endoscopic inflammatory and fibrotic remission as well as histologic remission (cutoff value of <20 eosinophils/mm² of hpf).