CASE 1: LYMPHOMA

PHYSICAL EXAMINATION

The patient is a 43-year-old male with a clinical history of lower gastrointestinal bleeding and melena undergoing colonoscopy and biopsy to rule out neoplasm versus inflammation. Patient had no other symptoms. Patient is HIV negative.

IMAGING

6/5 CT scan of abdomen: Large circumferential non-obstructing mass within the terminal ileum, Peyer's patches, with appearance most consistent with lymphoma. The mass measures 8.3 x 5.4 x 7.5 cm. An enlarged mesenteric lymph node measuring 1.8 cm is also present and is consistent with lymphoma involvement.

PROCEDURES

6/6 Colonoscopy with biopsy: Mass lesion in the orifice of the ileocecal valve.
10/23 Right colectomy, removal of terminal ileum and right colon

PATHOLOGY

6/6 Biopsy of small intestine: Malignant lymphoma and follicular lymphoma.

10/23 Colectomy: Malignant lymphoma, follicular type, involving the terminal ileum, measuring 8.7 x 7.1 x 2.4 cm. Two lymph nodes removed were negative for lymphoma involvement.

ONCOLOGY

6/23 Pre-op chemotherapy started; multiple agents.

CASE 2: LYMPHOMA

HISTORY & PHYSICAL EXAMINATION

9/10 HISTORY: Patient is a pleasant mildly obese 52-year-old female seen because of mediastinal density. Patient complained of shortness of breath. Over the last six months the patient has lost 10 pounds, had a low-grade fever, and experienced some night sweats.
FAMILY HISTORY: Aunt had some kind of cancer of the lymph glands. Details are not available.
SOCIAL HISTORY: Patient denies any personal history of smoking or alcohol use.
PHYSICAL EXAMINATION: Physical exam is unremarkable except for significantly enlarged palpable tender left cervical lymph nodes measuring more than 2.5 cm. No axillary lymphadenopathy. Heart and lungs and abdomen are unremarkable. No edema of the legs. All other systems were normal.

IMAGING

9/1 Chest x-ray: Mediastinal densities.

9/10 CT scan of chest: Soft tissue densities in the paraaortic, subcarinal, and bilateral supraclavicular areas. Suspect lymphoma.

9/10 CT abdomen/pelvis: Unremarkable.

9/11 Echocardiogram: Normal function and ejection fraction.

LABORATORY

CBC: Hemoglobin 9.1, MCV 71.3, platelet count 595,000.
PT/PTT, electrolytes, BUN and creatinine are normal. Alkaline phosphatase is 129. Total protein is 8.4.

PROCEDURES

9/12 Excisional biopsy of left cervical node

PATHOLOGY

9/12 There is some increased collagen tissue depicting modular structure in the lymph nodes. Serum protein electrophoresis showed decreased albumin with increased alpha-1, alpha-2, and gamma regions are association with a chronic inflammatory response. Final pathologic diagnosis: classical Hodgkin lymphoma, nodular sclerosing type.

CASE 3: LYMPHOMA

HISTORY & PHYSICAL EXAMINATION

The patient is a 35-year-old male who apparently began to have some complaints of abdominal pain and discomfort. Initially it was felt that this was consistent with gastroesophageal reflux disease or some type of irritation to the stomach. Apparently, he was seen as an outpatient at one of the immediate care centers and was placed on some antacids without any resolve. The patient finally saw his primary care physician who on exam palpated a large abdominal mass. The patient was referred to GI and had work-up for abdominal mass. No other abnormalities documented.

IMAGING

3/12 CT of abdomen: Large abdominal mass, 14 x 7 cm, appears to be mesenteric in origin.

LABORATORY

HIV negative.

PROCEDURE

3/16 Exploratory laparotomy: Surgery revealed a very large lobulated, mesenteric mass with whitish areas. The mass was encasing just distal to the origin of the superior mesenteric vessels. Biopsies of the mesenteric mass were performed.

PATHOLOGY

3/16 Mesenteric mass: Diffuse large B-cell lymphoma.

CASE 4: LYMPHOMA

PHYSICAL EXAMINATION

A very thin cachectic patient presents with dyspepsia. Complains of 40-pound weight loss over the last four months. No adenopathy of the neck. The lungs are clear. Splenomegaly is present but there is no other adenopathy.

IMAGING

3/31 CT scan of chest: Probable mass at the GE junction.

3/31 CT scan of abdomen: Small mass at GE junction. Positive for splenomegaly with tumor involvement.

PROCEDURES

3/31 Biopsy of stomach/cardia mass

PATHOLOGY

3/31 Stomach biopsy: Non-Hodgkin lymphoma with features of diffuse small cell lymphoma.

CASE 5: LYMPHOMA

History & Physical

Status: 05/03/XXXX

Chief Complaint: This is an 81 year old, white female patient of the clinic who came through the ER. She complained of chest pain.

History of Present Illness: She claimed that she had been having chest pain for two weeks and she said that the pain was not related to physical activity. She didn't call my office because she thought that the pain would just go away. It then started to become more constant and she started to have trouble breathing, so she decided to just go ahead and go to the ER and was seen originally by the ER doctor on call. Initial evaluation showed that she had hypoxemia, tachypnea and PE was shown on the CT angiogram. Incidental finding on the CBC also showed that she had blast cells in her CBC. This has not been observed on the last CBC that we had done last year in August. Because of the serious and critical condition she was in, she was admitted to ICU.

Other Medical Problems: Hypertension. Exogenous obesity. Dyslipidemia. Chronic low back pain from degenerative joint disease. Knee pain from degenerative joint disease.

Menstrual History: LMP was 49 years old.

Previous Serious Injuries: None.

Previous Surgeries: Thyroid. Left foot surgery. Vein stripping. Left cataract surgery. Right TKA.

Medications: Wygesic 65/650 q 4 hours prn for low back pain. Ziac 10/6.25 q a.m., Actonel 35 q week, Diovan 160 with lunch.

Allergies: She cannot tolerate theophylline, Pravachol and she cannot also tolerate Vioxx (the latter has just been recently withdrawn from the market).

Family History: Father died at 59 years old from black lung and mother 24 years old and she was a diabetic with heart problems. She has several siblings and she has one daughter.

Social History: She worked for 42 years. She doesn't smoke or drink alcohol. She doesn't take any over-the-counter medications.

Review of Systems: HEENT: No problems with frequent headaches, fainting spells or dizziness. She has eyeglasses and has full dentures. Cardiopulmonary: See HPI. GI: GERD. GU: No dysuria or frequency. Bones, Joints & Muscles: Degenerative joint disease of knee and lumbar spine.

Physical Exam: Revealed an obese, white female who appeared slightly short of breath. Vital signs when she came through the ER were originally BP of 150/71, pulse 56, respirations 22, temperature 98.5, 92% saturation on oxygen. HEENT: Head is normocephalic. PERRLA. Heart: sinus rhythm, slightly Brady cardiac. Lungs have poor air movement, probably secondary

to CA of lungs. Abdomen: Obese, soft, non-tender. Extremities: No pedal edema. Neurologically, she is grossly intact.

Admission Impression:

1. Acute PE of both lungs.
2. Blast cells in CBC, possible leukemia.
3. History of hypertension.
4. History of osteoporosis.
5. History of dyslipidemia.
6. Degenerative joint disease of lumbar spine and knees.

Plan: Admit to a unit bed and treat PE. Consult hematology for newfound blast cells. Continue treatment of her other co-morbidities and additional treatment as her condition evolves.

REPORT OF CONSULTATION (CASE 5: LYMPHOMA)

Date: 05/03/XXXX

Chief Complaint: Hematologic evaluation of a patient with elevated white count and 60% blasts.

History of Present Illness: The patient is an 81-year-old white female who has basically been fairly healthy except for hypertension and a history of smoking and hypercholesterolemia. Apparently in the past two weeks she had been complaining of a left upper quadrant discomfort. It would radiate to the back. It was an episodic, but fairly recurrent problem. She also had generalized achiness. She had low-grade fever, night sweats, no diarrhea, no constipation, no bruising. The patient came to the emergency room because of the said problem. CBC showed a white count of 16,100 with about 62% blast cells in the periphery. Review of CBCs from 8/10/XX showed a normal CBC at that time. The patient is not aware of any hematologic problems, and the patient is now admitted to the service of a doctor.

Past Medical History: Positive for hypertension since the year 2000. She also has osteoarthritis. She has hiatal hernia and hypercholesterolemia. She has history of fairly severe upper respiratory tract infection in the past, but not quite pneumonia as per her recollection.

Past Surgical History: Positive for knee surgery in 2000. Cataract surgery OU last year. Thyroidectomy in 1971. Venous stripping in the distant past, and also appendectomy in 1994.

Family History: Positive for mother that died of diabetes and heart disease, and father with pneumoconiosis.

Allergies: None.

Medications: At home include: Diovan 160 mg daily. Wygesic p.r.n.

Social History: The patient smoked half a pack a day for 10-15 years. She quit in the 1980s. She does not drink. She is a widow. She lives by herself. The patient has one child, a daughter, who lives in Africa.

Past OB/GYN History: She is a G1, P1, vaginal delivery. No complications. She menopaused at age 54. She has a mammogram on a yearly basis.

Review of Systems: The patient has fever. She has had mild sweats. No active weight loss. She has had an earache. No sore throat. No cough. She has had a questionable chest pain. Probably a referred pain from the spleen. She has the aforementioned left upper quadrant pain radiating to the back. No nausea, no vomiting. No loss of appetite. No diarrhea, no constipation, no blood in the stool or urine. No easy bruisability. No headache. She has generalized arthralgia and achiness.

Physical Examination: Shows a pale female with pink conjunctivae and anicteric sclerae. No oropharyngeal infections. No cervical or supraclavicular adenopathy. S1 and S2 within normal limits. No murmurs, no rubs. Regular rate and rhythm. Lungs are clear. Abdomen soft, non-tender. Slight tenderness in the left upper quadrant and hepatomegaly. No axillary or inguinal adenopathy. Extremities are within normal limits. Neurologically, the patient is nonfocal.

Consultation (continued Case #5: Lymphoma)

Labs: White count 16,100 with 26% neutrophils, 4% bands, 8% lymphocytes, 62% blast cells with polychromasia, PT of 14.4, INR of 1.3, PTT of 31. D-dimer of greater than 1050. Urine is yellow, clear, with a pH of 5.5, specific gravity of 1.025, no glucose, no ketone, no occult blood. Leukocyte esterase is negative. Occult blood is negative. Arterial blood gas on 21% FiO2 shows pH of 7.4, pCO2 of 29, pO2 of 47.9. Sodium 128, BUN 27, creatinine of 0.9, glucose of 106, calcium of 9.1. Amylase of 20. Lipase of 152. Blood cultures have been done. Chest x-ray shows mild cardiomegaly with elevation of left hemidiaphragm and a faint left basilar retrocardiac infiltrate, degenerative lipping at mid lower thoracic levels. Abdominal x-ray shows mild constipation and ileus, otherwise unremarkable. CT of the chest shows pulmonary emboli of secondary upper lung zone pulmonary arteries, with limited definition of the lower lung zone pulmonary arteries as a result of blood/contrast mixing and technical factors. Small left lower lobe infiltrate and several scattered 3-9 mm diameter mediastinal lymph nodes.

Assessment:

1. Acute leukemia.
2. Pulmonary embolism.
3. Possible pneumonia in an immunocompromised host.
4. Hypertension.
5. Hypercholesterolemia.
6. Osteoarthritis.

Plan: Patient has been admitted to the Intensive Care Unit. Blood cultures have already been done. The patient has been started on Lovenox, Levaquin, home medications resumed. I will do a liver profile, LDH, bone marrow aspiration and biopsy, flow cytometry and cytogenetic studies. Will put the patient on reverse isolation. The patient may need to be referred to a tertiary center for management of leukemia.

ALL would probably have a better outcome than AML, but most of patients at this age group have AML. They are also poorly tolerant of high doses of chemotherapy that are usually what is needed for AML (doxorubicin and Ara-C at 7 and 3).

Thank you very much for letting me take part in this patient's care. I will follow the patient with you.

Addendum (5/03/XX): I did a bone marrow aspiration and biopsy, and initial review shows that there are about 62% blast cells with no Auer rods with plenty of vacuolations. The patient probably has acute lymphocytic leukemia. The patient's LDH is markedly elevated at 3451. Uric acid level is elevated at 5.9. Repeat electrolytes today showed a BUN is slightly more elevated at 31 and the creatinine is up at 1.3 with baseline of 0.9.

The flow cytometry has been sent and will probably be ready tomorrow.

I contacted Hematology Oncology Division, and they will accept the patient into the leukemia service. The patient will be transferred by ambulance. We will send the bone marrow aspiration and biopsy slides and call them with the flow cytometry report.

RADIOLOGY REPORTS (CASE 5: LYMPHOMA)

DATE: 5/3/XXXX

CHEST:

Clinical History: Shortness of breath with chest pain.

Findings: PA and lateral views of the chest demonstrate mild cardiomegaly with prominent degenerative lipping and bridging at the mid lower thoracic levels. Mediastinum and bony thorax are unremarkable. There is mild elevation of the left hemidiaphragm. Lungs are fairly well aerated with suspicious small left retrocardiac infiltrate. Right lung, left upper lung are well aerated and free of active disease.

Impression: Mild cardiomegaly with mild elevation of the left hemidiaphragm and faint left basilar retrocardiac infiltrate. Degenerative lipping at mid lower thoracic levels. Chest otherwise unremarkable.

FLAT AND UPRIGHT ABDOMEN:

Clinical History: Abdominal pain.

Findings: Flat and upright views of the abdomen demonstrate mild amount of fecal material and scattered bowel gas. There is mild to moderate levoscoliosis of the lumbar spine with degenerative lipping. No renal or biliary stones are seen and no free air on the upright view.

Impression: Mild constipation and ileus. Examination otherwise unremarkable.

CT PULMONARY ANGIOGRAM:

Clinical History: Following intravenous administration of iodinated contrast rapid sequence thin-sliced images of the pulmonary arteries were obtained demonstrating occasional intraluminal filling defects of both upper lung zones secondary to pulmonary arteries with limited definition in the lower lung zone arteries as a result of mixing. There are also several scattered mediastinal lymph nodes and small left lower lobe infiltrate.

Impression: Pulmonary emboli of secondary upper lung zone pulmonary arteries with limited definition of the lower lung zone pulmonary arteries as a result of blood/contrast mixing and technical factors.

Small left lower lobe infiltrate and several scattered 3-9 mm diameter mediastinal lymph nodes.

PATHOLOGY REPORT (CASE 5: LYMPHOMA)

Date: 5/3/XXXX

Pre-Operative Diagnosis: R/O Leukemia

Post-Operative Diagnosis: Same

Tissues: Bone marrow of iliac crest

Pathology Procedures: Iron stain, cell block

Cross Reference: S05-1641

Bone Marrow Examination: Received for this study are marrow smears, clot and a specimen labeled one biopsy, left side. This consists of a decalcified cylindrical portion of bone measuring 1 cm in length and 0.2 cm in diameter. The specimen is all embedded.

Sections from decalcified bone and marrow clot reveal about 50-60% cellularity. There is moderate increase in immature cells (blasts). Up to 3 Megakaryocytes/h.p.f. are seen. Bony trabeculae are unremarkable.

Marrow smears show marked increase in cellularity with altered M:E ratio. There is marked increase in immature cells (blasts), having vacuolated cytoplasm and large nuclei with 2-4 nucleoli. Normal hematopoietic cells are reduced in number. Reaction is normoblastic. Adequate number of megakaryocytes is seen with active platelet production.

Stainable iron is slightly increased. Ring-sideroblasts are not seen.

The Differential Count is as follows: Myeloblasts 0.3%, Promyelocytes 1.0%, Myelocytes 6.3%, Metamyelocytes 4.0%, Bands 4.0%, Neutrophils 1.9%, Eosinophils 0.5%, Basophils 0.3%, Lymphocytes 4.4%, Plasma Cells 0.3%, Normoblasts 15.0%, Lymphoblasts 62.0%.

CBC on 5/02/XX: Hemoglobin 13.4%, Hematocrit 38.4, MCV 87.6, MCHC 34.9, Platelet Count 161,000/uL. WBCs 16, 100/uL with Neutrophils 26%, Bands 4%, Lymphocytes 8%, Blasts 62%.

Interpretation:

Impression: Bone marrow aspirate and biopsy (left): Acute Leukemia.

Comment: “Blasts” morphologically possess features of “Lymphoblasts”. Results of phenotyping on marrow sample are awaited and should be considered for final interpretation.

Addendum: Flow Cytometry results indicate this bone marrow being involved with a large B-cell lymphoma of follicle center cell origin involving marrow.

Path Procedures Complete: Iron Stain 5/03/XX – 1046, Cell Block 05/03/XX – 104

CONSULT (CASE 5: LYMPHOMA)
Department of Pathology

Body Site Bone marrow

Clinical Data Evaluate for acute leukemia

Specimen received 1-Bone Marrow Green Top(s)
1-Bone Marrow Purple Top(s)

Flow Cytometry Analysis

Test	Results
SKAPPA	Negative
SLAMBDA	+Moderate
HLA-DR	+Moderate
CD2	Negative
CD3	Negative
CD4	Negative
CD5	Negative
CD7	Negative
CD8	Negative
CD10	+Moderate
CD11b	Negative
CD11c	Negative
CD13	Negative
CD14	Negative
CD16	Negative
CD19	+Moderate
CD20	+Moderate
CD22	+Moderate
CD23	Negative
CD33	Negative
CD34	Negative
CD38	+Moderate
CD45	+Moderate
CD56	Negative
CD64	Negative
CD117	Negative

Viability: 95%

Abnormal cells present by flow cytometry.
Percentage of abnormal cells: Approximately 50%
Cell Size: Medium to Large

PHENOTYPE: A monoclonal lambda, CD10 positive B-cell population is present.

MORPHOLOGY: The smears prepared from the flow sample contain Maturing myeloid and erythroid cells. However, many large abnormal Lymphoid cells are present.

INTERPRETATION: Findings are consistent with a large B-cell lymphoma of follicle center cell origin involving marrow.

COMMENT: Due to the reticulin fibrosis often associated with lymphoid aggregates in the bone marrow, the reported count of clonal lymphoid cells may be an underestimate. Correlation with a comprehensive bone marrow examination, including a trephine core biopsy, is suggested.

Additional Studies: Cytogenetics

BONE MARROW REPORT CONSULT (CASE 5: LYMPHOMA)

Service:	Leukemia	**DOB/Age:**	81
Taken:	05/04/XX	**Race/Gender:**	W/F
Received:	05/05/XX	**Location:**	9BMT
Reported:	05/06/XX	**NCBH Path#:**	B05-501

Bone Marrow (BW) & Peripheral Blood (PB)

Final Pathologic Diagnosis BM (H-05-61 of 5/3/XX and PB (NCBH): Malignant lymphoma, B-cell phenotype (see comment).

Comment: The phenotype and morphology of the malignant cells in the BM and PB are consistent with a "mature" B-cell lymphoma that is positive for the B-cell associated markers CD19, CD20, and CD10. The cells are negative for TdT and positive for monotypic lambda Sig (see below flow cytometry report). Morphologically, this appears to represent a large B-cell lymphoma that is exhibiting a peripheral blood (leukemic) component.

Since the sections were not received, I am unable to estimate marrow cellularity accurately, but from the appearance of the particles in the crush prep, I estimate cellularity at 90-100%. We will attempt to obtain the sections from the referring hospital and, if they are received, I will issue an addendum report regarding cellularity.

I have personally reviewed the slides and/or other related materials referenced, and have edited the report as part of my pathologic assessment and final interpretation.

Bone Marrow Consult (continued Case 5: Lymphoma)

Material Received: Consult, slides only, bone marrow

Clinical History: This is 81 WF is referred with a presumptive diagnosis of acute lymphocytic leukemia. She has leukocytosis with PB blasts. Review of an outside BM is requested along with a PB smear (NCBH).

Material Description: Received 5 slides (2 stained, 3 unstained) labeled H-05-61 along with a preliminary BM report and a flow cytometry analysis report. Sections of the BM are not received. The BM smears are retained.

Peripheral Blood CBC and Smear	**%**	**Bone Marrow**	**500 cells counted (expected range)**	
Wbc—16.9		blasts –249	0 - 5	--49
RBC—3.74		promyl	1 - 8	--
Hbh—11.7		neut myl	2 - 19	--12
Hct—33.2		neut meta	5 - 32	--2
MCV—88.8		neut bnd	10 - 40	--8
MCH—31.4		neut seg	7 - 30	--4
MCHC—35.3		total eos	1 - 6	--2
Plt—172,000		total baso	0 - 2	--
Neut seg—23		pro-eryth	0 - 1	--0
Neut bnd—3		early-eryth	1 - 2	--
Lymph—7		mid-eryth	18 - 29	--14
Mono—1		late-eryth	0 - 5	--
Eosn--		69 = total nucleated RBCs		
Baso—1		lymph	0 - 24	--9
Meta--		plasma cell	0 - 2	--
Myel--		unID	0 - 3	--
Promyel—				
Blasts—65				
r.rbc/100wbc—				

Bone Marrow:

Cellularity:	90-100% ZNCR
Hemosiderin:	cannot eval
Lymphoid nodules:	cannot eval
M:E ratio:	2.0:1 (1.5-4.0:1 normal)

Procedures/Addenda

Flow Cytometry (Hem Lab) Date ordered: 5/5/XX Date Reported: 5/5/XX

Interpretation:

Clinical Information:	? all
Specimen Type:	PB
Anticoagulant:	EDTA

Bone Marrow Consult (continued Case 5: Lymphoma)

Results of Flow Cytometric Immunophenotype

Percent Abnormal Cells: 71% of all cells   Viability = 89%

(NAD) = No Abnormalities Detected; (=/-) = Very Weak Intensity; (+) = Weak Intensity; (++) = Moderate Intensity; (+++) = Strong Intensity; (-) = Cells Do Not Express This Antigen; (SEE) = See Comment

T Cell Antigens
CD2:
CD3: (-)
CD4:
CD5: (-)
CD7: (-)
CD8:
CD30:
CD103:
(+/+)05/27

NK Cell Antigens
CD16:
CD56: (-)

B Cell Antigens
CD10: (-)
CD11c:
CD19: (-)
CD20: (-)
CD22:
CD23:
CD25:
FMC7:

Kappa: (-)
Lambda: (++)

Myeloid Antigens
CD13: (-)
CD15: (-)
CD33: (-)

Monocytic Antigen
CD14: (-)

Platelet Antigen

CD61:

Erythroid Antigen
CD71:

Intracellular Markers
CMPC: (-)
NTdt: (-)

Differentiation Antigens
CD34: (-)
CD38: (+)
HLA-DR: (++)
CD45: (++)

Dual Staining and Other
CD20/CD10:

CD19/Lambda: (+/++)

Results/Comments: Abnormal B-cell population present showing strong intensity monotypic lambda Sig; CD10 positive. These results are consistent with the circulating (leukemic) phase of a follicular center cell lymphoma.

HISTORY & PHYSICAL (CASE 5: LYMPHOMA)

Admit Date: 05/27/XX
Discharge Date: 06/01/XX

Chief Complaint: Admission for chemotherapy (second course of EPOCH-Rituxan).

History of Present Illness: The patient is an 81-year-old white female who presented 05/02/XX with left upper quadrant pain, generalized achiness, shortness of breath, and was found in the ER to have a white count of 16,100 with 62% blasts and also a concurrent PE. The patient had a bone marrow aspiration biopsy and was found to have leukemic phase of Non-Hodgkin's lymphoma diffuse large cell type. The patient was transferred to the leukemia service. The patient was given her first course of EPOCH-Rituxan therapy on 05/06/XX. She tolerated that well and was discharged to home about a week ago. At home the patient has been ambulatory, afebrile. She remarks that she still has very poor appetite, very poor intake, no active nausea. The patient is now admitted for a second course of treatment. Baseline LDH prior to treatment was 3451, LDH most recently has been 224.

Past Medical History: Positive for hypertension since the year 2000. She also has osteoarthritis. She has hiatal hernia and hypercholesterolemia. She has history of upper respiratory tract infection in the past, but no active pneumonia.

Past Surgical History: Positive for knee surgery in 2000. Cataract surgery OU last year. Thyroidectomy in 1971. Venous stripping in the distant past, and also appendectomy in 1994.

Family History: Positive for mother that died of diabetes and heart disease, and father with pneumoconiosis.

Allergies: None.

Medications: At home include: Diovan 160 mg daily. Wygesic p.r.n. The patient now is also on Ziac, Actonel, Oxycodone, Neupogen, Coumadin, and Colace.

Social History: The patient smoked half a pack a day for 10-15 years. She quit in the 1980s. She does not drink. She is a widow. She lives by herself. Her daughter works for the State Department in Africa and is back to take care of her.

Past OB/GYN History: She is a G1, P1, vaginal delivery. No complications. She menopaused at age 54.

Review of Systems: No active fever. She has mild sweats. No weight loss. No new eye, hearing, sinus or thyroid complaints. No chest pains. At this time no palpitations, she has shortness of breath with exertion, no cough, no hemoptysis. She has nausea, no vomiting. She has poor appetite, no diarrhea, no constipation, no headache. Generalized arthralgia has improved.

Physical Examination: Shows a fairly nourished, fairly developed female 5 ft 4 ½ in tall, weight of 220 pounds. Blood pressure 120/60, afebrile at 97.6, pulse 72. Pale conjunctivae nonicteric sclerae. No oropharyngeal infections. No cervical or supraclavicular adenopathy. S1 and S2 within normal limits. No murmurs, no rubs. Regular rate and rhythm. Lungs are clear. No bony

tenderness of the spine or ribs. Abdomen soft, non-tender. It is difficult to assess liver/spleen size because of the thickness of the abdominal wall. Extremities are within normal limits. No Homan's sign, no edema. Neurologically, the patient is awake, alert, EOMI, no facial asymmetry. Tongue is midline, no meningismus.

Laboratory Data: White count 18,100 with 14% lymphs, 72% granulocytes, hemoglobin of 11.6, hematocrit 35.2, platelet count 338,000. PT 23, INR 3.2, BUN 11, creatinine 0.9, glucose 113, electrolytes showed sodium 129, calcium 8.7, magnesium 1.6, total protein 6, albumin 2.7. Liver profile within normal limits. LDH of 224. Corrected calcium 10.

Admission Impression:

1. Leukemic phase of Non-Hodgkin's lymphoma with diffuse large cell variety status post one course of EPOCH-Rituxan now admitted for second course.
2. Pulmonary embolism.
3. Hypertension
4. Hypercholesterolemia.
5. Osteoarthritis.
6. No HIV or AIDS

Plan: The patient will be admitted to the hospital. We will access a PIC line. The second port seems to not be working well. The patient's height is 5 ft 4 ½ in tall, weight of 221 pounds, BSA of 2.006 meters squared. Rituxan will be calculated 375 mg per meter square total dose of 772 mf, Etoposide will be calculated at 50 mg per meter square total dose of 100mg. Doxorubicin will be given at 10 mg per meter square total dose of 20 mg. Vincristine 0.4 mg per meter square total dose of 0.5 mg maximum. Rituxan will be given on day 1 only. Etoposide, Doxorubicin, and vincristine will be given day 1 to 4. On day 5 cyclophosphamide 750 mg per meter square dose total dose of 1545 mg. Patient will be given Tylenol, Benadryl, Pepcid, Anzemet, Dexamethasone, Etoposide, Doxorubicin, and Vincristine, cyclophosphamide. She will be given GCSF daily 48 hours after completion of chemotherapy.

DISCHARGE SUMMARY (CASE 5: LYMPHOMA)

Admit Date: 05/27/XX
Discharge Date: 06/01/XX

Chief Complaint: Admission for chemotherapy.

History of Present Illness: The patient is an 81-year-old white female who presented 05/02/XX with left upper quadrant pain, generalized achiness, shortness of breath, and was found in the ER at PCH to have a white count of 16,100 with 62% blasts and also a concurrent PE. The patient had a bone marrow aspiration biopsy and was found to have leukemic phase of Non-Hodgkin's lymphoma diffuse large cell type. The patient was transferred to the leukemia service. The patient was given her first course of EPOCH-Rituxan therapy on 05/06/XX. She tolerated that well and was discharged to home about a week ago. At home the patient has been ambulatory, afebrile. She remarks that she still has very poor appetite, very poor intake, no active nausea. The patient is now admitted for a second course of treatment. Baseline LDH prior to treatment was 3451, LDH most recently has been 224.

Hospital Course: The patient was given Tylenol, Benadryl, Pepcid, premeds prior to Rituxan. She tolerated Rituxan well. Subsequently, she received etoposide, doxorubicin, and vincristine on a continuous infusion basis for a four-day schedule again with no nausea and no vomiting, good tolerance. On the fifth day she received cyclophosphamide. We resumed her home medication. We asked the doctor to see the patient and the patient's blood pressure had to be monitored because of the steroids given for premeds prior to chem. The patient finished all five days of chemo well. She was therefore discharged to home with instructions to start GCSF 24 hours after completion of treatment and CBC q Mondays and Thursdays.

Admission Impression: Leukemic phase of non-Hodgkin's lymphoma with diffuse large cell variety, status post one course of EPOCH-Rituxan now admitted for second course.

Plan: The patient is doing well. She will start GCSF 48 hours after the completion of chemotherapy. Will do CBCs q Mondays and Thursdays. Patient is scheduled for four courses of Rituxan-EPOCH therapy. Will see her in the office in three weeks.

Principal Diagnosis:

1. Leukemic phase of Non-Hodgkin's lymphoma with diffuse large cell variety, status post second course of EPOCH-Rituxan.

Secondary Diagnosis:

1. History of pulmonary embolism
2. Hypertension
3. Osteoarthritis
4. Hypercholesterolemia