

The logo graphic consists of a green semi-circle at the top, followed by a horizontal line of green dots, a solid green horizontal line, and another horizontal line of green dots below it.

IBDHorizons

A panoramic view of a city skyline at sunset, with a purple and pink sky and a river in the foreground.

# Cancer Risk & Dysplasia Screening in IBD

# ARS QUESTION 1

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**Which is TRUE regarding surveillance of dysplasia in IBD**

- A. Standard definition endoscopy is not an acceptable screening method
- B. Virtual chromo-endoscopy is a valid surveillance method
- C. Recommended surveillance intervals for both pancolitis and proctitis are the same
- D. Presence of any dysplasia is indication for urgent total colectomy

# ARS QUESTION 2

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**Which statement is TRUE:**

- A. Most dysplastic lesions in IBD are not endoscopically visible
- B. Colectomy is indicated in all cases of high-grade dysplasia
- C. Disease duration, extent, and activity are associated with risk of dysplasia
- D. Having PSC reduces risk of dysplasia

## Clinical Case 7

During surveillance colonoscopy for 74-year-old patient with left sided UC for 12 years in endoscopic remission, a rectal flat 1.5cm lesion with high grade dysplasia is detected on biopsy.

# Cancer Risk & Dysplasia Screening in IBD

**Bincy P. Abraham, MD, MS, AGAF, FACG, FASGE**

Professor of Clinical Medicine – Houston Methodist Academic Institute

Professor of Clinical Medicine – Weill Cornell Medical College

Distinguished Professor & Director, Fondren IBD Program

Director, Gastroenterology & Hepatology Fellowship

# Disclosures

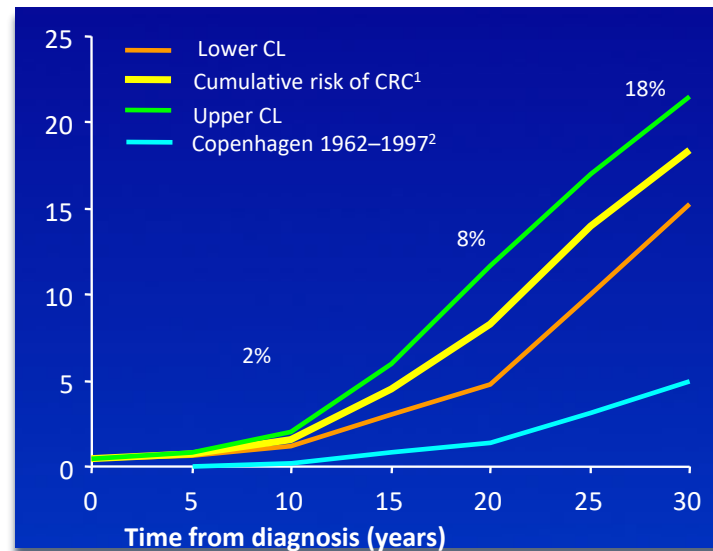
- Governance
  - Member – American Board Internal Medicine Board of Directors
  - Member – TDDC Clinical Governance Board
- Research
  - AbbVie
  - Gilead
  - Hoffman-La Roche
  - Janssen
  - Takeda

# Cumulative Risk of CRC

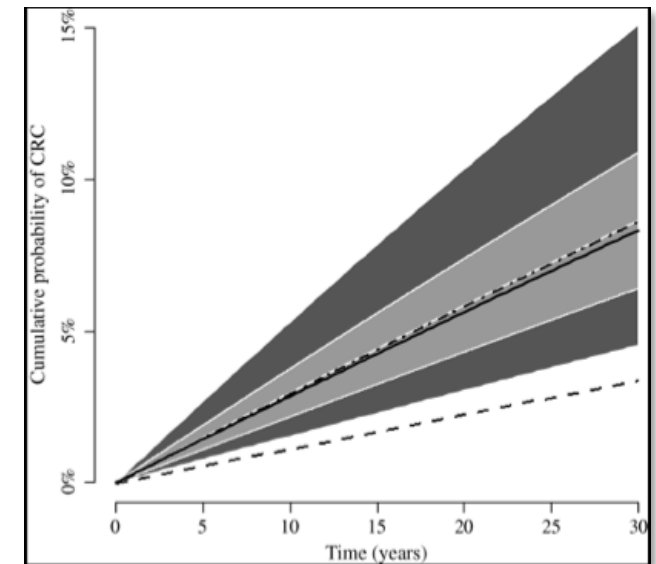
Meta-analysis:  
(population-based &  
referral center studies):

Cumulative Risk	Disease Duration
2.6% (95% CI: 0.8–4.7)	10-20 years
6.6% (95% CI: 1.3–13.8)	>20 years
Up to 21%	>20 years + Extensive Disease

## Colorectal Cancer in Ulcerative Colitis: Cumulative Risk



## Colorectal & Small Bowel Cancer in CD: Cumulative Incidence: (Meta-Analysis)

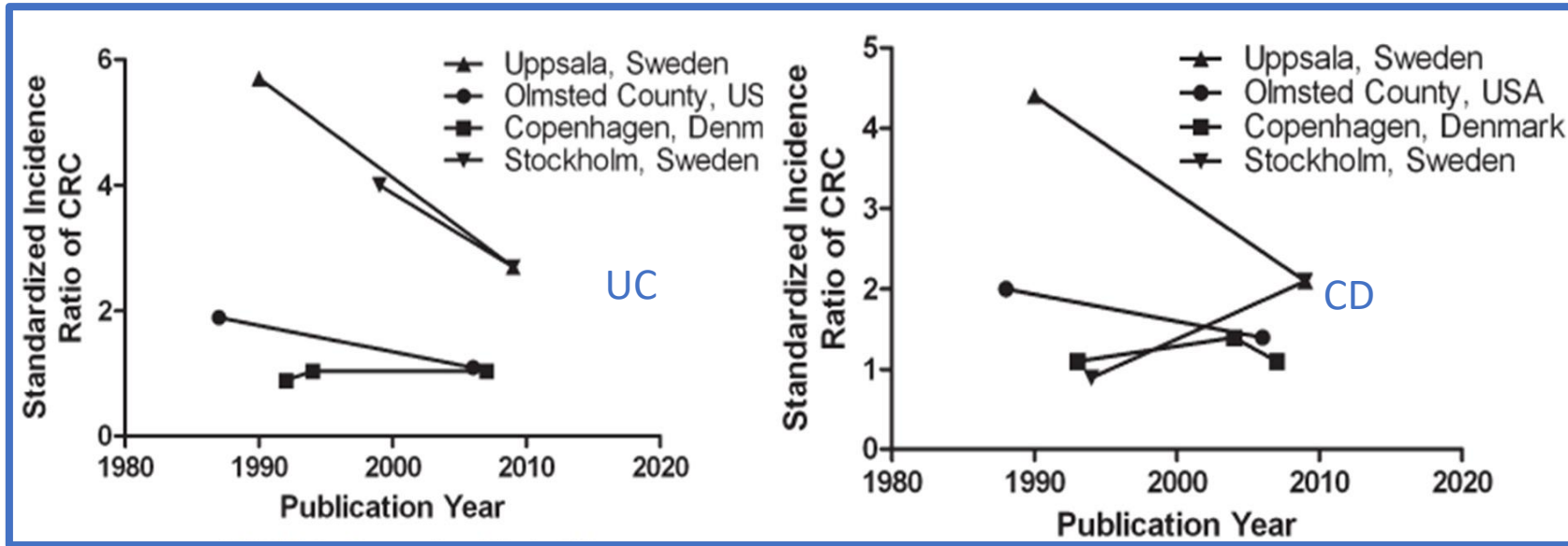


<sup>1</sup>Eaden 2001; <sup>2</sup>Winther 2001

Lutgens MWMD et al. *Inflamm Bowel Dis.* 2013; 19: 789–99; Eaden. *Gut.* 2001; Winther. *Gastroenterology.* 2001.

# Incidence & Rates

- Meta-analysis: 9 population- based studies
  - NS decreasing trend in risk of CRC in IBD over time



- However STILL ~ 2X >risk than non – IBD population



# Risk Factors for IBD-Associated Colorectal Neoplasia

Patient Factors	Disease Factors	Endoscopic Features
<b>PSC</b> <ul style="list-style-type: none"> <li>from time of diagnosis</li> <li>s/p liver transplant</li> <li>s/p proctocolectomy (pouch Ca)</li> </ul>	<b>Disease Duration</b> <ul style="list-style-type: none"> <li>&gt;7-8 years</li> <li>increases linearly</li> </ul>	<b>CD:</b> <ul style="list-style-type: none"> <li>&gt;30-50% colon mucosa involved</li> </ul> <b>UC:</b> <ul style="list-style-type: none"> <li>10-15x: pancolitis</li> <li>2x: left sided colitis</li> <li>0 risk: proctitis</li> </ul>
<b>Colorectal Neoplasia Hx</b> <ul style="list-style-type: none"> <li>Increased synchronous/metachronous lesions</li> </ul>	<b>Disease Extent</b> (CD >30-50% colon involvement)	<b>Strictures</b> <ul style="list-style-type: none"> <li>UC &gt; CD</li> <li>proximal location</li> </ul>
<b>Family History</b> (1 <sup>st</sup> degree relative)	<b>Endoscopic activity</b>	<b>Foreshortened tubular colon</b>
<b>Smoking</b>	<b>Histologic activity</b>	(pseudopolyps)

# New Guidelines: When to start surveillance?

	Previous:	Current:
<b>Extensive Colitis</b>	≥8-10 yrs from dx	≥8 yrs from dx
<b>Left-sided Colitis</b>	≥10-15 yrs from dx	≥8 yrs from dx
<b>Repeat</b>	1-2 years	1-3 years
<b>Proctitis</b>	?	?
<b>PSC</b>	Annually from diagnosis	

# Dysplasia Surveillance

## Ideal:

- Perform by experienced gastroenterologist / at IBD center
- Disease in remission
- \*Do not delay if active disease
- Adequate bowel preparation
- Minimal pseudopolyps

## Standard of Care:

- Standard definition scopes no longer acceptable!
- High-definition white light colonoscopy:
  - 2 to 4 random biopsies q10cm from cecum to rectum (minimum 32 biopsies)
  - If lesions found: add targeted biopsies + biopsies from surrounding "normal" mucosa (to evaluate for invisible dysplasia or inflammation)
- Chromoendoscopy (indigo carmine/ methylene blue)
  - Targeted biopsies of lesions + random biopsies (to evaluate for invisible dysplasia or inflammation)

# To Chromo or Not to Chromo?

## Dye Chromoendoscopy (CE) v. High Definition – White Light Endoscopy (HD-WLE)

### Meta-analysis (3 RCTs & 3 observational studies)

- 1358 IBD patients undergoing surveillance: (670 CE, 688 HD-WLE)
- More dysplasia found on CE vs. HD-WLE (18.8% vs. 9 %, P=0.08)

### Systematic analysis of 3 RCTs

- (242 CE, 151 HD-WLE)
- More dysplasia found on CE (12.4%) vs. HD-WLE (10.4%)



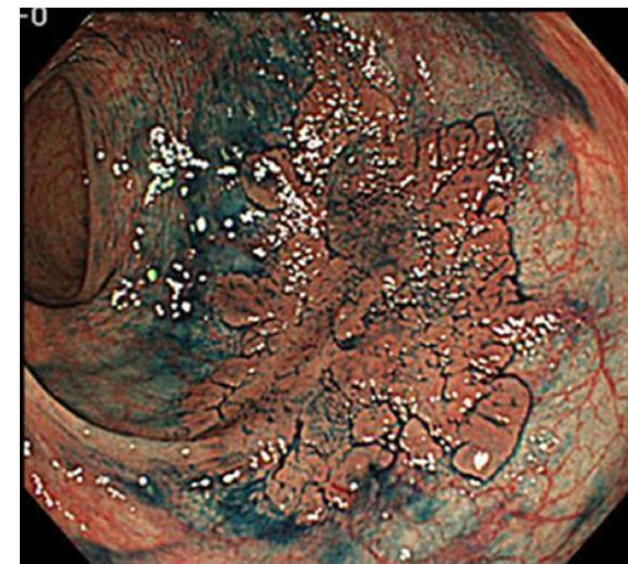
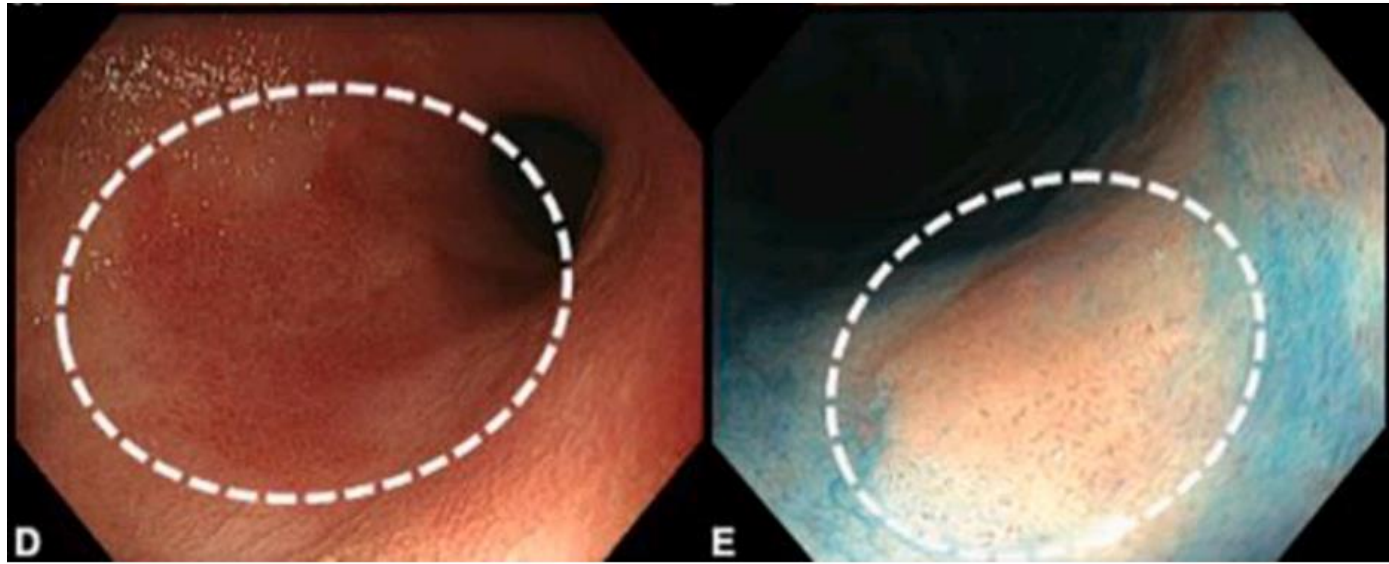
Cost  
Time

### *Virtual Chromoendoscopy?*

- Fuji Intelligent Chromo Endoscopy (FICE) and iSCAN (Pentax)
- **Narrow band imaging:**
  - Currently not recommended:
  - Does not increase yield of dysplasia detection

# Dye Chromoendoscopy

- Methylene blue or Indigo Carmine



# Endoscopically “Invisible” Dysplasia

Invisible Dysplasia on Random Biopsies

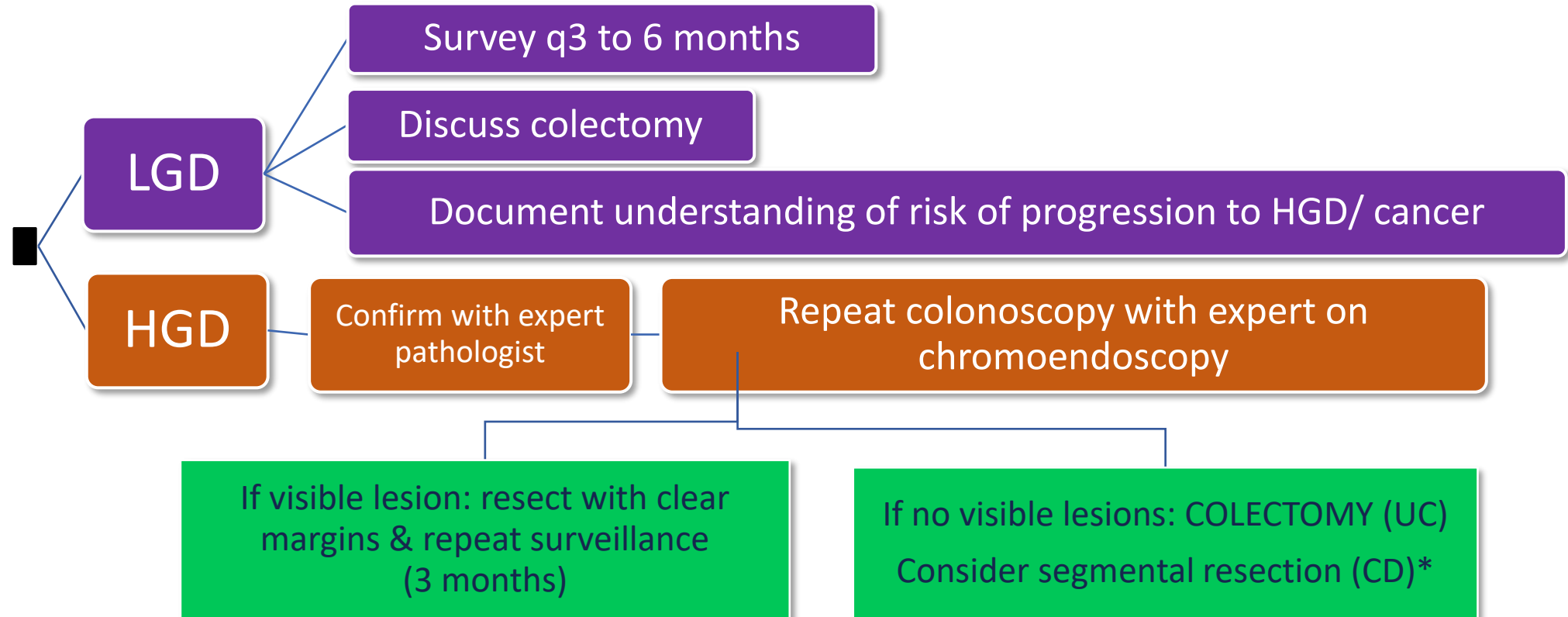
Confirm by expert GI / IBD Pathologist

Repeat Enhanced Colonoscopy (chromoendoscopy) by Expert GI/ IBD specialist

**Up to 1/3 of “invisible” dysplasia is actually visible!**

If no lesions: Random biopsies q10cm (minimum 32)

# Endoscopically “Invisible” Dysplasia



# Management of Visible Dysplasia:

Multimodal Management	Goal: en bloc resection, negative margins
Resect (endoscopic/surgical)	If unable (EMR, ?ESD) → then surgery
Obtain/ Maintain disease quiescence (medical management)	
Modify risk factors (smoking)	Challenges/ Risks
Continue close colonoscopic surveillance (unless total proctocolectomy).	<ul style="list-style-type: none"><li>• Increased risk submucosal fibrosis (inflammation)</li><li>• Incomplete resection</li><li>• Perforation</li><li>• Bleeding</li><li>• Recurrence</li></ul>



# Approach to Visible Dysplasia

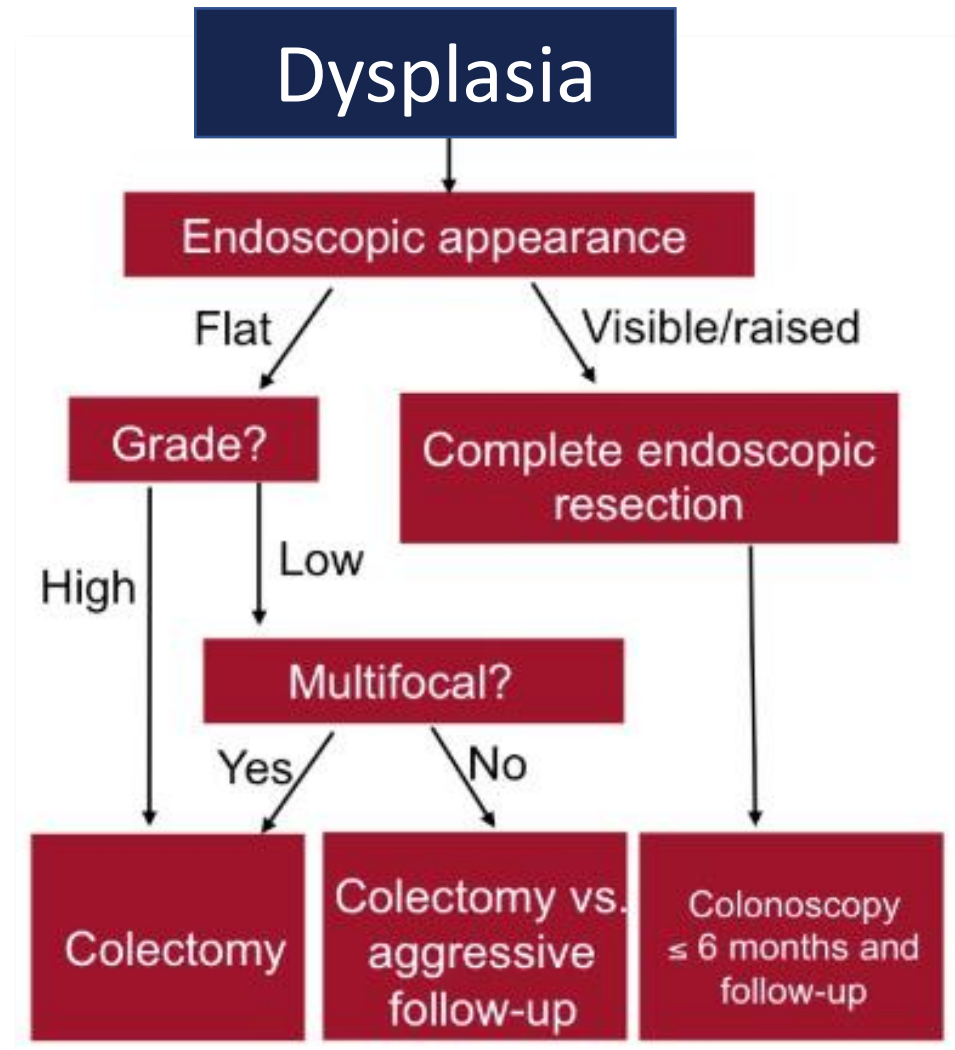
DALM: Dysplasia Associated Lesion/ Mass

ALM:  
Adenoma  
Like Mass

The terms "DALM" and "ALM" are being replaced by:

- "polypoid"
- "non-polypoid"
- "flat"
- "invisible" dysplasia

Paris  
Classification



# Risks of Unresected Disease

- Always recommend total proctocolectomy when dysplasia is found (visible/invisible)
- High risk of synchronous dysplasia/cancer
- High risk of later development of metachronous neoplasia

## **Retrospective study:**

- 75 CD patients w/ localized colon cancer undergoing resection:
- 39%: at least one metachronous cancer
  
- Mean time to new dysplasia 5 years
- Mean time to cancer 6.8 years, respectively.

# Dysplasia in IBD

- Dysplasia risk is decreasing but still 2x higher than the general population
- Disease duration, extent, and activity conveys increased risk
- Most dysplasia is now “visible” therefore use high definition and consider chromoendoscopy in high-risk patients
- Endoscopically visible dysplasia (LGD/ HGD) if resected with clear margins may avoid colectomy

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# IBDHorizons

## Panel Discussion

Moderator: Scott Lee, MD

Bincy Abraham, MD

Timothy Ritter, MD

Anita Afzali, MD

Feza Remzi, MD

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A panoramic view of the New Orleans skyline at sunset, with a vibrant sky of pink, orange, and blue. The city's buildings are silhouetted against the colorful sky.

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