

**California Tumor Tissue Registry's  
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***"Gastrointestinal Pathology"***

**Case 1**

Hx: 77 y/o male with presented with 2 month hx of increasing weakness. He was found to have a microcytic anemia with a Hgb of 6.4 (ref range 13.5-17.5 gm/dl) and an MCV of 65 (ref range 80-100 fL). Pt has been on ASA x 20years and coumadin x 2 years, as therapy for CAD and Afib. Pt denies melena, abdominal pain, n/v/f, and hematemesis. States he had 1 mild episode of BRBPR last week. States he has reg BM. No significant weight loss. He has at least 8 year hx of Barrett's esophagus. Colonoscopy 5 years ago showed tubular adenoma. Colonoscopy 1 year ago showed diverticulosis and 1st degree hemorrhoid. Colonoscopy as part of workup for current problems showed a tubular adenoma and a red spot in the cecum. The clinical differential included AVM vs. bruise by endoscope.

**Dx:**

Angiodysplasia (vascular ectasia), cecum

Embolotherapy for small bowel angiodysplasia.

Gastrointest Endosc 2003 Nov;58(5): p797-800

Nguyen N; Croser D; Madigan D; Abu-Sneineh A; Bartholomeusz D; Schoeman M

Gastric angiodysplasia--a missed cause of gastrointestinal bleeding.

Postgrad Med J 1987 Oct;63(744): p865-6

Tung KT; Millar AB

Gastrointestinal angiodysplasia in three Saudi children.

Ann Saudi Med 2009 May-Jun;29(3): p223-6

Al-Mehaidib A; Alnassar S; Alshamrani AS

Gastrointestinal bleeding due to angiodysplasia in patients with type 1 von Willebrand disease: report on association and management.

Haemophilia 2008 Jan;14(1): p150-2

Siragusa S; Malato A; Lo Coco L; Cigna V; Saccullo G; Abbene I; Anastasio R; Caramazza D; Patti R; Arcara M; Di Vita G

Endoscopic therapy for upper-GI vascular ectasias.

Gastrointest Endosc 2004 Feb;59(2): p233-8

Pavey DA; Craig PI

Endoscopic classification of vascular lesions of the small intestine (with videos).

Gastrointest Endosc 2008 Jan;67(1): p169-72

Yano T; Yamamoto H; Sunada K; Miyata T; Iwamoto M; Hayashi Y; Arashiro M; Sugano K

"Watermelon rectum" associated with multiple vascular ectasia in the colon.

Gastrointest Endosc 2007 Sep;66(3): p601-2; discussion 602

Fu K; Ikematsu H; Hurlstone DP; Kaji Y; Ishikawa T; Yoshida S

Vascular ectasia of the proximal stomach.

Dig Dis Sci 2007 May;52(5): p1367-9

Al-Haddad M; Ward EM; De Vault KR; Bouras EP; Raimondo M

## **Case 2**

46 y/o woman with a 2 cm broad-based mass in the 1st portion of the duodenum that had been present for more than 3 years. It was removed via "exploratory laparotomy with lateral duodenectomy and removal of mass via transduodenal approach". The outside group that contributed this cases was in disagreement. One person called it an adenomatous polyp, another dx'd "hyperplastic polyp with features of Peutz-Jegher polyp.

### **Dx:**

Gastric Hamartoma (ectopic) in 1<sup>st</sup> segment of duodenum

A simple method to demonstrate duodenal gastric metaplasia.

J Clin Pathol 2002 Jul;55(7): p520-3

Rubio CA

Pyloric Brunner's gland hamartoma.

Gastrointest Endosc 2004 Jan;59(1): p76

Jeong YS; Chung JP; Lee DY; Ji SW; Lee SJ; Lee KS; Lee SI; Park C

Gastric hamartomatous polyposis, Cowden syndrome, and H. pylori.

Am J Med 2004 May 1;116(9): p642-4

Isomoto H; Urata M; Mizuta Y; Kohno S; Sawada T; Okada T

Heterotopic gastric mucosa together with intestinal metaplasia and moderate dysplasia in the gall bladder: report of two clinically unusual cases with literature review.

Gut 2001 May;48(5): p719-23

Xeropotamos N; Skopelitou AS; Batsis C; Kappas AM

A case of early gastric cancer accompanied by a hamartomatous inverted polyp and successfully managed with endoscopic submucosal dissection.

Endoscopy 2007 Feb;39 Suppl 1:E202

Ono S; Kamoshida T; Hiroshima Y; Okawara A; Matsuo T; Kakinoki N; Ishikawa A; Kishimoto Y; Hirai S; Oka Y; Shimokama T

## **Case 3**

51 y/o male with a history of GI tubular adenomas underwent routine surveillance. In addition to finding another TA, this nodule was found. CD117 negative.

### **Dx:**

Leiomyoma, GI tract

Tumors of the small intestine.

World J Surg 2000 Apr;24(4): p421-9

Blanchard DK; Budde JM, et al.

Intestinal leiomyoma presenting as a pelvic mass: two case reports.

Aust N Z J Obstet Gynaecol 2003 Aug;43(4): p331-3

Tuncay YA; Ozturk D; Tok B; Demirdoven G; Omurcan C

Rectum leiomyoma in a 10-month-old female.

Pediatr Surg Int 2003 Apr;19(1-2): p104-5

Gomez NA; Cozzarelli R; Alvarez LR; Fabre E; Vargas PE; Zapatier JA

Small intestinal neoplasms.

J Clin Gastroenterol 2001 Oct;33(4): p267-82

Gill SS; Heuman DM; Mihas AA

Gastrointestinal stromal tumors: recent advances in understanding of their biology.

Hum Pathol 1999 Oct;30(10): p1213-20

Miettinen M; Sarlomo-Rikala M; Lasota J

#### **Case 4**

47 y/o man with a massive recurrent tumor in the abdomen. It had been previously dx'd as GIST, with appropriate immuno characteristics.

#### **Dx:**

Gastrointestinal stromal tumor (GIST), clinically malignant

Gastrointestinal stromal tumors presenting as omental masses--a clinicopathologic analysis of 95 cases.

Am J Surg Pathol 2009 Sep;33(9): p1267-75

Miettinen M; Sobin LH; Lasota J

[Gastrointestinal stroma tumors (GIST): what is new in 2009?]

Ann Pathol 2009 Feb;29(1): p20-3

Emile JF; Scoazec JY; Coindre JM

Gastrointestinal stromal tumors (GIST) in children and adolescents: A comprehensive review of the current literature.

Pediatr Blood Cancer 2009 Dec 15;53(7): p1171-9

Benesch M; Wardelmann E; Ferrari A; Brennan B; Verschuur A

DOG1 antibody in the differential diagnosis of gastrointestinal stromal tumors: a study of 1840 cases.

Am J Surg Pathol 2009 Sep;33(9): p1401-8

Miettinen M; Wang ZF; Lasota J

Is it possible to differentiate gastric GISTs from gastric leiomyomas by EUS?

World J Gastroenterol 2009 Jul 21;15(27): p3376-81

Kim GH; Park do Y; Kim S; Kim DH; Kim DH; Choi CW; Heo J; Song GA

#### **Case 5**

This 78 year-old man consulted his physician because of black tarry stool. His hemoglobin level was 9.1 grams per deciliter. Upper GI endoscopy revealed blood in the esophagus and a hiatal hernia. The mucosa of the distal 5 cm of the esophagus was red with areas of erosion. No discrete ulcer or mass was identified. A biopsy was performed. (Case contributed by Robert E. Petras, M.D., AmeriPath Cleveland, Cleveland, Ohio)

**Dx:****Barrett esophagus with high grade dysplasia, esophagus**

Definition of Barrett's esophagus: time for a rethink-is intestinal metaplasia dead?

Am J Gastroenterol 2009 Oct;104(10): p2588-94  
Riddell RH; Odze RD

Barrett's esophagus: diagnostic challenges and recent developments.  
Ann Diagn Pathol 2009 Jun;13(3): p212-21  
Maru DM

Endoscopic resection for Barrett's esophagus with high-grade dysplasia or early esophageal adenocarcinoma.  
Semin Thorac Cardiovasc Surg 2008 Winter;20(4): p310-9  
Watson TJ

Barrett's: do we still need goblet cells for diagnosis?  
Am J Gastroenterol 2009 Sep;104(9): p2355-6; author reply 2356-7  
Lenglinger J; Riegler M

Histology of metaplasia and dysplasia in Barrett's esophagus.  
Surg Oncol Clin N Am 2009 Jul;18(3): p411-22  
Yerian L

**Case 6**

This is from a transverse colon mass in a 96 y/o man. It was 8 cm in greatest diameter, exophytic and partially necrotic. One of eighteen lymph nodes contained similar tumor.

**Dx:****Lymphoepithelioma-like adenocarcinoma, colon**

Lymphoepithelioma-like carcinoma of the prostate.  
Hum Pathol 2009 Jul;40(7): p982-7  
Lopez-Beltran A; Cheng L; Prieto R; Blanca A; Montironi R

Tracheal lymphoepithelioma-like carcinoma: a case report.  
Indian J Cancer 2002 Jul-Sep;39(3): p112-5  
Satyanarayana S; Pathak SD; Saraswat V; Sarma YS; Bharadwaj R; Goorha YK

Lymphoepithelioma-like hepatocellular carcinoma: a case report and a review of the literature.  
Other ID: PMC2738796  
World J Gastroenterol 2008 Aug 7;14(29): p4694-6  
Nemolato S; Fanni D; Naccarato AG; Ravarino A; Bevilacqua G; Faa G

Undifferentiated gastric carcinoma with lymphoid stroma (lymphoepithelioma-like carcinoma/medullary carcinoma).  
Pathologica 2009 Feb;101(1): p15-7  
Falzarano SM; Mourmouras V; Mastrogiulio MG; La Magra C; Vindigni C

Lymphoepithelioma-like carcinoma of the skin mimicking a basal cell carcinoma.

Eur J Dermatol 2009 Mar-Apr;19(2): p179-80

Hinz T; Wiechert A; Bieber T; Bauer R; Schmid-Wendtner MH

### **Case 7**

66 yo male with history of stomach stapling approximately 20 years ago (in the mid 80's) for weight loss and has since lost about 170 lbs with a current weight of 195. He is now c/o rlq discomfort at the level of his umbilicus. The pain is described as sharp, which does not radiate, and does not have any aggravating factors. The pain persists for up to 3 days. He denies any changes in bowel habits, but does have some brbpr on the tissue paper. He also note c/o 2-3 episodes of emesis daily. He is now having a change in his voice. He has had vomiting since 1987, but is concerned because of his voice change.

PMHx: GASTRIC STAPLING; Stroke in 1983; Paraganglioma L adrenal gland with L adrenalectomy 1998; Cholecystectomy 1998; Head Injuries-multiple; GERD; Atypical Chest Pain; Asthma.

Assessment:

1.Abdominal pain

2.GERD/Emesis

3.Hx gastric bypass

Biopsy is from the rectal mass.

### **Dx:**

Carcinoid tumor, rectum

Rectal carcinoid tumor, 6 mm in diameter, with lymph node metastases.

Endoscopy 2008 Sep;40 Suppl 2:E40-1

Shinohara T; Hotta K; Oyama T

Carcinoid tumor arising in a tailgut cyst of the anorectal junction with distant metastasis: a case report and review of the literature.

Arch Pathol Lab Med 2004 May;128(5): p578-80

Song DE; Park JK; Hur B; Ro JY

Rectal carcinoid tumors: review of results after endoscopic and surgical therapy.

Arch Surg 2008 May;143(5): p471-5

Kwaan MR; Goldberg JE; Bleday R

Usefulness of Ki-67 for predicting the metastatic potential of rectal carcinoids.

Pathol Int 2006 Oct;56(10): p591-6

Hotta K; Shimoda T; Nakanishi Y; Saito D

Proposed staging system for gastrointestinal carcinoid tumors.

Am Surg 2008 May;74(5): p418-22

Landry CS; McMasters KM; Scoggins CR; Martin RC

Cutaneous manifestations of the malignant carcinoid syndrome.

Br J Dermatol 2005 Jan;152(1): p71-5

Bell HK; Poston GJ; Vora J; Wilson NJ

## **Case 8**

A 53 year old woman presented with acute abdominal pain assumed to be diverticulitis. A right hemicolectomy was performed.

The resected colon showed extensive serosal fibrinopurulent exudate. There was also an 8 x 7 x 4 cm mass in the cecum and ascending colon which narrowed the lumen by approximately 70%. It ulcerated the overlying mucosal and perforated into the underlying fat. The attached portion of ileum was uninvolved.

### **Dx:**

Large cell neuroendocrine carcinoma, cecum

Neuroendocrine carcinomas (carcinoid, atypical carcinoid, small cell carcinoma, and large cell neuroendocrine carcinoma): current concepts.  
Hematol Oncol Clin North Am 2007 Jun;21(3): p395-407; vii  
Moran CA; Suster S

Cytokeratin 20-positive large cell neuroendocrine carcinoma of the colon.  
Pathol Int 2005 Aug;55(8): p524-9  
Kato T; Terashima T; Tomida S; Yamaguchi T; Kawamura H; Kimura N; Ohtani H

Large cell neuroendocrine carcinoma of the larynx: a case report and a review of the classification of this neoplasm.  
J Clin Pathol 2005 Jun;58(6): p658-61  
Greene L; Brundage W; Cooper K

Large cell neuroendocrine carcinoma of the ampulla of Vater with glandular differentiation.  
J Clin Pathol 2004 Oct;57(10): p1098-100  
Cheng SP; Yang TL; Chang KM; Liu CL

Gastric large cell neuroendocrine carcinomas: a distinct clinicopathologic entity.  
Am J Surg Pathol 2006 Aug;30(8): p945-53  
Jiang SX; Mikami T; Umezawa A; Saegusa M; Kameya T; Okayasu I

Large cell neuroendocrine carcinoma of prostate: a clinicopathologic summary of 7 cases of a rare manifestation of advanced prostate cancer.  
Am J Surg Pathol 2006 Jun;30(6): p684-93  
Evans AJ; Humphrey PA; Belani J; van der Kwast TH; Srigley JR

## **Case 9**

A 49 y/o woman with dysphagia & GERD. Had long hx of allergic rhinitis, fibromyalgia and hearing loss. Had nephrectomy (no details) and GERD w/ reflux laryngitis. On maintenance allergy shots. An EGD showed thick folds & furrows in upper esophagus. No erosions. Sessile polyp in fundus of stomach. (not biopsied).

No peripheral eosinophilia. Food allergy testing showed 4+ allergies to rye, soy, cantaloupe & egg white.

## Bx of proximal esophagus: eosinophilic esophagitis

### Dx:

#### Eosinophilic esophagitis

Comparison of histological parameters for the diagnosis of eosinophilic oesophagitis versus gastro-oesophageal reflux disease on oesophageal biopsy material.

Mueller S; Neureiter D; Aigner T; Stolte M.  
Histopathology 2008 Dec;53(6): p676-84

High intraepithelial eosinophil counts in esophageal squamous epithelium are not specific for eosinophilic esophagitis in adults.

Rodrigo S; Abboud G, et al.  
Am J Gastroenterol 2008 Feb;103(2): p435-42

Histopathologic variability and endoscopic correlates in adults with eosinophilic esophagitis.

Gonsalves N; Policarpio-Nicolas M, et al.  
Gastrointest Endosc 2006 Sep;64(3): p313-9

Lesson of the month. Beware the eosinophils.

Kaye PV; Majumdar D, et al.  
Histopathology 2007 Jun;50(7): p936-8

Clinical presentation of patients with eosinophilic inflammation of the esophagus.

Baxi S; Gupta SK, et al.  
Gastrointest Endosc 2006 Oct;64(4): p473-8

### **Case 10**

This 66 year-old woman presented with rectal bleeding and anal pain. She was thought clinically to have "hemorrhoids". Your specimen comes from the hemorrhoidectomy specimen.

(Case contributed by J.J. Tjandra, M.D., Parkville, Victoria, Australia)

### Dx:

#### Melanoma, anus

Rectal polyp: can it be a malignant melanoma?

Surgery 2006 Sep;140(3): p474-5  
Saiprasad BR; Prasad MS; Ravishankar TH; Mathur K

Malignant melanoma of the anal region.

Clin Exp Dermatol 2007 Sep;32(5): p603-7  
Heyn J; Placzek M; Ozimek A; Baumgaertner AK; Siebeck M; Volkenandt M

Melanosis of the colon and terminal ileum associated with primary malignant melanoma of the anorectum.

Gastrointest Endosc 2006 May;63(6): p886-8  
Hong SS; Min YI; Yang SK; Kim KJ; Byeon JS; Myung SJ; Kim JH; Yu ES

Endoscopic mucosal resection of primary anorectal malignant melanoma: a case report.

Acta Med Okayama 2008 Dec;62(6): p421-4

Tanaka S; Ohta T; Fujimoto T; Makino Y; Murakami I

Anorectal malignant melanoma: morphologic and immunohistochemical features.

Am J Clin Pathol 2006 Jul;126(1): p93-100

Chute DJ; Cousar JB; Mills SE

Poorly differentiated tumours of the anal canal: a diagnostic strategy for the surgical pathologist.

Histopathology 2007 Jan;50(1): p163-74

Balachandra B; Marcus V; Jass JR