המרכז לקרוהן וקוליטיס בילדים
על שם אן וג'ו טרנר, ירושלים
המרכז הרפואי שערי צדק (ע.ר.)

היחידה לגסטרו ילדים ותזונה
המרכז הרפואי שערי צדק, ירושלים (ע.ר.)
PEDIATRIC GASTROENTEROLOGY UNIT
Shaare Zedek Medical Center, Jerusalem, Israel

Mucosal healing and clinical assessment in predicting 1 year sustained remission in pediatric UC

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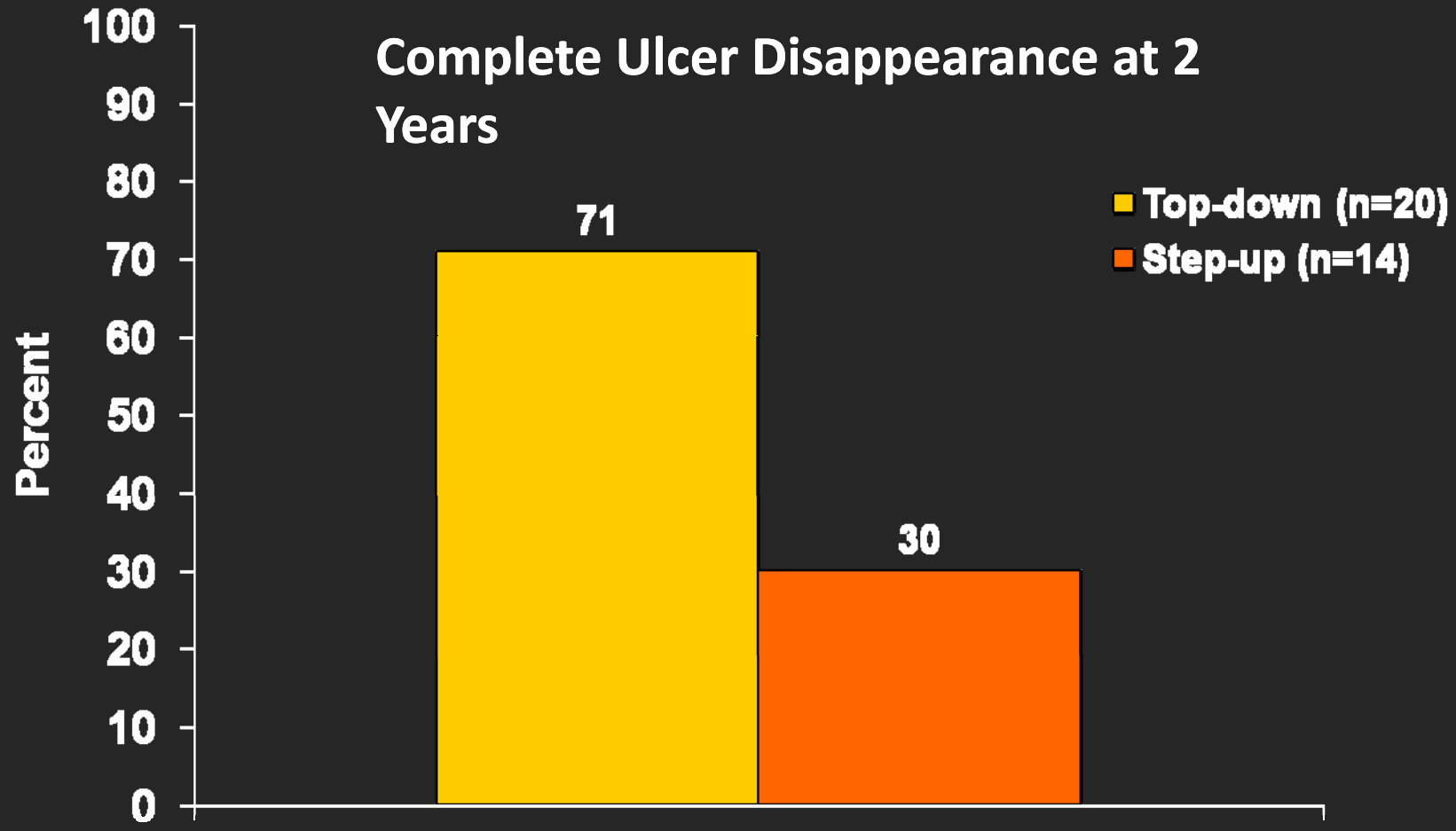
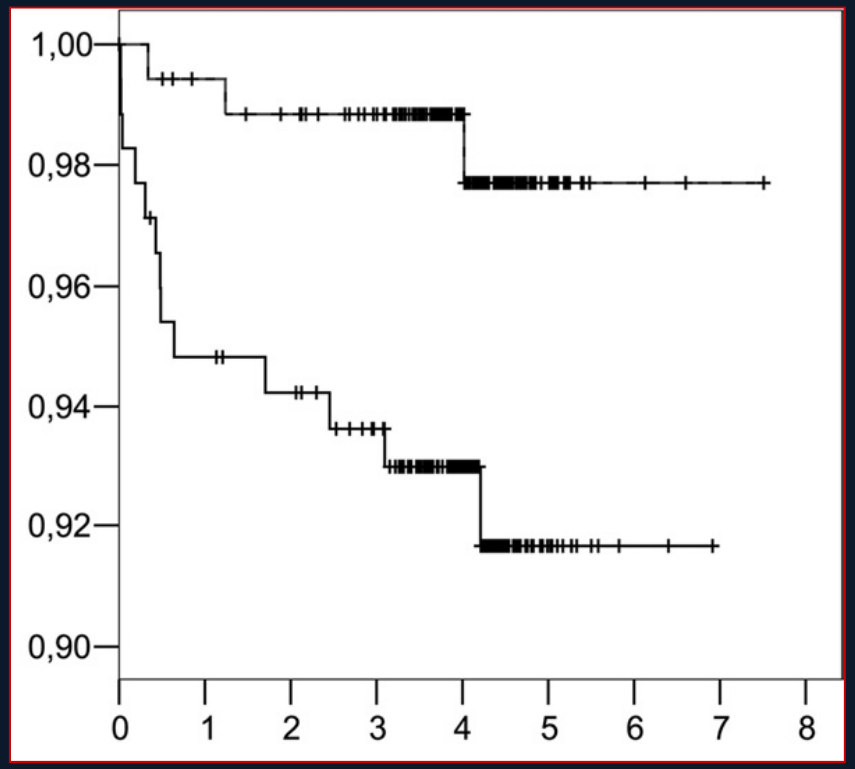
Mucosal Healing



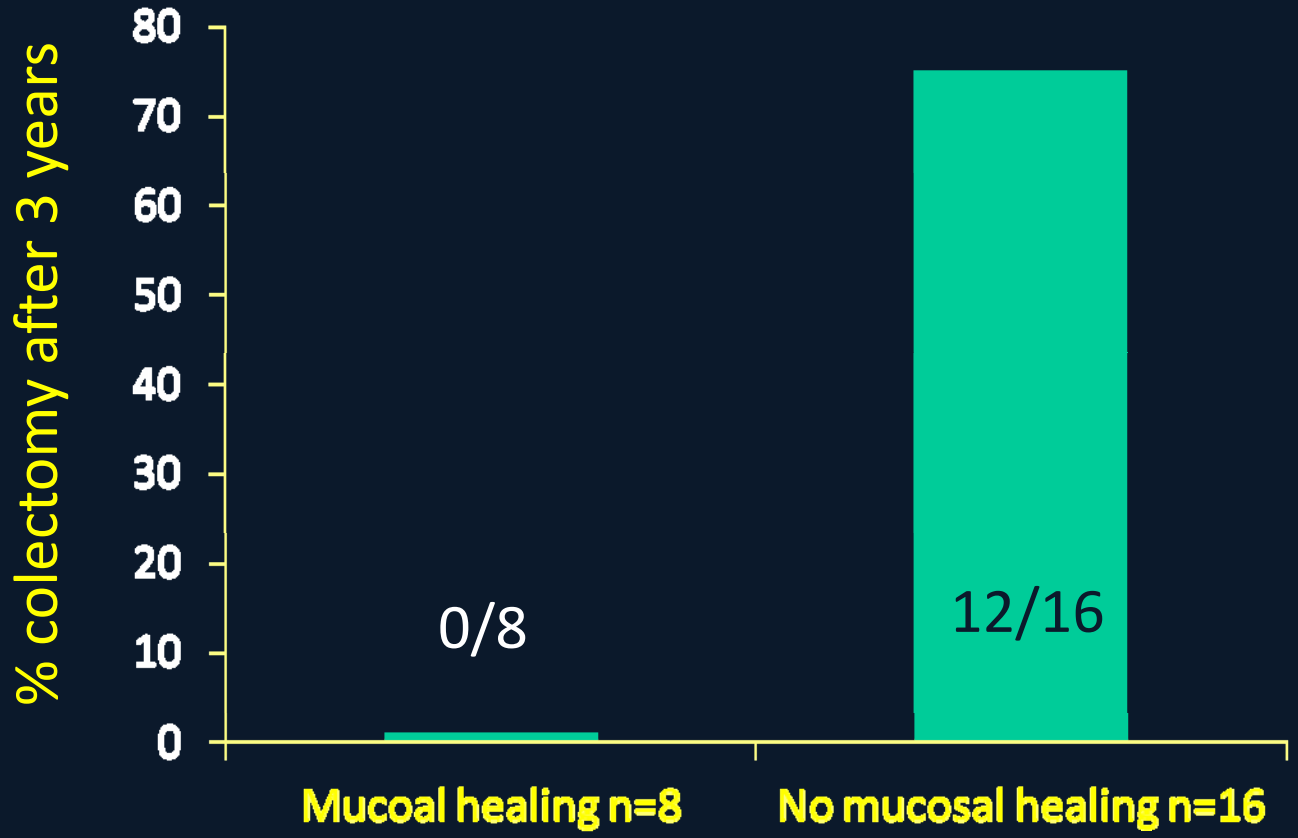
D'Haens et al. *Gut* 2005;54 (1 Suppl 37):A17.

The emerging importance of identifying deep remission in UC



Frøslie et al. Gastroenterology 2007;133:412–422

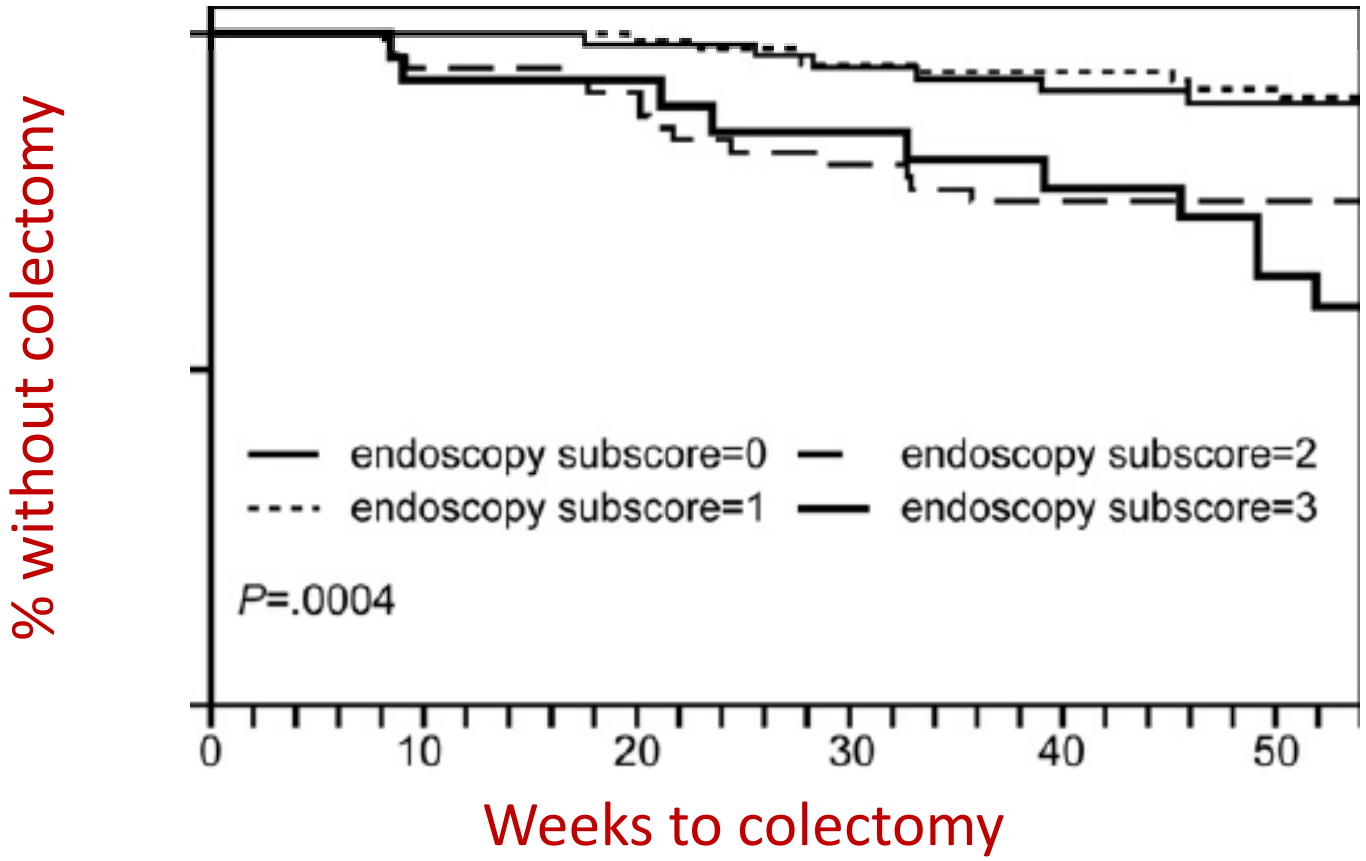
24 patients with steroid refractory ASC
3 months after a single infliximab dose



Gustavsson et al. Aliment Pharmacol Ther 2010; 32: 984–989

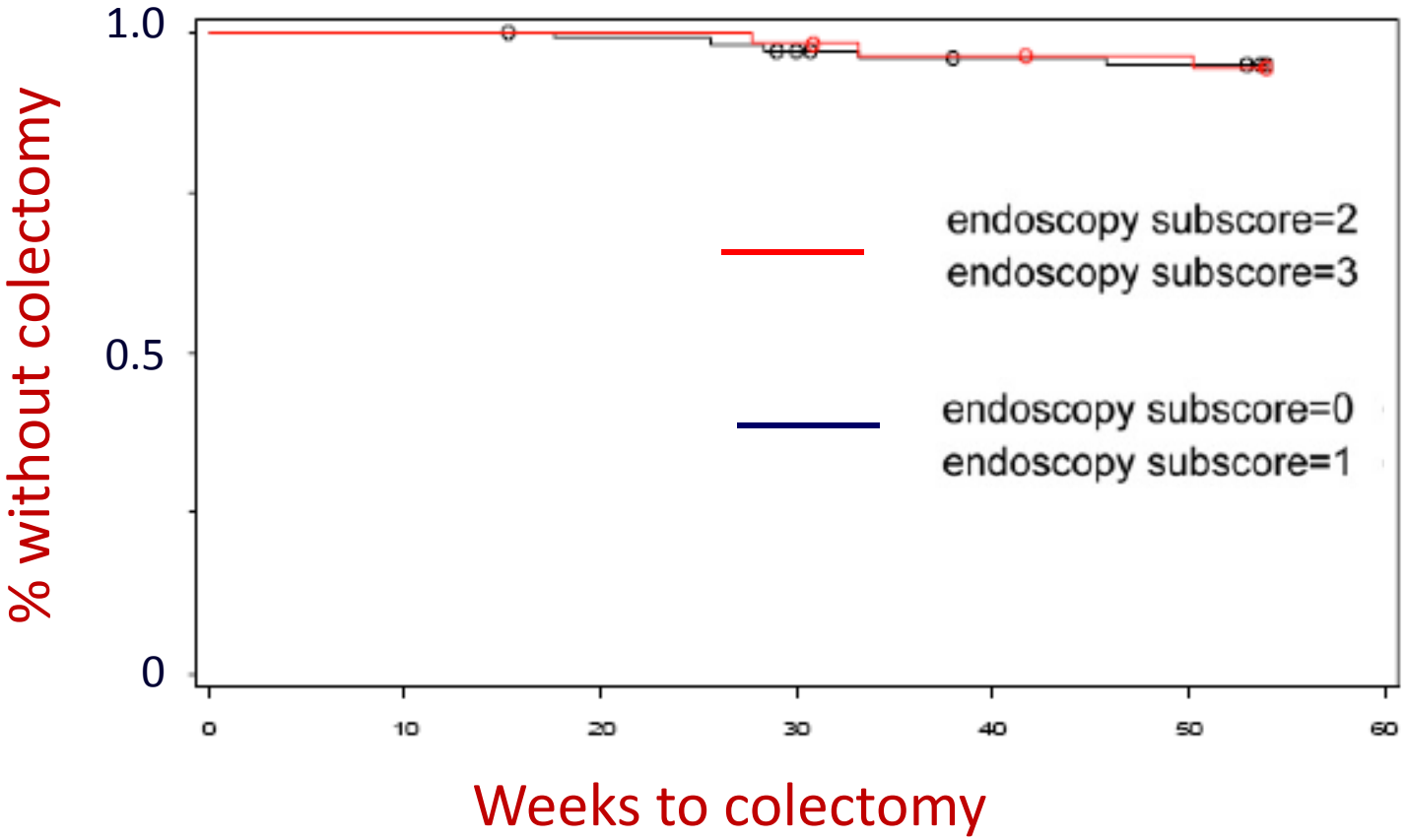
Combined ACT cohorts: the infliximab arm starting at week 8

n=466 who did not have colectomy by week 8



Colombel et al. Gastroenterology 2011

Sub group analysis of those with clinical remission at week 8

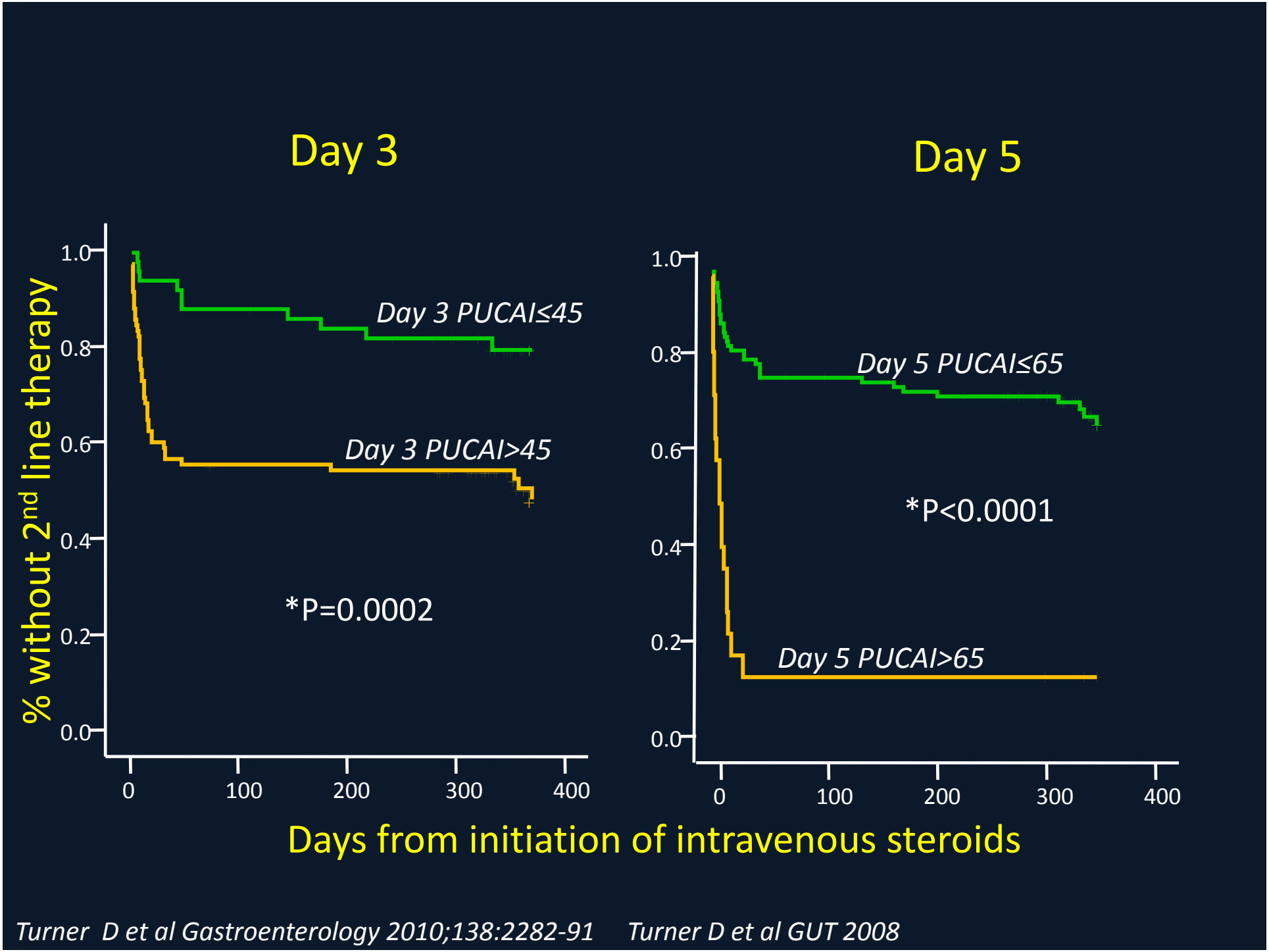


Colombel et al. Gastroenterology 2011

The PUCAI

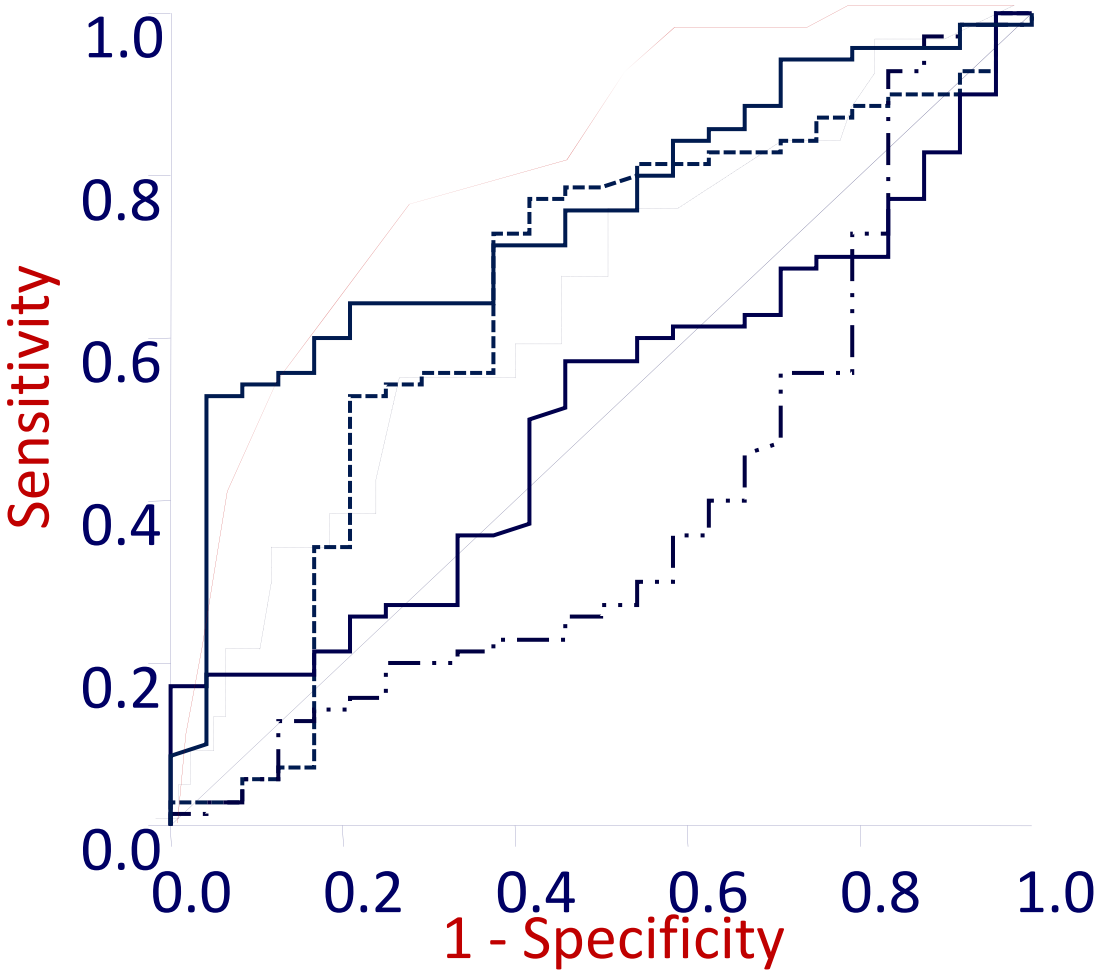
ITEM	POINTS
1. Abdominal pain	
No pain	0
Pain can be ignored	5
Pain cannot be ignored	10
2. Rectal bleeding	
None	0
Small amount only in < 50% of stools	10
Small amount with most stools	20
Large amount (>50% of the stool content)	30
3. Stool consistency of most stools	
Formed	0
Partially formed	5
Completely unformed	10
4. Number of stools per 24 hours	
0-2	0
3-5	5
6-8	10
>8	15
5. Nocturnal bowel movement (any diarrhea episode causing wakening)	
No	0
Yes	10
6. Activity level	
No limitation of activity	0
Occasional limitation of activity	5
Severe restricted activity	10
SUM OF PUCAI (0-85)	

Turner et al; Gastroenterology 2007;133:423-432



Turner D et al Gastroenterology 2010;138:2282-91 *Turner D et al GUT 2008*

Predicting steroid failure in acute severe colitis



	AUROC (95%CI)
PUCAI	0.81 (0.73-0.89)
PK-M2	0.75 (0.64-0.85)
CRP	0.66 (0.56-0.77)
Calprotectin	0.64 (0.50-0.78)
Lactoferrin	0.51 (0.38-0.63)
S100A12	0.39 (0.25-0.53)

Gut 2010;59(9):1207-1212

Aims

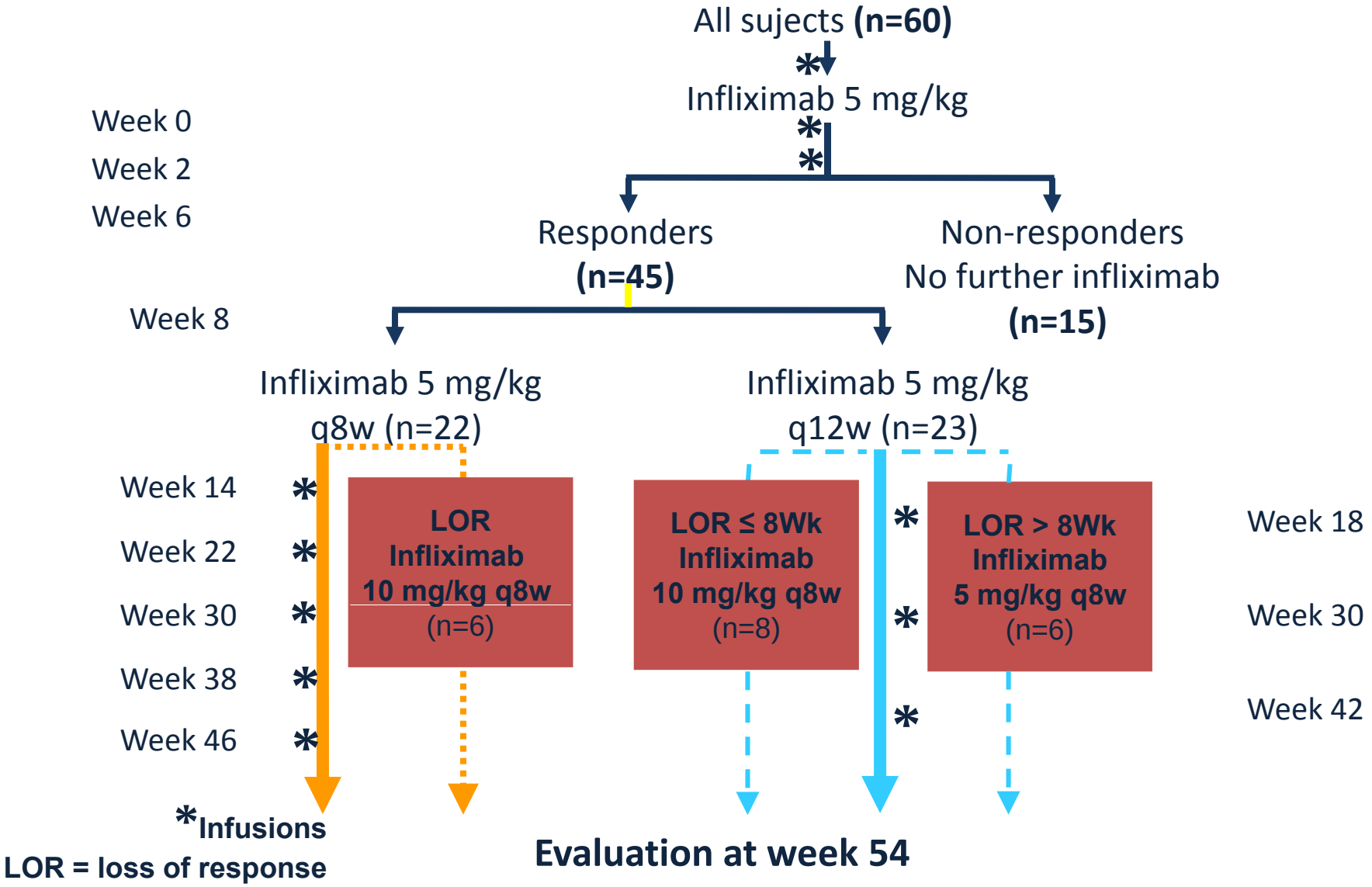
- To explore the utility of MH to predict 1 year sustained steroid-free remission in pediatric UC
- To compare it with that of a clinical index and CRP

Methods

- The T72 database was used in a post-hoc analysis
- Predictors at Week 8
  - sigmoidoscopy, PUCAI and CRP
- Outcome
  - Steroid-free remission by both PGA and PaGA at both weeks 30 and 54

Hyams et al., CGH 2012

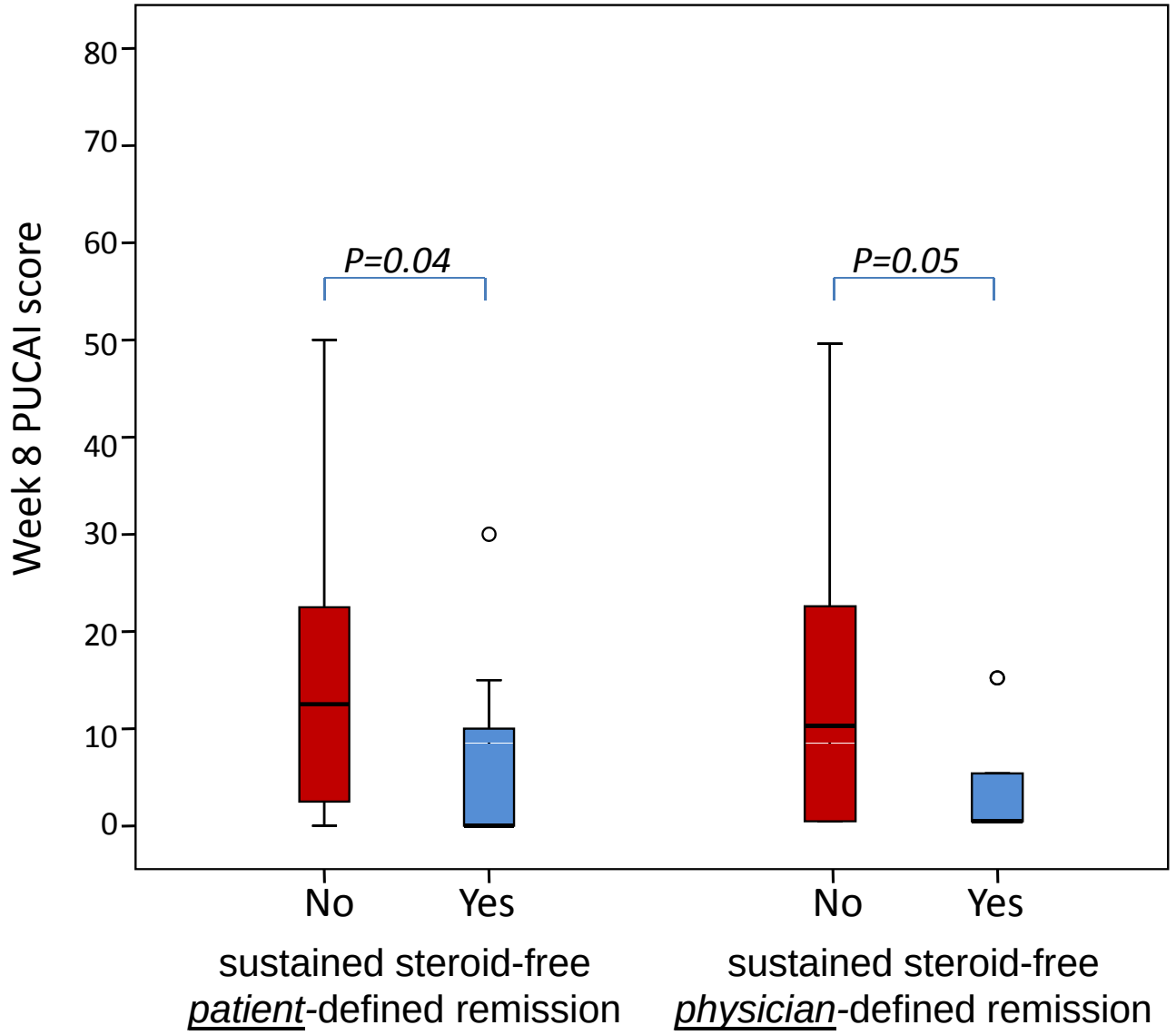
Study Design



Results

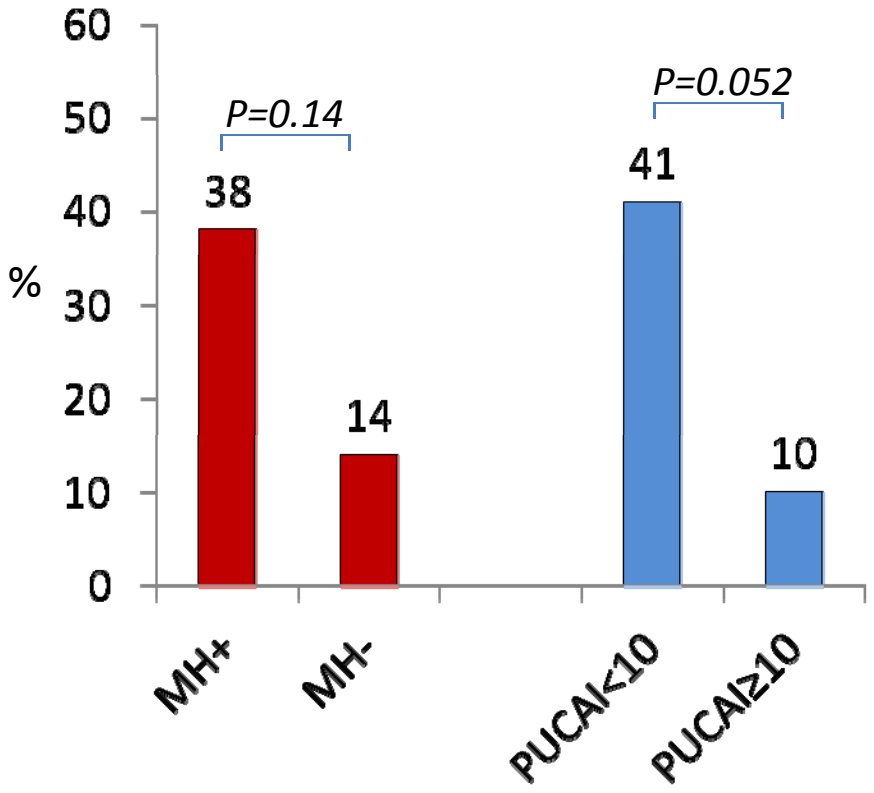
	Total cohort (n=51)
Males	21 (41%)
Age (years)	13.5 ±3
Range (years)	6-17
Disease duration (years)	1.3 (6.5-2.4)
First attack	4 (8%)
Exacerbation	47 (92%)
Disease extent	
Left sided	11 (22%)
Extensive	40 (78%)
PGA at week 0	
Quiescent	0 (0%)
Mild	3 (6%)
Moderate	38 (75%)
Severe	10 (20%)
Concurrent medications	
Oral 5-ASA	30 (59%)
Immunomodulators	24 (47%)
Corticosteroids	32 (63%)

The PUCAI predicts 1-year steroid-free sustained remission



The PUCAI and MH in predicting 1-year steroid-free sustained remission

% achieving 1-year sustained steroid free *physician*-defined remission



% achieving 1-year sustained steroid free *patient*-defined remission

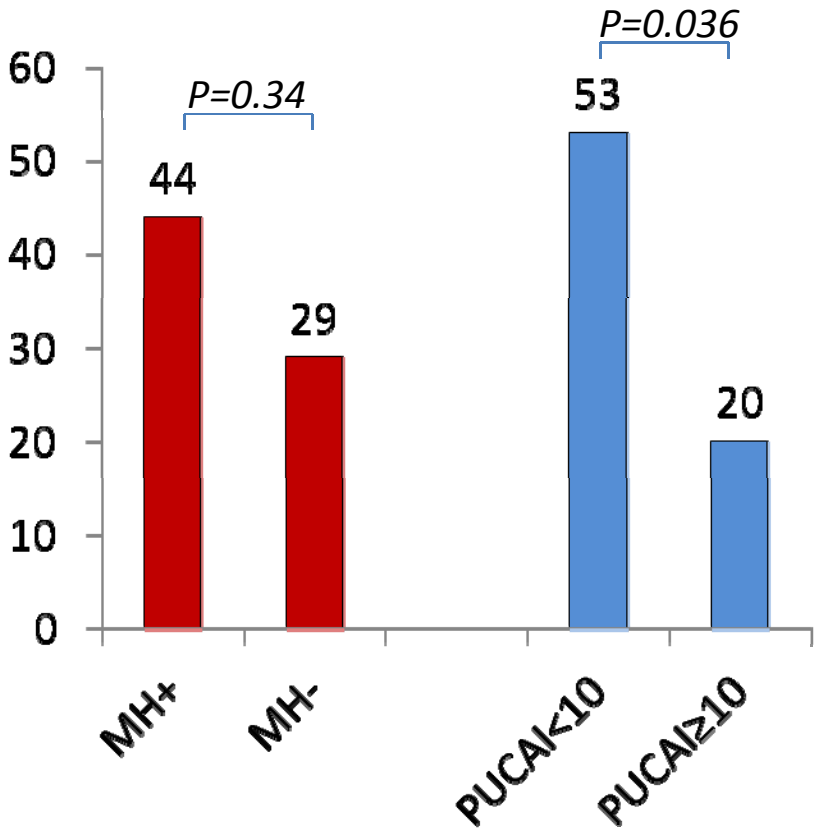
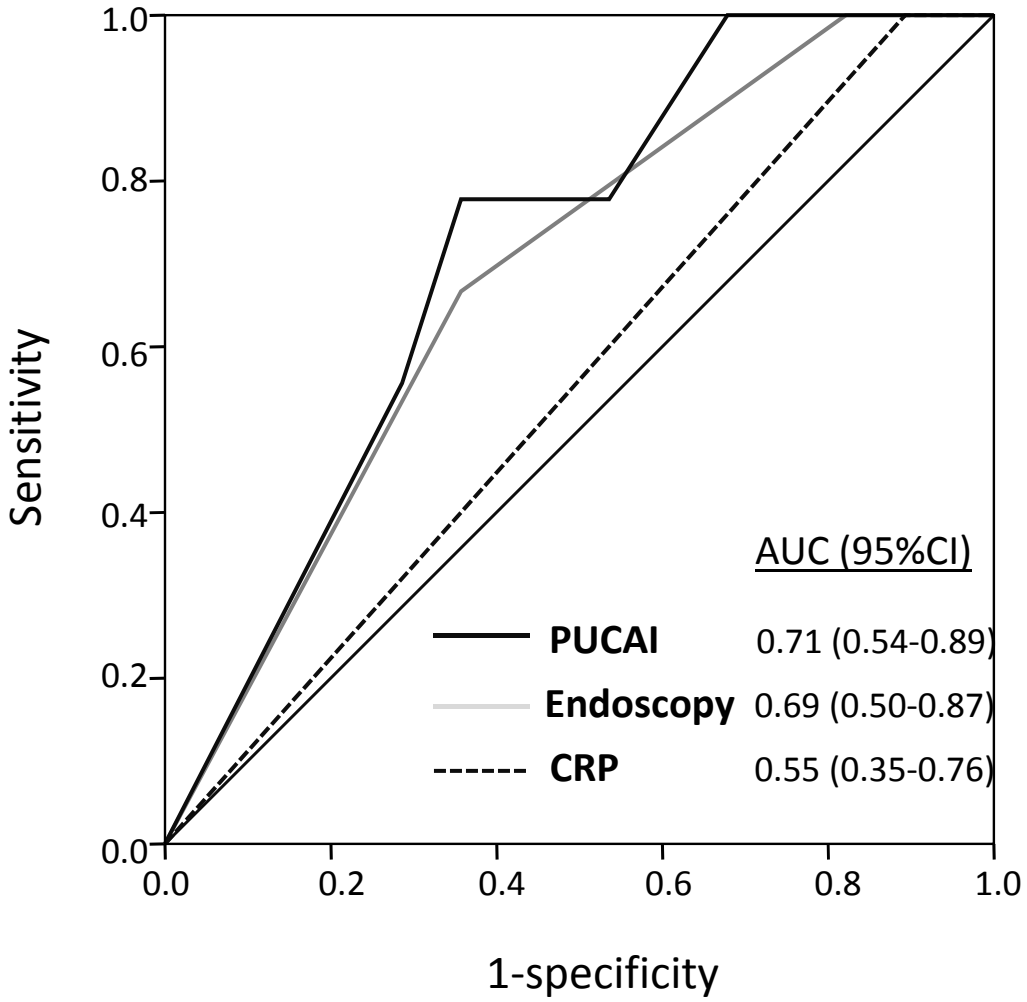


Figure 3a


1.0
0.8
0.6
0.4
0.2
0.0
Sensitivity
0.0
0.2
0.4
0.6
0.8
1.0
1-specificity
AUC (95%CI)
PUCAI 0.71 (0.54-0.89)
Endoscopy 0.69 (0.50-0.87)
CRP 0.55 (0.35-0.76)

Wk 8 predictors of 1-year steroid-free sustained remission

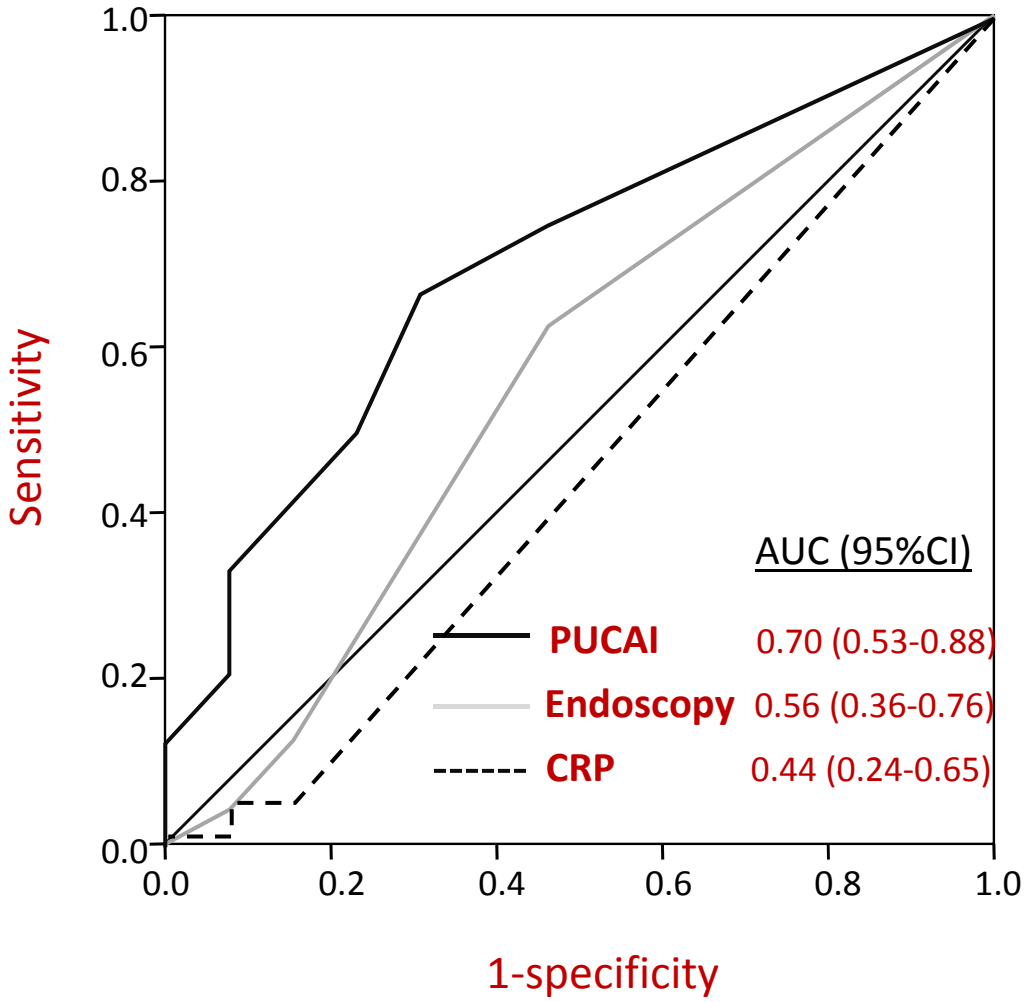


Figure 4

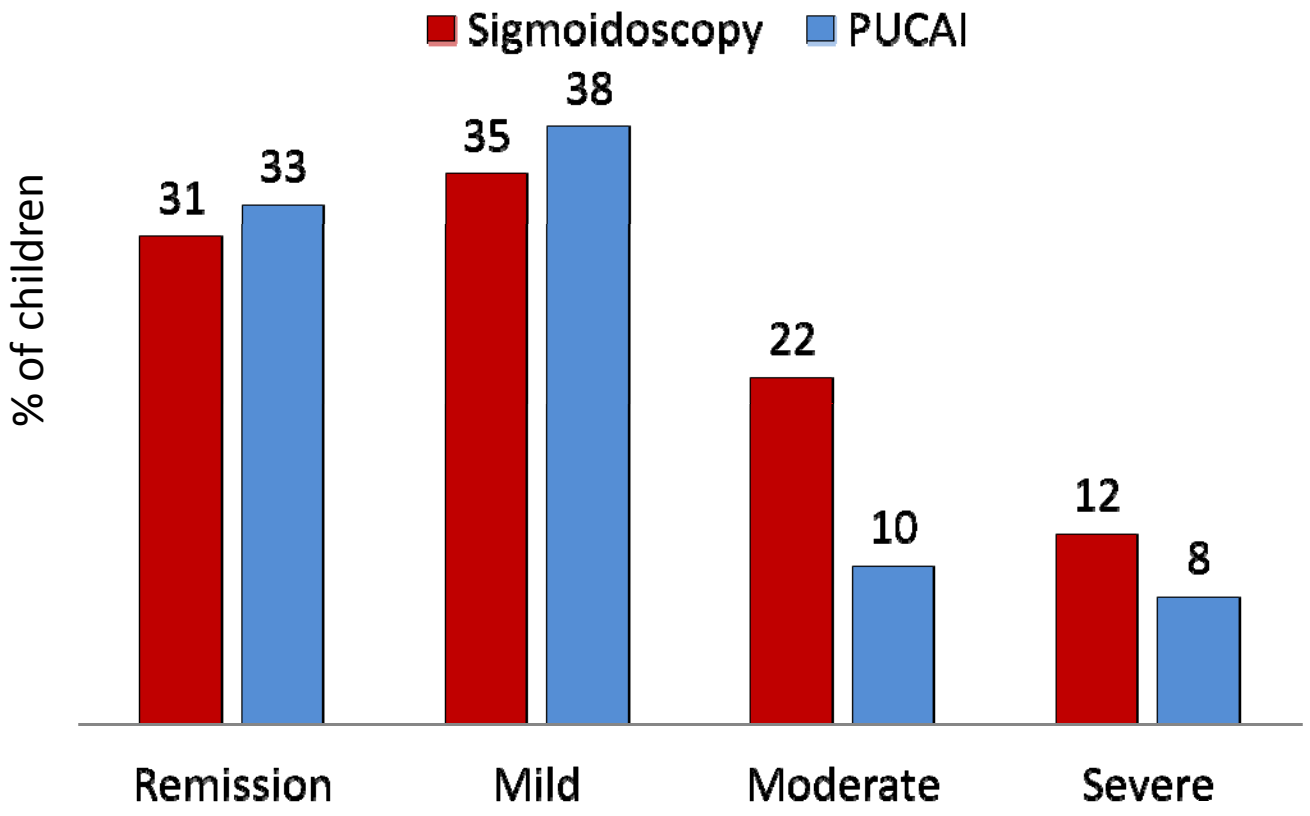
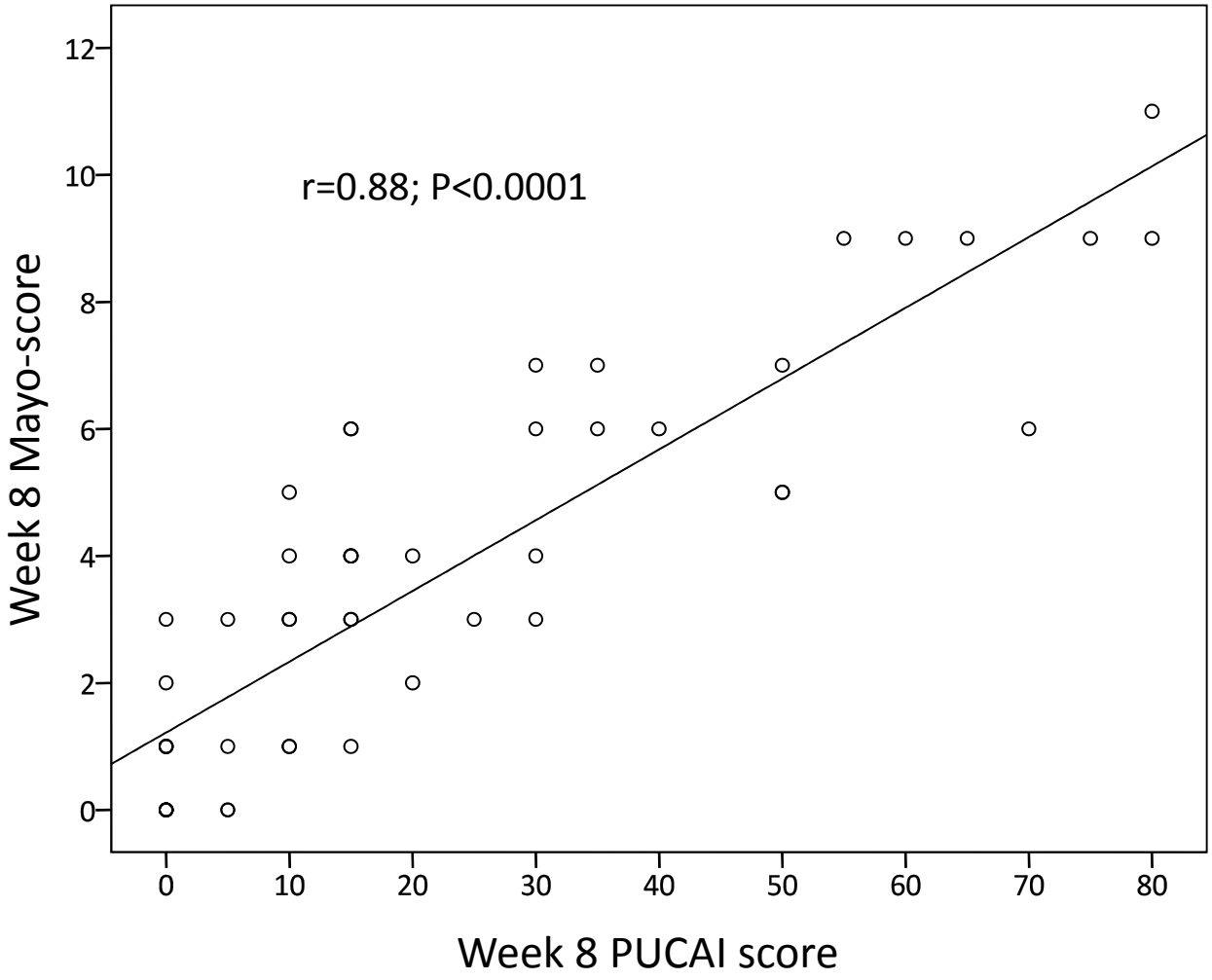
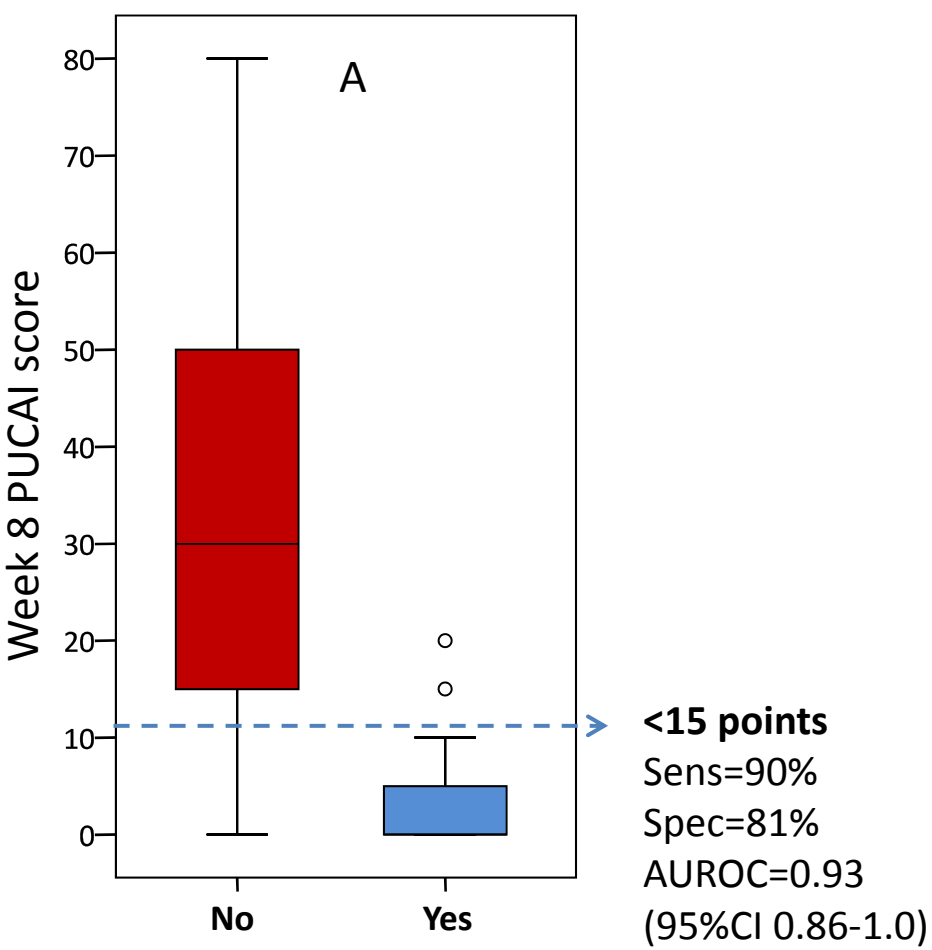
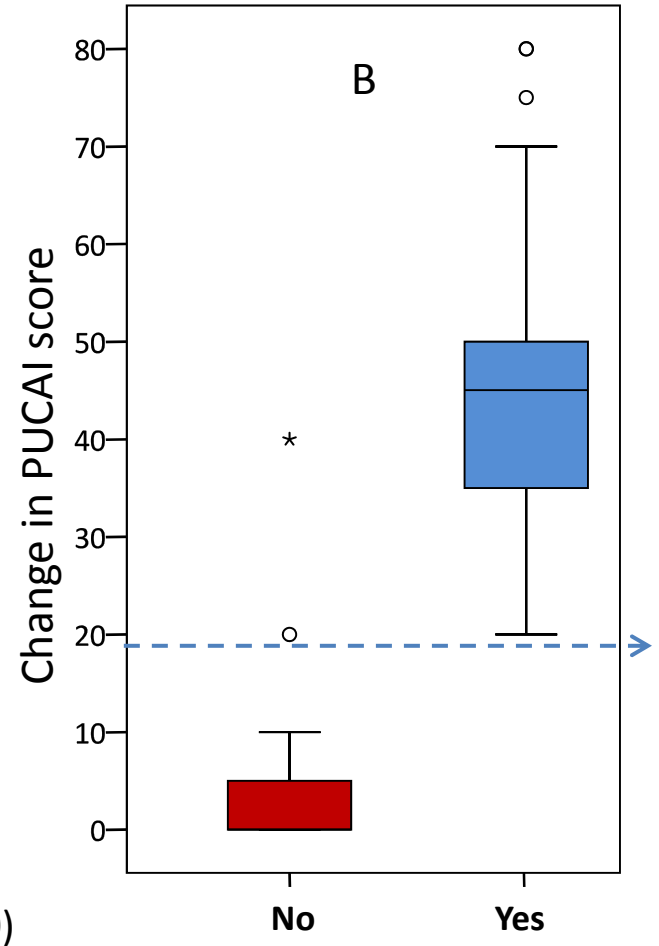

Sigmoidoscopy
PUCAI
% of children
31
33
35
38
22
10
12
8
Remission
Mild
Moderate
Severe

Figure 5


r=0.88; P<0.0001
Week 8 Mayo-score
Week 8 PUCAI score
0
2
4
6
8
10
12
0
10
20
30
40
50
60
70
80



<15 points
Sens=90%
Spec=81%
AUROC=0.93
(95%CI 0.86-1.0)



≥20 points
Sens=97%
Spec=90%
AUROC=0.97
(95%CI 0.92-1.0)

Results

- Using a multivariable logistic regression model, the Week 8 PUCAI was the only predictor of sustained 1-year steroid-free remission (P=0.038) while MH and CRP were not (P>0.2).

Conclusions

- We present the first data on the utility of MH to predict disease course in pediatric UC.
- We found that the PUCAI has at least similar power as MH in predicting week 30 and 54 sustained remission and was superior to CRP.
- Therefore, routine endoscopic evaluation in children with UC who are in complete clinical remission by the PUCAI may not be justified.

Thank you