

VEQ ANATOMIA PATOLOGICA CICLO 2024: PRESENTAZIONE E COMMENTO DEI RISULTATI DEI PARTECIPANTI

Firenze 16 Dicembre 2024
AOU Careggi NIC 3, Aula Magna

Classificazione dei polipi intestinali per lo screening

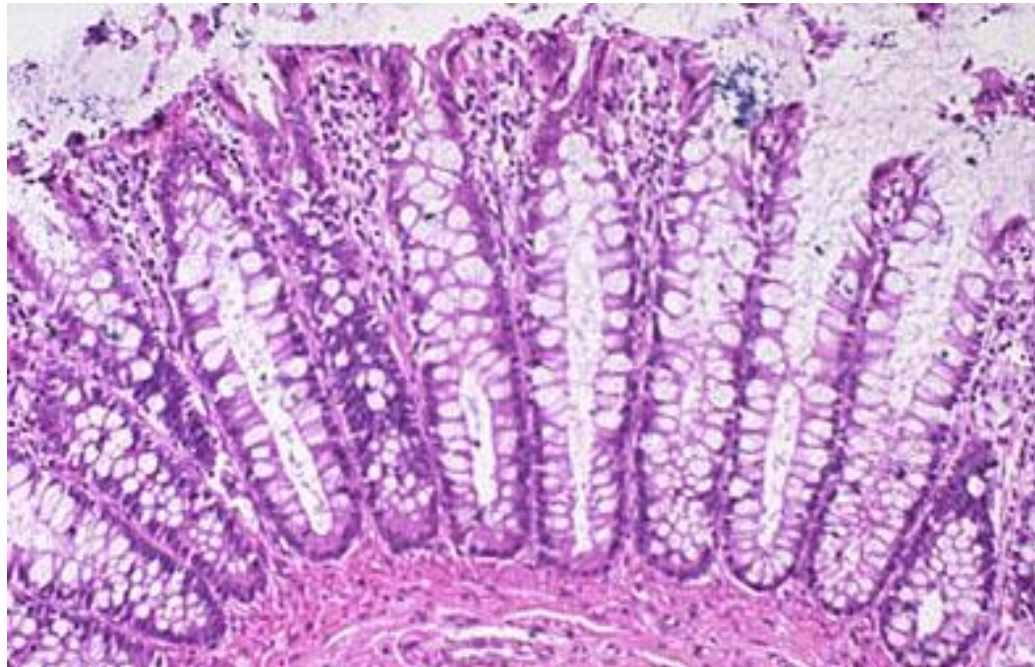
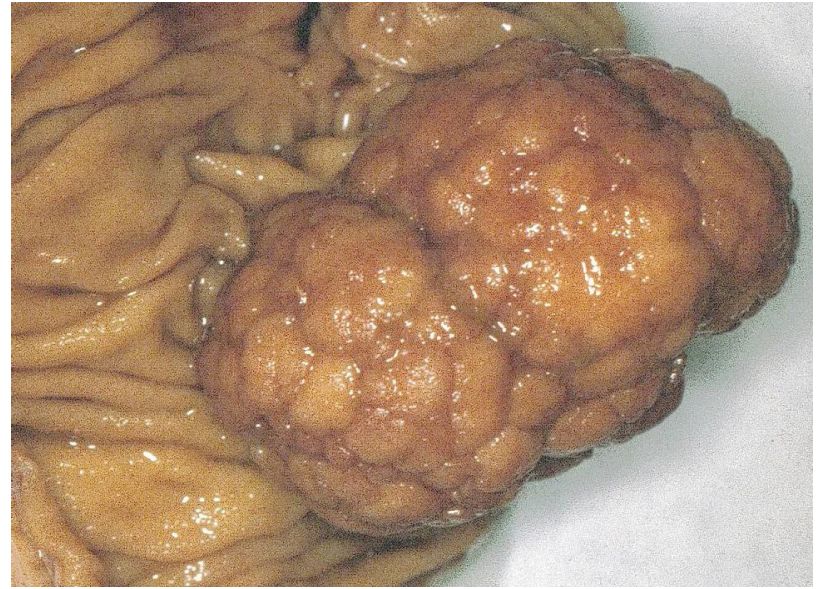
Luca Messerini



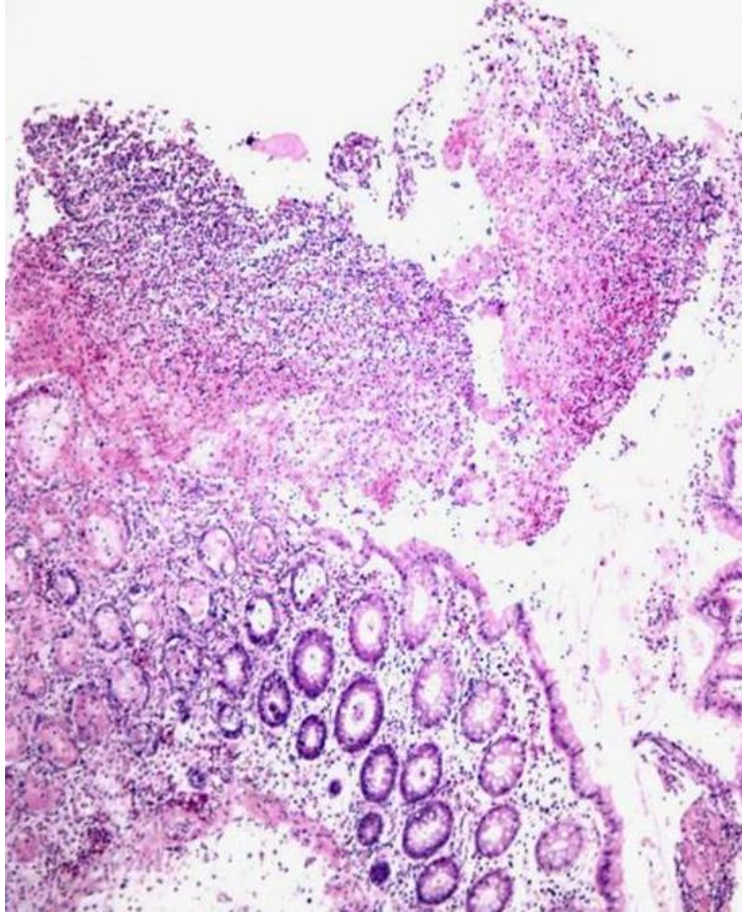
Polipo

- Il termine "polipo", letteralmente significa lesione dai molteplici (dal greco πωλίπύς), e nel suo significato originale indica genericamente qualsiasi neoformazione che aggetta nel lume di un organo cavo; è pertanto, una definizione macroscopica e solo l'esame istologico può identificare correttamente la natura di un polipo.

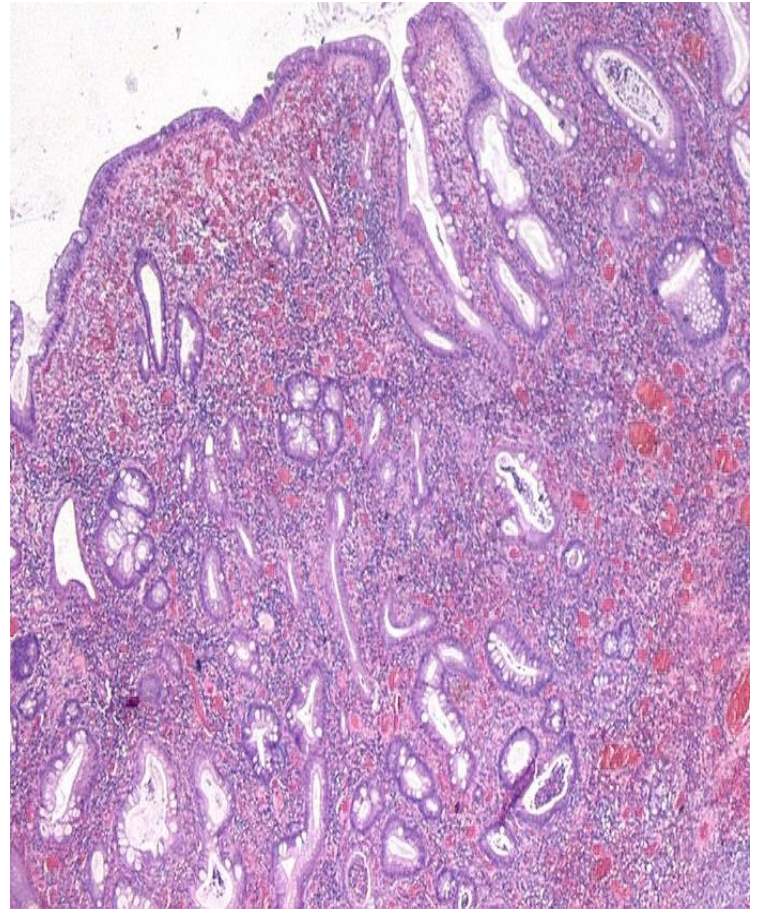
Non-Neoplastici	Neoplastici
<ul style="list-style-type: none">• Infiammatori• Amartomatosi• Prolasso• Serrati	<ul style="list-style-type: none">• Epiteliali: adenoma adenoma cancerizzato adenocarcinoma NEN (neoplasia neuroendocrina)• Non-epiteliali: lipoma, linfoma, GIST.....



Polipi infiammatori

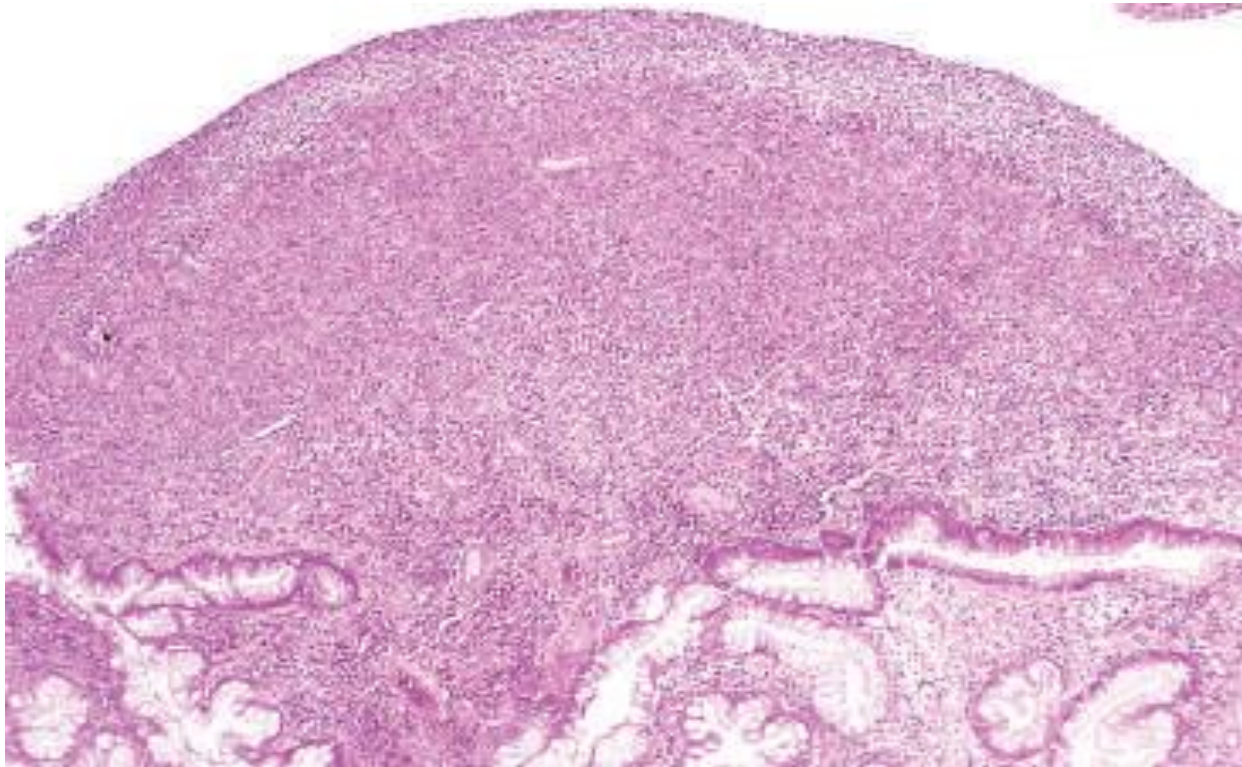


Colite da *C. difficile*



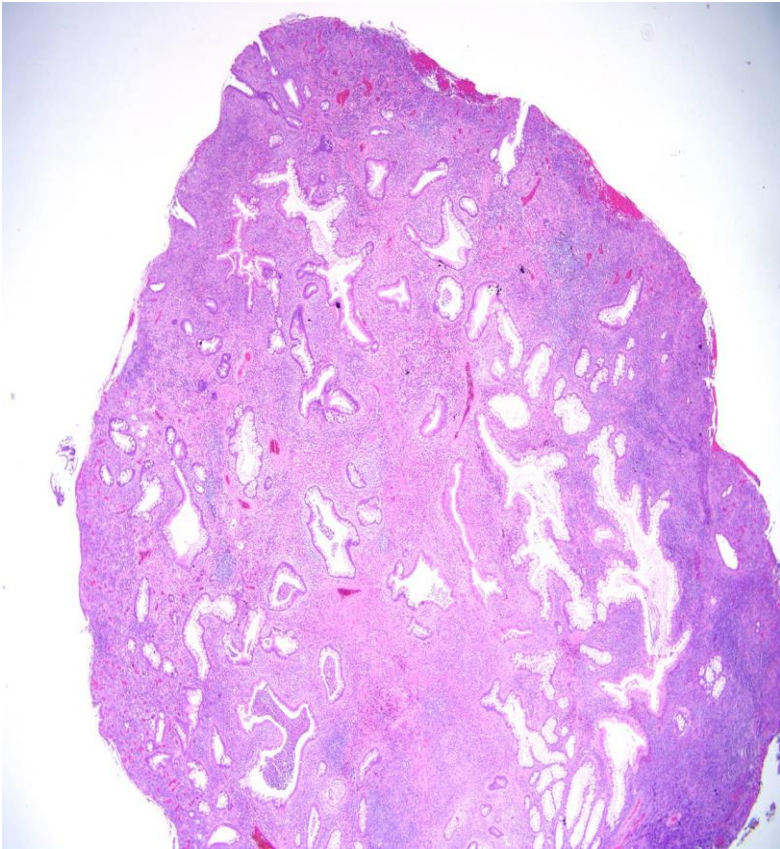
Rettocolite ulcerosa

Inflammatory cap polyp

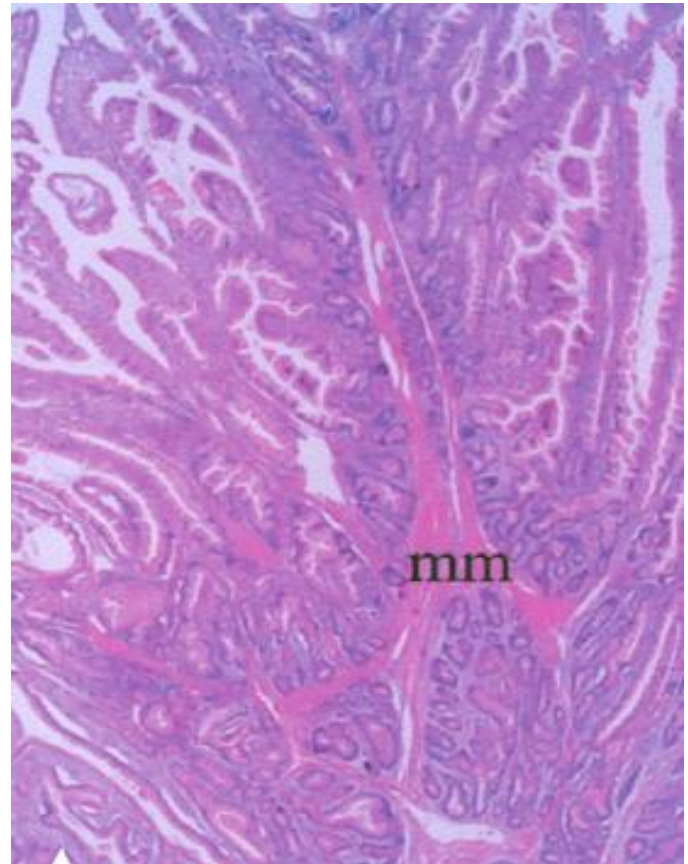


This type of inflammatory pseudopolyp shows an overlying “cap” of necro-inflammatory exudate. These rare lesions usually occur in the setting of cap polyposis (a condition in which dozens of these types of polyps develop), at anastomotic sites, in association with inflammatory bowel disease (as in this case), or in many other conditions that induce mucosal ulceration. The most common location is the rectum or rectosigmoid; less commonly, the descending colon is involved (Odze R 2023)

Polipi amartomatosi

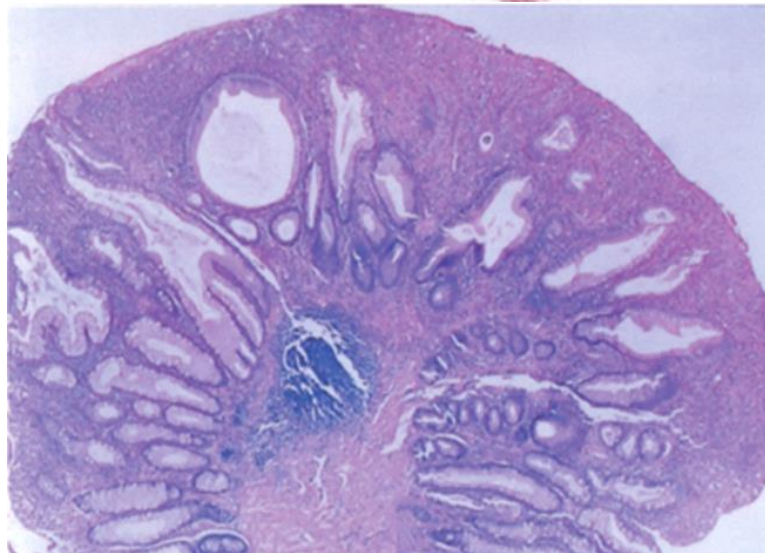
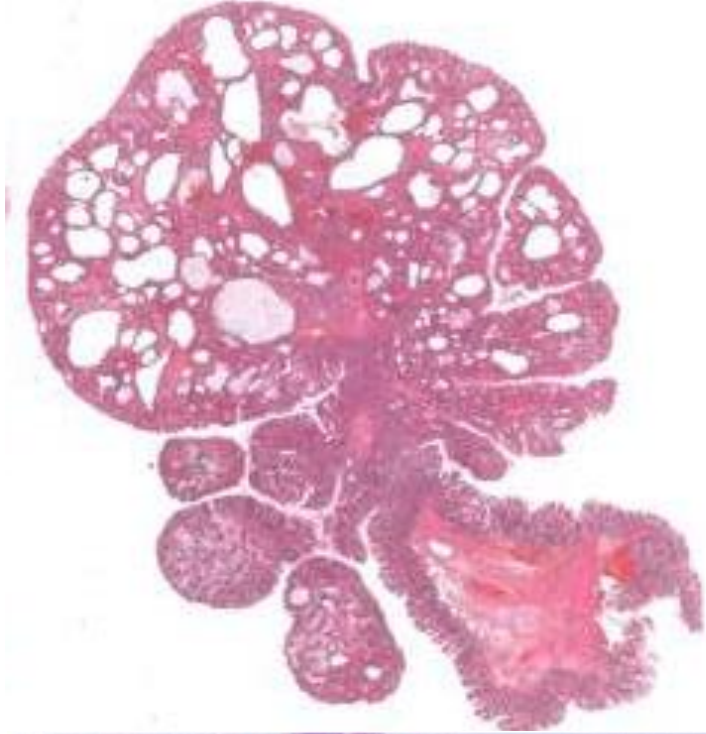


Polipo giovanile

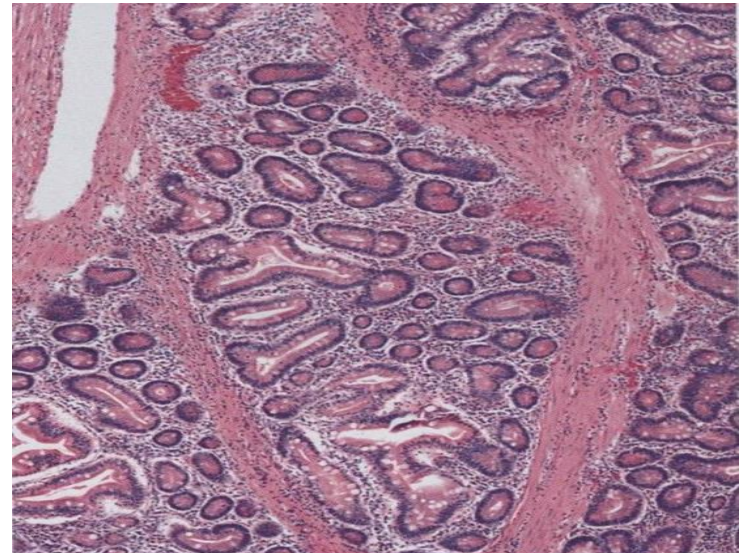


Peutz-Jeghers

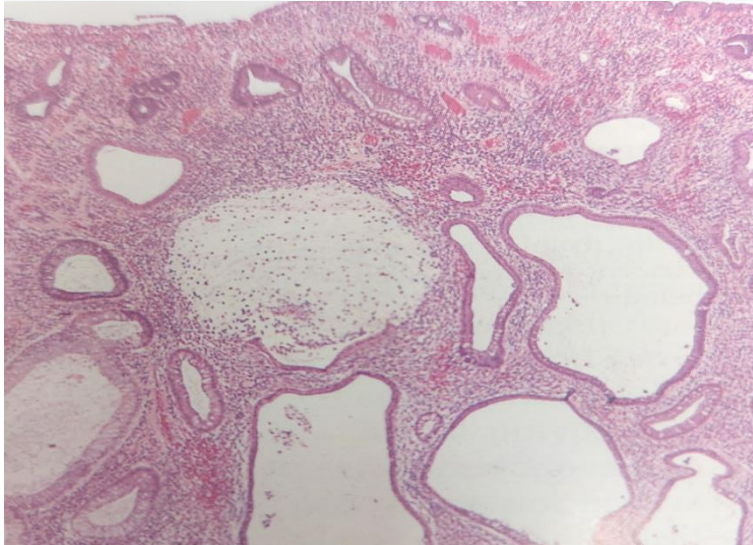
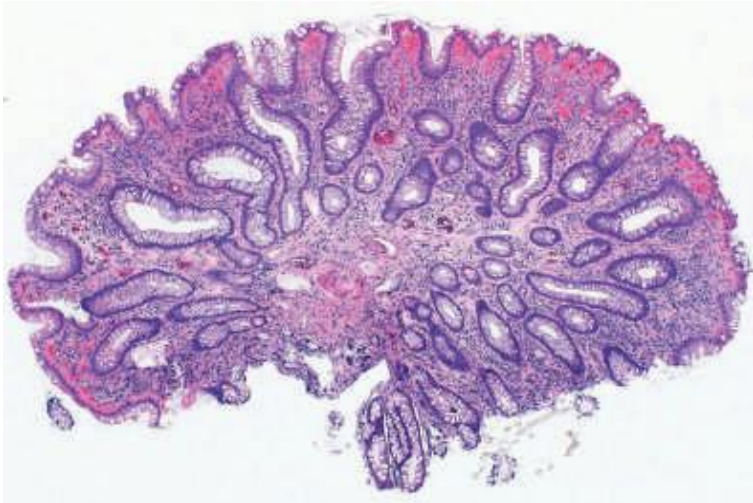
Polipo giovanile



Peutz Jeghers

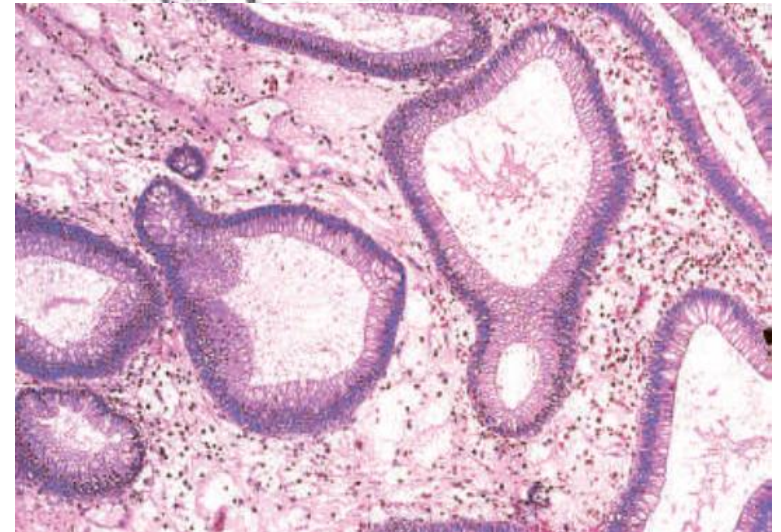
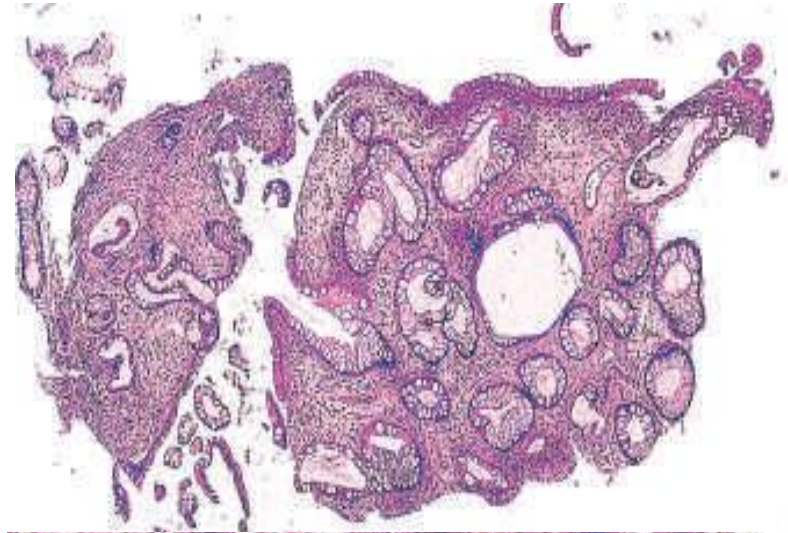


Cowden (PTEN-hamartoma tumor syndrome)



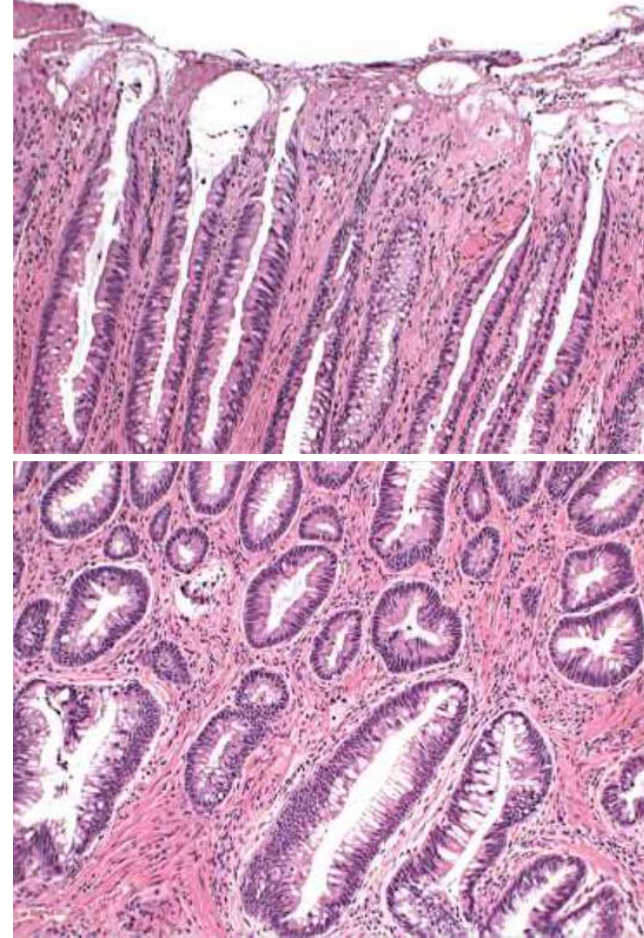
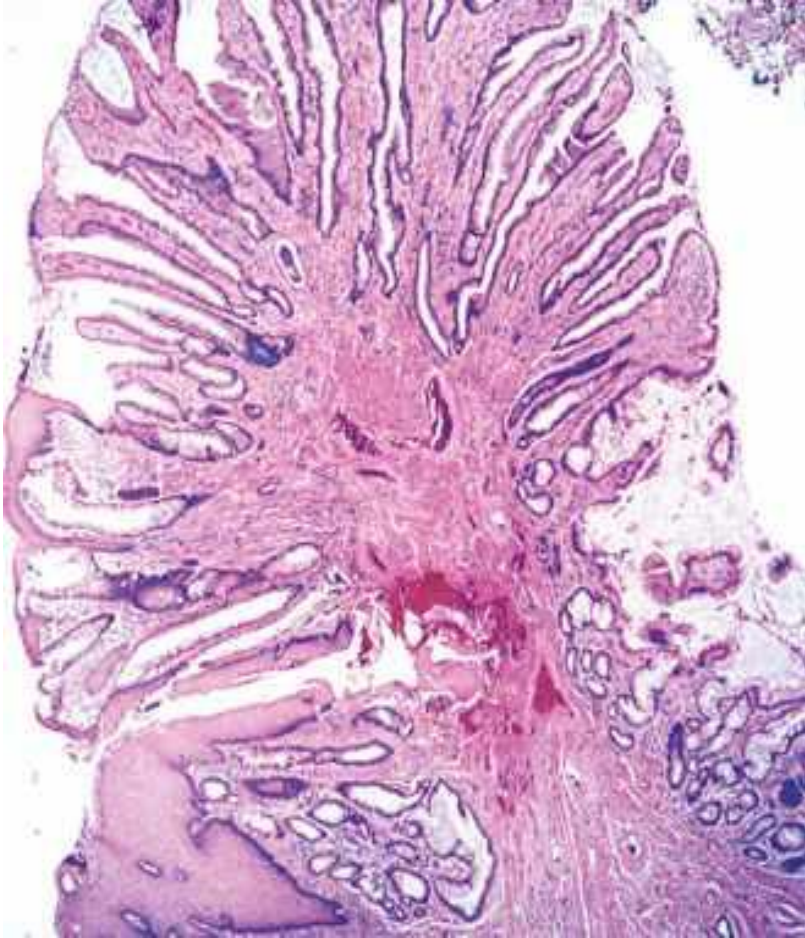
Polipi GI, acantosi glicogenica esofagea
>Rischio di neoplasie: mammella, colon, endometrio, rene tiroide, melanoma

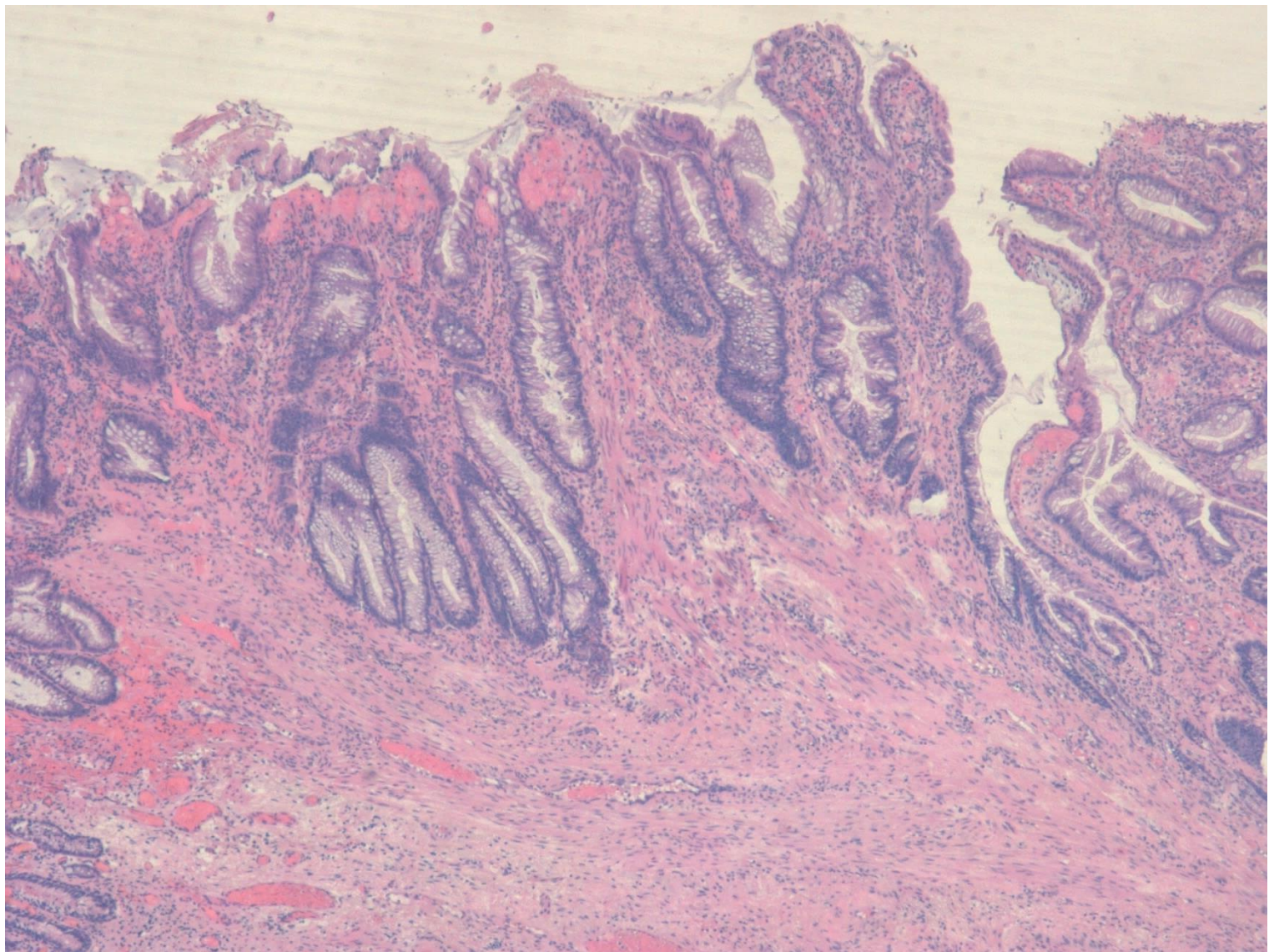
Cronkhite-Canada (Non-hereditary polyposis)



Polipi GI (escluso esofago)
Alterazioni delle unghie
Iperpigmentazioni cutanee

Prolasso della mucosa (ulcera solitaria del retto, polipo infiammatorio cloacogenico)

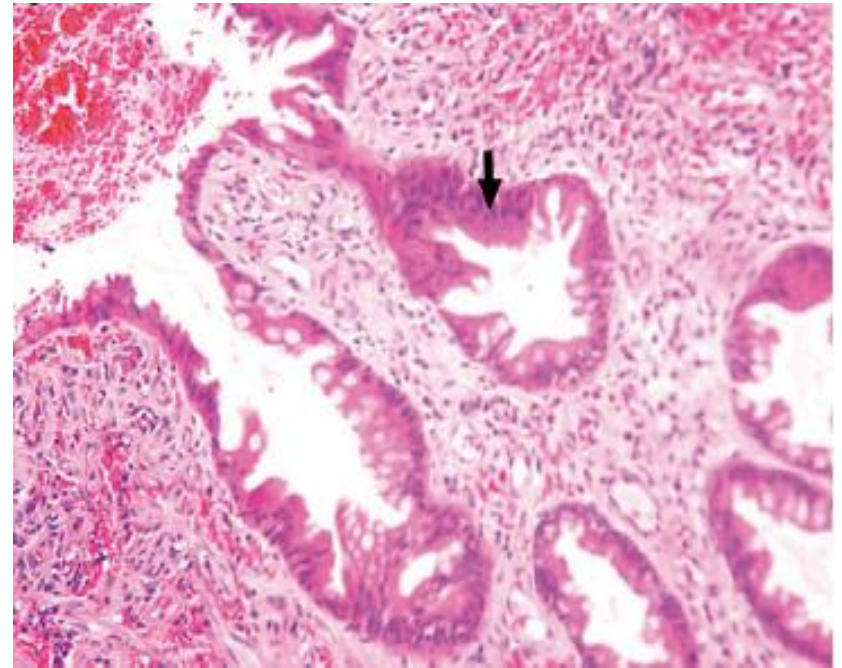
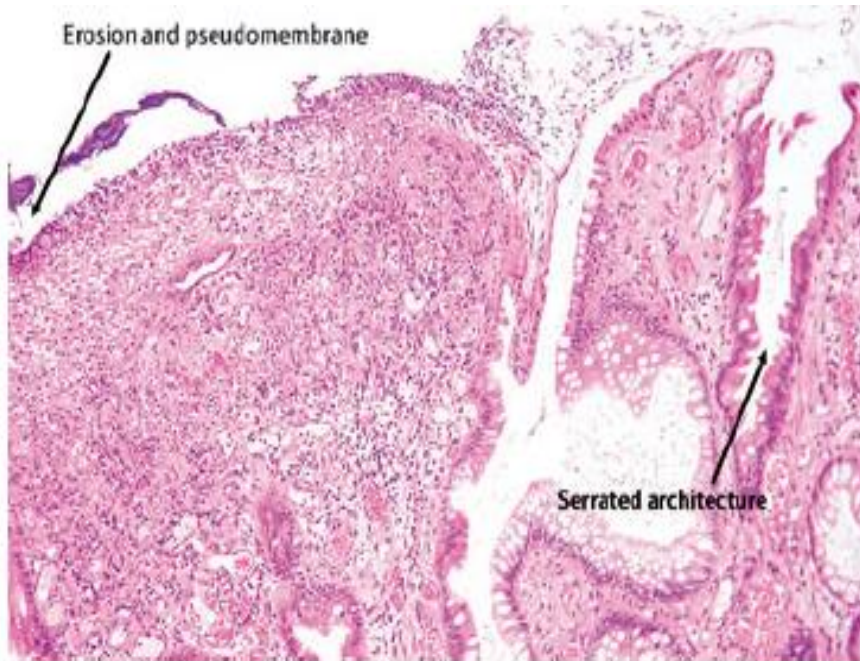




Essential and desirable diagnostic criteria

Essential: epithelial hyperplasia without dysplasia; stromal inflammation; fibromuscular proliferation.

Histopathological mimicry in mucosal prolapse



European Guidelines for Quality Assurance in Colorectal Cancer Screening

7

**Quality assurance in pathology in
colorectal cancer screening and
diagnosis**

Authors

Phil Quirke
Mauro Risio
René Lambert
Lawrence von Karsa
Michael Vieth

Annex

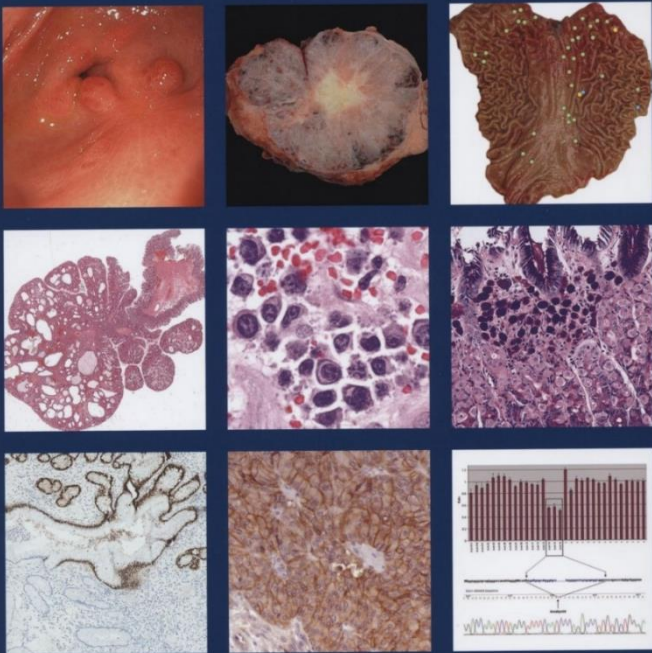
Annotations of colorectal lesions

pages: 205-250

- **Classification of polyps**
 - epithelial
 - non-epithelial
- **Serrated polyps**
 - hyperplastic polyp
 - sessile serrated polyp
 - traditional serrated adenoma
- **Classification of lesions in the
adenoma-carcinoma sequence**
- **pT1 colorectal cancer**

Digestive System Tumours

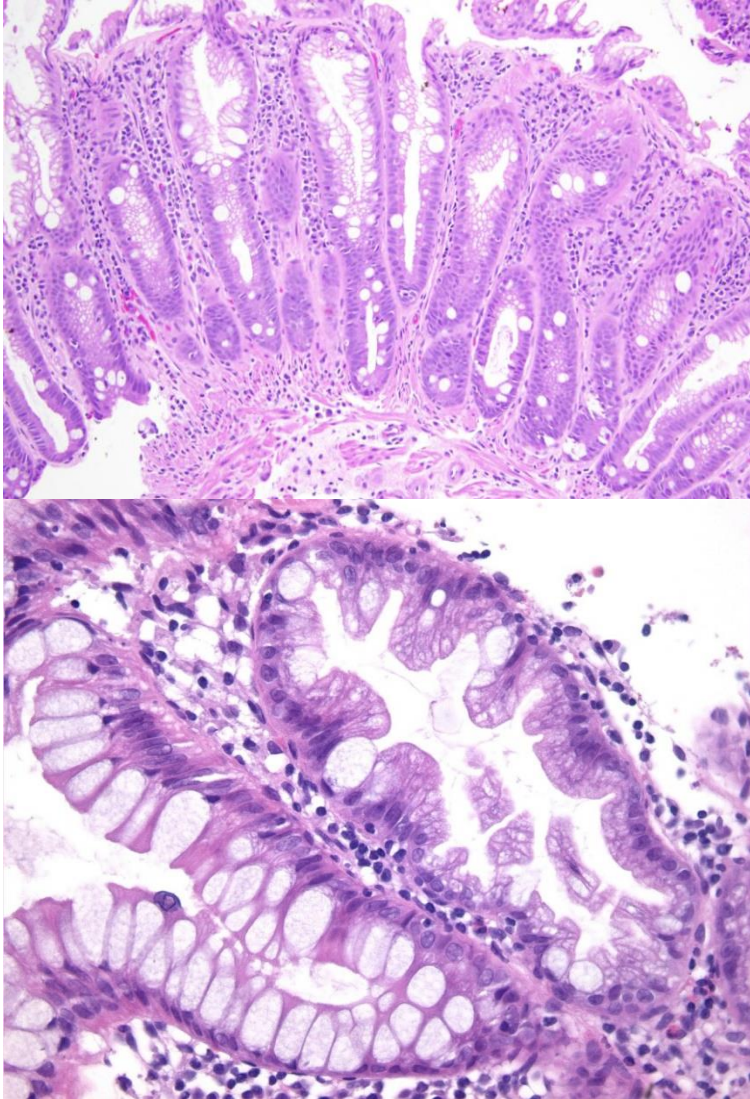
Edited by the WHO Classification of Tumours Editorial Board



Polipi Serrati

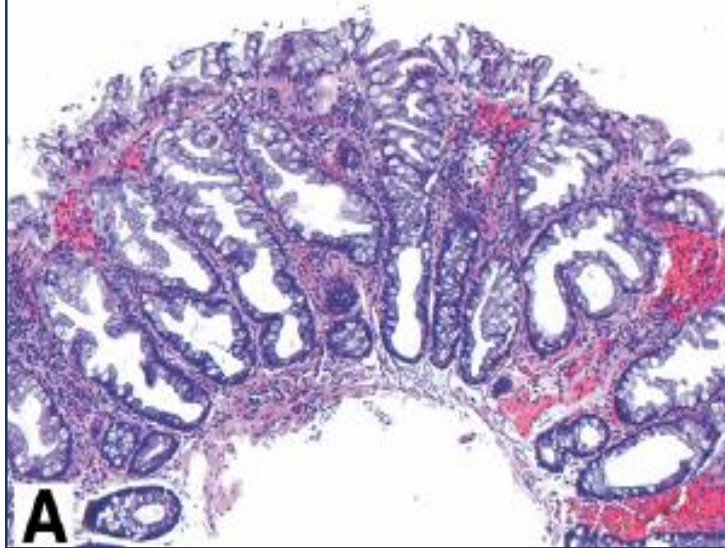
- Polipo iperplastico
- Lesione serrata sessile
- Lesione serrata sessile con displasia
- Adenoma serrato tradizionale
- Adenoma serrato non classificabile

Polipo iperplastico

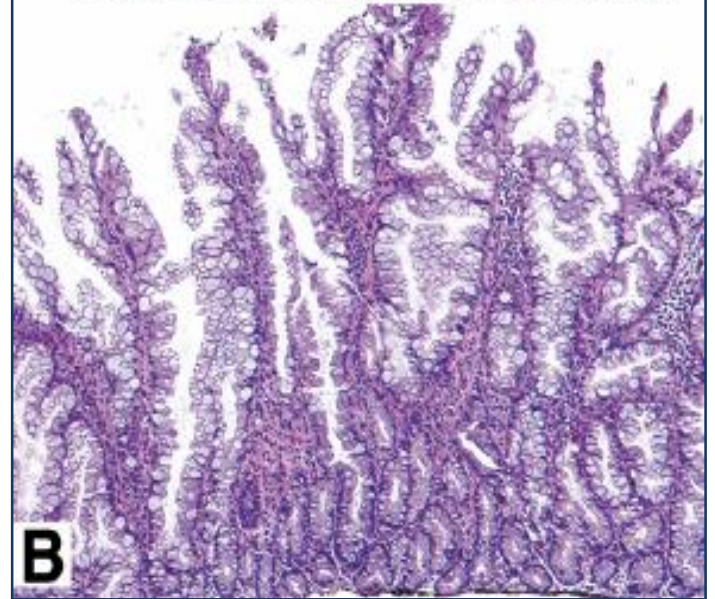


Nuclei orientati alla base
Non ipercromasia nucleare
Non nuclei pluristratificati
Non atipia citologica
Non atipia architetturale
Non displasia
3 varianti morfologiche

Hyperplastic polyp, microvesicular type



Hyperplastic polyp, goblet cell type

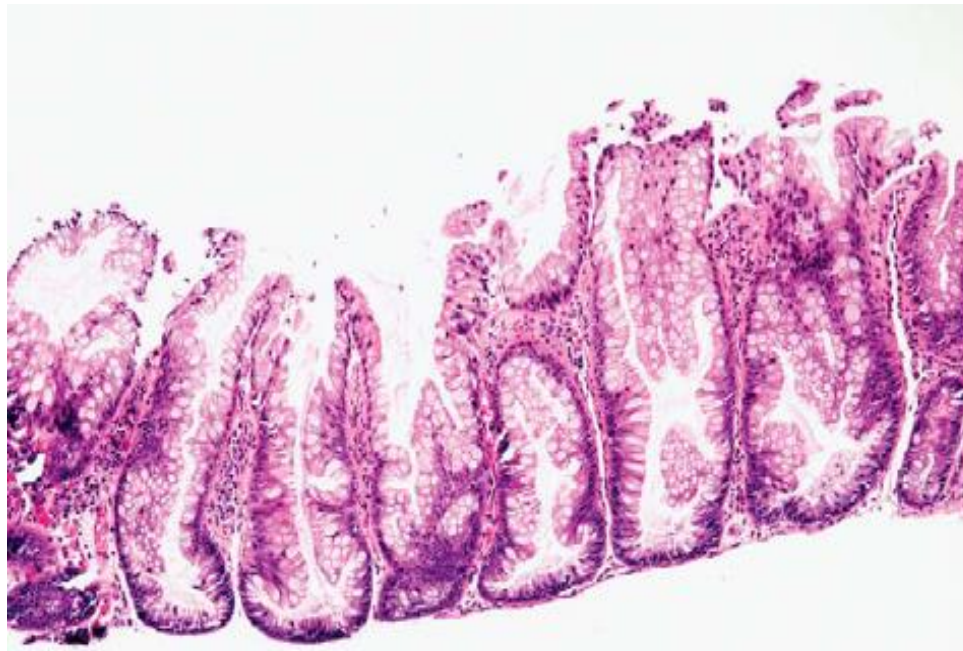
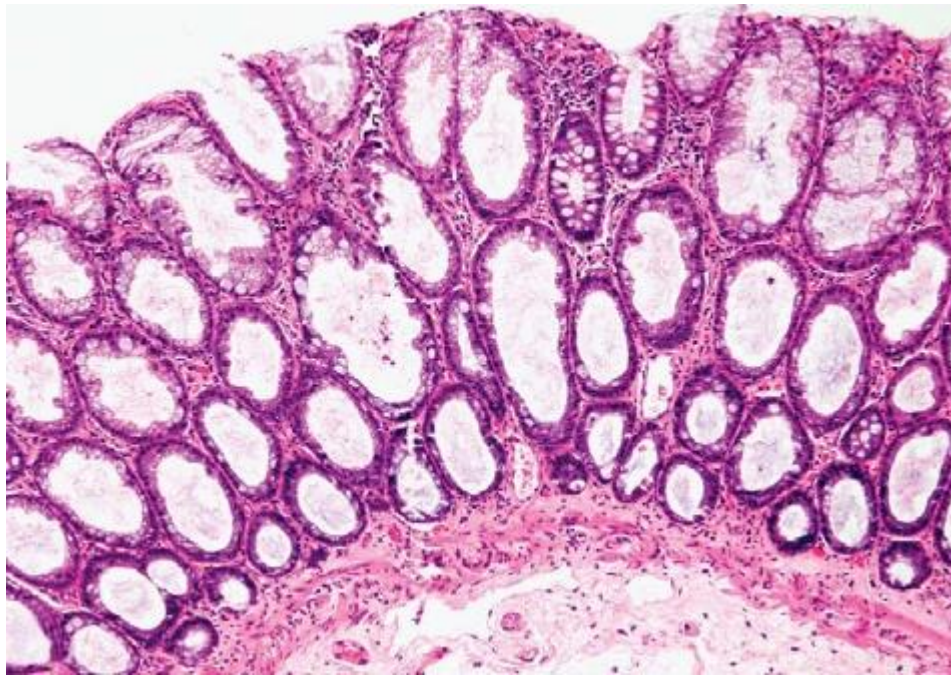


~~**Hyperplastic polyp, mucin-poor type**~~

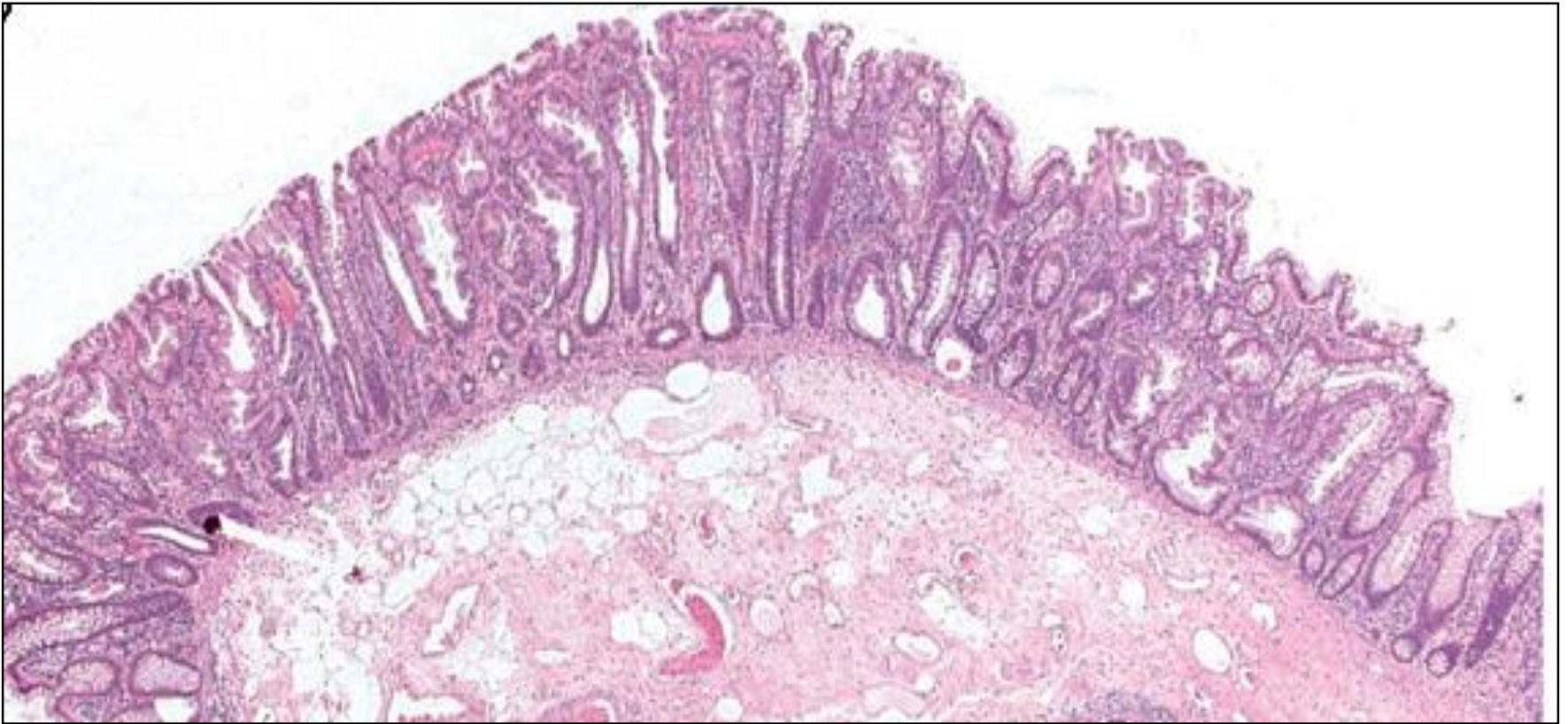


Emina Torlakovic

Am J Surg Pathol 27(1): 65–81, 2003.

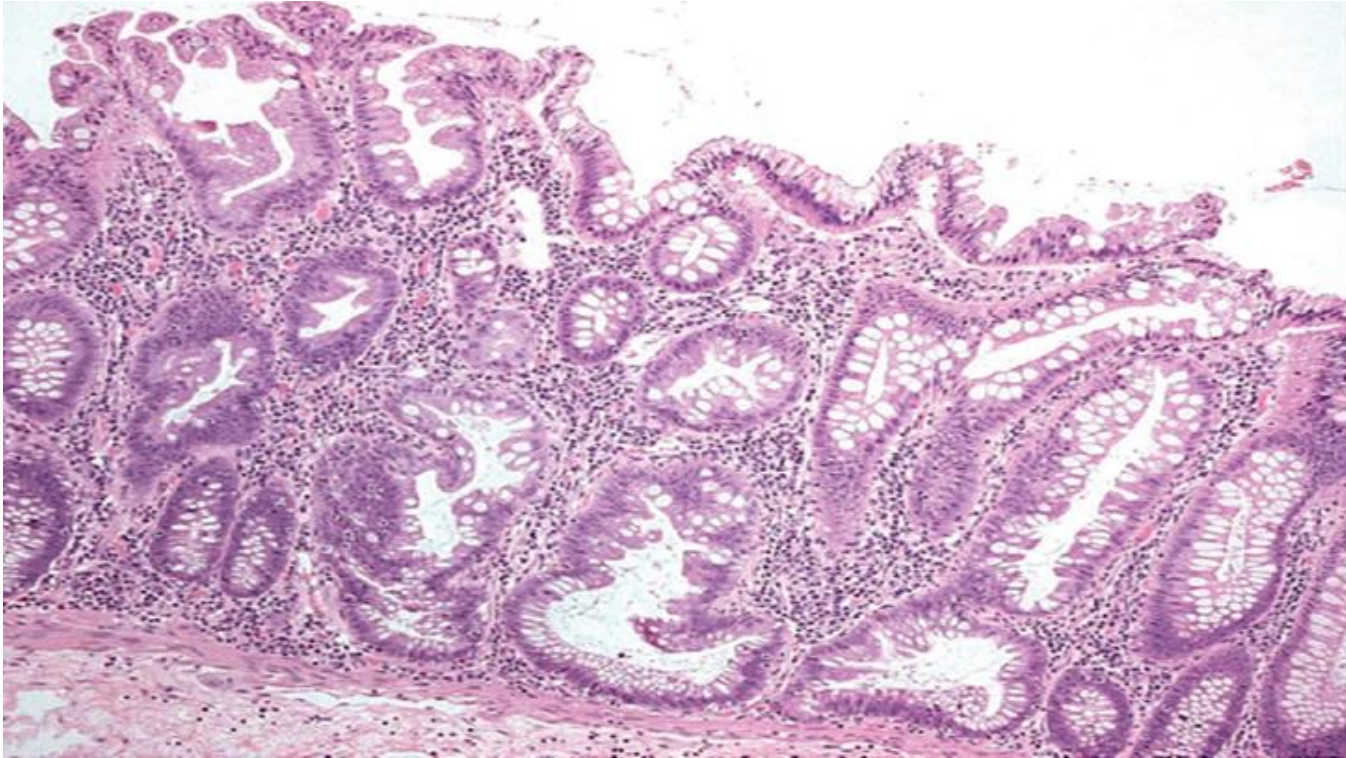


Polipo serrato sessile (Torlakovic 2003)

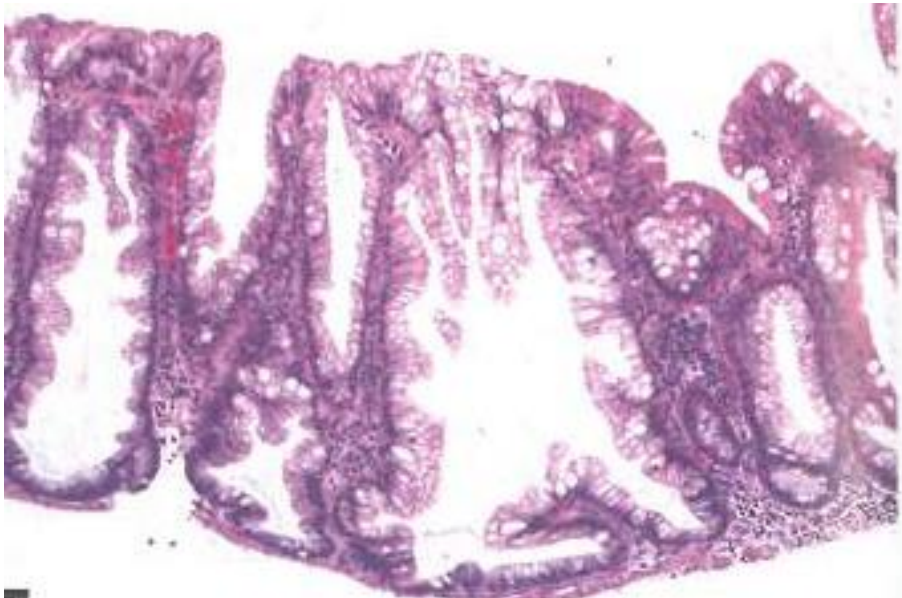
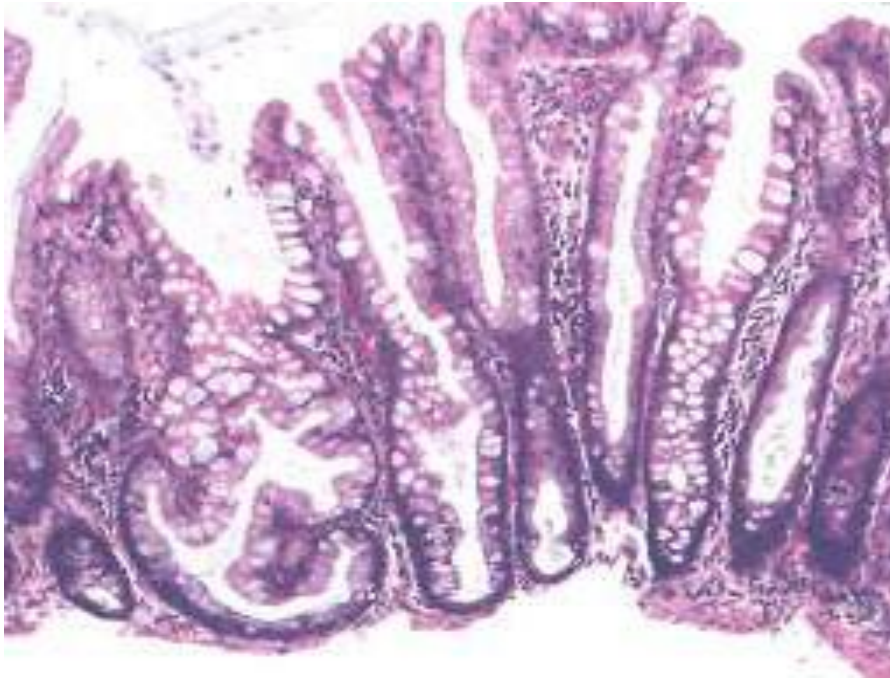


Sinonimi: adenoma serrato sessile,
adenoma serrato superficiale, adenoma serrato tipo1,
polipo serrato con alterazioni proliferative,
lesione serrata sessile

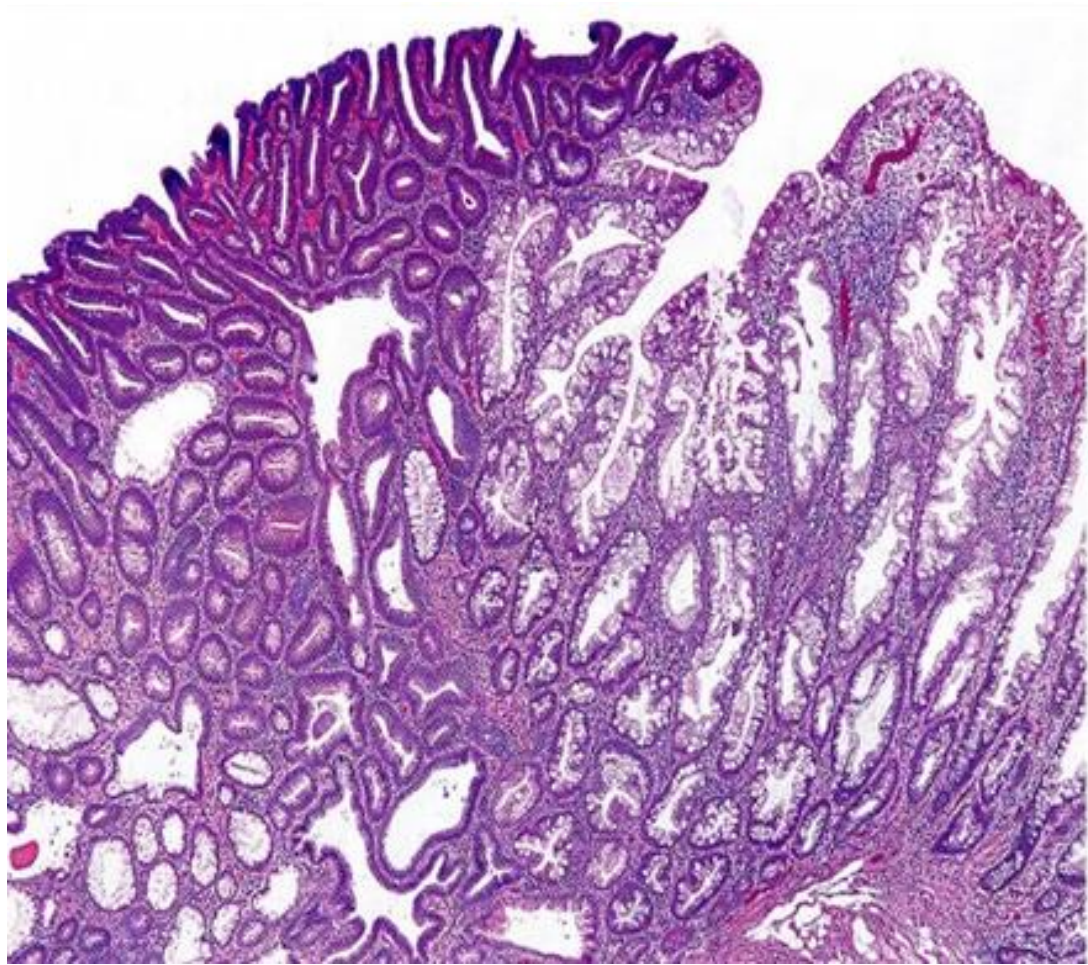
Sessile Serrated Lesion WHO 2019



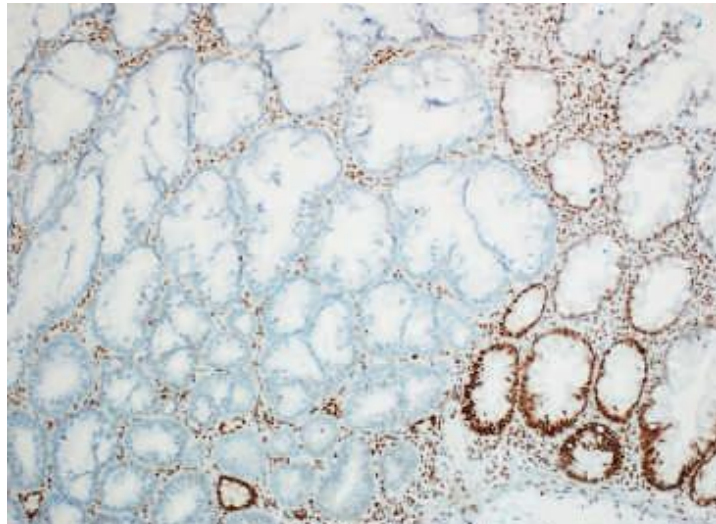
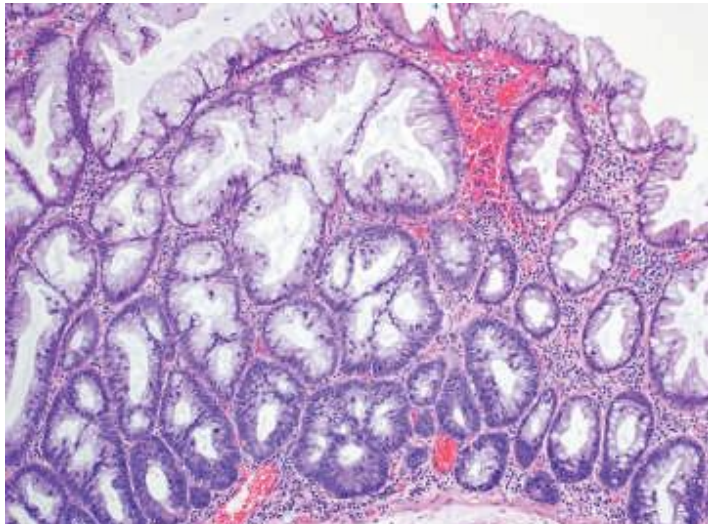
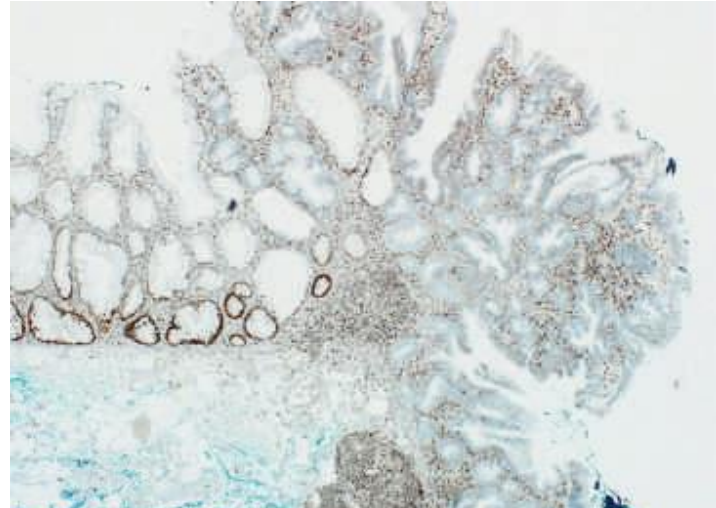
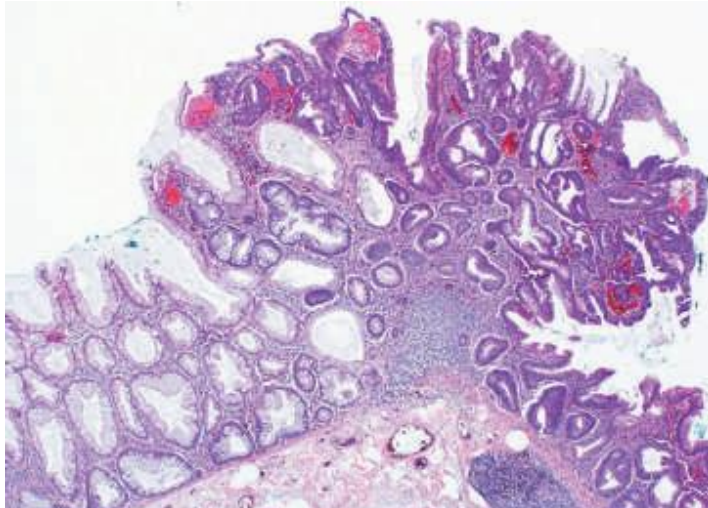
- Horizontal growth along muscularis mucosae
- Serration extending into the crypt base
- Asymmetrical proliferation



The presence of ≥ 1 unequivocal architecturally distorted serrated crypt is sufficient for the diagnosis of Sessile Serrated Lesions (SSL)
WHO 2019

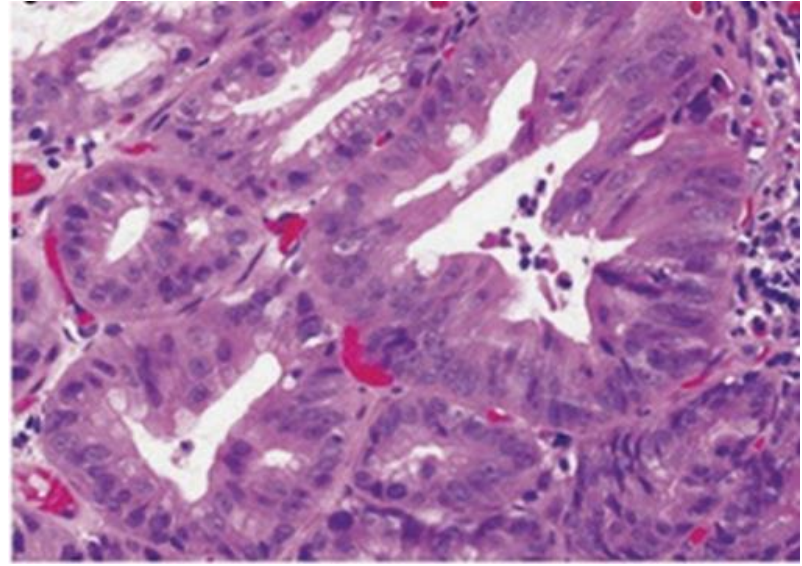
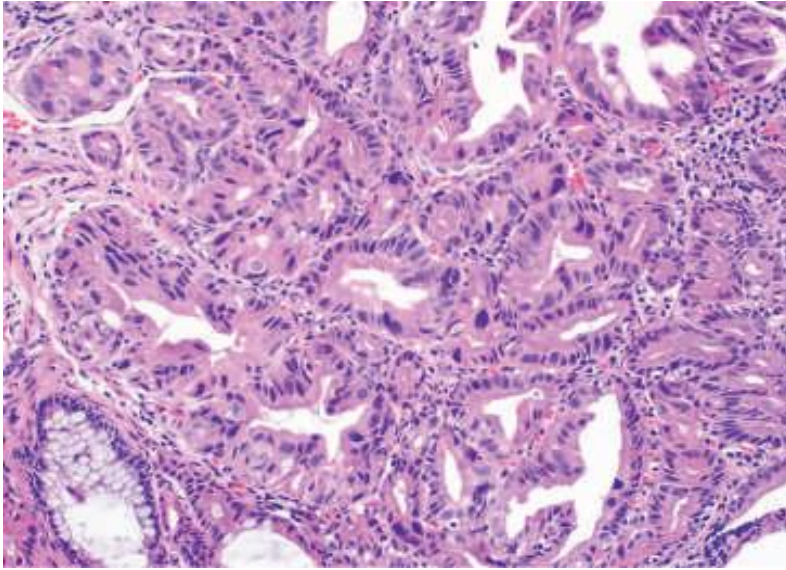


Intestinal-type dysplasia

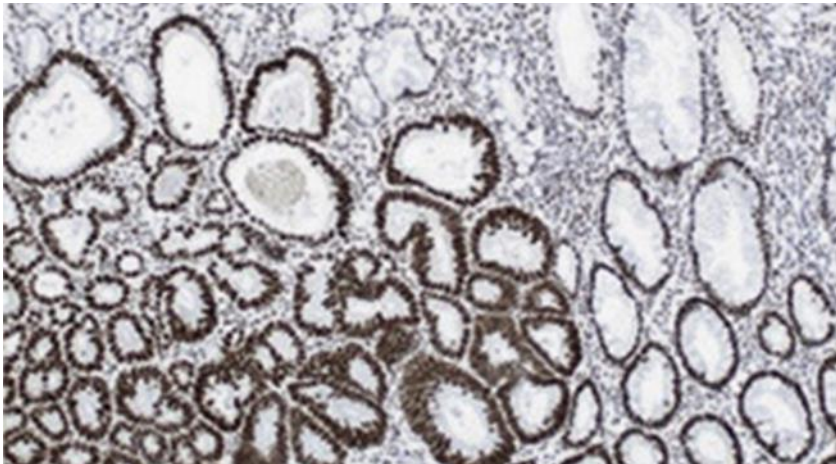


Crypt branching, crypt elongation, villous architecture; elongated, cigar-shaped hyperchromatic nuclei that resemble low-grade dysplasia in conventional adenomas
loss of MLH1 expression

Serrated dysplasia

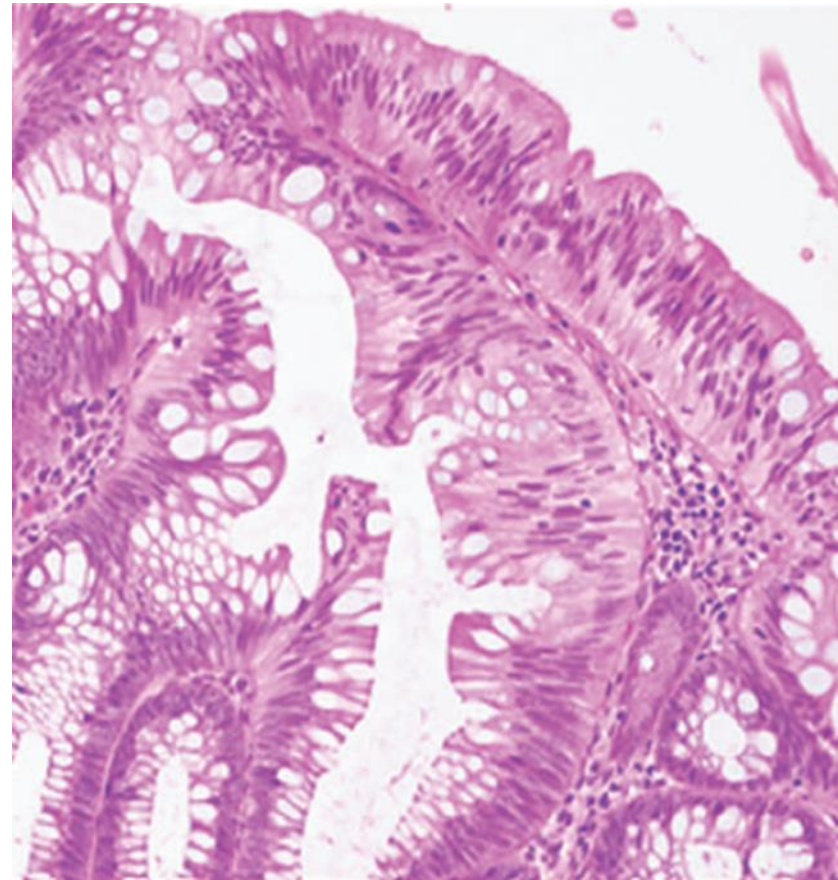
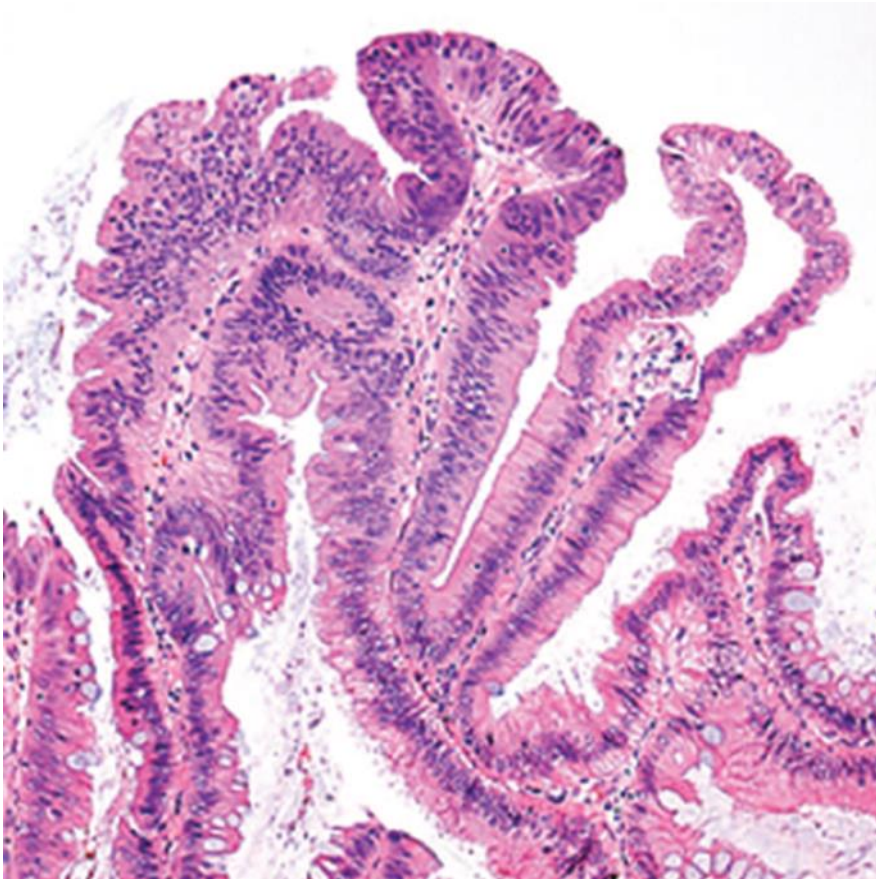


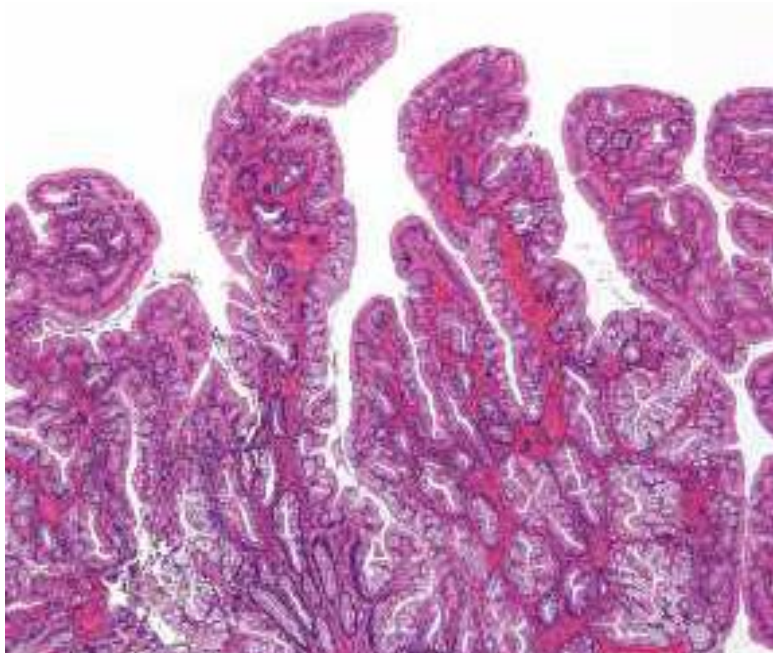
Architectural complexity and tightly packed glands composed of epithelial cells with prominent cytoplasmic eosinophilia, luminal serration, enlarged nuclei and prominent nucleoli



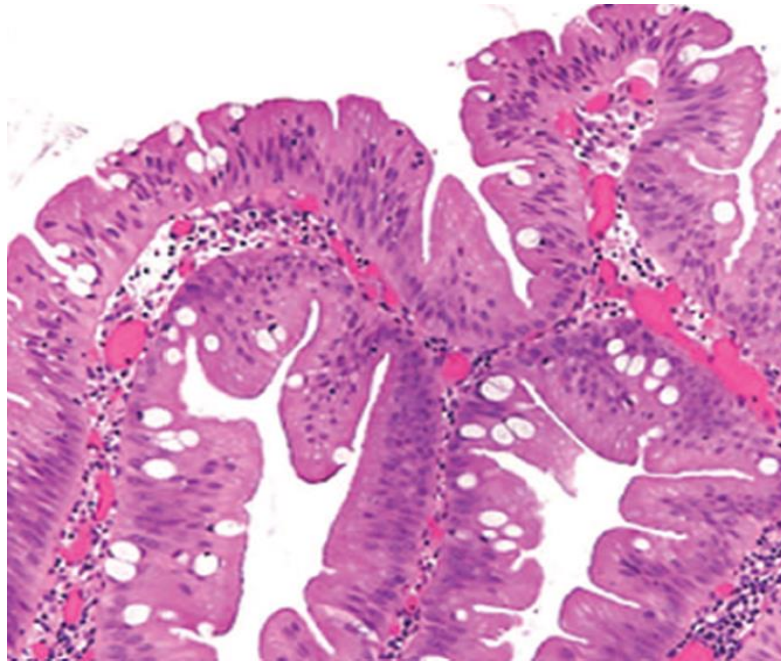
MLH1 is normally preserved in this type of dysplasia

Traditional serrated adenoma WHO 2019



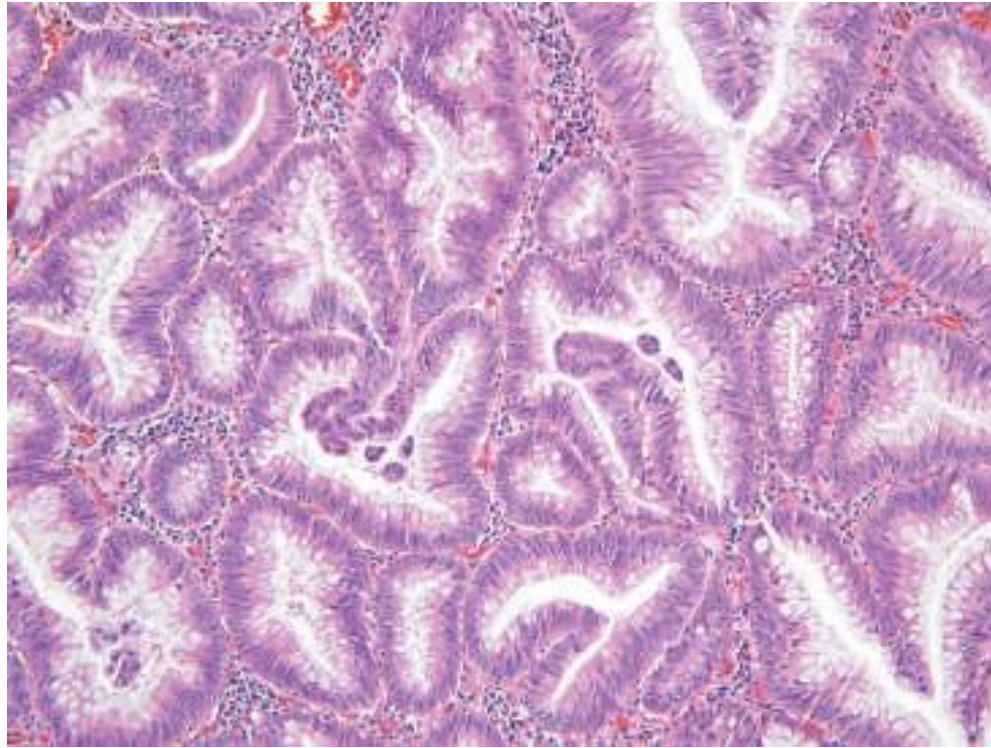


Slitlike serrations, similar to the narrow silts present in normal small-intestinal epithelium.



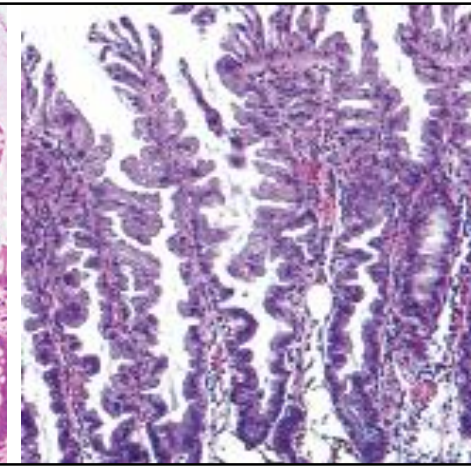
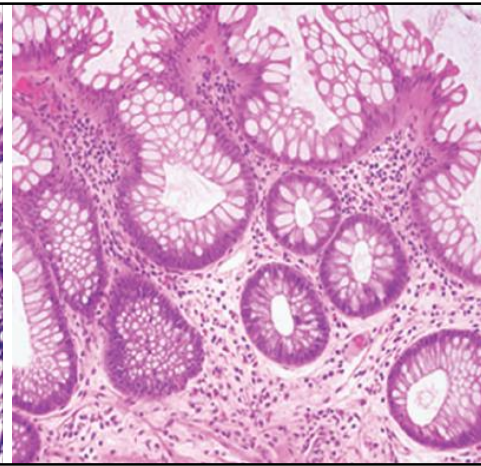
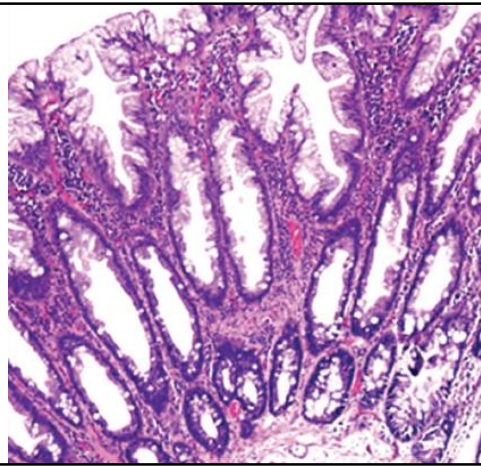
Epithelial cells with abundant and intensely eosinophilic cytoplasm and bland oval-shaped palisaded nuclei

Adenoma serrato non classificabile

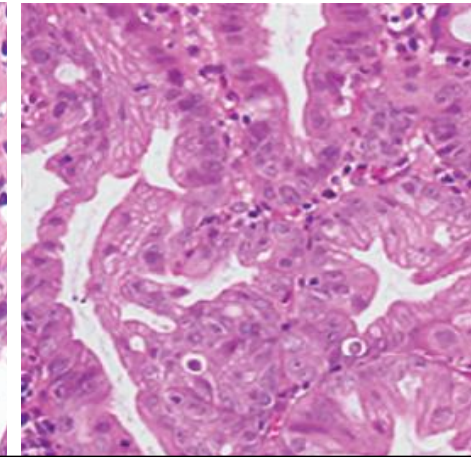
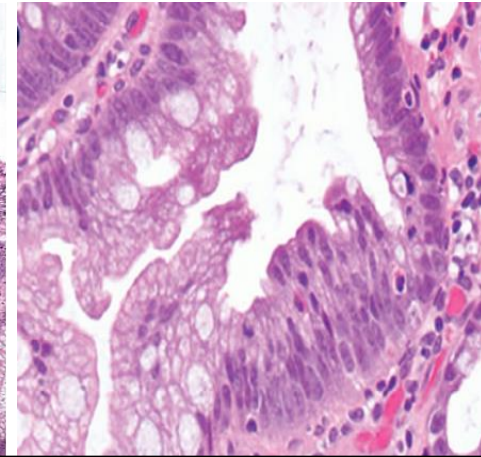
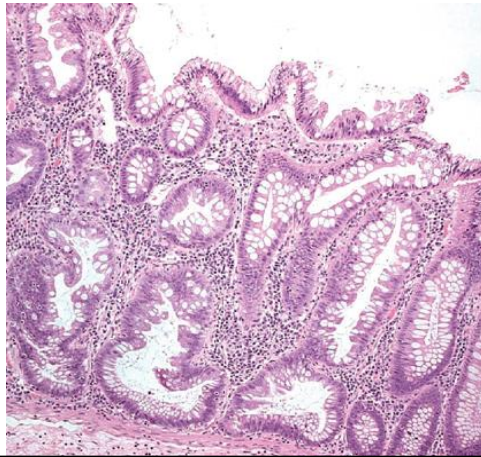


Some dysplastic polyps with serrated architecture are difficult to classify as either TSA or SSLD (WHO 2019)

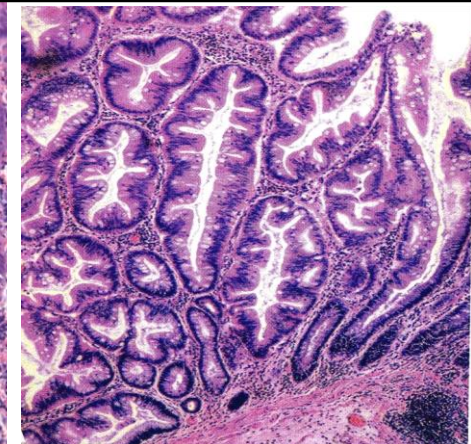
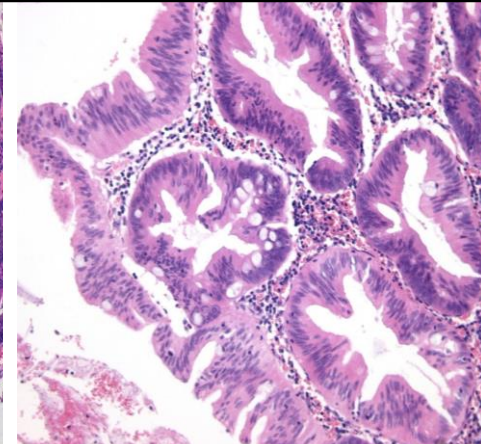
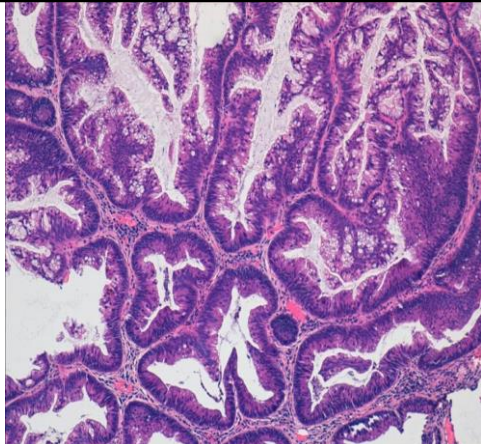
Conventional adenoma with a serration architecture (Odze R 2023)



Polipo iperplastico
architettura serrata
displasia: no



Adenoma/Polipo
«serrato» sessile
displasia: possibile
-convenzionale
-serrata



Adenoma serrato
tradizionale
displasia:
sempre presente

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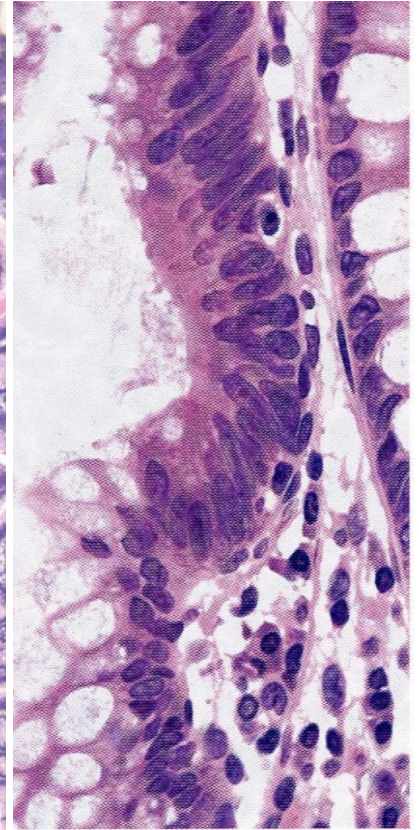
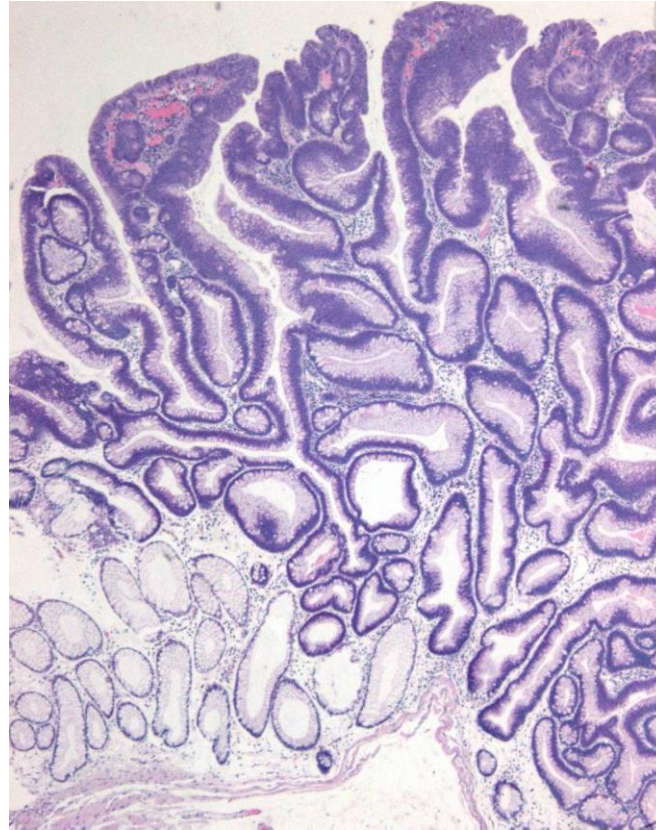
Annex

Annotations of colorectal lesions

pages: 205-250

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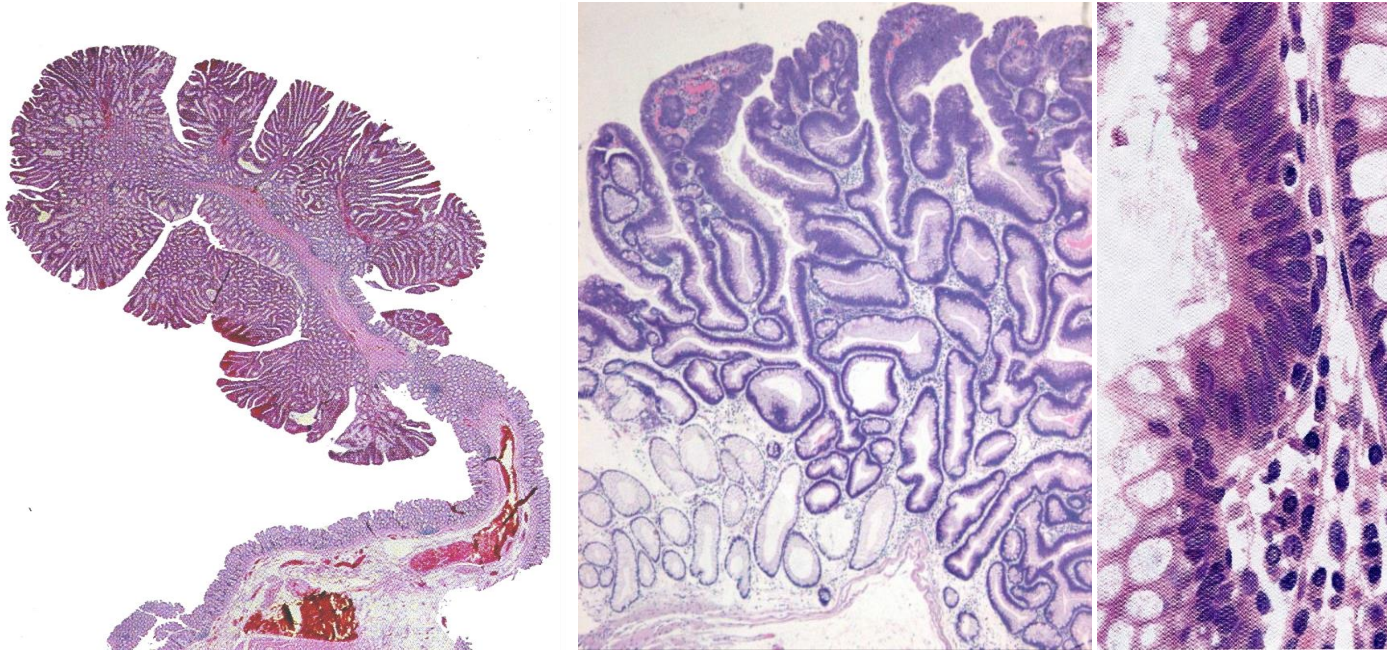
Adenoma



Adenoma is defined as a lesion of the colon or rectum containing unequivocal epithelial neoplasia (European Guidelines 2010).

Adenomas are defined by the presence of dysplastic epithelium (WHO 2010).

Conventional Adenoma



Conventional adenoma is a benign, premalignant neoplasm composed of dysplastic epithelium. The descriptor «conventional» distinguishes this from lesions in the serrated pathway (WHO 2019).

European Guidelines for Quality Assurance in Colorectal Cancer Screening



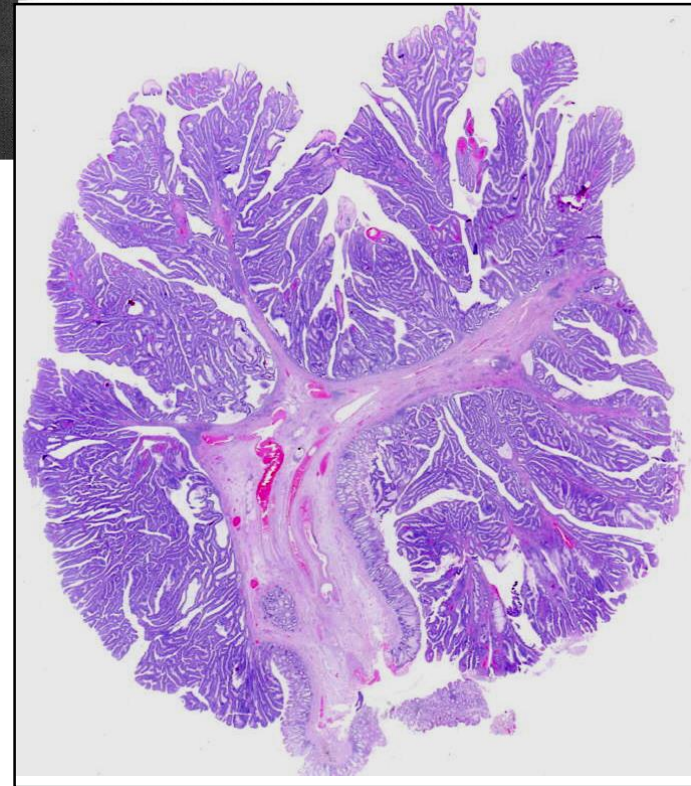
European Commission

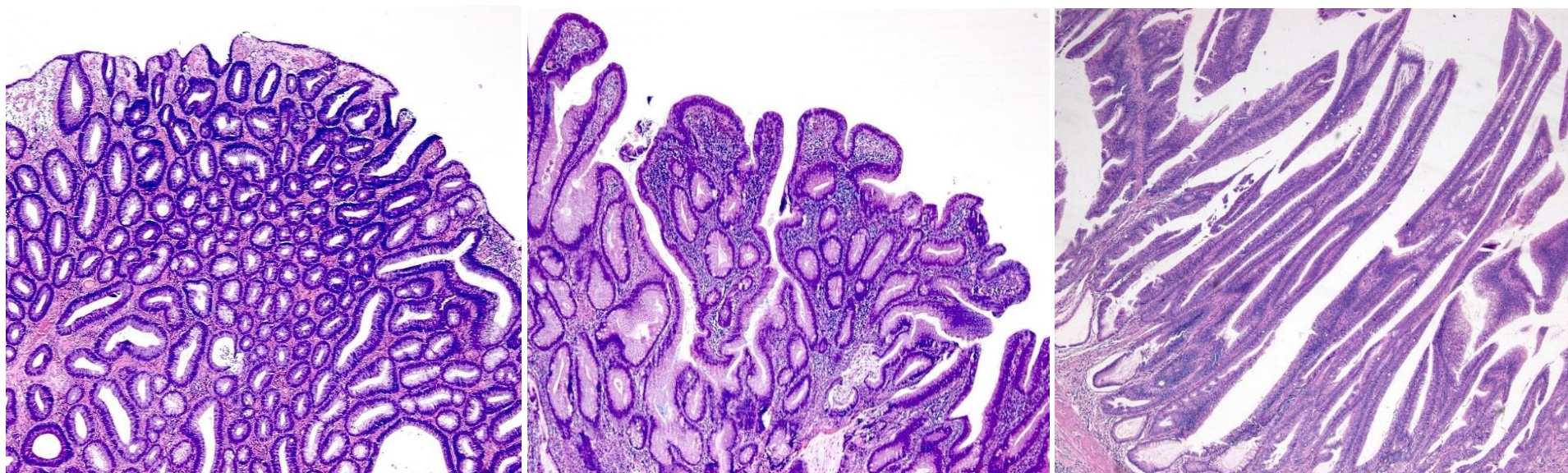
Grading of Villousness

The “20% rule”

At least 20% of the estimated volume of an adenoma should be villous to be classified as a tubulo-villous adenoma and 80% villous to be defined as a villous adenoma. All other lesions are classified as tubular.

The reproducibility of villousness increases when collapsing the categories into only two: tubular vs. any villous component (i.e. anything > 20% villous).





Subtyping of conventional adenomas

- Tubular (villous component $\leq 25\%$)
- Tubulovillous (villous component $>25\% \leq 75\%$)
- Villous (villous component $>75\%$)

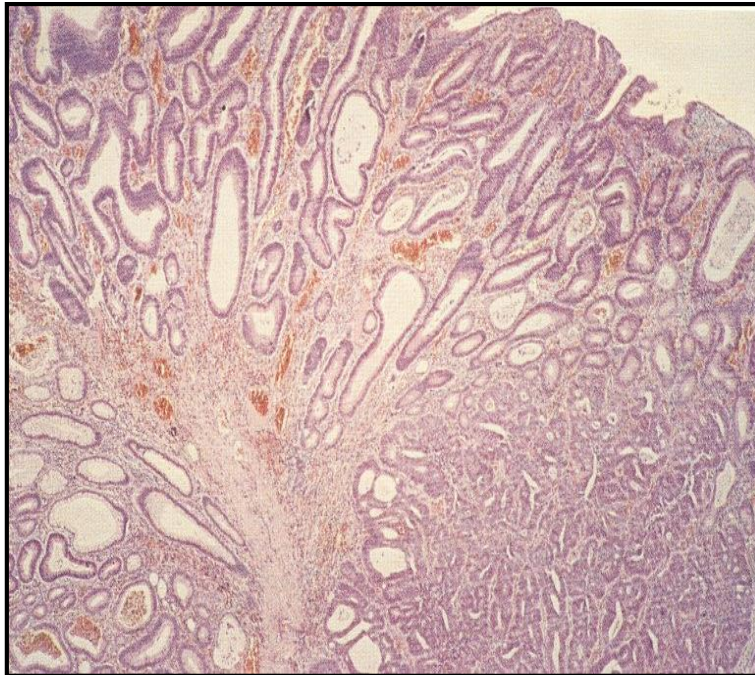
WHO 2019

European Guidelines for Quality Assurance in Colorectal Cancer Screening



European Commission

Risio, Mauro



GRADING OF NEOPLASIA/DYSPLASIA

It is divided into **low and high grade** to improve interobserver agreement, with high grade equating “severe dysplasia” in older systems.

Mucosal high grade neoplasia is diagnosed on architecture, supplemented by an appropriate cytology.

Changes of mucosal high grade neoplasia should usually involve **one or two glands**, sufficient to be identified at low power examination.

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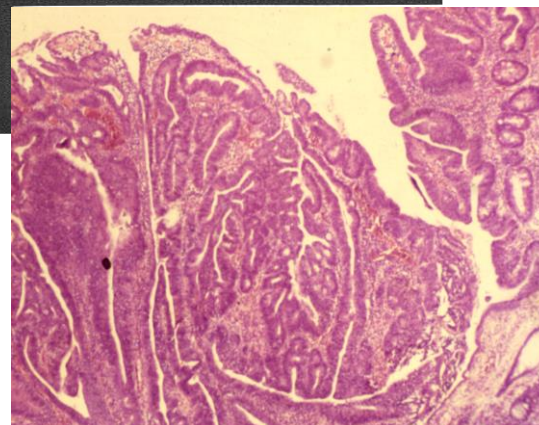


European Commission

Mucosal High Grade Neoplasia

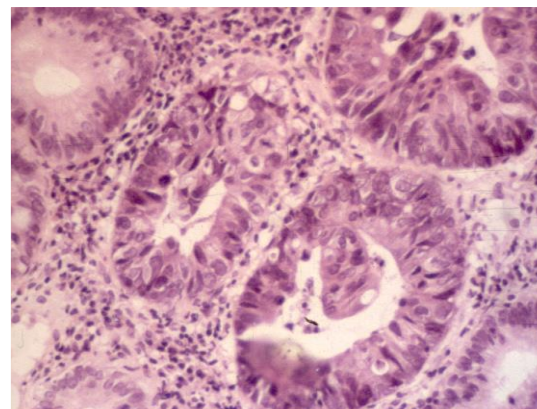
ARCHITECTURAL CHANGES

- Complex glandular crowding
- Prominent glandular budding
- Cribriform appearance and “B to B”
- Prominent intraluminal papillary tufting



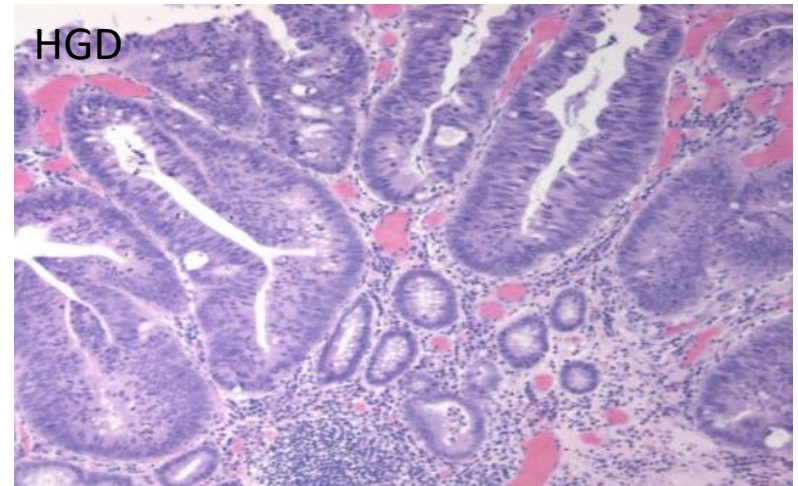
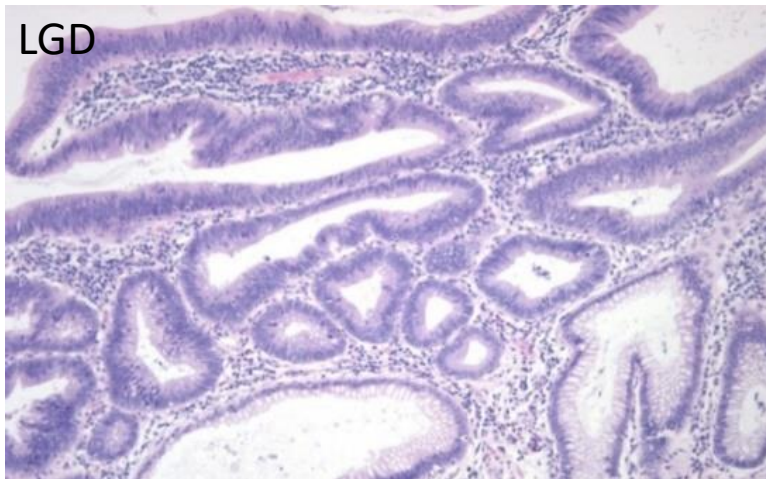
CYTOLOGICAL CHANGES

- Loss of cell polarity
- Nuclear stratification
- Enlarged nuclei with nucleoli
- Atypical mitotic figures
- Dysplastic cells (retroruclear goblet cells)
- Prominent apoptosis (“dirty” appearance)

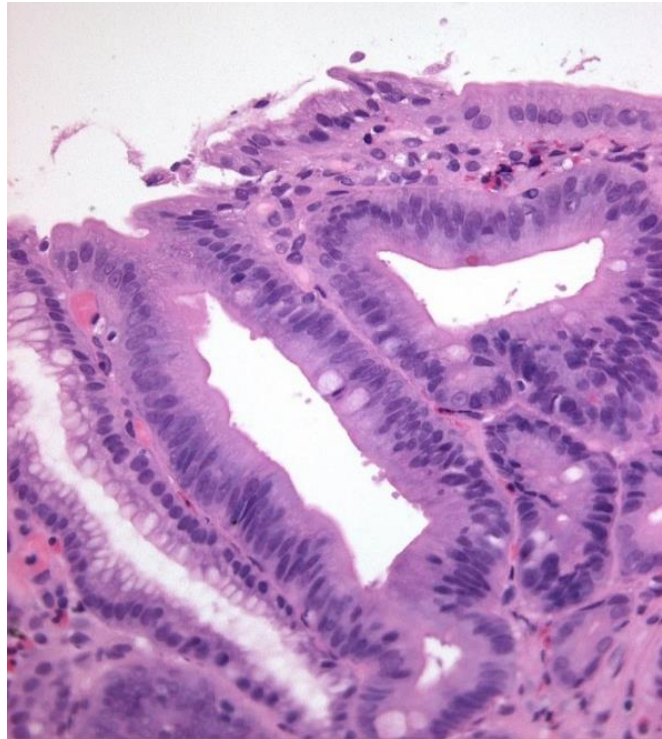


Grading of adenomas

For dysplasia grading of conventional adenomas we used a two-tiered stratification into low-grade and high-grade, although there is a high level of interobserver variability. WHO 2019

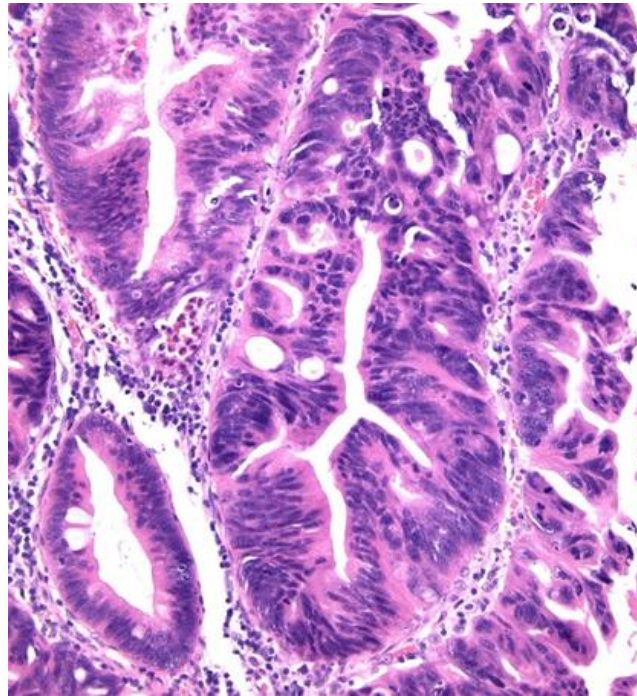


Low-grade dysplasia is defined by the presence of architecturally non-complex crypts containing nuclei that are pseudostratified, or partially stratified, such that the cell nuclei reach only the lower half of the cell cytoplasm.



The crypts are arranged in a parallel configuration **without** significant back-to-back configuration, cribriforming, or complex budding.

High-grade dysplasia is defined by marked pseudostratification, or stratification, of neoplastic nuclei that extend toward the luminal half of the cells and usually contain significant pleomorphism, increased mitotic activity, atypical mitoses, and marked loss of polarity.



Architectural changes such as back-to-back gland configuration and cribriforming may also be observed.

Reproducibility of the Villous Component and High-grade Dysplasia in Colorectal Adenomas <1 cm

Implications for Endoscopic Surveillance

Dipti Mahajan, MD,* Erinn Downs-Kelly, DO,* Xiuli Liu, MD,* Rish K. Pai, MD, PhD,*
Deepa T. Patil, MD,* Lisa Rybicki, MS,† Ana E. Bennett, MD,* Thomas Plesec, MD,*
Oscar Cummings, MD,‡ Douglas Rex, MD,§ and John R. Goldblum, MD*

Am J Surg Pathol 2013;37:427–433

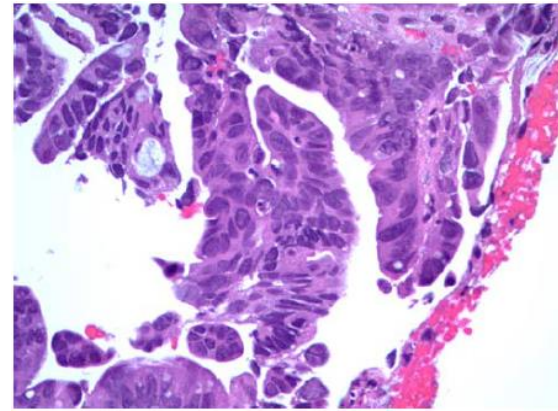
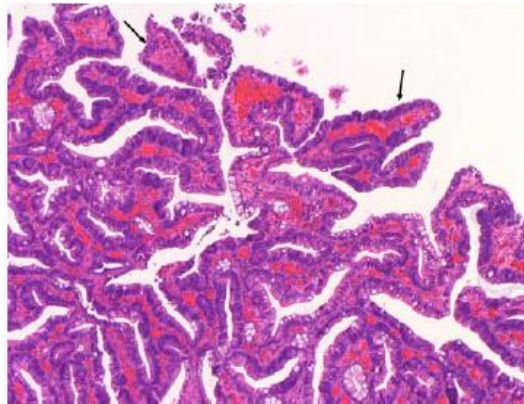
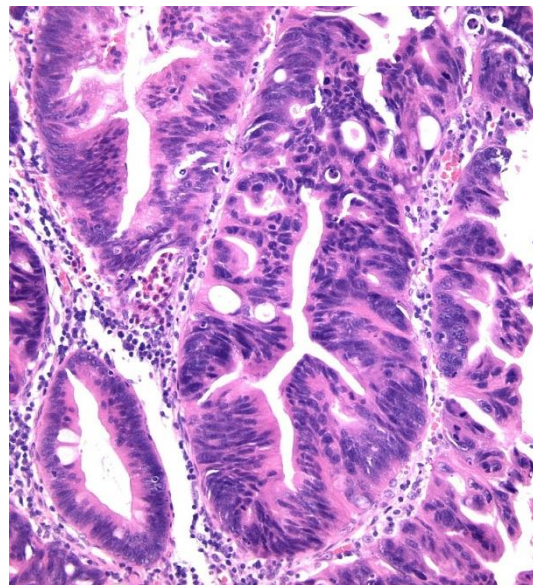
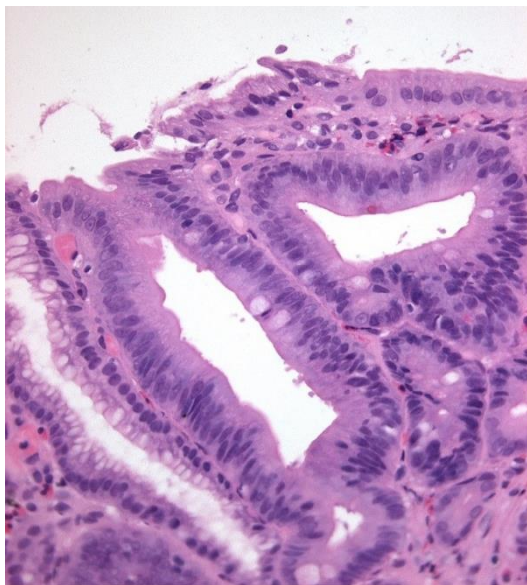


TABLE 2. κ Indices for Interobserver Agreement

Feature	κ	<i>P</i>	95% CI	Interobserver Agreement*
Preconsensus diagnosis				
A-VC	0.21	< 0.001	0.15-0.27	Poor
HGD	0.26	< 0.001	0.20-0.32	Poor
AA	0.29	< 0.001	0.23-0.35	Poor
Postconsensus diagnosis				
A-VC	0.37	< 0.001	0.31-0.43	Poor
HGD	0.31	< 0.001	0.25-0.37	Poor
AA	0.34	< 0.001	0.28-0.40	Poor



**European Guidelines for Quality Assurance
in Colorectal Cancer Screening**

Pathologist reporting in a colonoscopy screening programme should not report high-grade-neoplasia in more than 5% of lesions and those in a FOBT programme in not more than 10% of lesions.