IX CONGRESSO NAZIONALE IG-IBD

FIRENZE 29 NOVEMBRE 1 DICEMBRE 2018

Histologic Scoring Indices In Ulcerative Colitis: A Critical Reappraisal

Vincenzo Villanacci
Anatomia Patologica
Spedali Civili
Brescia

"Terms such as non-specific chronic inflammation or signs of chronic inflammatory bowel disease but non-diagnostic should be avoided"

"It is important to define the terminology as clearly as possible and to use the terminology consistently to avoid confusion"

CLINICAL INFORMATIONS

MULTIPLE BIOPSIES

from five sites around the colon
(including the rectum and the ileum)

Multiple implies a minimum of
two samples….correctly oriented!!!!!

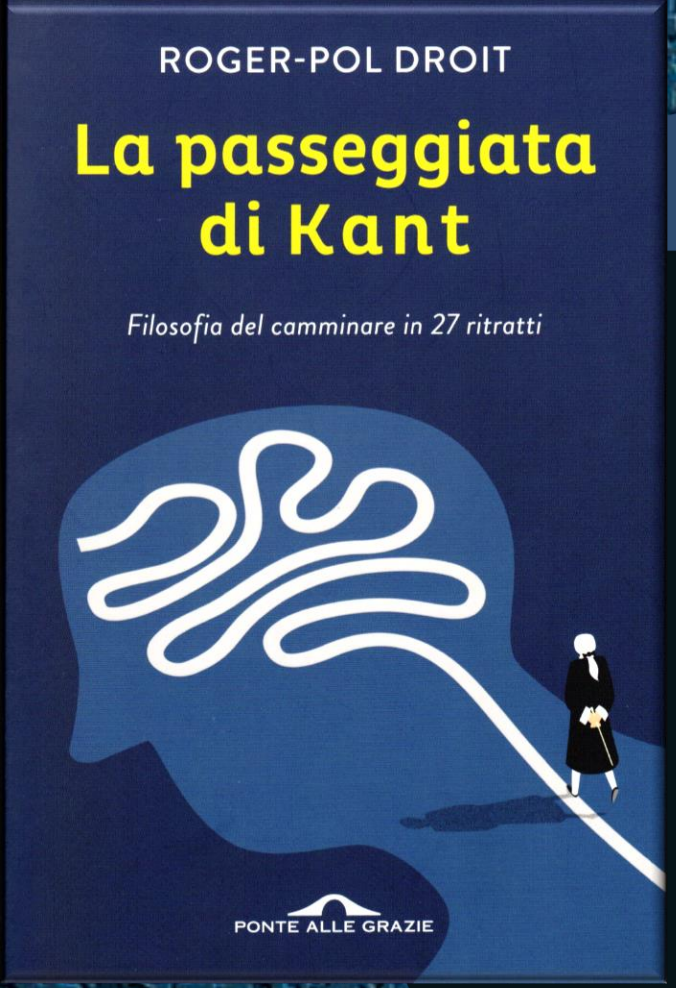
Microscopic Features of Ulcerative Colitis

A diagnosis of established ulcerative colitis is based upon the combination of :

A) Crypt Arch Dis

B) Heavy Diffuse Transi Propr

C) Basal Plasmacytosis



Ah, tu credi questo, ma ne sei proprio sicuro?

Questa insinuazione è una vera e propria destabilizzazione.

La messa in dubbio che incrina le evidenze dà sulle prime, l'impressione che si cadrà.

D'un tratto, il mondo familiare e sicuro si rivela incerto.

I pilastri ai quali ci aggrappavamo ci sfuggono.

Credete di sapere? Embè, non sapete!

Siete sicuri che tutto è familiare?

Guardate in modo diverso, sarete sorpresi .

Microscopic Features of Ulcerative Colitis

A) Heavy Diffuse

T

F

B)

D) Crypt

Architectural Distortion

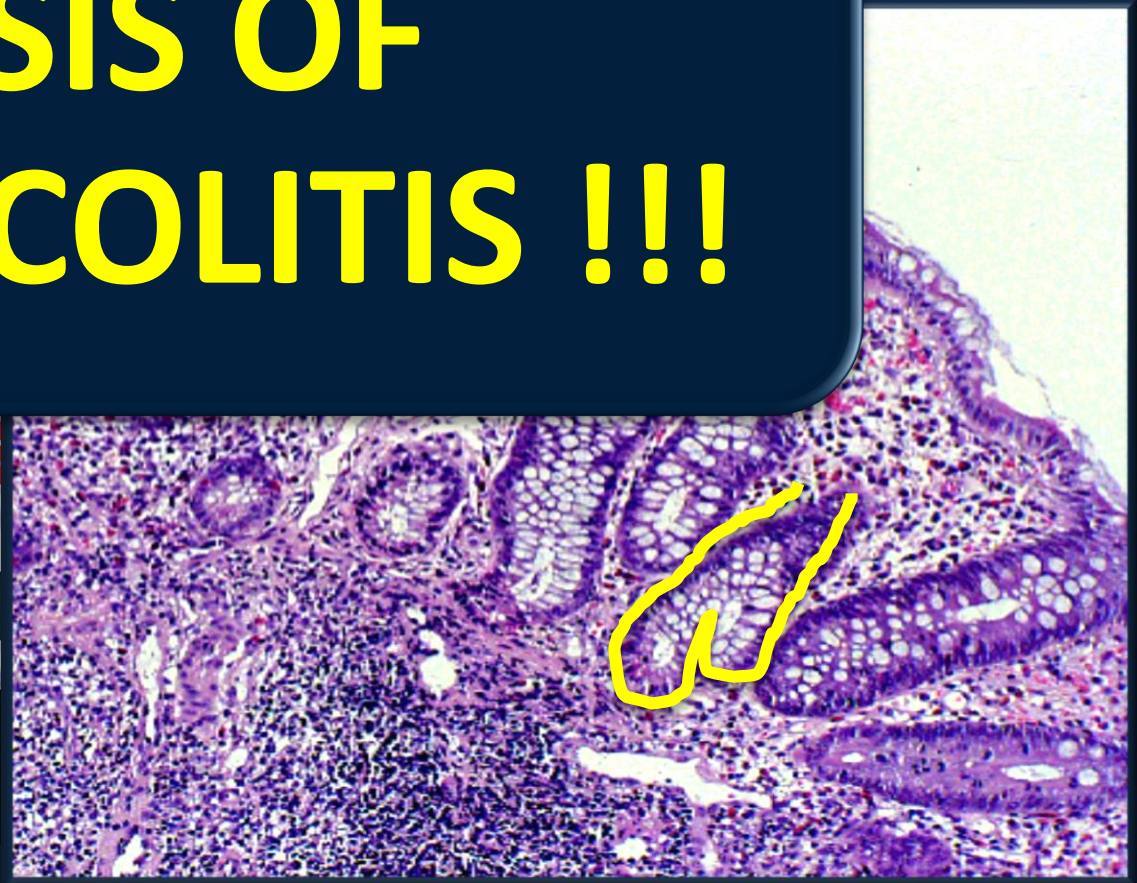
Heavy Diffuse Transmucosal Lamina Propria Cell Increase

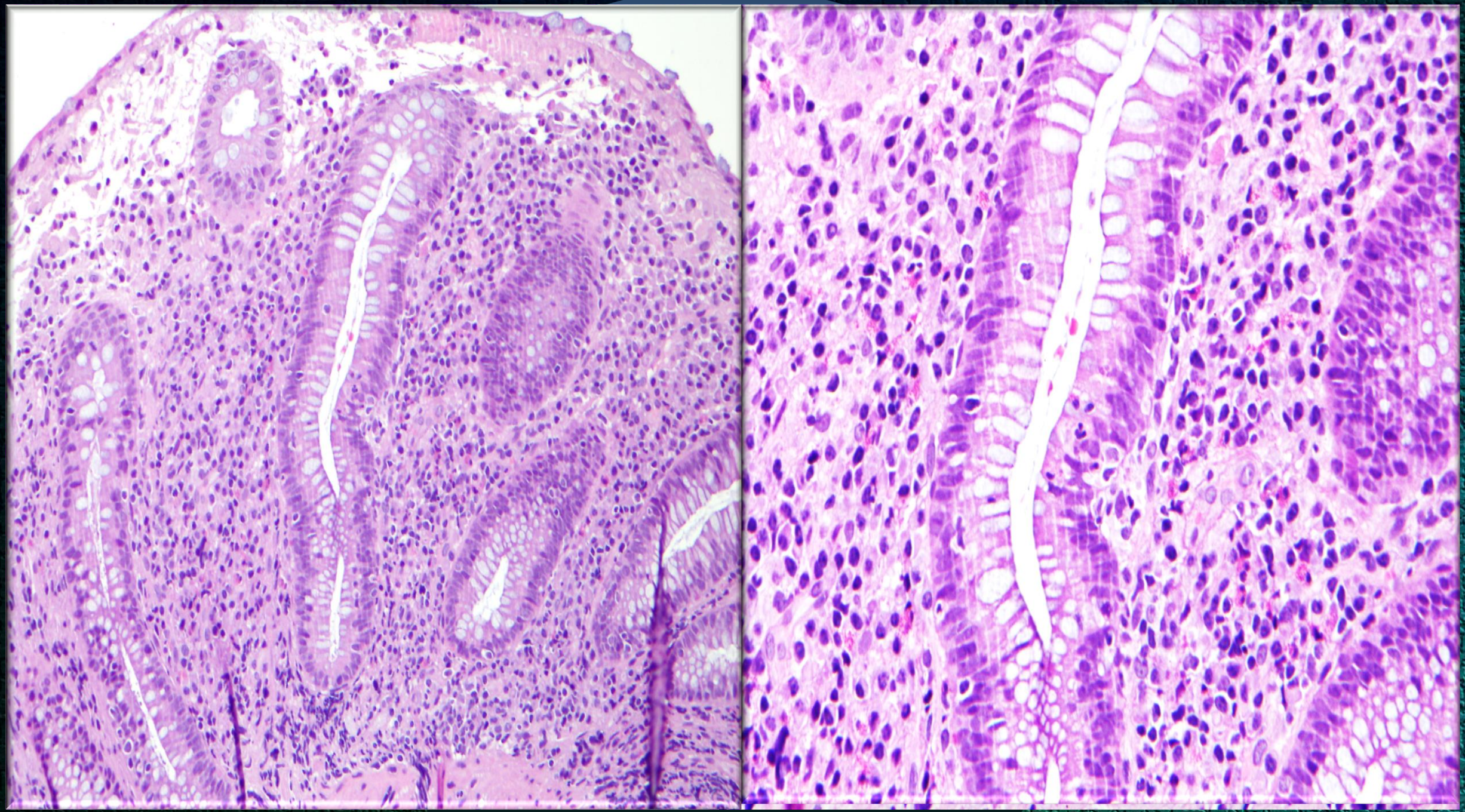
Basal Plasmacytosis

nophils

DIAGNOSIS OF ULCERATIVE COLITIS !!!

Crypt Architectural Distortion





ACTIVITY OF UC !

Corticosteroids

Salycilates

Immunomodulators

Biological Agents

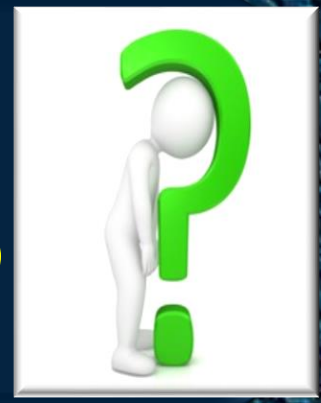
è nu passaggio dal sonoro al muto.
E quanno s'è stutata 'a lampetella
significa ca ll'opera è fernuta
e 'o primm'attore s'è ghiuto a cuccà.

poesia del grande **Totò**

WHEN TO STOP TREATMENT WITH BIOLOGICAL DRUGS?

When it stops working?

When it is working but associated with toxicity?



When it is still working?

When to stop therapy?

ECCO	BSG	ACG	CAG
"no recommendations can be given for the duration of treatment with MTX or anti-TNF although prolonged use of these medications may be considered if needed"	"NICE recommends that maintenance therapy with anti-TNF therapy should continue 12 months or until treatment failure"	"the recommendation uses strong language regarding the benefit of continuing anti-TNF therapy …the quality of the evidence was high"	"for the patient who has responded favourably to 52 weeks of therapy, the benefit of continued therapy appears to outweigh the risks"

ACG, American College of Gastroenterology;
BSG, British Society of Gastroenterology;
CAG, Canadian Association of Gastroenterology;
ECCO, European Crohn's and Colitis Organisation

There are no established guidelines as to whether and when biological therapy can be discontinued

When to stop therapy?

IG-IBD Statement 5F

Maintenance therapy after successful anti-TNFα agents induction is mandatory. Infliximab [EL 1b, RG A], adalimumab [EL 1b, RG B], or AZA/6-MP [EL 2b, RG C], with drained sepsis [EL 4, RG B], should be used as maintenance therapy. All the maintenance therapy should be used for at least 1 year [EL 1b, RG A]; adalimumab could be used up to 3 years [EL 2, RG B]

IG-IBD

the Italian Group for the study of Inflammatory Bowel Disease

The London Position Statement of the World Congress of Gastroenterology on Biological Therapy for IBD With the European Crohn's and Colitis Organization: When to Start, When to Stop, Which Drug to Choose, and How to Predict Response?

Geert R. D'Haens, MD, PhD[1], Remo Panaccione, MD[2], Peter D.R. Higgins, MD[3], Severine Vermeire, MD, PhD[4], Miquel Gassull, MD, PhD[5], Yehuda Chowers, MD[6], Stephen B. Hanauer, MD[7], Hans Herfarth, MD[8], Daan W. Hommes, MD, PhD[9], Michael Kamm, MD[10,11], Robert Löfberg, MD[12], A. Quary[13], Bruce Sands, MD[14], A. Sood, MD[15], G. Watermayer[16], Bret Lashner, MD[17], Marc Lémann, MD[18], Scott Plevy[19], Walter Reinisch, MD[20], Stefan Schreiber, MD, PhD[21], Corey Siegel, MD[22], Stephen Targan, MD[23], M. Watanabe, MD[24], Brian Feagan, MD[25], William J. Sandborn, MD[26], Jean Frédéric Colombel, MD, PhD[27] and Simon Travis, MD[28]

Am J Gastroenterol 2011; 106:199–212; doi:10.1038/ajg.2010.392

WCOG Statement 1.31

In patients with UC or CD who have responded to a year of anti-TNF therapy, the benefits of continuing therapy should be weighed against the risks of discontinuation. Withdrawal of therapy is possible in patients with CD who have both complete mucosal healing and no biological evidence of inflammation [EL 2b]. The previous pattern of disease and response to different therapies are essential considerations. There are no data for UC.


ECCO
European
Oddio
Mò che
ci
combina
questo

STRIDE: treat-to-target recommendations in CD

Composite endpoint

Clinical/PRO remission

- Resolution of abdominal pain and normalization of bowel habit
- Should be assessed at a minimum of 3 months during active disease
- Patients' individual goals (e.g. QoL, mood disorders, fatigue, work productivity) should also be addressed: normalisation of QoL as ultimate goal

AND

Endoscopic remission

Absence of ulceration is the target

OR

Resolution of findings of inflammation on cross-sectional imaging

Adjunctive measures of disease activity that may be useful in selected cases, BUT NOT ALONE

- Histopathology is not a target due to lack of evidence of clinical utility
- Available biomarkers including CRP and faecal calprotectin are not targets

Mayo Endoscopic Score	Endoscopic Finding
Score 0	Normal
Score 1	Mild disease: erythema, decreased vascularity
Score 2	Moderate disease: marked erythema, absent vascular pattern, friability, erosions
Score 3	Severe disease: marked erythema, granularity, spontaneous bleeding, ulcerations

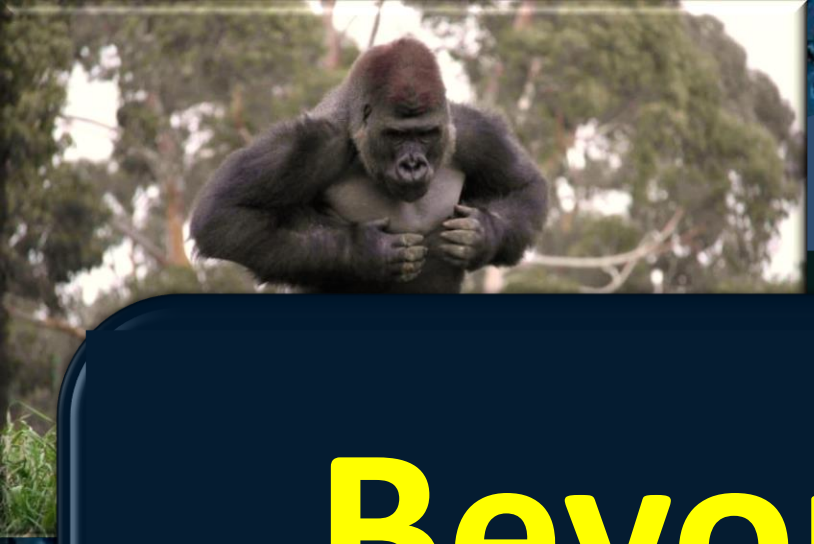
It is of paramount importance to consider that an endoscopic description of Mucosal Healing does not necessarily imply histological healing of the mucosa

Several authors stressed the concept that microscopic evidence of inflammation persists in 16-100% of patients with endoscopically quiescent colitis . In addition, active histological inflammation predicts clinical relapse during 12 months of follow-up, whereas endoscopic features did not.

Therefore, even considering the potentiality of the new therapeutic approaches, the importance of achieving also histological healing might add further value to future trials

On the basis of these evidences, the optimal treatment goal should be the complete resolution of the inflammatory process.

This is reached only when confirmed by histological assessment.

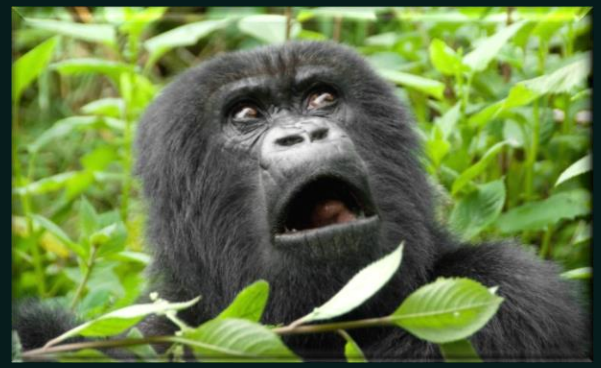


Beyond Endoscopic Appearance !!!

NUMBER AND SITE OF BIOPSIES

ACTIVITY AND INACTIVITY OF IBD

SCORES OF MUCOSAL HEALING



FIRST PROBLEM !

NUMBER AND SITE OF BIOPSIES

Clinical Gastroenterology and Hepatology 2014;12:929–934

Histologic Remission: The Ultimate Therapeutic Goal in Ulcerative Colitis?

Laurent Peyrin–Biroulet,*,‡ Aude Bressenot,*,§ and Wendy Kampman||

*Inserm, U954, France; ‡Department of Hepato-Gastroenterology, §Department of Pathology, University Hospital of Nancy,

Gut, 1991, 32, 174–178

Microscopic activity in ulcerative colitis: what does it mean?

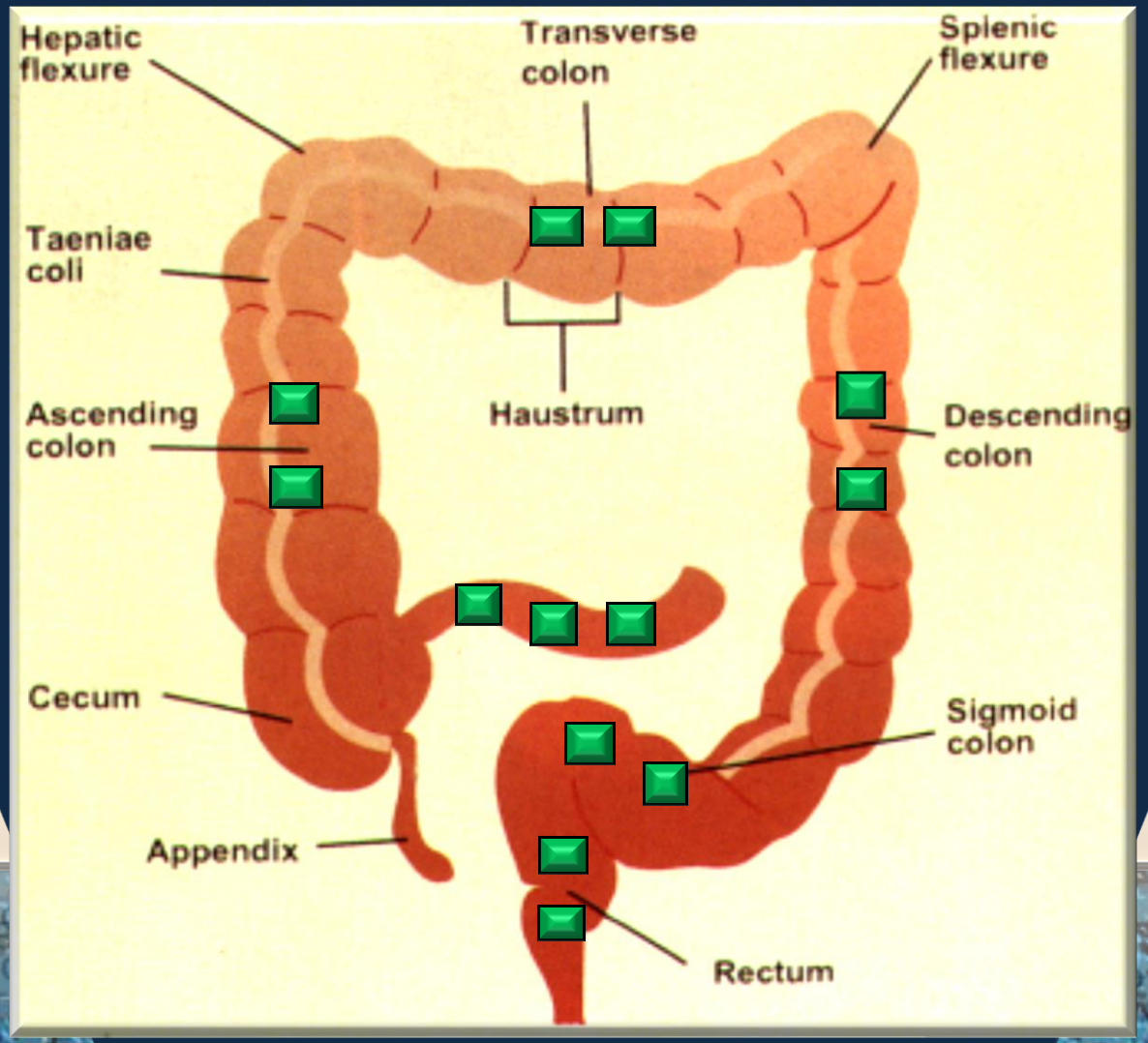
S A Riley, V Mani, M J Goodman, S Dutt, M E Herd

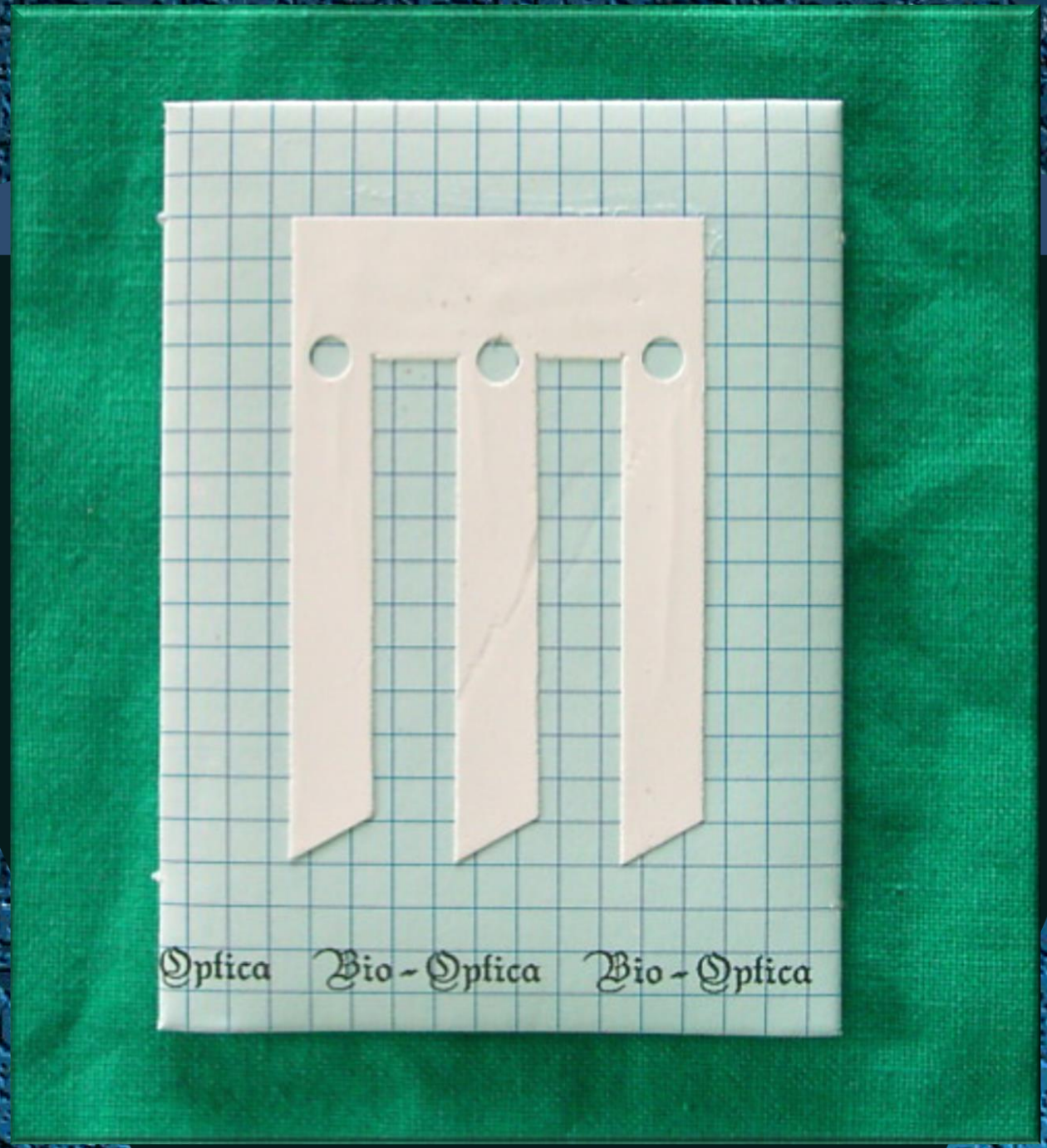
No indications about the number of biopsies and the number of different type of cells to evaluate !!!

Systematic review with meta-analysis: mucosal healing is associated with improved long-term outcomes in Crohn's disease

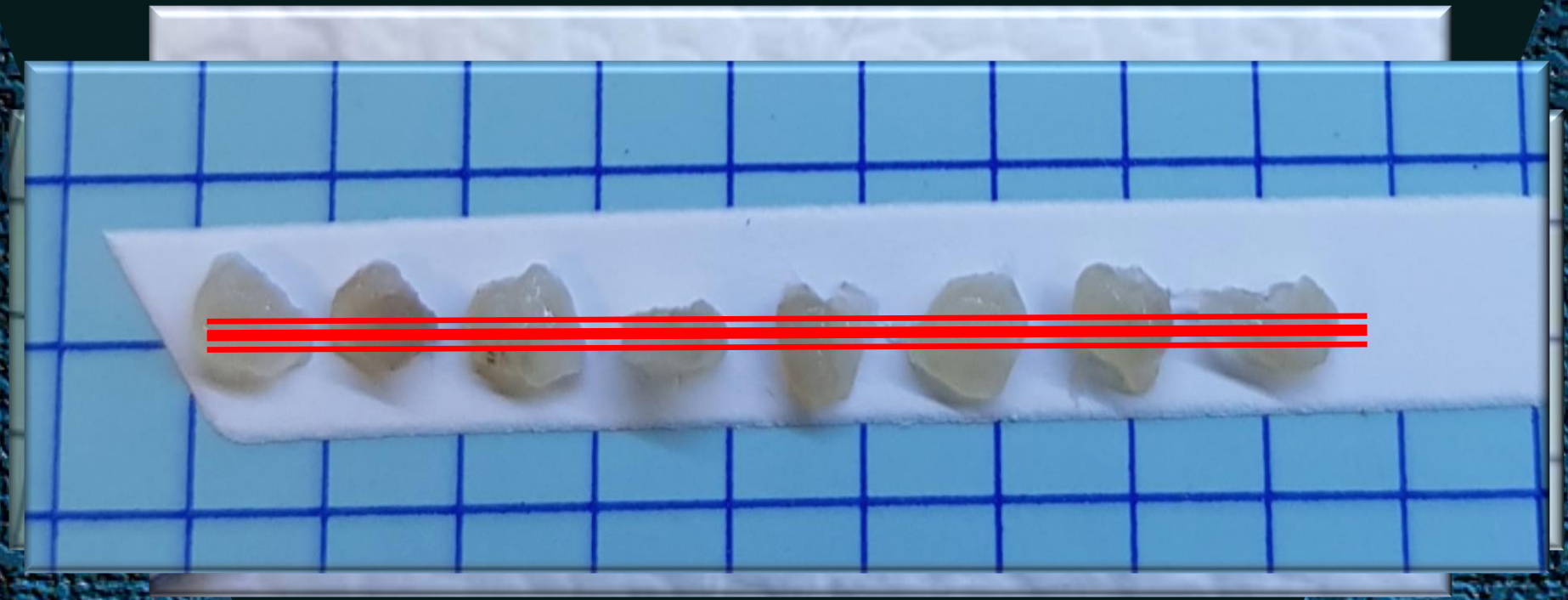
S. C. Shah, J.-F. Colombel, B. E. Sands & N. Narula

ADEQUATE SAMPLING




Optica Bio-Optica Bio-Optica

Ileo Colon

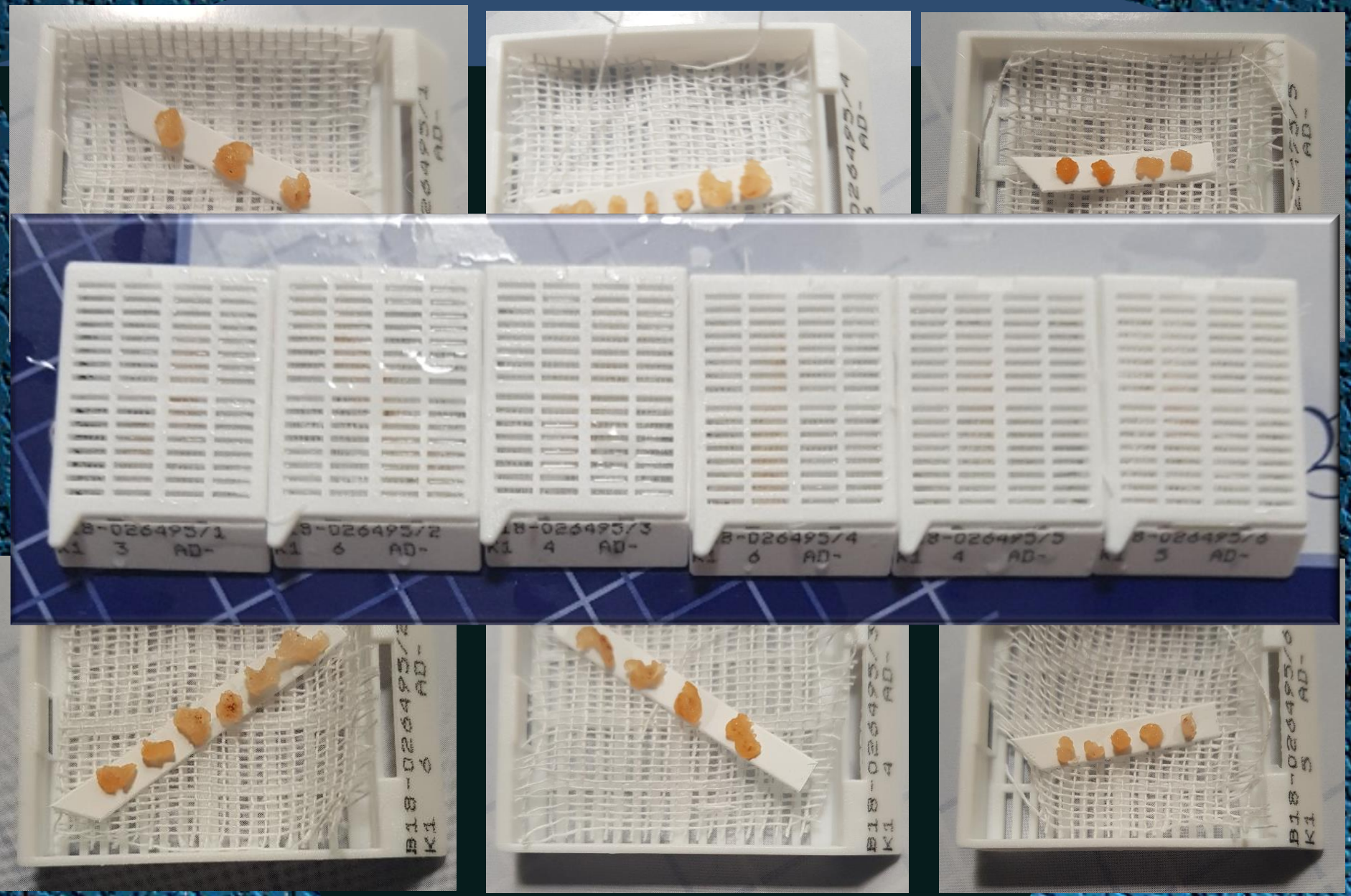


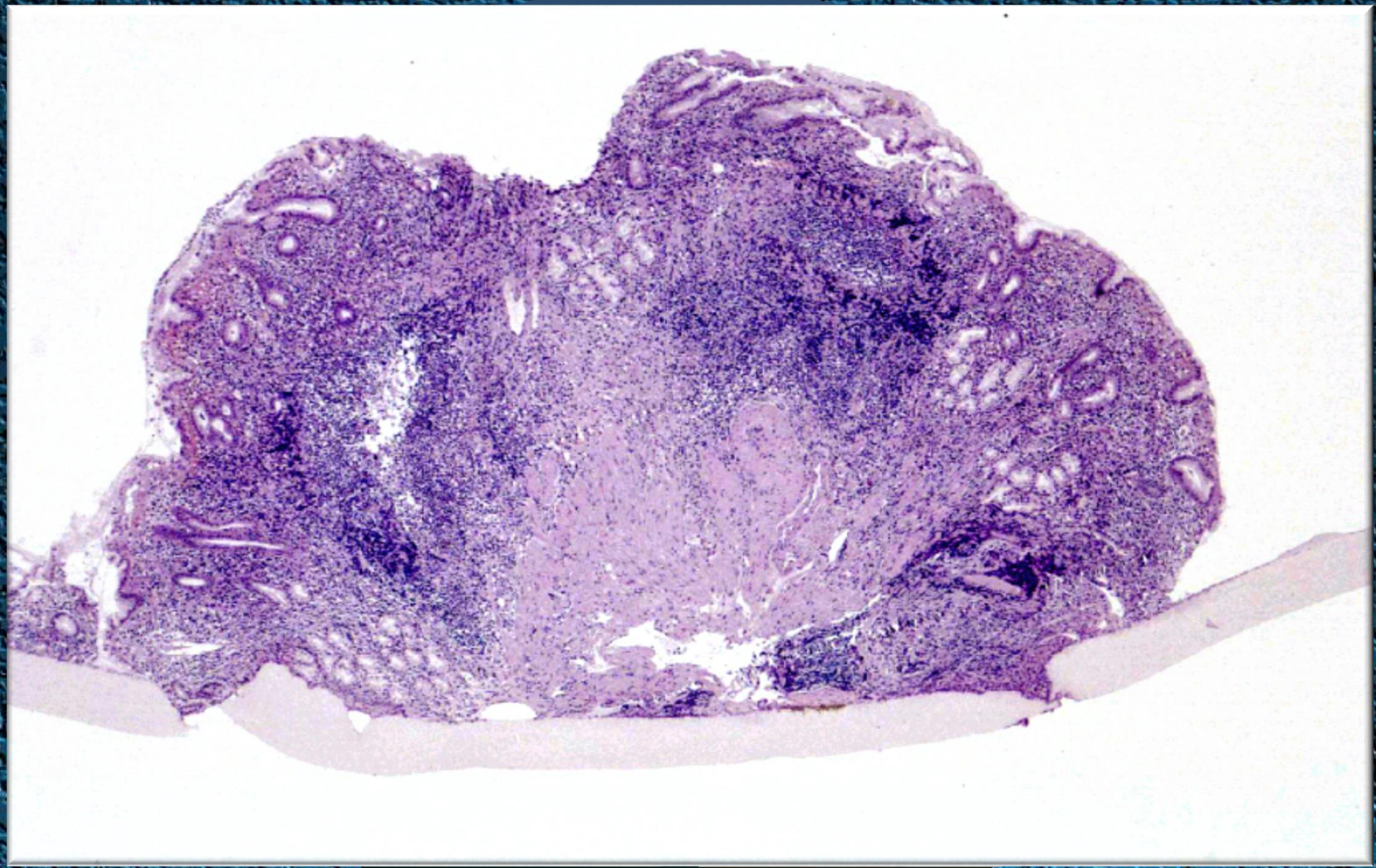

7
8
9
10
11
12
13
1
2
3
4
5
6

ILEO

SIGMA-RETTO

DUODENO-BULBO





BIOPSIA COLORETTALE	SET DI DATI CLINICI PER SOSPETTA COLITE IDIOPATICA

Nome del paziente	
Sesso F ❑ M ❑	
Data di nascita	
Data dell'esame	
Ospedale	

SINTOMI PRINCIPALI	
Diarrea	Acquosa ❑ Ematica ❑
Durata totale della malattia	
Durata del presente episodio	
Stato clinico attuale	
Aspetto sigmoidoscopico	Caratteristiche della mucosa

Estensione della malattia	❑
retto	❑
retto-sigma	❑
lato sinistro	❑
trasverso	❑
ascendente	❑
pancolite	❑
Pattern continuo	❑
segmentale	❑

SEDE DELLA BIOPSIA/E	
Opinione clinica	
Informazioni aggiuntive (se appropriate)	
Precedenti interventi G.I.	
Terapia	
Risultato colture fecali	
Altre malattie presenti	

SECOND PROBLEM !

ACTIVITY AND INACTIVITY OF IBD

Features of “activity”

- Cryptitis, crypt abscesses
- Epithelial injury
- Mucodepletion, cuboidal shape, nuclear enlargement, ulcer

Neutrophils

(cryptitis / crypt abscess formation)

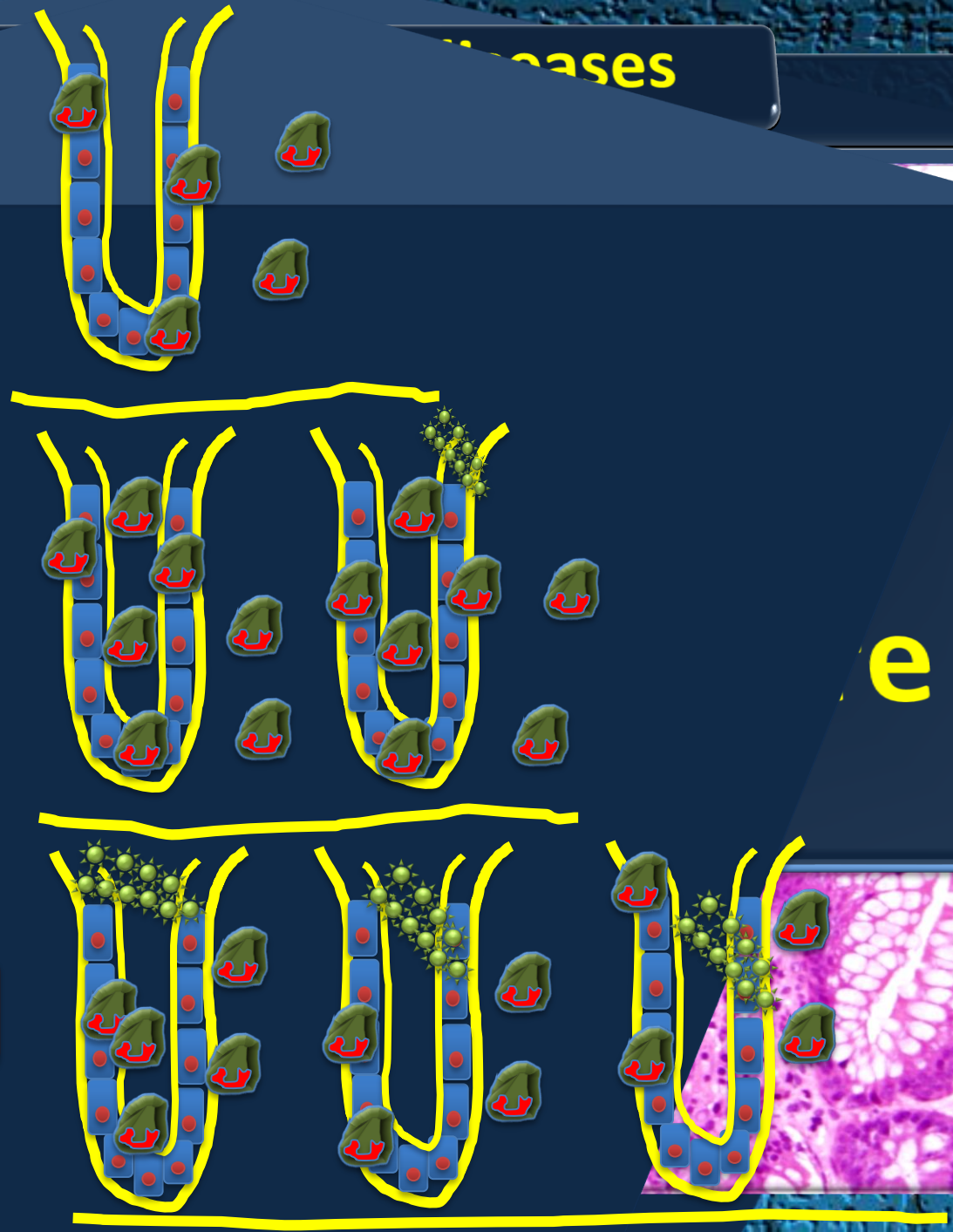
markers of disease activity

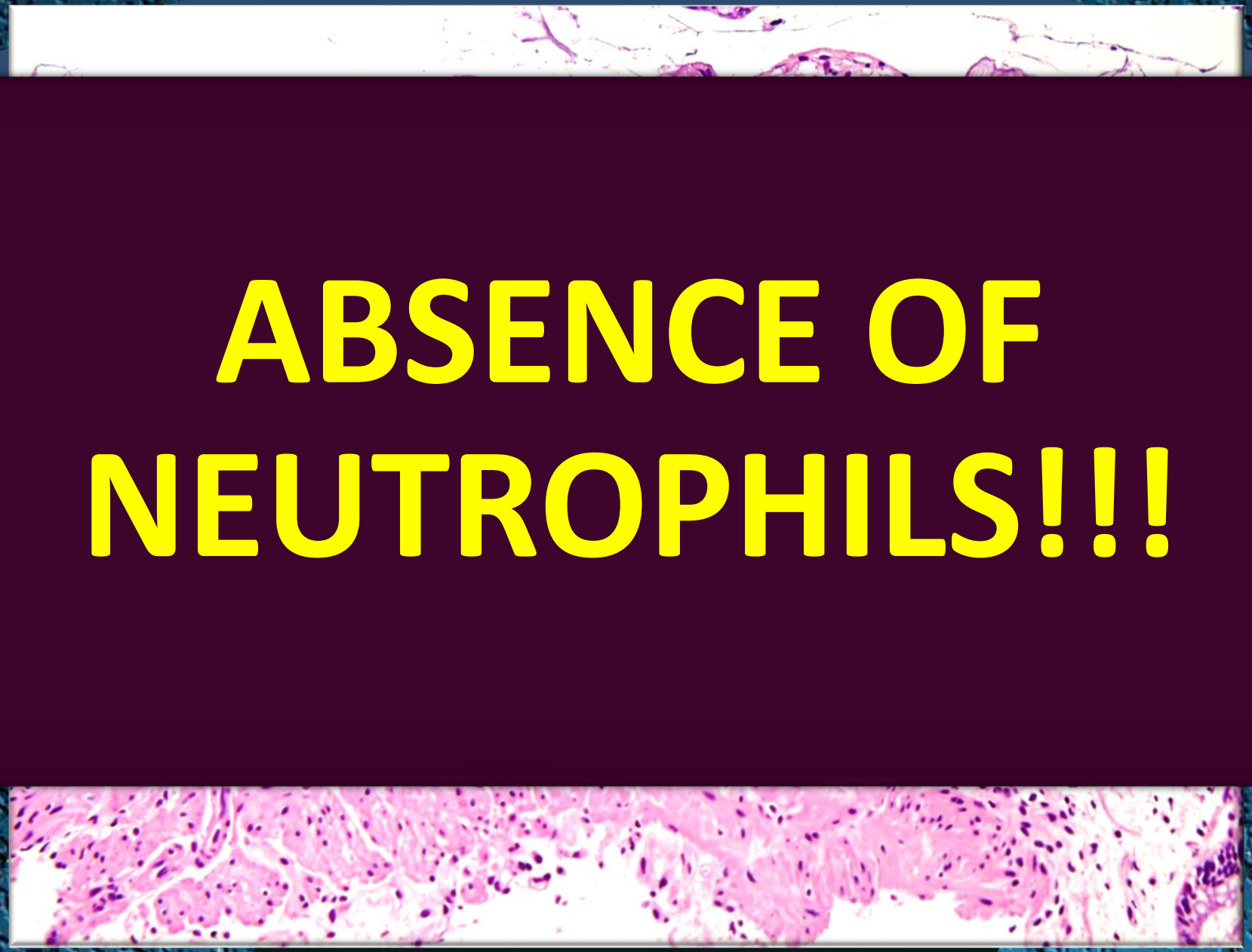
Activ… …eases

LOW

MODERATE

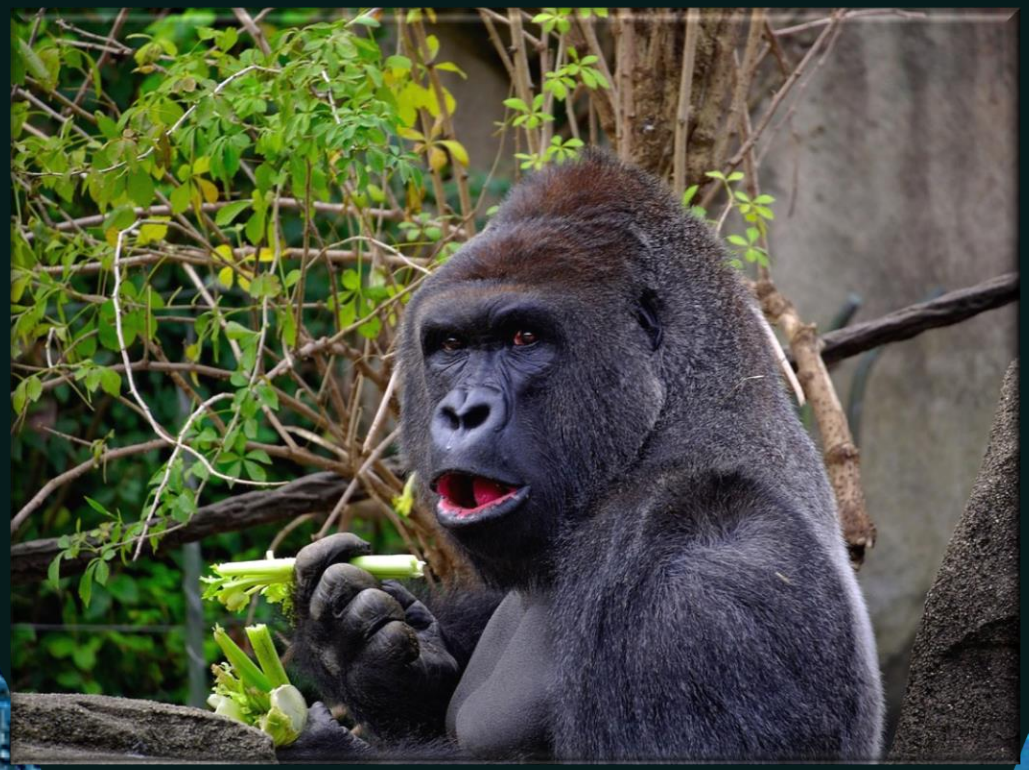
SEVERE



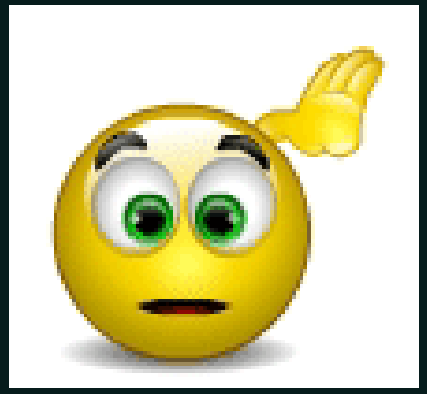


ABSENCE OF NEUTROPHILS!!!

THERE IS A PROBLEM..



Several authors stressed the concept that microscopic evaluation of Mucosal Healing is based not only on neutrophils but also on other cellular elements such as plasma cells and eosinophils…



Journal of Crohn's and Colitis (2014) 8, 1582–1597

ELSEVIER

Available online at www.sciencedirect.com

ScienceDirect

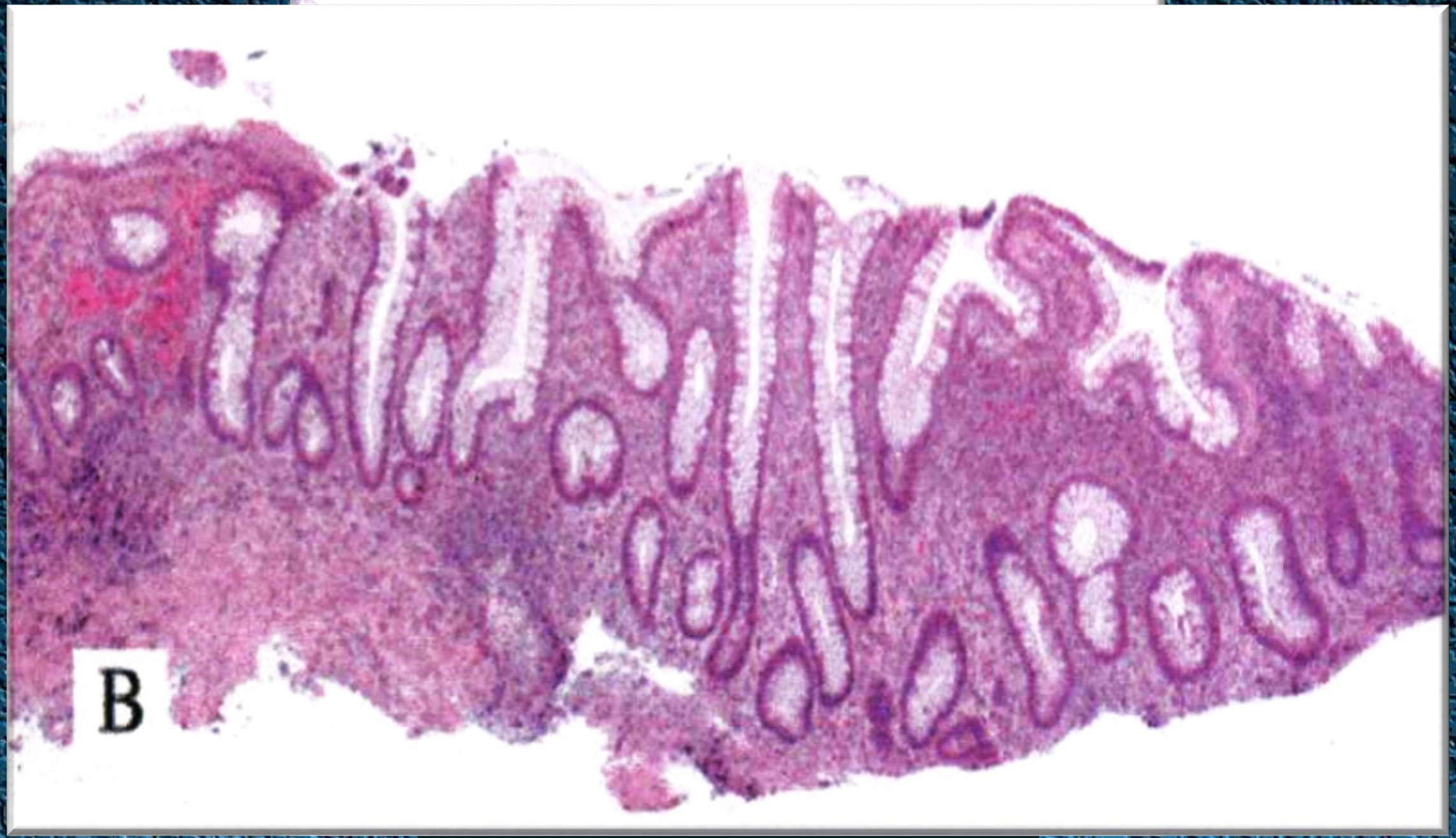
REVIEW ARTICLE

Systematic review: Histological remission in inflammatory bowel disease. Is 'complete' remission the new treatment paradigm? An IOIBD initiative

R.V. Bryant[a], S. Winer[b], SPLTravis[a], R.H. Riddell[b,*]

[a] *Translational Gastroenterology Unit, John Radcliffe Hospital, Oxford University Hospitals, United Kingdom*
[b] *Department of Pathology and Laboratory Medicine, Mt Sinai Hospital, 600 University Avenue, Toronto, ON M5G 1X5, Canada*

Received 11 June 2014; received in revised form 6 August 2014; accepted 12 August 2014


B

The International Organization of Inflammatory Bowel Disease Has embraced histologic remission ad defines it as:

A) The absence of neutrophils (both in the crypts and lamina propria)

WHICH IS THE NORMAL NUMBER OF PLASMA CELLS ?

WHICH IS THE NORMAL NUMBER OF EOSINOPHILS ?

Study Highlights

WHAT IS CURRENT KNOWLEDGE

- ✓ Mucosal healing is a key endpoint to medical therapy in ulcerative colitis (UC).
- ✓ Mucosal healing reduces risk of hospitalization and colectomy.

No indications about the number of biopsies and the number of basal plasma cells to evaluate !!!

- ✓ There is a poor correlation between endoscopic and microscopic disease activity.
- ✓ All patients with mucosal healing should have biopsies to assess the histologic disease activity.
- ✓ Closer follow-up and optimization of medical therapy should be considered in patients with basal plasmacytosis.

I DISAGREE !!

BECAUSE BASAL PLASMACYTOSIS IS ONLY A DIAGNOSTIC MARKER AND NOT INDICATIVE OF REMISSION!!!!

Microscopic Features of Ulcerative Colitis

Basal plasmacytosis at the initial onset has a high predictive value for the diagnosis of IBD

Basal plasmacytosis is a good diagnostic feature in established ulcerative colitis.

ECCO

EOSINOPHILIC GASTROENTERITIS

Table 4: Proposed quantitative criteria for eosinophilic gastritis and eosinophilic gastroenteritis

Author(s)	Diagnosis	Criteria
Hurrell et al.[78]	Histologic eosinophilic gastritis	≥30 eosinophils per HPF in at least 5 separate HPFs (if H. pylori present, eosinophilia must persist several months post eradication)
Collins[77]	Eosinophilic gastritis	≥30 eosinophils per HPF in at least 5 separate HPFs
Ko et al.[72]	Eosinophilic gastritis (pediatric)	≥70 eosinophils per HPF involving >3 HPFs
Bischoff and Ulmer[76]	Eosinophilic gastroenteritis	>20 eosinophils per HPF
Collins[77]	Eosinophilic enteritis	>52 eosinophils per HPF in the duodenum OR >56 eosinophils per HPF in the ileum
Collins[77]	Eosinophilic colitis	>100 eosinophils per HPF in the right colon OR >84 eosinophils per HPF in the transverse or descending colon OR >64 eosinophils per HPF in the rectosigmoid colon
Turner et al.[84]	Colonic eosinophilia	>50 eosinophils per HPF in the right colon >35 eosinophils per HPF in the transverse colon >25 eosinophils per HPF in the left colon

HOW MANY EOSINOPHILS?

THERE ARE NO ABSOLUTE CUT-OFF

Conner JR Histopathology 2017

Poor prognostic factors for UC patients

Clinical factors

EOSINOPHILS

Disease and treatment factors

Reinisch W, et al. Clin Gastroenterol Hepatol. 2015;13:635–42

Original article

doi:10.1111/codi.12725

Severe eosinophilic infiltration in colonic biopsies predicts patients with ulcerative colitis not responding to medical therapy

P. Zezos*†, K. Patsiaoura‡, A. Nakos*, A. Mpoumponaris*, T. Vassiliadis*, O. Giouleme*, M. Pitiakoudis§, G. Kouklakis† and N. Evgenidis*

*Division of Gastroenterology, 2nd Propaedeutic Department of Internal Medicine, "Hippokration" General Hospital, Aristotle University of Thessaloniki, Thessaloniki, Greece, †Gastrointestinal Endoscopy Unit, Democritus University of Thrace, University General Hospital of Alexandroupolis, Alexandroupolis, Greece, ‡Department of Pathology, "Hippokration" General Hospital, Thessaloniki, Greece and §2nd Department of Surgery, Democritus University of Thrace, University General Hospital of Alexandroupolis, Alexandroupolis, Greece

Received 17 March 2014; accepted 5 June 2014; Accepted Article online 14 July 2014

COLORECTAL DISEASE

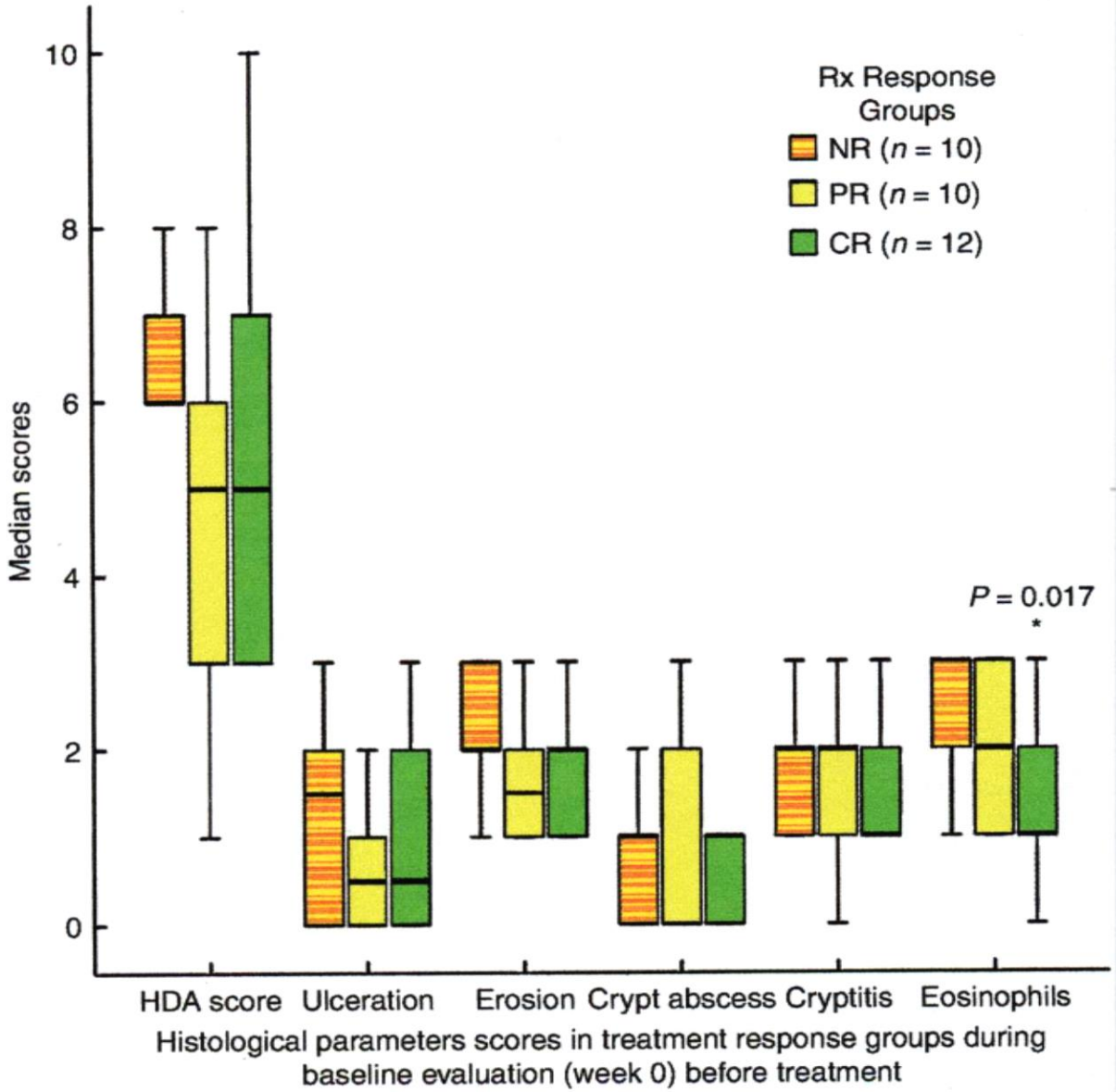


Figure 4 Histological parameters scores, according to treatment (Rx) response group, during baseline evaluation (week 0). *In patients with complete response, eosinophilic infiltration of the lamina propria was significantly less severe compared with that of patients with no response to treatment. No other significant differences in histological parameters were observed between Rx response groups. Kruskal–Wallis nonparametric ANOVA and the Mann–Whitney *U*-test were used for statistical evaluation. Boxes display the median value along with 25th–75th percentiles and whiskers display minimum–maximum values. CR, complete response; NR, no response; PR, partial response.

Grading of histological disease activity (HDA) was performed semi-quantitatively for each of four histological feature (ulceration, erosion, crypt abscess and cryptitis), using a scale with scores from 0 to 3 (no or minimal HDA = 0, mild HDA = 1, moderate HDA = 2 and severe HDA = 3), resulting in a total HDA score of 0–12.

This total HDA score was categorized into four grades of histological disease activity: inactive/minimal (score 0–3); mild (score 4–6); moderate (score 7–9); and severe (score 10–12).

Moreover, in each case it was estimated whether there was a predominance of eosinophils among inflammatory cells (lymphocytes,plasmatocytes, neutrophils and eosinophils) infiltrating the colonic lamina propria. The presence and the degree of eosinophil predominance was scored as: 0, none or minimal; 1, mild; 2, moderate; and 3, severe (Fig. 1a, b).

Histological evaluation and scoring were performed under light microscopy, at x400 magnification, by one experienced gastrointestinal pathologist (KP) who knew the diagnosis but was blinded to the clinical status.

The most inflamed site in the left colon or rectum was used for the assessment of endoscopic and histological scores.

28 cases of UC

21 Cases: 12 M + 9 F (median age 31,57)

7 Controls: 5 M + 2 F (median age 46,85)

> 60 in two biopsies at HPF 40x

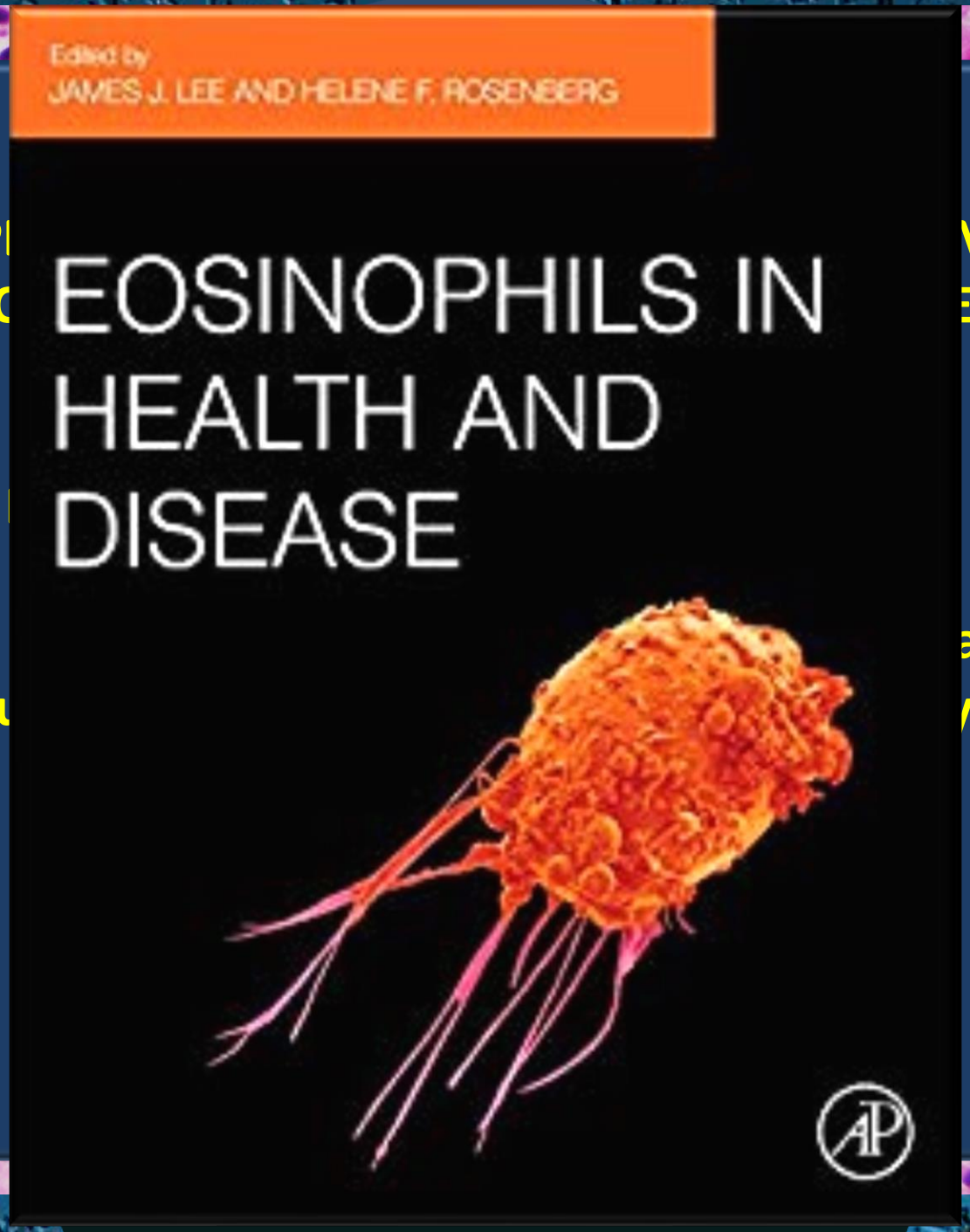
Duration of disease	Therapy
Cases: 2 - 13 years	Cases: inefficacy of therapy→IFX
Controls: 2 – 5 years	Controls: efficacy of therapy→ remission

COLONIC HYP
PREDIC

MAY HELP TO
ERAPY

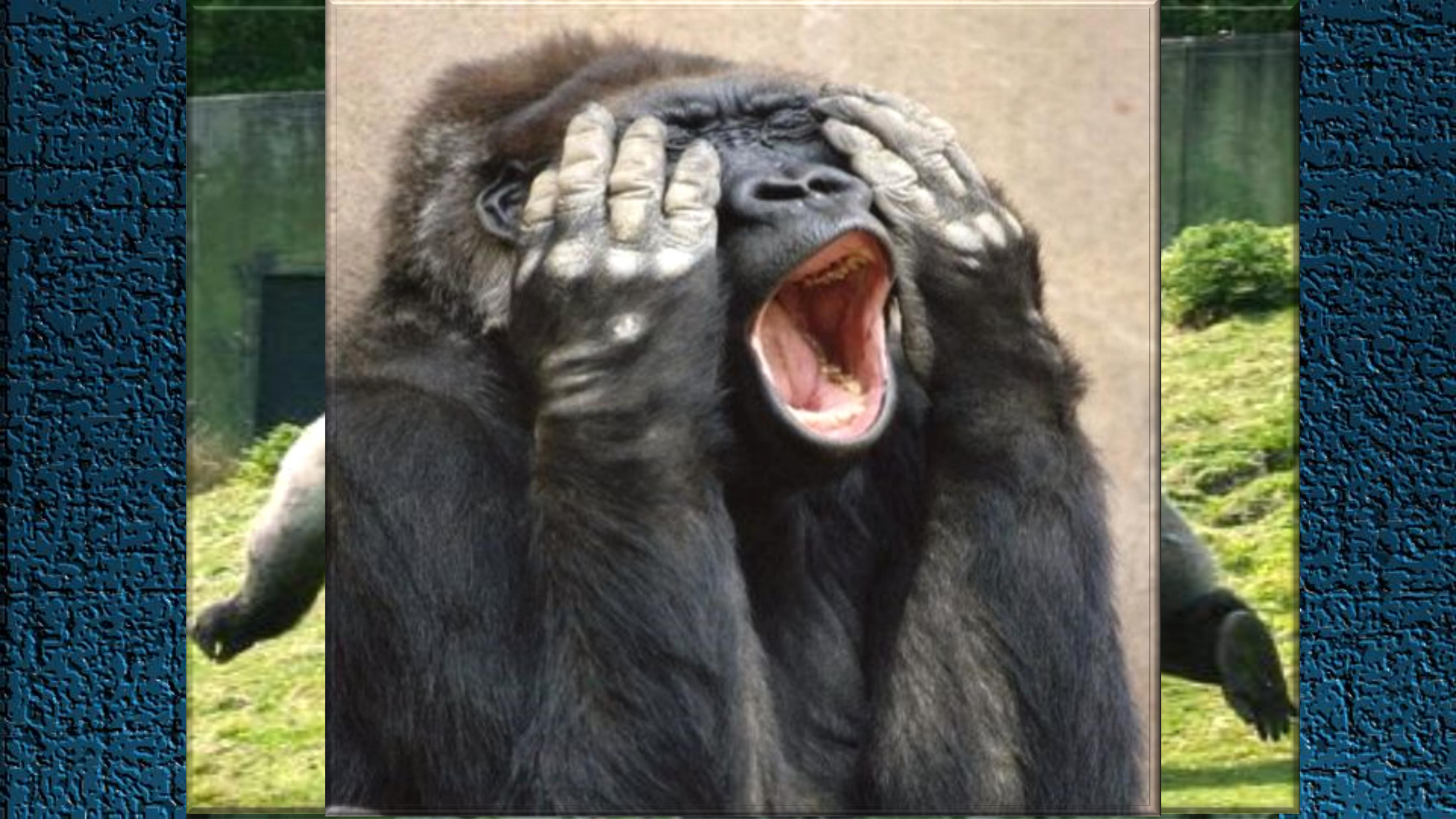
I am pleased
pu

accepted for
y.



THIRD PROBLEM !

SCORES OF MUCOSAL HEALING

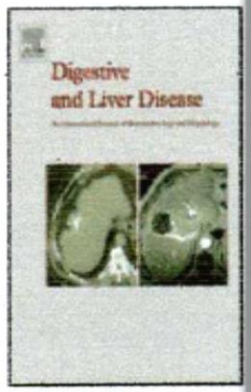


Digestive and Liver Disease 45 (2013) 969–977

Contents lists available at ScienceDirect

Digestive and Liver Disease

journal homepage: www.elsevier.com/locate/dld



Review Article

Definition and evaluation of mucosal healing in clinical practice

Silvia Mazzuoli[a], Francesco W. Guglielmi[a,*], Elisabetta Antonelli[b], Marianna Salemme[c], Gabrio Bassotti[b], Vincenzo Villanacci[c]

[a] Gastroenterology and Artificial Nutrition Department, "San Nicola Pellegrino" Hospital Trani, BT, Italy
[b] Gastroenterology and Hepatology Section, Department of Clinical & Experimental Medicine, University of Perugia, Italy
[c] Department of Pathology, Spedali Civili of Brescia, Italy

Virchows Arch
DOI 10.1007/s00428-017-2156-5

ORIGINAL ARTICLE

Disease activity and mucosal healing in inflammatory bowel disease: a new role for histopathology?

Rish K. Pai[1] · Karel Geboes[2]

Table 3 Selected histologic scoring systems in ulcerative colitis

Truelove and Richards, 1956 [11] 3-grade scale ranging from no inflammation to severe inflammation

Saverymuttu index, 1986 [59] Generates a total score based on enterocyte damage, crypt abnormalities, lamina propria chronic inflammation, lamina propria neutrophilic inflammation

Riley score, 1991 [60] Scores 6 items on a 4 point scale (0–4):

1. Neutrophils in lamina propria
2. Crypt abscesses
3. Mucin depletion
4. Surface epithelial integrity
5. Chronic inflammatory cell infiltrate
6. Crypt architectural abnormalities

Modified Riley, 2005 [61] Score ranges from 0 to 7

Score 0: Normal biopsy or inactive colitis

Score 1: Scattered individual neutrophils in lamina propria

Score 2: Patchy collections of neutrophils in lamina propria

Score 3: Diffuse neutrophilic infiltrate in lamina propria

Score 4: Neutrophils in epithelium, <25% crypts involved

Score 5: Neutrophils in epithelium, 25 to 75% of crypts involved

Score 6: Neutrophils in epithelium, >75% crypts involved

Score 7: Erosion or ulceration

Gupta/Harpaz score, 2007 [21] Activity is graded based on cryptitis and ulcers/erosions
Inactive (no cryptitis)
Mildly active (<50% of crypts involved)
Moderately active (>50% crypts involved)
Severely active (ulcers or erosions)
Chicago score, 2007 [62] Score ranges from 0 to 6
Normal (score 0)
Quiescent (score 1)
Increased lamina propria neutrophils without definite intraepithelial neutrophils (score 2)
Cryptitis without crypt abscesses (score 3)
Crypt abscesses in <50% of crypts (score 4)
Crypt abscesses in >50% of crypts or erosions/ulceration (score 5)

Robarts histopathologic index, 2016
[26]
Based on the Geboes score. Measures those items that correlate with histologic
severity are reproducible and respond to therapies. Calculated score that ranges from 0 to 33
RHI = 1 × chronic inflammatory cell infiltrate (0–3) + 2 × lamina propria neutrophils (0–3) + 3 × neutrophils in epithelium (0–3) + 5 × erosions or ulceration (0–3 [combines Geboes subscores 5.1 and 5.2])

Nancy index, 2016 [27] 4-point scale taking into account both chronic lamina propria inflammation and active inflammation
Grade 0: No histological significant disease (no or only mild increase in chronic inflammatory cells)
Grade 1: Chronic inflammatory cell infiltrate with no acute inflammatory cell infiltrate
Grade 2: Mildly active disease
Grade 3: Moderately active disease
Grade 4: Severely active disease (ulceration)

Table 2. Geboes' score for the calculation of histological activity with additional data about basal plasmacytosis.

Grade 0 Structural (architectural) changes

0.0 No abnormality
0.1 Mild abnormality
0.2 Mild or moderate diffuse or multifocal abnormalities
0.3 Severe diffuse or multifocal abnormalities

Grade 1 Chronic inflammatory infiltrate

1.0 No increase
1.1 Mild but unequivocal increase
1.2 Moderate increase
1.3 Marked increase

Grade 2A Eosinophils in the lamina propria

2A.0 No increase
2A.1 Mild but unequivocal increase
2A.2 Moderate increase
2A.3 Marked increase

Grade 2B Neutrophils in the lamina propria

2B.0 No increase
2B.1 Mild but unequivocal increase
2B.2 Moderate increase
2B.3 Marked increase

Table 2. Geboes' score for the calculation of histological activity with additional data about basal plasmacytosis.

Grade 3 Neutrophils in the epithelium

3.0 None

3

part of crypt

4.2 Probable: marked attenuation

4.3 Unequivocal crypt destruction

Grade 5 Erosion or ulceration

5.0 No erosion, ulceration, or granulation

Extra Basal plasmacytosis

Absent

Focal basal plasmacytosis

Diffuse basal plasmacytosis

No indications about the number of biopsies and the number of different type of cells to evaluate !!!

Table 2. The proposed Simplified Geboes Score.

Grade 0: No inflammatory activity	0.0 No abnormalities 0.1 Presence of architectural changes 0.2 Presence of architectural changes and chronic mononuclear cell infiltrate
Grade 1: Basal plasma cells	1.0 No increase 1.1 Mild increase 1.2 Marked increase
Grade 2A: Eosinophils in lamina propria	2A.0 No increase 2A.1 Mild increase 2A.2 Marked increase
Grade 2B: Neutrophils in lamina propria	2B.0 No increase 2B.1 Mild increase 2B.2 Marked increase
Grade 3: Neutrophils in epithelium	3.0 None 3.1 < 50% crypts involved 3.2 > 50% crypts involved
Grade 4: Epithelial injury [in crypt and surface epithelium]	4.0 None 4.1 Marked attenuation 4.2 Probable crypt destruction: probable erosions 4.3 Unequivocal crypt destruction: unequivocal erosion 4.4 Ulcer or granulation tissue

Original

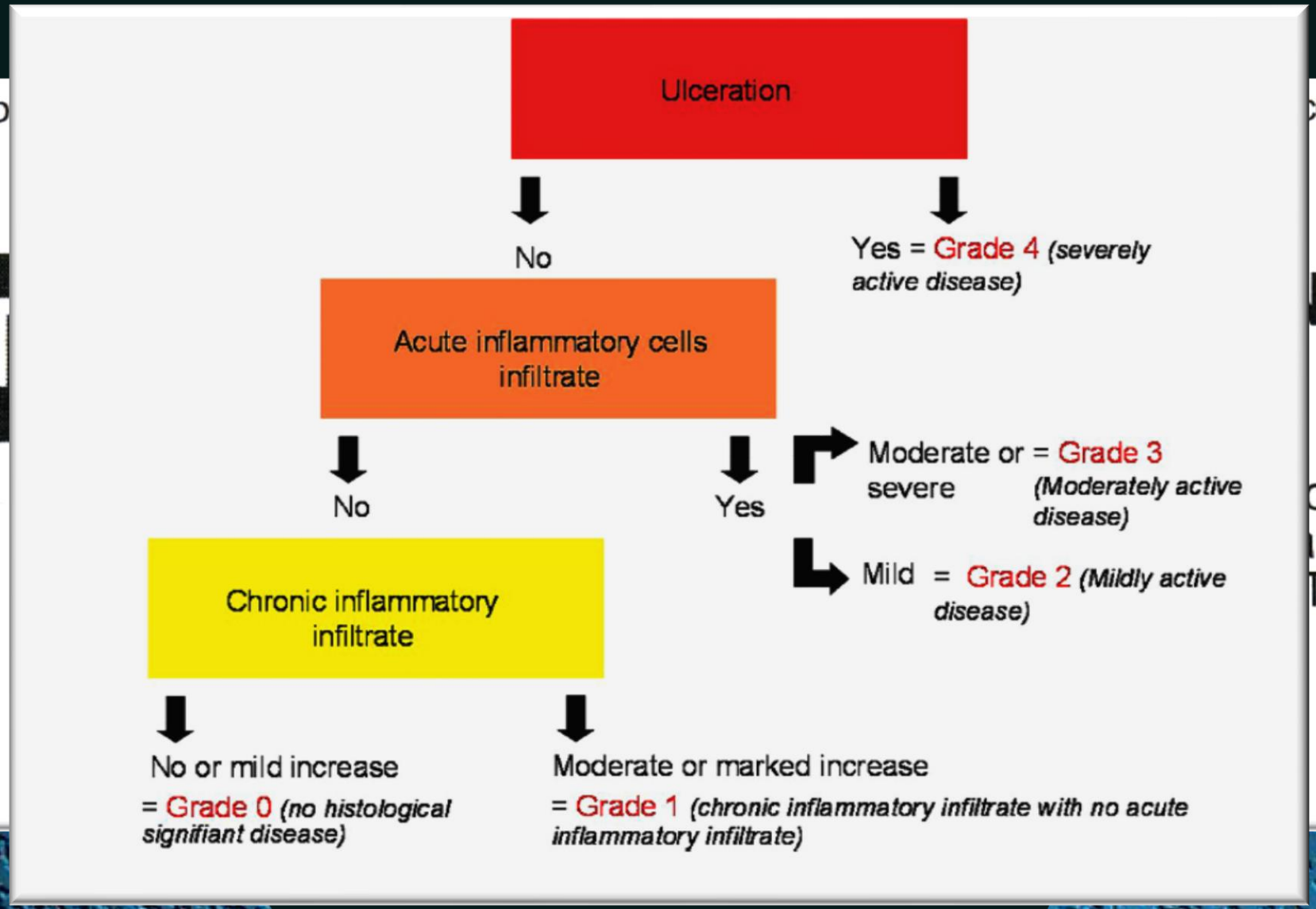
A Sin

Aranzaz
Bart Ler
Marc Fe
Gert De

[a]University H
Centre for
Leuven, Bel
University H
Pujol, Depar

Correspondir
Herestraat 4

The Nancy Index



The Nancy Index

Absence of significant histological disease
grade 0

Chronic inflammatory infiltrate with no acute inflammatory infiltrate
grade 1

Mildly active disease
grade 2

Moderately active disease
grade 3

Severely active disease
grade 4

Robarts Histological Index

Component
Intercept
Chronic inflammatory infiltrate
0=No increase
1=Mild but unequivocal increase
2=Moderate increase
3=Marked increase
Lamina propria neutrophils
0=None
1=Mild but unequivocal increase
2=Moderate increase
3=Marked increase
Neutrophils in epithelium
0=None
1=<5% crypts involved
2=<50% crypts involved
3=>50% crypts involved
Erosion or ulceration
0=No erosion, ulceration or granulation tissue
1=Recovering epithelium+adjacent inflammation
1=Probable erosion—focally stripped
2=Unequivocal erosion
3=Ulcer or granulation tissue

SE, standard error.

Table 2 Inflammatory bowel disease histological grading proposal (ECAP system).

Histopathology	Grade/score
E – Extent of inflammation	
Focal	1
Multifocal (patchy)	2
Diffuse	3
C – Chronicity	
C1 Crypt architectural alteration	
None	0
Focal alteration	1
Patchy distortion (<50%)	2
Diffuse distortion (>50%)	3
C2 Paneth cell metaplasia	
None	0
Present	1
A – Activity of inflammation	
A1 Surface epithelium	
Normal	0
Reactive changes (mucin depletion/villiform)	1
Neutrophilic infiltration	2
Erosion	3
Ulceration	4
A2 Neutrophilic cryptitis	
>5%	
<50%	
>50%	
A3 Crypts abscess	
None	0
Present	1
A4 Crypts destruction	
None	0
Crypt destruction	1
A5 Lamina propria mononuclear cellularity	
Normal	0
Mild increase	1
Moderate increase	2
Severe increase	3
A6 Basal plasmacytosis	
None	0
Focal	1
Diffuse	2
A7 Lamina propria neutrophilic infiltration	
None	0
Rare	1
Scattered	2
Extensive	3
P – Plus/others	
P1 Lamina propria eosinophilic infiltration	
None	0
Mild	1
Moderate	2
Severe	3
P2 Lymphoid follicles/aggregates	
None	0
Rare	1
Prominent	2
Total score	

EXTREMELY COMPLICATED AND SUBJECTIVE !

NOT APPLICABLE IN ROUTINE DIAGNOSIS !

PROPOSAL

SIMPLIFIED SCORE		
Patient	Morphological element	Grade
#1		
	Crypt Abscess	Absent 0
		Moderate (2) 2
		Severe (3) 3
		Ileum
	Sites involved from disease	Right Colon
		Transverse Colon
		Left Colon
		Rectum

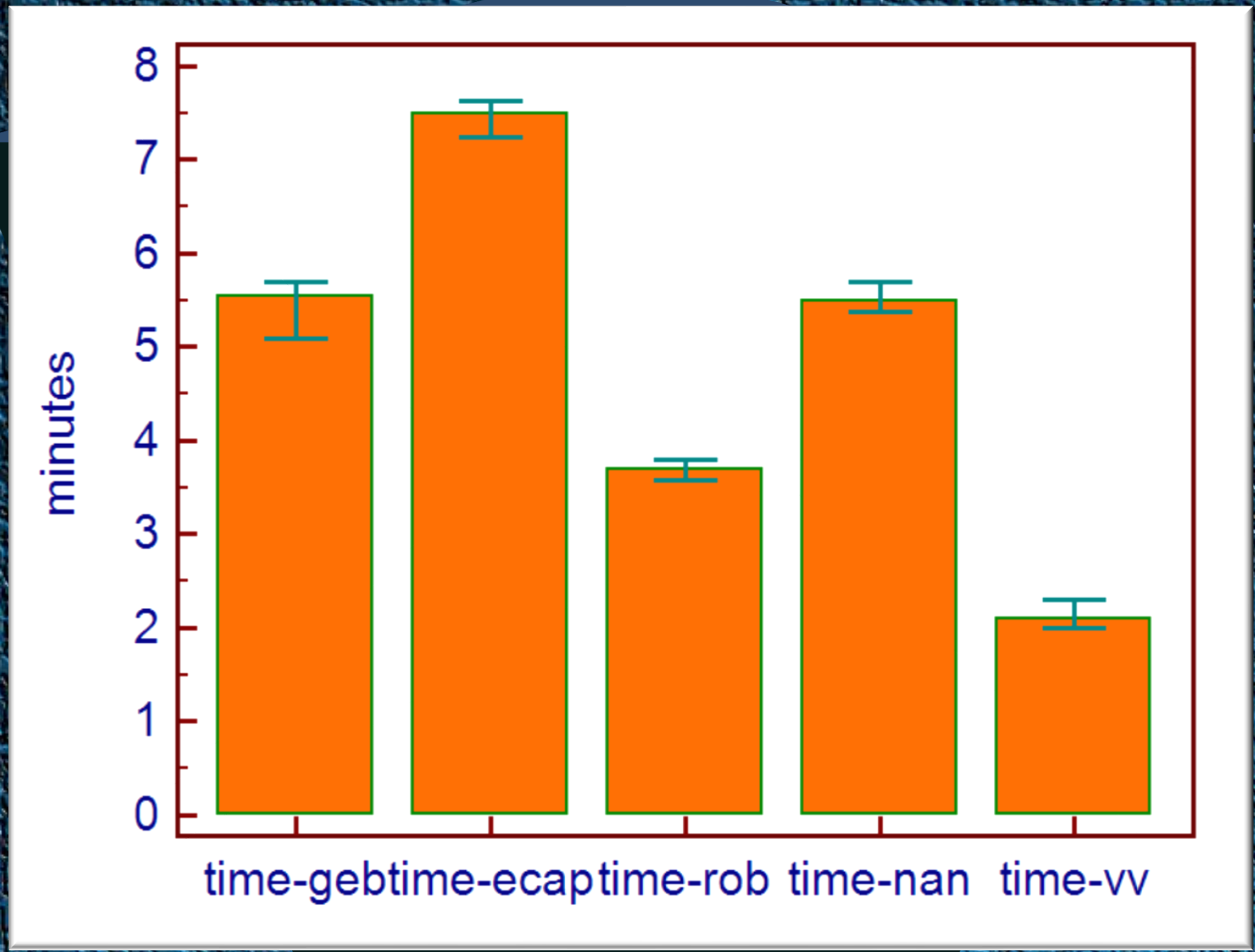
Simple and Quick !!!

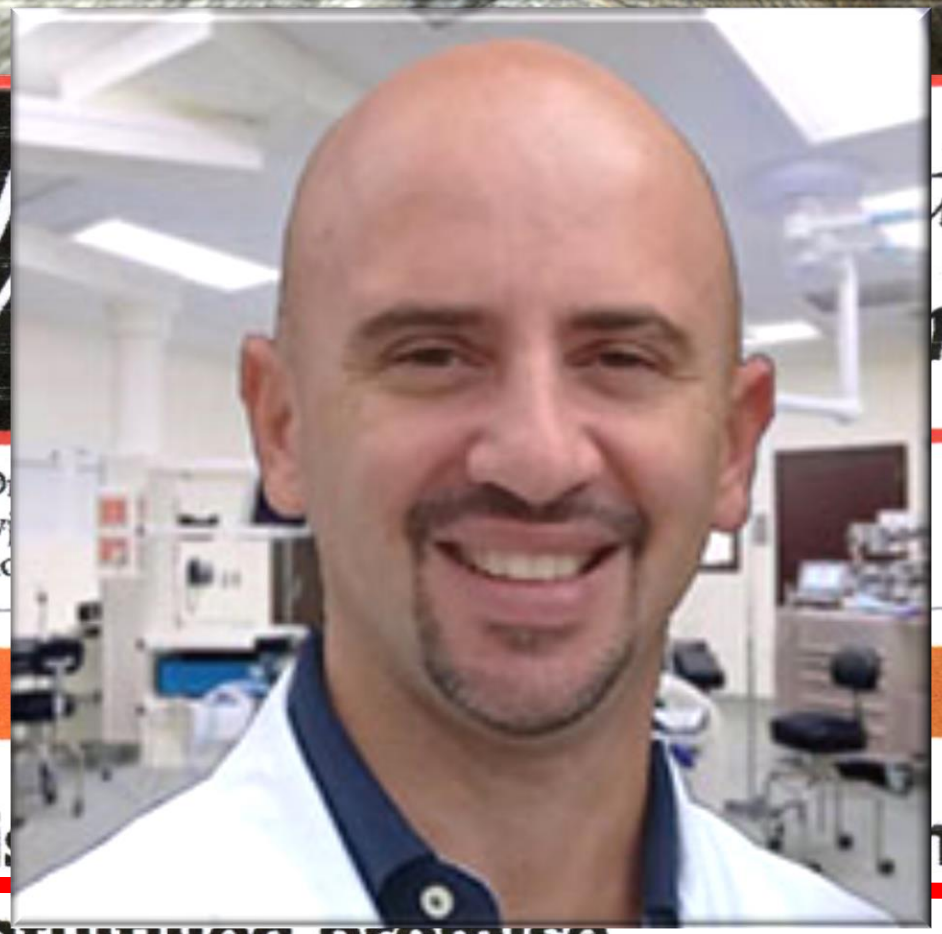
USEFULNESS OF DIFFERENT PATHOLOGICAL SCORES TO ASSESS MUCOSAL HEALING IN INFLAMMATORY BOWEL DISEASE:

A REAL LIFE STUDY

Scientific Reports 28-July-2017

Complete biopsy sampling (at least four samples from the terminal ileum, and at least two samples from cecum, ascending colon, transverse colon, descending colon, sigmoid, and rectum) pre- and post-therapy. Thus, usually having three slides (one for terminal ileum, one from the cecum to the descending, one for the sigmoid and the rectum), a total of 144 slides (72 pre- and 72 post-therapy) was evaluated for a total of 384 biopsies


minutes
0
1
2
3
4
5
6
7
8
time-geb
time-ecap
time-rob
time-nan
time-vv

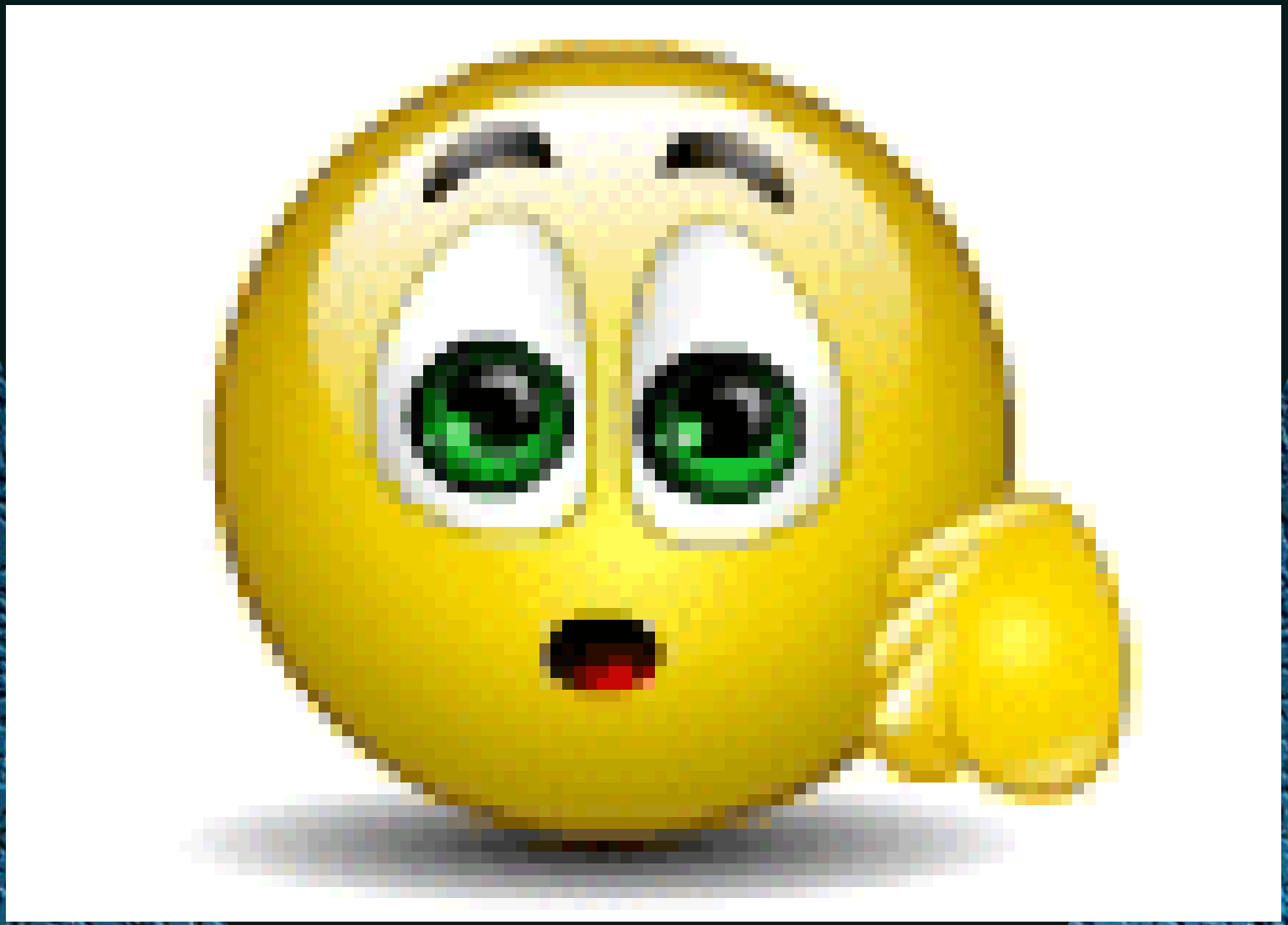


Pericolo scampato !!

unfulfilled promise

Vincenzo Villanacci, Elisabetta Antonelli, Karel Geboes,

CONCLUSIONS



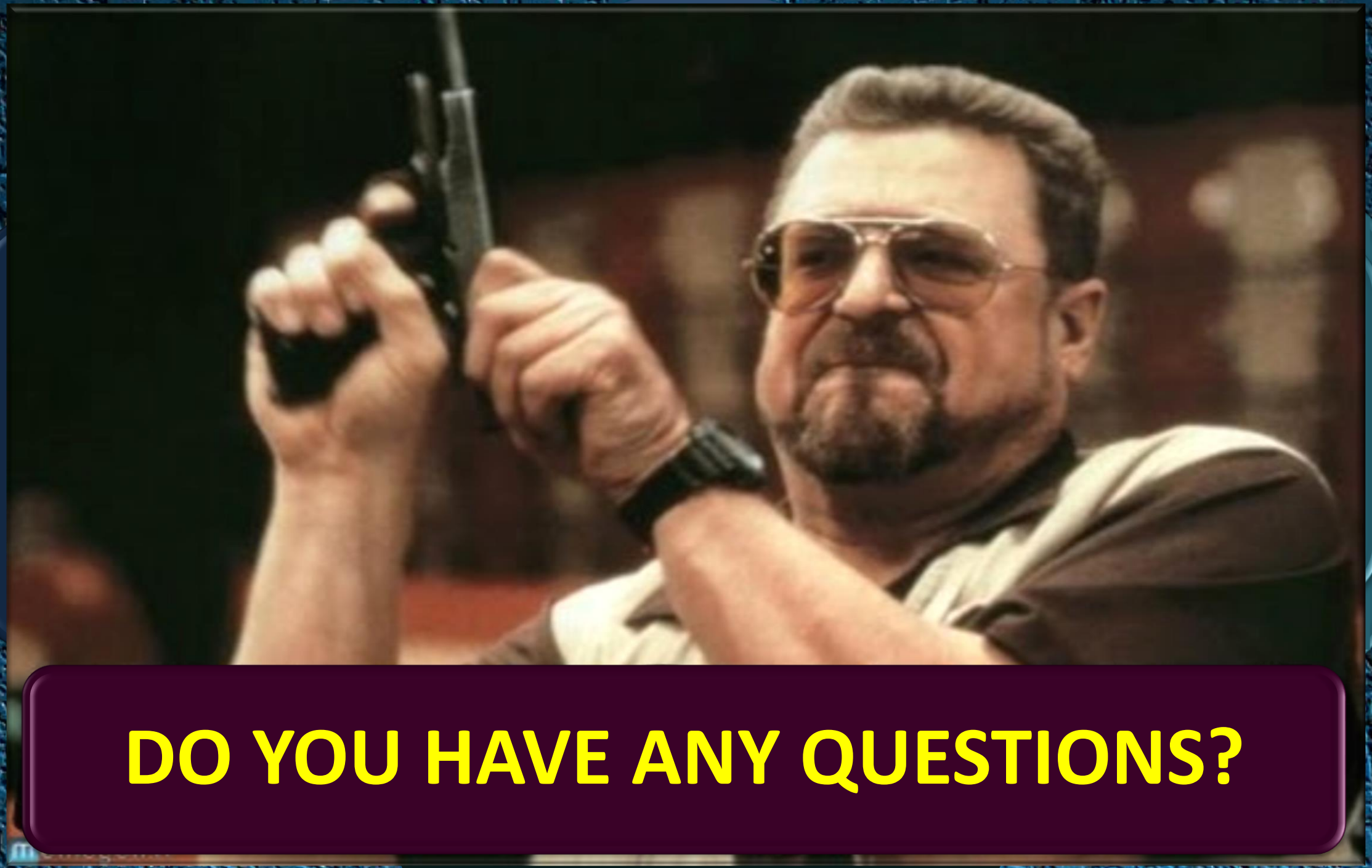
Remember……

“…he that increaseth knowledge increaseth sorrow ”

Ecclesiastes, 1:18

SIMPLIFIED SCORE		
Patient	**Morphological element**	**Grade**
#1		
	Crypt Abscess	Absent
		Present
	Erosions and ulcerations	Absent
		Present
	Active Inflammatory Infiltrate in Lamina Propria	Absent
		Low (1)
		Moderate (2)
		Severe (3)
		Ileum
	Sites involved from disease	Right Colon
		Transverse Colon
		Left Colon
		Rectum

abnormalities.


DO YOU HAVE ANY QUESTIONS?