



# Case presentation

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Emek Medical Center, Afula, Israel.

March, 2016



- 60 y/o man with long standing UC+PSC.
- Last 10 years on clinical and endoscopic remission.
- Med: Asacol 4.8 gr/d +Ursodiol 750mg/d







100

Pathology:  
Negative for dysplasia  
Inflammatory polyp



# Colonoscopy 2011

- Negative for dysplasia





# Colonoscopy 2013

**MOUNT SINAI HOSPITAL**  
Joseph and Wolf Lebovic Health Complex  
210 Princes by Avenue  
Haifa, 31015, Israel Web: 123

MSD-1002013

## Colonoscopy Record

Clearly imprint patient identification card

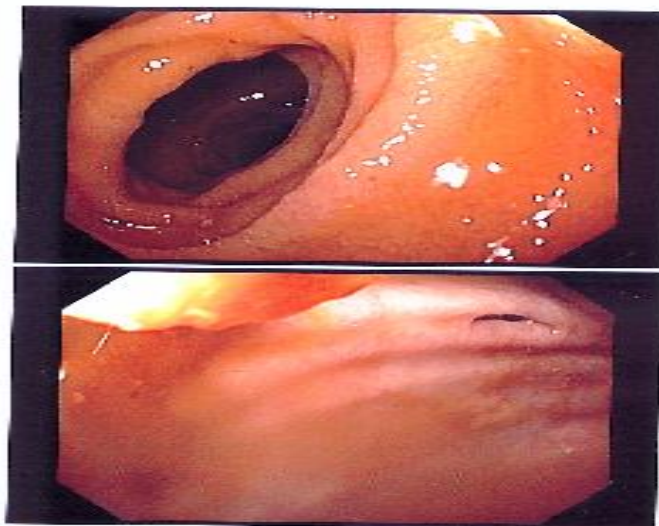
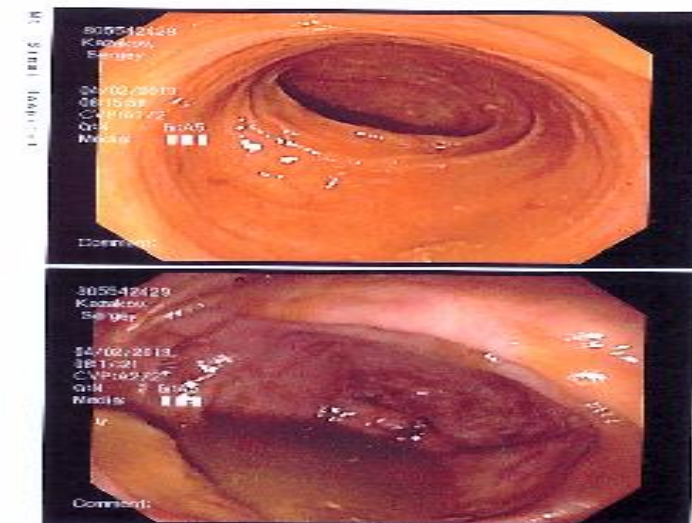
Date: YYYY-MM-DD

Time: HH:MM

Req'd by  
Dr.

Performed by  
Dr. K. O. S. O. K.

Pre-operative Diagnosis



Pathology:  
Negative for dysplasia



Signature

*K. O. S. O. K.*



# Colonoscopy April 2014

APR 22 / 14  
**MOUNT SINAI HOSPITAL**  
Joseph and Wolf Lebovic Health Complex  
670 University Avenue  
Toronto, Ontario, Canada M5S 1A5  
MSH (Rev. 01/2014) Page 1 of 1

## Colonoscopy Record

Clearly imprint patient identification card



S-CD:	
Size (cm)	
Flattened surface	
Mucosal surface	
Lesions?	
STUM	# of polyps
and	
eyed	

Flat lesions rectum- from 10 cm.  
Pathology- Low grade dysplasia



# 60 y/o, UC+PSC

What next? •

Colonoscopy  
2010  
No dysplasia

Colonoscopy  
2013  
No dysplasia

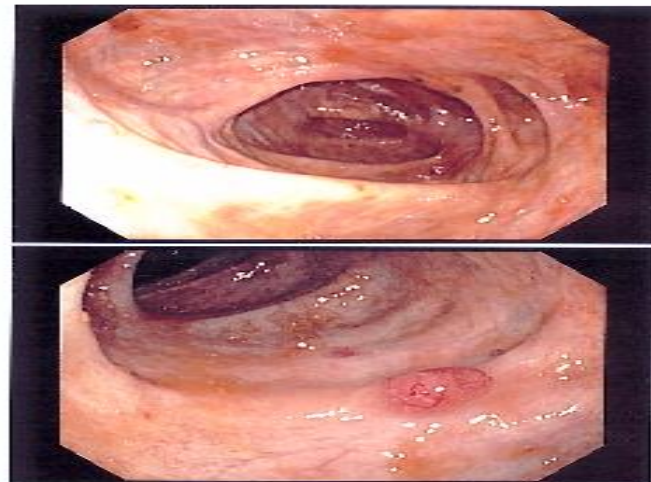
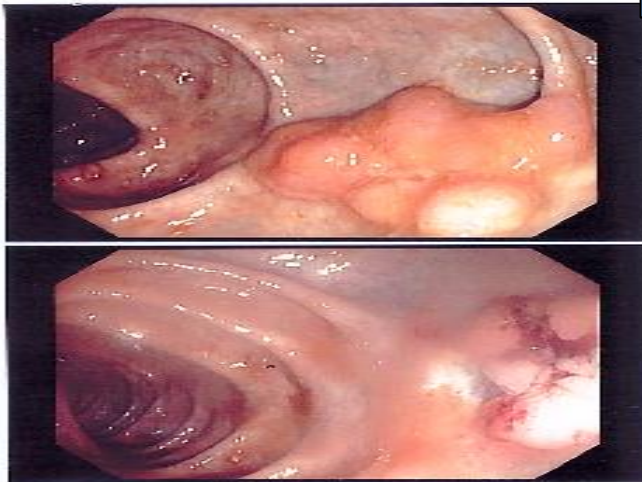
April 2014  
Low grade  
dysplasia  
Rectum (10CM)



# Colonoscopy Sep 2014

1. Biopsy from 50 cm- indefinite for dysplasia.
2. 10 cm -Low grade Dysplasia -

SEPT 09, 2014  
MOUNT SINAI HOSPITAL  
Joseph and Wolf Lebowitz Health Complex  
600 Mt. Sinai by Avenue  
Nahariya, Galilee, Israel 1656100  
50221 Date: 09-09-14 Page: 1 of 1  
Colonoscopy Record



Barcodes  
ASCENDING  
Formed  
Removal  
Partially removed  
65cm  
Tattoo  
Number of Biopsies  
TERMINAL ILS  
SES-CD:  
Ulcer size (cm)  
No. Ulcerated  
No. Affected  
Sigmoidoscopy  
Rutger's S



Score	
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100	

Date

XXXX MM DD

Mr. Yehonatan Ben-Zion 65cm





# 60 y/o, UC+PSC

What next? •

Colonoscopy Sep 2014

Colonoscopy  
2010  
No dysplasia

Colonoscopy  
2013  
No dysplasia

April 2014  
Low grade  
dysplasia  
Rectum  
(10CM)

Sep 2014  
Indefinite  
dysplasia Bx from  
50 cm  
Low grade  
dysplasia from Bx  
10 cm





# Colonoscopy Nov 2014

1. lesion in the ascending colon. (DISTORTED TUBULAR ARCHITECTURE)
2. lesion in the splenic flexure. (TUBULOVILLOUS ADENOMATOUS CHANGE)
3. lesion in the rectum. (Low grade dysplasia)







# 60 y/o, UC+PSC

- What next? Multifocal lesions

Colonoscopy  
2010  
No dysplasia

Colonoscopy  
2013  
No dysplasia

April 2014  
Low grade  
dysplasia  
Rectum  
(10CM)

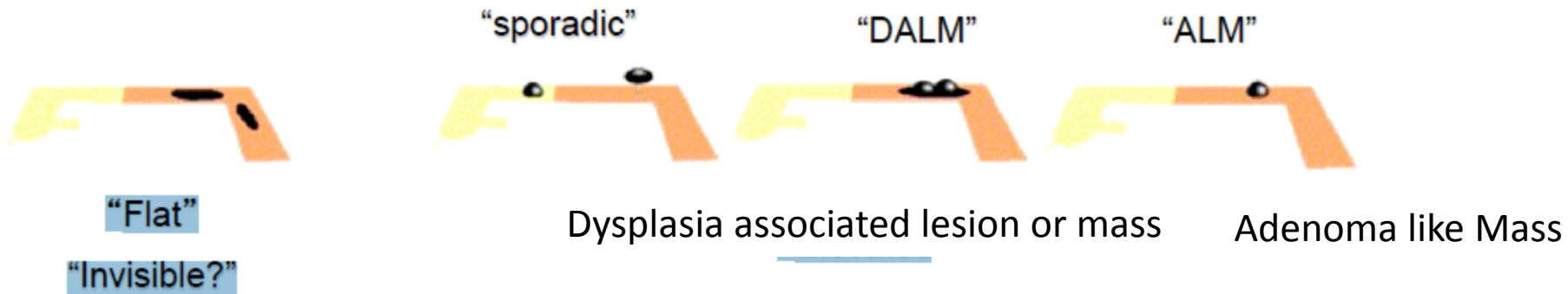
Sep 2014  
Indefinite  
dysplasia  
from 50 cm  
  
Low grade  
dysplasia  
from 10 cm.

Nov 2014  
RT colon  
Lesion.  
  
Splenic  
flexure  
lesions  
  
Rectum  
lesions



# Vocabulary for dysplasia in IBD

## Traditional: Macroscopic classification

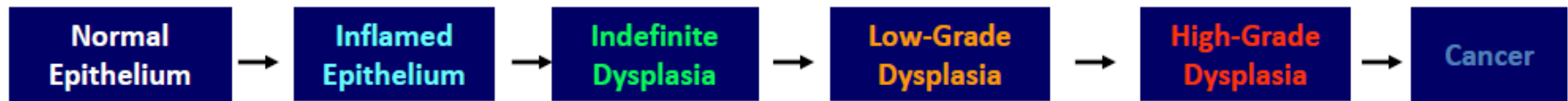


## Better:

- How detected (Non-targeted vs. targeted biopsies)
- Can borders be defined



3. What to do when dysplasia is detected:  
polypectomy, proctocolectomy, partial  
resection?



# Does all dysplasia mandate colectomy?

## Recommendations from a recent guideline are mostly grade A

### Should Colectomy Be Performed for Flat Dysplasia?

**Grade A:** There is high certainty that colectomy for flat HGD treats undiagnosed synchronous cancer and prevents metachronous cancer.

**Grade Insufficient:** The current evidence is insufficient to assess the balance of benefits and harms of colectomy for flat LGD.

### Should Colectomy Be Performed for Raised Dysplasia?

**Grade A:** High certainty that the magnitude of net benefits is substantial.

- I. Patients with IBD and a non-adenoma-like dysplasia-associated lesion or mass should be treated with colectomy.
- II. Patients with IBD and an adenoma-like dysplasia-associated lesion or mass, and no evidence of flat dysplasia elsewhere in the colon, can be managed safely by polypectomy and continued surveillance.



## Perspective: What proportion of dysplasia fall into the “flat” category

- Rutter 2006
  - 25/110 (22.7%) LGD “invisible” or flat
- Rubin 2007
  - 29/75 LGD invisible (38.7%)
- Velayos 2009
  - 16/61 (26.2%) LGD invisible
- Marion 2008
  - 3/12 LGD invisible (25%)

*Rutter MD et. al.. GI Endoscopy 2004: 60(3):334*

*Rubin DT et. al.. GI Endoscopy 2007: 65 (7): 998*

*Velayos FS et al ACG 2009*

*Marion JF et al AJG 2008: 103: 2342*

# Perspective: What proportion of dysplasia fall into this category

## Should Colectomy Be Performed for Flat Dysplasia?

**Grade A:** There is high certainty that colectomy for flat HGD treats undiagnosed synchronous cancer and prevents metachronous cancer.

**Grade Insufficient:** The current evidence is insufficient to assess the balance of benefits and harms of colectomy for flat LGD.

~25%

## Should Colectomy Be Performed for Raised Dysplasia?

**Grade A:** High certainty that the magnitude of net benefits is substantial.

- I. Patients with IBD and a non–adenoma-like dysplasia-associated lesion or mass should be treated with colectomy.
- II. Patients with IBD and an adenoma-like dysplasia-associated lesion or mass, and no evidence of flat dysplasia elsewhere in the colon, can be managed safely by polypectomy and continued surveillance.

~75%



- Performance of surveillance and role of chromoendoscopy:
- what is standard of care?



# Surveillance Technique

- **Based on expert opinion**
- **Technique:** 4-quadrant biopsies every 10 cm of mucosa; at least 33 biopsies; extra focus on nodules, masses, strictures; every 5 cm in rectosigmoid

# Chromoendoscopy proposed as means of improving sensitivity of colonoscopy

- Two main uses in IBD Surveillance
  - Improve detection of subtle colonic lesions (increase sensitivity of surveillance)
  - Once lesion detected-to aid in differentiating between neoplastic and non-neoplastic based on crypt architecture and modified pit pattern

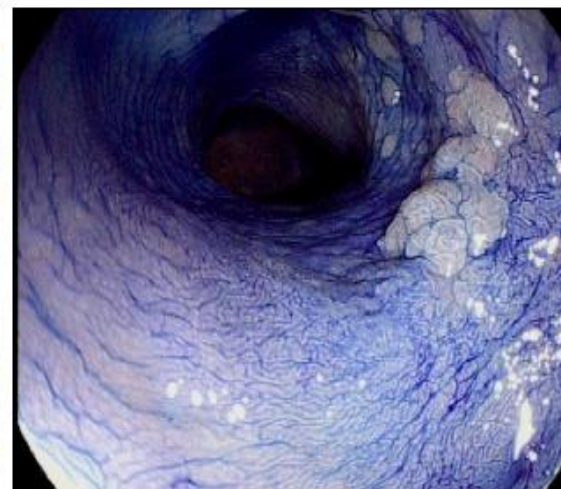
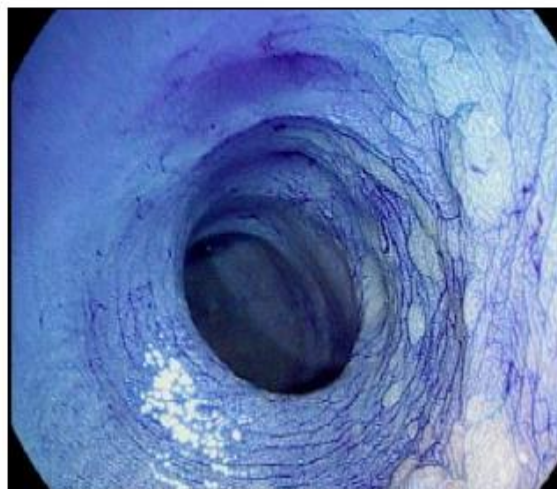
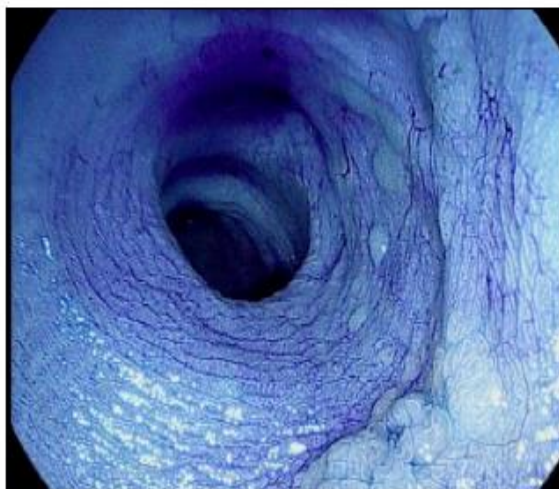


# “Invisible” dysplasia happens in IBD- Reason for “enhanced” surveillance techniques

110 neoplastic lesions	25 invisible	After histopathological analysis: 1 CRC, 8 HGD, 16 LGD	
	85 visible - median size 10mm (range 1-40mm)	At colonoscopy: 74 polypoid 4 irregular outline 1 plaque 6 macroscopic CRC (one only histologically confirmed at colectomy)	Decision after histopathological analysis: 16 DALMs (8 HGD, 8 LGD) 41 TA (33 mild, 8 moderate dysplasia) 12 TVA (8 mild, 4 moderate dysplasia) 11 VA (3 LGD, 4 mild, 3 moderate, 1 villous dysplasia) 5 CRC

Figure 2.

Details of neoplastic lesions. *CRC*, Colorectal cancer; *HGD*, high grade dysplasia; *LGD*, low grade dysplasia; *DALM*, dysplasia-associated lesion/mass; *TA*, tubular adenoma; *TVA*, tubulovillous adenoma; *VA*, villous adenoma.



# Chromoendoscopy Finds More Dysplasia than Conventional Exams

Author (Year)	Institution	# of UC Patients	Type of Imaging	Number of Dysplastic Lesions		Sensitivity / Specificity
				Chromo	Conventional	
Kiesslich (2003)	University of Mainz, Germany	263	Methylene blue	<b>32</b>	<b>10</b>	93% sens. 93% spec.
Rutter (2004)	St. Mark's Hospital, Harrow, UK	100	Indigo carmine	<b>7</b>	<b>0</b>	Not given
Hurlstone (2005)	The Royal Hallamshire Hospital, Sheffield, UK	350	Indigo Carmine-and Magnification	<b>69</b>	<b>24</b>	93% sens. 88% spec.
Kiesslich (2007)	University of Mainz, Germany	161	Confocal endomicroscopy	<b>19</b>	<b>4</b>	94.7% sens. 98.3% spec. 97.8% accuracy
Dekker (2007)	Academic Medical Center, Amsterdam, The Netherlands	42	Narrow-band imaging	<b>8</b>	<b>7</b>	Not given
Marion (2008)	Mount Sinai, New York, USA	102	Methylene Blue	<b>17</b>	<b>9</b>	Not given



# Role of chromoendoscopy in surveillance

- Not yet standard of care
- Chromoendoscopy (not virtual chromo)-is an alternative surveillance technique mentioned in guidelines from Crohn's and Colitis Foundation of America (2006) and British Society of Gastroenterology Guidelines (2010)

# What is the probability of finding occult (synchronous) cancer after a diagnosis fLGD?

Study	If colectomy done immediately
Bernstein 1994	3/16 (19%)
Ullman 2003	2/11 (19%)
Rutter 2006	2/10 (20%)

# Fact: Non-resectable colonic dysplasia is managed with surgery

- Concern in IBD is typically the type of surgery
  - Colectomy in IBD vs. limited resection in non-IBD



# Proposal: 3 parameters relevant for managing dysplasia

Questions and parameters to decide	“non-adenoma like dysplasia lesion or mass”	“adenoma-like lesion or mass and no flat dysplasia elsewhere”	“flat high-grade dysplasia”	“flat low-grade dysplasia”
Progression	No info	<5%*	High	1-12% vs 25-55%
Occult Cancer	43%	<5%	42%	19%
Resectability	No	Yes	No	No
Treatment?	Surgery (grade A)	Polypectomy (grade A)	Surgery (grade A)	Insufficient (grade I)

\* Further adenoma 50%-need close surveillance

# Proposal: 3 parameters relevant for managing dysplasia

Questions and parameters to decide	“non-adenoma like dysplasia lesion or mass”	“adenoma-like lesion or mass and no flat dysplasia elsewhere”	“flat high-grade dysplasia”	“flat low-grade dysplasia”
Progression	No info	<5%*	High	1-12% vs 25-55%
Occult Cancer	43%	<5%	42%	19%
Resectability	No	Yes	No	No
Treatment?	Surgery (grade A)	Polypectomy (grade A)	Surgery (grade A)	Insufficient (grade I)

\* Further adenoma 50%-need close surveillance



# So what is the right answer?





“You don't  
have to have  
all the right answers.  
You just have to be  
willing to  
learn.”

~ Katrina Mayer

[www.wearemomo.com](http://www.wearemomo.com)





# Discuss it with your patients







# Thanks

- Eran Zittan. MD  
Mount Sinai Hospital, Toronto, Canada.
- Emek Medical Center, Afula, Israel.  
Feb 2016







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## European evidence based consensus for endoscopy in inflammatory bowel disease

Vito Annese, Marco Daperno, Matthew D. Rutter, Aurelien Amiot, Peter Bossuyt, James East, Marc Ferrante, Martin G  tz, Konstantinos H. Katsanos, Ralf Kie  lich, Ingrid Ord  s, Alessandro Repici, Bruno Rosa, Shaji Sebastian, Torsten Kucharzik, Rami Eliakim,

DOI: <http://dx.doi.org/10.1016/j.crohns.2013.09.016> 982-1018 First published online: 1 December 2013

Article

Figures & data

Information & metrics

Explore



# ECCO 2013

## ECCO Statement 13G

Pan-colonic methylene blue or indigo carmine chromoendoscopy should be performed during surveillance colonoscopy, with targeted biopsies of any visible lesion [EL2].

If appropriate expertise for chromoendoscopy is not available, random biopsies (4 every 10 cm) should be performed [EL3]; however this is inferior to chromoendoscopy in the detection rate of neoplastic lesions [EL2] [Voting results: 100% agreement].





# Final pathology –Case 1

Specimen:

COLON RIGHT

Gross Description:

The specimen container is labeled with the patient's identification and as "right hemicolectomy" and contains a right hemicolectomy specimen comprised of terminal ileum, ileocecal valve, appendix, cecum, ascending colon and adjacent pericolonic adipose tissue. The terminal ileum measures 8.2 cm in length 6.5 cm in luminal circumference. Ileocecal valve measures 6.6 cm in circumference. The appendix measures 4.6 cm in length x 1.3 cm in diameter. The colonic component of the specimen measures 25.2 cm in length by up to 11.4 cm in the middle circumference.

Both the proximal and distal margins of the specimen are received opened. Pericolonic adipose tissue is present to a maximum of 8.6 cm.

Within the ascending colon there is a circumferential, broad-based and constricting lesion measuring 3.5 cm from proximal to distal thigh 4.8 cm in luminal circumference. The lumen narrows to a minimum of 2.6 cm. This lesion is present 14.5 cm from the proximal margin and 10.4 cm from the distal margin. This lesion causes puckering of the serosal surface. Serial cuts of the lesion demonstrated chalky white and gray appearance with obliteration of the muscularis propria, extension into the adjacent adipose tissue. This lesion extends to within 0.1 cm of the closest peritonealized surface, and is present 1.4 cm from the closest pericolonic margin of resection.



- The mucosa of the terminal ileum has a finely granular tan and gray appearance. There is a single focus of nodularity noted measuring 2.1 x 2.3 cm, and is present 2.5 cm from the proximal margin. Serial cuts through this focus show slightly thickened mucosa. The ileocecal valve has a slight flattened and otherwise unremarkable appearance.
- The serosal aspect of the appendix is pink-tan, smooth and glistening.
- Serial cuts show a patent unremarkable lumen. The mucosa of the cecum has a thickened, nodular tan and pink appearance however is unremarkable on sectioning. The remaining serosal aspect of the specimen is pink-tan
- glistening appearance. The bowel wall ranges in thickness from 0.4 to 0.6 cm. Palpation of the adjacent pericolonic adipose tissue reveals multiple well-circumscribed ovoid nodules, consistent with lymph nodes that measure up to 1.4 cm in greatest dimension.







## Staging information is based on the AJCC 7th edition Case 1

### Ancillary Testing:

The tumour has been examined for the mismatch repair genes products MLH1, MSH2, MSH6 and PMS2 because of the patients age (< 60).

MLH1: Normal nuclear staining.

MSH2: Normal nuclear staining.

MSH6: Normal nuclear staining.

PMS2: Normal nuclear staining.

Immunohistochemical analysis showed normal nuclear staining for MLH1, MSH2, MSH6 and PMS2. This finding is highly correlated with tumours that are microsatellite stable (MSS).

This testing does not preclude referral to a genetic counsellor if there is a strong family history or if there is concern that this patient has a risk for hereditary cancer.

### Additional Information (added November 29, 2011):

Review of the specimen with the additional endoscopic findings shows deep plasma cells and eosinophils with mild architectural distortion consistent with an underlying chronic colitis. The disease is most severe in the distal part of the specimen and would be consistent with ulcerative colitis. **The distal margin shows focal nuclear atypia and findings which would be considered indefinite for dysplasia in the setting of colitis.**





# Colonoscopy pathology report 9.2011

## Case 1

1. The specimen container is labelled with the patient's identification and contains 3 pieces of tan to pink tissue ranging up to 0.1 to 0.2 cm in greatest dimension.  
- 1 tissue submitted in toto.

2. The specimen container is labelled with the patient's identification and contains 2 pieces of pink-tan tissue measuring 0.1 and 0.2 cm in greatest dimension.  
- 1 tissue submitted in toto.

### Microscopic Description:

Both biopsies show active colitis with regenerative mucosa consistent with an active chronic colitis. Mucosal ulceration with ulcer base material is noted in the rectal biopsy. In addition, both biopsies show areas of increased nuclear atypia and gland crowding consistent with a low-grade tubular adenoma or focal low-grade dysplasia. Endoscopic correlation is required to separate discrete adenomas vs. areas of low-grade dysplasia.

### DIAGNOSIS:

1, 2. Colon (25cm, rectum), biopsies:  
- Active chronic colitis with focal low-grade dysplasia (see description)







Once a person's T, N, and M categories have been determined, usually after surgery, this information is combined in a process called *stage grouping*. The stage is expressed in Roman numerals from stage I (the least advanced) to stage IV (the most advanced). Some stages are subdivided with letters.

#### Stage 0

**Tis, N0, M0:** The cancer is in the earliest stage. It has not grown beyond the inner layer (mucosa) of the colon or rectum. This stage is also known as *carcinoma in situ* or *intramucosal carcinoma*.

#### Stage I

**T1-T2, N0, M0:** The cancer has grown through the muscularis mucosa into the submucosa (T1) or it may also have grown into the muscularis propria (T2). It has not spread to nearby lymph nodes or distant sites.

#### Stage IIA

**T3, N0, M0:** The cancer has grown into the outermost layers of the colon or rectum but has not gone through them (T3). It has not reached nearby organs. It has not yet spread to the nearby lymph nodes or distant sites.

#### Stage IIB

**T4a, N0, M0:** The cancer has grown through the wall of the colon or rectum but has not grown into other nearby tissues or organs (T4a). It has not yet spread to the nearby lymph nodes or distant sites.

#### Stage IIC

**T4b, N0, M0:** The cancer has grown through the wall of the colon or rectum and is attached to or has grown into other nearby tissues or organs (T4b). It has not yet spread to the nearby lymph nodes or distant sites.

#### Stage IIIA

One of the following applies.

**T1-T2, N1, M0:** The cancer has grown through the mucosa into the submucosa (T1) and it may also have grown into the muscularis propria (T2). It has spread to 1 to 3 nearby lymph nodes (N1a/N1b) or into areas of fat near the lymph nodes but not the nodes themselves (N1c). It has not spread to distant sites.

**T1, N2a, M0:** The cancer has grown through the mucosa into the submucosa (T1). It has spread to 4 to 6 nearby lymph nodes (N2a). It has not spread to distant sites.

#### Stage IIIB

One of the following applies.

**T3-T4a, N1, M0:** The cancer has grown into the outermost layers of the colon or rectum (T3) or through the visceral peritoneum (T4a) but has not reached nearby organs. It has spread to 1 to 3 nearby lymph nodes (N1a/N1b) or into areas of fat near the lymph nodes but not the nodes themselves (N1c). It has not spread to distant sites.

**T2-T3, N2a, M0:** The cancer has grown into the muscularis propria (T2) or into the outermost layers of the colon or rectum (T3). It has spread to 4 to 6 nearby lymph nodes (N2a). It has not spread to distant sites.

**T1-T2, N2b, M0:** The cancer has grown through the mucosa into the submucosa (T1) or it may also have grown into the muscularis propria (T2). It has spread to 7 or more nearby lymph nodes (N2b). It has not spread to distant sites.

#### Stage IIIC

One of the following applies.

**T4a, N2a, M0:** The cancer has grown through the wall of the colon or rectum (including the visceral peritoneum) but has not reached nearby organs (T4a). It has spread to 4 to 6 nearby lymph nodes (N2a). It has not spread to distant sites.

**T3-T4a, N2b, M0:** The cancer has grown into the outermost layers of the colon or rectum (T3) or through the visceral peritoneum (T4a) but has not reached nearby organs. It has spread to 7 or more nearby lymph nodes (N2b). It has not spread to distant sites.

**T4b, N1-N2, M0:** The cancer has grown through the wall of the colon or rectum and is attached to or has grown into other nearby tissues or organs (T4b). It has spread to at least one nearby lymph node or into areas of fat near the lymph nodes (N1 or N2). It has not spread to distant sites.

#### Stage IVA

**Any T, Any N, M1a:** The cancer may or may not have grown through the wall of the colon or rectum, and it may or may not have spread to nearby lymph nodes. It has spread to 1 distant organ (such as the liver or lung) or set of lymph nodes (M1a).

#### Stage IVB

**Any T, Any N, M1b:** The cancer may or may not have grown through the wall of the colon or rectum, and it may or may not have spread to nearby lymph nodes. It has spread to more than 1 distant organ (such as the liver or lung) or set of lymph nodes, or it has spread to distant parts of the peritoneum (the lining of the abdominal cavity) (M1b).

If you have any questions about your stage, please ask your doctor to explain the extent of your disease.







Once a person's T, N, and M categories have been determined, usually after surgery, this information is combined in a process called *stage grouping*. The stage is expressed in Roman numerals from stage I (the least advanced) to stage IV (the most advanced). Some stages are subdivided with letters.

#### Stage 0

**Tis, N0, M0:** The cancer is in the earliest stage. It has not grown beyond the inner layer (mucosa) of the colon or rectum. This stage is also known as *carcinoma in situ* or *intramucosal carcinoma*.

#### Stage I

**T1-T2, N0, M0:** The cancer has grown through the muscularis mucosa into the submucosa (T1) or it may also have grown into the muscularis propria (T2). It has not spread to nearby lymph nodes or distant sites.

#### Stage IIA

**T3, N0, M0:** The cancer has grown into the outermost layers of the colon or rectum but has not gone through them (T3). It has not reached nearby organs. It has not yet spread to the nearby lymph nodes or distant sites.

#### Stage IIB

**T4a, N0, M0:** The cancer has grown through the wall of the colon or rectum but has not grown into other nearby tissues or organs (T4a). It has not yet spread to the nearby lymph nodes or distant sites.

#### Stage IIC

**T4b, N0, M0:** The cancer has grown through the wall of the colon or rectum and is attached to or has grown into other nearby tissues or organs (T4b). It has not yet spread to the nearby lymph nodes or distant sites.

#### Stage IIIA

One of the following applies.

**T1-T2, N1, M0:** The cancer has grown through the mucosa into the submucosa (T1) and it may also have grown into the muscularis propria (T2). It has spread to 1 to 3 nearby lymph nodes (N1a/N1b) or into areas of fat near the lymph nodes but not the nodes themselves (N1c). It has not spread to distant sites.

**T1, N2a, M0:** The cancer has grown through the mucosa into the submucosa (T1). It has spread to 4 to 6 nearby lymph nodes (N2a). It has not spread to distant sites.

#### Stage IIIB

One of the following applies.

**T3-T4a, N1, M0:** The cancer has grown into the outermost layers of the colon or rectum (T3) or through the visceral peritoneum (T4a) but has not reached nearby organs. It has spread to 1 to 3 nearby lymph nodes (N1a/N1b) or into areas of fat near the lymph nodes but not the nodes themselves (N1c). It has not spread to distant sites.

**T2-T3, N2a, M0:** The cancer has grown into the muscularis propria (T2) or into the outermost layers of the colon or rectum (T3). It has spread to 4 to 6 nearby lymph nodes (N2a). It has not spread to distant sites.

**T1-T2, N2b, M0:** The cancer has grown through the mucosa into the submucosa (T1) or it may also have grown into the muscularis propria (T2). It has spread to 7 or more nearby lymph nodes (N2b). It has not spread to distant sites.

#### Stage IIIC

One of the following applies.

**T4a, N2a, M0:** The cancer has grown through the wall of the colon or rectum (including the visceral peritoneum) but has not reached nearby organs (T4a). It has spread to 4 to 6 nearby lymph nodes (N2a). It has not spread to distant sites.

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**T4b, N1-N2, M0:** The cancer has grown through the wall of the colon or rectum and is attached to or has grown into other nearby tissues or organs (T4b). It has spread to at least one nearby lymph node or into areas of fat near the lymph nodes (N1 or N2). It has not spread to distant sites.

#### Stage IVA

**Any T, Any N, M1a:** The cancer may or may not have grown through the wall of the colon or rectum, and it may or may not have spread to nearby lymph nodes. It has spread to 1 distant organ (such as the liver or lung) or set of lymph nodes (M1a).

#### Stage IVB

**Any T, Any N, M1b:** The cancer may or may not have grown through the wall of the colon or rectum, and it may or may not have spread to nearby lymph nodes. It has spread to more than 1 distant organ (such as the liver or lung) or set of lymph nodes, or it has spread to distant parts of the peritoneum (the lining of the abdominal cavity) (M1b).

If you have any questions about your stage, please ask your doctor to explain the extent of your disease.





# Colonoscopy 2012 Case 1

The video colonoscope was introduced into the rectum and advanced to the anastomosis on the right side. The neoterminal ileum was seen and was entirely normal.. Random biopsy was taken. The anastomosis itself looked well-healed except for some small puckering of the skin. There was no obvious area of concern.

On withdrawing the scope, the remainder of the colonic mucosa with the preparation looked normal without any obvious signs of inflammation. In the sigmoid around 30 cm, there was a little bit of inflammation with small aphthous ulcers. This was biopsied The rectum itself appeared relatively normal.

Retroflexion views were normal in the rectal junction.

IMPRESSION: Normal-looking colon. Rule out recurrence of dysplasia, and rule out microscopic signs of inflammation.







# Pathology from Colonoscopy 2012

## Case 1

### DIAGNOSIS:

- 
- 1. Terminal ileum, biopsy: •
  - Without significant abnormality •
- 2. Anastomosis site, biopsy: •
  - Without significant abnormality •
- 3+4. Colon, 80 cm and 60 cm, biopsies: •
  - Chronic colitis, inactive •
  - Negative for dysplasia •
- 5. Colon, 30 cm, biopsy: •
  - Chronic colitis, inactive •
  - Focal low grade dysplasia •
- 6. Colon, rectum, biopsy: •
  - Chronic colitis, inactive •
  - Focal epithelial changes indefinite for dysplasia •







# Last colonoscopy 12/2014

## Case 1

### Procedure Note:

Following informed consent and the usual bowel preparation, the patient was sedated with midazolam 4 mg and fentanyl 25 mcg IV. Digital rectal exam was performed, which was normal. The pediatric colonoscope was inserted per rectum and advanced to the anastomosis, where the neoterminal ileum was intubated. The neoterminal ileum was normal as was the anastomosis. The right colon was also normal. Between 40 and 50 cm around the splenic flexure there was no active inflammation, but there was chronic change with scarring. In the distal 30 cm of the colon there was colitis Mayo score 1 with erythema, and mild reduction in submucosal vascular pattern. Biopsies were taken every 10 cm throughout the colon to assess for any dysplasia.

### Pathology:

### DIAGNOSIS:

- 1-7. Colon, 70 cm, 60 cm, 50 cm, 40 cm, 30 cm, 20 cm and rectum, biopsies:
  - Features consistent with quiescent ulcerative colitis
  - Low grade dysplasia at 30 cm
  - Epithelial changes indefinite for dysplasia at 60 cm and rectum





# Case 1

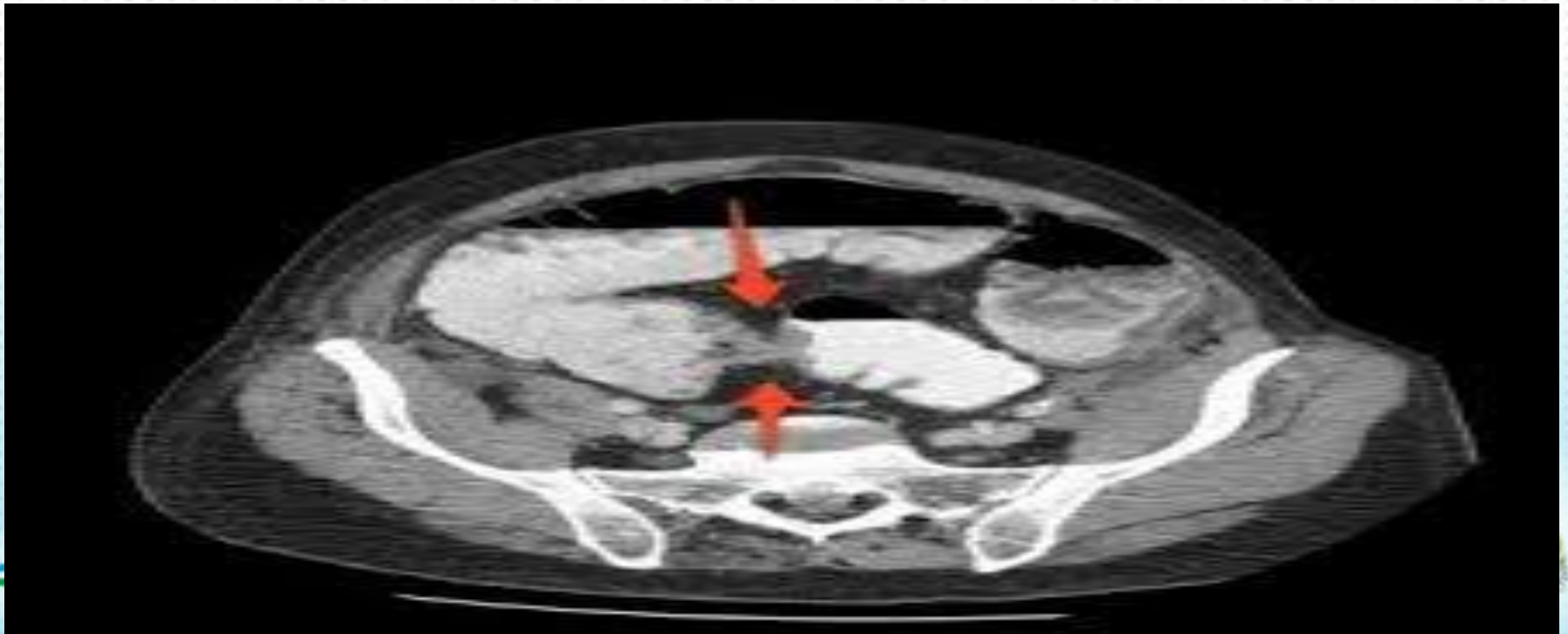
- M.D. is a 31 year old male who presented with a three month history of right sided abdominal pain on Jan/2011.
- Weight loss, denied any melena or hematochezia.
- Subsequently developed constipation, obstructive symptoms.





# Case 1

- CT-scan showed an apple core obstruction in the ascending colon with severe proximal dilatation.







# Case 1

- Urgent OR with Dr. Cohen for a right hemicolectomy on January 27, 2011.
- Surgery report:
- An hard mass at the hepatic flexure and no obvious masses had seen in the remainder of his colon.
- Pathology:?????



## Case 1

- Pathology :
- 5 cm diameter tumor, 6/51 positive lymph nodes.
- Low-grade colonic adenocarcinoma, pT4a pN2a (Stage IIc); In addition **Features of chronic colitis with focal changes indefinite for dysplasia at the distal margin (see additional information)**



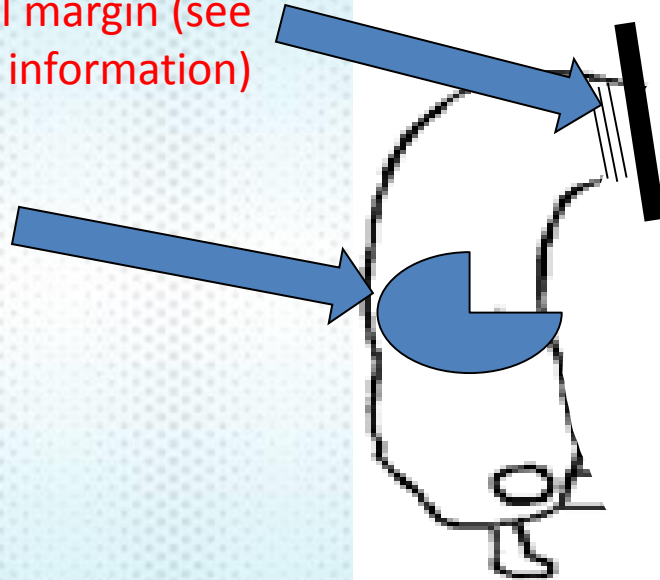




# Surgery Pathology specimen

chronic colitis with focal  
changes indefinite for dysplasia  
at the distal margin (see  
additional information)

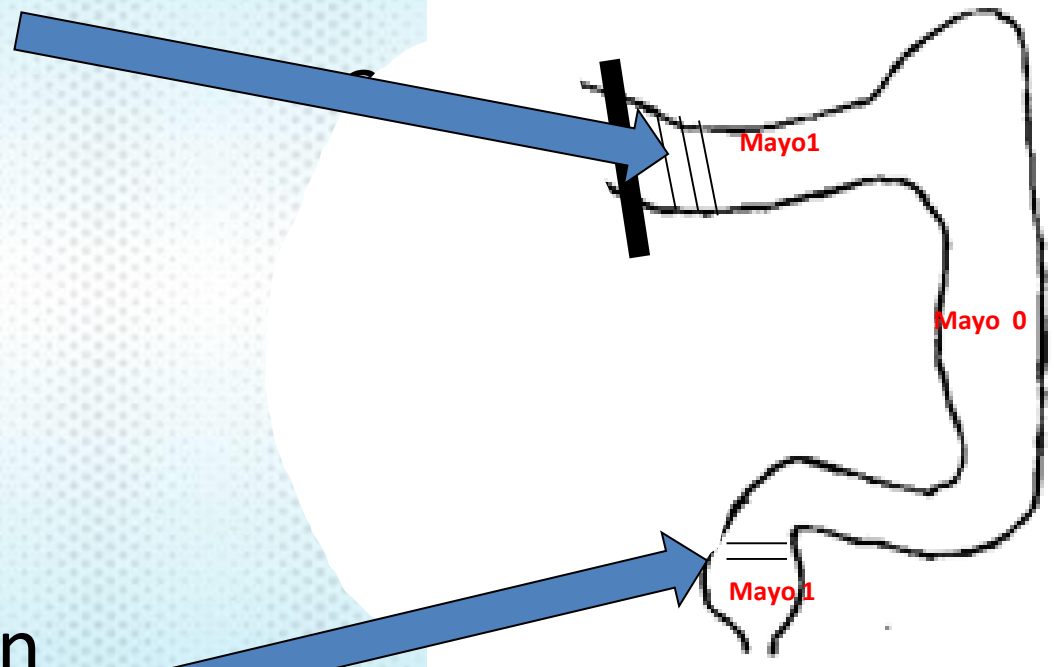
Low grade  
Adenocarcinoma.





# Colonoscopy Sep/2011

- Mild inflammation distal to the



- Mild Inflammation  
rectosigma with low grade dysplasia .





# Case 1

- Oncology stand point: completed adjuvant Chemotherapy with FOLFOX on the 17th of August 2011.
- FOLOFOX: 5-FU, leucovorin, and oxaliplatin
- No Metastatic disease per CT.







# Case 1

RT. Hemicolectomy

Carcinoma (Distal margin with chronic colitis +)

Stage IIIc=T4a N2a

Jan/2011

Mild Colitis  
Transverse, and recto-  
-sigma with Low  
grade dysplasia

Colonoscopy

Sep/2011

completed  
FOLFOX  
chemotherapy.

09/2011







# What next?

- 27 y/o, who had been diagnosed with UC just post to RT hemicolectomy d/t advanced tumor.
- Residual colon with mild active disease and with low grade dysplasia at least in the rectum.
- Post chemotherapy.(FOLFOX)
- What Next.....Total proctocolectomy...IPAA?





# Case 1

RT.Hemicolectomy  
Carcinoma (Distal  
margin+)  
Stage IIIC=T4a N2a  
Jan/2011

Mild Colitis  
Transverse, and  
recto –sigma  
with Low grade  
dysplasia  
Colonoscopy  
Sep/2011

completed  
FOLFOX  
chemotherapy  
.  
09/2011

Colonoscopy  
2012  
Inactive  
disease with  
focal low  
grade  
dysplasia  
recrum

Colonoscopy  
12/2014  
Inactive  
disease with  
focal low  
grade  
dysplasia in  
the rectum







# What next?

- 31 y/o, who had been diagnosed with UC just post to RT hemicolectomy d/t advanced tumor 4 years ago.
- Residual colon with mild active disease and with low grade dysplasia at least in the rectum.
- Post chemotherapy.(FOLFOX)
- Last colonoscopy- Inactive disease, Low grade dysplasia in the rectum
- What Next.....Total proctocolectomy...IPAA?

