Chief complaint: Tenesmus sensation and urgency defecation for three weeks

Present illness:
This 58 year-old male patient was a case of diabetes mellitus with regular drug control for several years. He suffered from tenesmus sensation and urgency defecation for 3 weeks and was told to have rectal tumor through healthy examination.

The patient went to our OPD on 2011/4/22 for help. He also complained that anal bleeding was noted occasionally. In OPD, colonoscopy was arranged and rectal ulcerative tumor was found. Pathology showed rectal adenocarcinoma. He was admitted for further evaluation and treatment.

Past History: Diabetes mellitus under metformin control.

Personal History:
Smoking: 2 packs per day for 20+ years.
Alcohol: three bottles per week, quit recently.
Betel nut: several per day, quit recently.
No known allergy to drug or food.

Family History: No colorectal cancer history.

Physical Examination:
BH: 164.6cm BW:63.2Kg
T:35.6/℃ P:78/min R:18/min BP:120/50/mmHg
General appearance: fair looking; Consciousness: clear
HEENT: sclera: not icteric; conjunctivae: not pale
NECK: Supple; no lymphadenopathy
Chest and Abdomen: Breathing sound- clear; Heart sound- regular, no murmur; Abdomen- flat and soft, normoactive bowel sound

Laboratory data:

<table>
<thead>
<tr>
<th>WBC(uL)</th>
<th>10,000</th>
<th>MCH(pg/Cell)</th>
<th>29.0</th>
<th>BUN(mg/dL)</th>
<th>15.0</th>
<th>Uric Acid(mg/dL)</th>
<th>6.3</th>
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<tbody>
<tr>
<td>RBC(million/uL)</td>
<td>5.14</td>
<td>MCHC(gHb/dL)</td>
<td>32.4</td>
<td>Creatinine(mg/dL)</td>
<td>0.61↓</td>
<td>T-Cholesterol(mg/dL)</td>
<td>163</td>
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</tbody>
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**Imaging findings:** To be presented.

**Operation method and findings:**
1. Radical protectomy (2011/5/27): A 3x3 cm ulcerative tumor located at 10 cm proximal to the anal verge.
2. Thoracoscopic wedge resection, left lower lung lobectomy and mediastinal lymph node dissection (2011/8/19): A 3x3x2 cm tumor located at left lower lung with lymph nodes enlarged.

**Pathology:**
2. CT-guided biopsy of LLL (2011/5/7): Primary lung adenocarcinoma with positive TTF-1 and negative CDX-2
3. Left lower lung lobectomy (2011/8/19): Well differentiated adenocarcinoma s/p CCRT with margin negative, ypT1aN0M0

**Course and Treatment:**
After admission, CT scan was done for tumor survey and it revealed rectal adenocarcinoma with lung metastasis, stage IV, T3N3M1. But CT-guided biopsy showed primary lung adenocarcinoma with positive TTF-1 and negative CDX-2. The patient received pre-op RT for rectal cancer from 2011/5/6 to 2011/5/13. Radical protectomy was performed on 2011/5/27 and pathology diagnosis revealed rectal adenocarcinoma, T3N0M0, stage II. PET/CT for staging of lung cancer revealed TxN3M0, stage IIIB. Then the patient was discharged on 2011/6/5 and received CCRT (weekly vinorebline/cisplatin) for lung adenocarcinoma from 2011/6/21 to 2011/7/19.

After CCRT, partial response was noted. The patient was then admitted on 2011/8/18 for thoracoscopic wedge resection and left lower lung lobectomy. Pathology showed pT1aN0M0 with clear margin and then received OPD F/U. On 2011/11/27, he was admitted due to shortness of breath for 2 days and CT revealed tumor recurrence involving in mediastinal lymph nodes and obstructive pneumonitis. At the same time, due to impending respiratory failure, he was intubated and sent to MICU. We changed to Tarceva for second line treatment since 2011/12/8 and he was discharged on 2011/12/17 after the condition was stable.

On 2012/2/6, he was admitted for progressive shortness of breath and right limb weakness. CT showed brain metastasis with intratumoral hemorrhage and brain edema. Pleura and spleen metastases was also noted. Progressive disease was impressed. Brain radiotherapy was given from 2012/2/27 to 2012/3/6. On 2012/3/9, due to pneumonia with hypercapnic respiratory failure, he was intubated. Tracheotomy was done on 2012/4/11. On 2012/6/12, seizure attacked due to brain metastasis progression and Dilantin was given. Hospice care was suggested and family agreed. The patient expired on 2012/6/17.

**Points of discussion:**
1. Differential diagnosis of lung tumor: primary or metastases by Radiologist and pathologist
2. Standard treatment options for the patient with lung cancer, stage IIIb