Colorectal and Appendix Case #3

DISCHARGE SUMMARY #1

Admit date: 2/26/2010
Discharge date: 2/29/2010

Chief complaint: Altered mental status.

Principal diagnoses:
1. Cerebrovascular accident.
2. Adenocarcinoma of the left colon with metastatic disease

Hospital course: Cerebrovascular accident. A stroke work-up was initiated. Aspirin was started and Zocor was continued. The results of the MRI that the patient had as an outpatient were consistent with a recent subacute cerebral infarct involving the distribution of the left posterior cerebral artery. There was some contrast enhancement involving the occipital lobe, the splenium of the corpus callosum, and the posterior thalamus on the left side. MRA results showed attenuation of the left posterior cerebral artery in a pattern and distribution compatible with atherosclerotic disease. No evidence of aneurysm, arteriovenous malformation or major vascular occlusion is otherwise identified. A transesophageal echocardiogram was done here in the hospital. The study was read as a normal study. The bubble study was negative. No patent foramen ovale was identified. There was no evidence of clots. Carotid ultrasound was also done in the hospital, and there was no significant stenosis bilaterally. On the day of discharge, the patient showed no residual deficits from the cerebrovascular accident.

Newly diagnosed colorectal carcinoma. The patient was to have surgery this upcoming Monday. The surgery was postponed secondary to neurology recommendations for risk of a re-stroke within 4 weeks. A CT of the chest, abdomen, and pelvis were done here in the hospital, and the results were conclusive of metastatic disease in the liver and a soft tissue nodule was present in the left lateral basal segment of the lung. CT scan showed a questionable dissection of the aortal versus motion artifact. MRI and an MRA of the chest were done to rule out the dissection. The MRI and the MRA were negative for aortic dissection. Hematology-oncology was consulted after the CT findings. Dr. X had a detailed discussion with family members. His recommendations included that the patient follow-up in his clinic after the stroke evaluation was completed.

DISCHARGE SUMMARY #2

Admit date: 7/17/2010
Discharge date: 7/22/2010

Chief complaint: Metastatic colon cancer.

History of present illness: This is a 67-year-old male found to have colon cancer on colonoscopy in February, and subsequent CAT scan revealed metastatic liver disease. He was scheduled to have a sigmoid colectomy with debulking of the liver, but he had a stroke and surgery had to be

put off. While awaiting surgery, the patient began preoperative chemotherapy. He now presents to have definitive surgical intervention.

Hospital course: On July 17, the patient underwent a sigmoid colectomy and had an intraoperative hepatic ultrasound with a partial left hepatic resection X4. His postoperative course was uneventful and is discharged on postoperative day #5. Incision line is clean and dry; abdomen is soft. He is positive for having had 2 soft brown bowel movements.

Principal diagnosis: Metastatic colon cancer, T3 N0 M1.

HISTORY & PHYSICAL

Date: 2/6/2010

History: This 67-year-old male presents today because yesterday morning he became dizzy to the point at which he had to hold onto the wall. At that time he had numbness on the right side of his body from his face, leg, and arm. He had no acute headache, no visual or hearing disturbance, no chest pain, no palpitations, and no shortness of breath. He was admitted to the hospital where his glucose was 293 and potassium was 3.0. A CT scan of the head was normal.

Physical examination: ABDOMEN: Active bowel sounds. Soft, non-tender. No hepatosplenomegaly, masses, or bruits. RECTAL: Stool brown, heme-positive.

Impression:
1. Hypertension.
2. Probable type II diabetes mellitus.

GENERAL SURGERY CONSULT

Date: 2/26/2010

History of present illness: This 67-year-old male presents today for follow-up of left colon cancer. He had a colonoscopy on 2/20/10 for family history and heme positive stool. A large polyp with focus of invasive cancer in the sigmoid and a nearly obstructing colon mass, adenoma by biopsy, were found. Lab results on 2/6 include CEA 165 and hemoglobin 13.9. Patient is here to discuss surgery. He denies other bowel complaints.

Impression: Left colon cancer; elevated CEA.

Plan: CT scan of abdomen and pelvis. Left colectomy. Patient gives informed consent and is medically ready for surgery.

PROGRESS NOTE #1

Date: 3/3/2010

Patient is a 67-year-old man whom I saw on February 28 when he was hospitalized. He was found to have occult blood in stool. A colonoscopy disclosed a partially obstructing lesion of the sigmoid colon, and biopsy of this region revealed an infiltrating low-grade adenocarcinoma arising in an adenoma. The CEA measurements were quite elevated at 165 and 103. Computed tomography of the chest and abdomen showed a less than 1 cm nodule in the left lower lung. There were 2 masses within the left lobe of the liver and 6 within the right lobe of the liver.

The patient was hospitalized because of a stroke. He noted some numbness of his right side, dizziness, and confusion on February 5, 2010. These symptoms persisted and an MRI examination on February 26 showed findings compatible with a subacute infarction in the left occipital lobe and thalamus. An MRI examination showed attenuation of the left posterior cerebral artery. A transesophageal echo study was negative. An MRI examination of the chest showed no evidence of aortic dissection.

Impression:

1. Adenocarcinoma of the colon, stage I (T? N0 M1).
2. Recent stroke.
3. Diabetes mellitus.
4. Hypertension.

1. I had a discussion with the patient and his wife about his disease and potential therapy for it. It was not felt that he should have immediate surgery because of the recent stroke. With this problem and the detection of fairly advanced metastatic disease, I have recommended that he be treated with chemotherapy, specifically, FOLFOX. The side effects and complications of the drugs in this regimen were reviewed in considerable detail with the patient and his family. The possible complications of central venous catheters were also reviewed. The patient would like to proceed with this therapy.
2. A Passport device will be implanted or PICC line will be placed this week.
3. I anticipate starting FOLFOX treatment on March 11.

PROGRESS NOTE #2

Date: 3/12/2010

Past medical history: Metastatic colon cancer with metastasis to the liver, as well as left occipital and left posterior thalamus. He has seen Hematology/Oncology and began chemotherapy, FOLFOX. He has seen Colorectal Surgery, at which time surgery was considered, but now, because of the recent acute CVA and metastasis, this is on-hold.

Impression:

1. Hypertension with tachycardia.
2. Type II diabetes mellitus.
3. Metastatic colon cancer.

PROGRESS NOTE #3

Date: 7/14/2010

Patient is scheduled for a left colectomy with Dr. Y on 7/17/2010 with Dr. X being available to evaluate the metastatic disease within the liver at that time, and hopefully, treating all of the lesions with radiofrequency ablation. He underwent an updated CT scan today, which does show some mild progression of the 4 known lesions within the right side of the liver; however, all still appear to be less than 3 cm and still amenable to radiofrequency ablation. There is a new lesion which was not seen on his last scan in May in segment 41 which is approximately 1 cm in size and also amenable to radiofrequency ablation. The previously seen too-small-to-characterize lesion between segment 2 and 3 is less conspicuous on today's exam. Even though there has been some moderate progression of his disease since his previous scan in May, all the lesions do still appear to be amenable to radiofrequency ablation and that will remain the plan. I reiterated the situation to the patient and his wife and had a detailed discussion about what the procedure would entail from a hepatic perspective. After I answered all of his questions to his satisfaction, informed consent was obtained.

IMAGING REPORT #1

Date: 2/28/2010

Procedure: CT scan of chest, abdomen, and pelvis.

Impression:

1. Mural thickening almost certainly representing colonic mass, present at the mid portion of the sigmoid colon, along a short segment, with the presence of multiple hepatic soft tissue masses in all lobes of the liver with the possible exception of the medial portion of the left lobe of the liver. These findings are concerning for primary colonic malignancy with metastatic disease to the liver and will require further investigation.
2. Soft tissue nodule present in the left lateral basal segment of the lung.
3. Region of proximal ascending aorta which demonstrates motion artifact versus focal dissection of intima. We recommend further evaluation with MRA to evaluate this finding.

OPERATIVE REPORT #1

Date: 2/20/2010

Procedure: Colonoscopy.

Indications: Family history of colon cancer, 1st degree relative.

Findings: The perianal and digital rectal examinations were normal. A pedunculated polyp was found in the sigmoid colon. The polyp was 45 mm in size. The polyp was removed with a piecemeal technique using a hot snare. Resection and retrieval were complete. A fungating, infiltrative, ulcerated partially obstructing medium-sized mass was found in the sigmoid colon. The mass was circumferential. The mass measured 6 cm in length. Oozing was present. This was

biopsied with a hot forceps for histology. Multiple large-mouthed diverticula were found in the entire colon. The exam was otherwise without abnormality.

Impression:
1. A 45 mm polyp in the sigmoid colon resected and retrieved.
2. Likely malignant partially obstructing tumor in the sigmoid colon biopsied.
3. Diverticulosis of colon.

OPERATIVE NOTE #2

Date: 7/17/2010

Preoperative diagnosis: Sigmoid colon cancer with liver metastases.
Postoperative diagnosis: Same.
Procedure:
1. Sigmoid colectomy with primary anastamosis.
2. Wedge resection of liver.

PATHOLOGY REPORT #1

Date: 2/20/2010

Specimen:
1. Sigmoid colon mass biopsy.
2. Sigmoid colon polyp.

Final pathologic diagnosis:
1. Large intestine, sigmoid endoscopic biopsies: adenomatous polyp with high grade dysplasia.
2. Large intestine, sigmoid endoscopic polypectomy: infiltrating, moderately differentiated adenocarcinoma measuring at least 6 mm in greatest diameter and arising within a tubulovillous adenoma with high grade dysplasia. Tumor invades submucosa and extends to cauterized margin. No definite lymphovascular invasion identified.

PATHOLOGY REPORT #2

Date: 7/17/2010

Final pathologic diagnosis:
1 and 2. Sigmoid colectomy with separately submitted distal margin: moderately differentiated invasive adenocarcinoma, 5 cm. Tumor invades through the muscularis propria into pericolonic adipose tissue (pT3). No lymphovascular invasion seen. Proximal, distal, and radial margins are negative. Eighteen benign lymph nodes (0/18). See comment.
3. Liver segment III: metastatic moderately differentiated carcinoma, 0.9 cm abutting the hepatic capsule 0.4 cm from the cauterized hepatic margin.

4. Liver segment II: metastatic adenocarcinoma, 1.5 cm, abutting the hepatic capsule 0.4 cm away from the hepatic margin.
5. Liver segment IVA: metastatic adenocarcinoma, 0.8 cm, 0.8 cm away from the parenchymal margin.
6. Liver segment I: metastatic adenocarcinoma, 0.7 cm, 0.1 cm from the parenchymal margin.

Note #1 and 2: There is dense fibrosis around the tumor suggesting previous treatment effect. However, nearly all the tumor mass is viable with very rare tumor necrosis. Additionally, two lymph nodes show areas of fibrous scar. No viable tumor is seen. One can speculate that these areas may represent areas of tumor prior to treatment.

AJCC stage: pT3 N0 M1.

Supplemental 10/8/2010: This case was sent for K-ras genotype mutation analysis. Findings: No K-ras mutations detected (wild type).

Gross:
1. 2 x 1.5 x 1 cm segment of intestine in a donut shape. The mucosa is smooth, pink, and glistening. No lesions are identified. Specimen is entirely submitted.
2. 32 cm segment of large intestine which measures 5.3 cm in circumference in one of the margins and 8 cm in the other margin. At 8 cm from the wide margin, there is a 5 x 3.5 cm lobualted, ulcerated, pink tumor. Tumor is located at the mesenteric fat. On cut surface, the tumor appears to involve all layers. The large intestinal mucosa is folded, tan-pink. There is a moderate amount of attached fat. Multiple lymph nodes are identified.
3. 4.5 gm, 3 x 2 x 1.6 cm wedge biopsy of liver. The external surface is smooth gray-red. Surgical margin is inked black. The cut surfaces have a 0.5 x 0.5 cm lobulated, pink nodule which is at 0.7 cm from the surgical margin. The remaining liver parenchyma is lobualted and tan. Module is entirely submitted, sublabeled A-B.
4. 2 gm, 2.8 x 2 x 1.2 cm segment of liver. The external surface is gray with multiple red areas. The surgical margin is inked black. On cut surfaces there is a 1.5 x 1.3 x 0.7 cm ill-defined, lobulated, gray-yellow tumor which is at 0.7 cm from the surgical margin.
5. 5.5 gm, 3.5 x 3 x 1.5 cm segment of liver. The external surface is lobualted, gray-pink. The surgical margin is inked black. On cut surfaces, there is a 1 x 0.5 x 1 cm lobualted, gray-light yellow tumor at 1 cm from the closest surgical margin. The remaining parenchyma is lobualted, tan-light yellow.
6. 1.5 gm, 1.5 x 1.2 x 0.7 cm segment of liver. The external capsule is gray-pink, displaying a 0.7 cm ill-defined, white area. The cut surfaces display a 1 x 0.7 x 0.7 cm lobulated, gray-light yellow tumor. The remaining parenchyma is lobualted, tan-light brown. Margin is inked black.

CSv2 ANSWER WORKSHEET

FIELD#	FIELD NAME	CODE AND RATIONALE/DOCUMENTATION	
1	**Patient Name -**		
CANCER IDENTIFICATION			
2	Primary Site		
3	Histology		
4	Behavior		
5	Grade		
6	Grade system type		
7	Grade system value		
8	Lymph-vascular invasion		
STAGE OF DISEASE AT DIAGNOSIS			
9	CS Mets at Dx - Bone		
10	CS Mets at Dx - Lung		
11	CS Mets at Dx - Liver		
12	CS Mets at DX - Brain		
COLLABORATIVE STAGING			
13	CS Tumor Size		
14	CS Extension		
15	CS Tumor Size/Ext Eval		
16	CS Lymph Nodes		
17	CS Lymph Nodes Eval		
18	Regional Nodes Positive		
19	Regional Nodes Examined		
20	CS Mets at Dx		
21	CS Mets Eval		
22	CS Site-Specific Factor 1		
23	CS Site-Specific Factor 2		
24	CS Site-Specific Factor 3		
25	CS Site-Specific Factor 4		
26	CS Site-Specific Factor 5		
27	CS Site-Specific Factor 6		
28	CS Site-Specific Factor 7		
29	CS Site-Specific Factor 8		
30	CS Site-Specific Factor 9		
31	CS Site-Specific Factor 10		
32	CS Site-Specific Factor 11		
33	CS Site-Specific Factor 12		
34	CS Site-Specific Factor 13		
35	CS Site-Specific Factor 14		
36	CS Site-Specific Factor 15		
37	CS Site-Specific Factor 16		
38	CS Site-Specific Factor 17		
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43	CS Site-Specific Factor 22		
44	CS Site-Specific Factor 23		
45	CS Site-Specific Factor 24		
46	CS Site-Specific Factor 25		

Colorectal and Appendix Case #6

DISCHARGE SUMMARY

Discharge date: 6/16/2010

Hospital course: This 87-year-old white female was found to have a colon cancer in the transverse colon found on colonoscopy. She had a CT scan, which revealed no evidence of metastatic disease. She was admitted to the hospital on 6/10/10 after undergoing a mechanical bowel preparation the day before. She was taken to surgery and underwent a transverse colectomy for easily identified transverse colon cancer. Subsequent pathology revealed a Dukes B2 lesion with negative lymph nodes. Postoperatively, the patient has made a good recovery. She is discharged home in good condition on a regular diet, limited activity, and normal medications, and will be seen in the office in 2 weeks.

CONSULT #1

Date: 6/9/2010

History of present illness: The patient is an 87-year-old lady with history of atrial fibrillation and heart failure. She comes to the office today because she is going to have a left hemicolectomy tomorrow because of cancer of the colon. She was on Coumadin because of atrial fibrillation and, as a consequence of a car accident, she underwent blood testing which showed severe anemia of the iron-deficiency kind. She underwent a full work-up which showed a mass in the left colon. The Coumadin was stopped 2 weeks ago, and she is scheduled for a hemicolectomy.

Physical exam: She is an elderly, white female in no acute distress, conscious and cooperative. Chest has some crackles in the left base, but is otherwise clear to auscultation and percussion. The heart has a systolic murmur at the apex which is somewhat difficult to hear.

Assessment: Patient is to undergo colon surgery. She has moderate risk due to her atrial fibrillation and history of heart failure, and she is undergoing a procedure of moderate severity. I believe she should be continued on her beta blockers perioperatively and be started on prophylactic Lovenox dose as soon as it is surgically feasible.

CONSULT #2

Date: 6/9/2010

Reason for consultation: The patient is an 87-year-old female who was noted to have hemoglobin 10.5, hematocrit of 32.3 in May 2010. Iron saturation was decreased at 7%. Ferritin level was 38. The patient underwent colonoscopy. This revealed diverticulosis of the sigmoid colon, a polyp in the mid sigmoid colon, polyps in the sigmoid colon, and a mass in the proximal transverse colon and hepatic flexure. The patient was referred for removal of the mass and is scheduled for surgery June 10. The patient's previous colonoscopy, prior to this, was August 2003, at which time she had diverticulosis and one polyp.

Recommendations: The patient is medically stable for surgery.

OPERATIVE REPORT

Date: 6/10/2010

Preoperative diagnosis: Left transverse colon cancer.
Postoperative diagnosis: Mid transverse colon cancer.
Procedure: Transverse colectomy.

Findings: The peritoneal cavity was entered and explored. Exploration revealed no evidence of peritoneal disease. The liver was carefully inspected, and there was no evidence of metastatic disease in the liver. The colon was palpated, and there was a lesion present in the mid transverse colon which was easily identified. The rest of the colon was carefully palpated, and no other abnormalities were noted.

PATHOLOGY REPORT

Date: 6/10/2010

Specimen description: Transverse colon.

Gross description: 18 cm segment of colon with mesocolic fat. 4 cm from the closest longitudinal margin is a 2.3 cm round plaque with a central ulcerated area with raised, rolled edges. The lesion is approximately 80% circumferential and on section extends completely through the muscularis propria approximately 4 mm into pericolic fat. The closest radial margin is 1.1 cm. 5 mm on the side opposite to the closest margin is a 3 mm round sessile polyp. The remainder of the mucosa appears unremarkable. A 23 x 7 cm segment of omentum is attached. Several small lymph nodes are noted in the mesocolon.

Microscopic description: There are sections of colon and lymph node. The colon reveals an infiltrating moderately differentiated colonic adenocarcinoma extending through the muscularis propria to pericolic fat. Vascular and perineural invasion are not identified. The surgical margins are clear microscopically. A small polyp adjacent to the carcinoma is shown to be a small adenomatous polyp. There are a total of 9 lymph nodes dissected from the pericolic fat. No metastatic carcinoma is identified.

Diagnosis: Infiltrating moderately differentiated colonic adenocarcinoma extending through muscularis propria to 4 mm in pericolic fat.

Margins: Closest, 4 cm; radial, 1.1 cm.
Lymphatic invasion: No.
Blood vessel invasion: No.
AJCC stage: T3 N0 Mx.

CSv2 ANSWER WORKSHEET

FIELD#	FIELD NAME	CODE AND RATIONALE/DOCUMENTATION	
1	**Patient Name -**		
CANCER IDENTIFICATION			
2	Primary Site		
3	Histology		
4	Behavior		
5	Grade		
6	Grade system type		
7	Grade system value		
8	Lymph-vascular invasion		
STAGE OF DISEASE AT DIAGNOSIS			
9	CS Mets at Dx - Bone		
10	CS Mets at Dx - Lung		
11	CS Mets at Dx - Liver		
12	CS Mets at DX - Brain		
COLLABORATIVE STAGING			
13	CS Tumor Size		
14	CS Extension		
15	CS Tumor Size/Ext Eval		
16	CS Lymph Nodes		
17	CS Lymph Nodes Eval		
18	Regional Nodes Positive		
19	Regional Nodes Examined		
20	CS Mets at Dx		
21	CS Mets Eval		
22	CS Site-Specific Factor 1		
23	CS Site-Specific Factor 2		
24	CS Site-Specific Factor 3		
25	CS Site-Specific Factor 4		
26	CS Site-Specific Factor 5		
27	CS Site-Specific Factor 6		
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29	CS Site-Specific Factor 8		
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