CONFIDENTIALITY

This document and the information described in the document is classified as medical health records and protected by HIPPA privacy rules and regulations. By reviewing or receiving or accessing this document, you agree to review it only for answering the questions on the test and discard the information, material, and other details immediately after completing the test.

Please note that there would be legal consequences if you intentionally or unintentionally violate this agreement.

Instructions for the test:

- → This document is for reference only and should be discarded immediately.
- → Please review the document and its content here to answer all the questions on the Mettle platform.
- → While answering question number 7, please review the entire report and test dates closely to gauge the correct age of the patient.

Type	Source	Collected On
AP Specimen	Bone Marrow	12/07/2015

Components

Patient: Mr. Man

Component

Case Report

Result:

Surgical Pathology

Authorizing Provider: Dr. Red

MD Collected: 12/07/2015, 12:53

Pathologist: Dr. Moore

Received: 12/07/2015, 13:37

Specimen: Bone Marrow

Final Diagnosis

Result: **(Outside Case #: 987654**

Bone marrow, aspiration and biopsy

- Normocellular bone marrow (60%) with trilineage hematopoiesis

- Single atypical paratrabecular lymphoid aggregate (less than 1% of marrow cellularity) (See Comment)

Comment

Result: Review of outside report of flow cytometry and our review of outside special stains support this diagnosis. We agree with the outside pathologists.

Although there is no immunohistochemical or flow cytometric evidence of disease, the presence of an atypical paratrabecular lymphoid aggregate is suggestive of very low level involvement by morphologically low-grade lymphoma.

Ancillary Studies

Result: **By outside report, flow cytometric analysis was performed and interpreted as below:**
"There is no flow cytometric evidence of involvement by lymphoma."

Clinical History

Result: The patient is a 41-year-old male with an outside reported history of B-cell lymphoma

Gross Description

Result: Received: 9 slides (9 original) with associated written material are received for review from the Medical Center, Department of Pathology

The received original glass slides are returned after review.

Microscopic Description

Result: **Laboratory Data:**

CBC#: Outside lab results.

WBC: 4.9

HGB: 7.5

PLTS: 122

RBC: 2.99

MCV: 82

MCHC: 30.5

NEUT: 67%

LYMPH: 10%

MONO: 21%

EOS: 1%

BASO: 1%

Light Microscopy:
Peripheral Blood:
Platelets: Decreased
Erythroid: Polychromasia
Leukocytes: Lymphopenia

Bone Marrow Aspirate:
Cellularity: Cellular marrow particles
Megakaryocytes: Adequate in number
Erythropoiesis: Orderly maturation
Granulopoiesis: Orderly maturation

M:E ratio: 1.6:1 **Differential:** 500 cells counted / cjd
2% blasts
1% promyelocytes
13% myelocytes
32% maturing granulocytes
34% erythroid
7% lymphocytes
1% monocytes
8% eosinophils
0% basophils
2% plasma cells

Review of Outside Iron Stain: Not evaluated due to lack of positive control slide

Touch Prep: Confirmatory

Bone Marrow Clot and/or Biopsy:
There are no clot sections: The bone marrow biopsy sections are confirmatory. There is a single, very small paratrabecular lymphoid aggregate composed of small lymphocytes.

Cellularity: **Biopsy:** 60%

Special Stains:
Outside stains of the biopsy sections are reviewed.
PAX-5: PAX-5 stains scattered cells. It is unclear if the lymphoid aggregate seen on H&E sections is present on this stained slide.
Reticulin Stain: Reticulin stain reveals no increased marrow fibrosis.

EMBEDDED IMAGES
Result: **Laboratory Data:**
CBC#: Outside lab results.
WBC: 4.9
HGB: 7.5
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Reticulin Stain: Reticulin stain reveals no increased marrow fibrosis.

Order

Hematopathology Order

Hematopathology Order

Ordering date: 12/07/2015
Ordering provider: Dr. Red
Authorized by: Dr. Red
Frequency: -
once

Ordering provider: Dr. Red
12/07/2015

Resulting lab: HOSPITALS
CLINICAL LABORATORIES

Specimen Information

Type	Source	Collected On
AP Specimen	Tissue	12/07/15, 12:53

Components

Component	Value	Reference Range	Flag	Lab
Case Report				

Result:
Surgical Pathology Report Case:
Authorizing Provider: Dr. Red MD Collected: 12/07/15, 12:53
Pathologist: Dr. Moore Received: 12/07/2015, 13:37
Specimen: Tissue

Final Diagnosis
Result: **(Outside Case #:** 123456
Designated mass, mesenteric, core biopsy
- Mature CD10-positive B-cell lymphoma (See Comment)

Comment
Result: Review of outside reports of flow cytometry and our review of outside special stains support this diagnosis. We agree with the outside pathologists.

The morphologic and immunophenotypic features in this sample, including small cell size and low Ki-67, are compatible with a low-grade follicular lymphoma. This may represent a low-grade component of the patient's known diffuse large B-cell lymphoma. Given the scant nature of this specimen, a higher-grade component to this lesion cannot be entirely excluded.

Ancillary Studies
Result: **By outside report, flow cytometric analysis was performed and interpreted as below:**
"A. Mesenteric mass, flow cytometric immunophenotyping:

CD10 positive monoclonal B-cell population detected (47%).

Description of Results: Histograms for CD45 versus side scatter show a population of events (on average 70% of total analyzed events) with intense CD45 staining and low side scatter features corresponding to lymphocytes. The lymphocyte population is gated and analyzed as above. A phenotypically abnormal population with forward and right-angle scatter features of small to medium-sized lymphocytes constitutes 47% of total analyzed events (67% of events within the lymphoid gate). It expresses the B-cell associated antigens CD19, CD20, CD22 and high intensity monoclonal surface immunoglobulin of the lambda isotype. In addition, it expresses CD10. It is negative for CD5 and other T-cell associated antigens. No previous flow cytometric analysis is available for review."

Clinical History
Result: The patient is a 41 year-old male with an outside reported history of a lung nodule.

Gross Description
Result: Received: 14 glass slides (14 original) with associated written material from the Medical Center, Department of Pathology,

Microscopic Description
Result: The stained aspirate smears reveal predominantly small lymphocytes with occasional larger forms.

The H&E stained sections of the core biopsy reveals fibrous tissue with an infiltrate composed of predominantly small lymphocytes with irregular nuclear contours. Distinct follicular architecture is not appreciated.

Special Stains:
Outside stains of block A2 are reviewed.
CD3: CD3 stains small lymphocytes in the background.
CD21: CD21 stains scattered follicular dendritic meshworks and is negative in the neoplastic cells.
Bcl-2: Bcl-2 stains the neoplastic cells.
Bcl-6: Bcl-6 stains the neoplastic cells.
Ki-67: Ki-67 stains 10-20% of the neoplastic cells.
PAX-5: PAX-5 stains similar to CD21.

EMBEDDED IMAGES
Result: The stained aspirate smears reveal predominantly small lymphocytes with occasional larger forms.

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STAT REQUEST - URGENT!

Authorization for Release of Medical Records and Protected Health Information (PHI) for Continuity of Care

Patient Name: Mr. Man
Patient Address: 123 Street
Patient City/State/Zip: Town, NY
Patient Country: 12345
Patient Phone #: 800-000-123
Date of Request: 11/01/16
Purpose for this request: **CONTINUANCE OF CARE**

Patient DOB:
Patient SSN: **999999999**
Needed By: **11/20/16**

Provider Facility Name: Healthcare Hospital

Provider Address: 456 Road
Provider City/State/Zip: Town, NY 12345
Provider Phone/Fax:
123-456-7890

I request the following information be released for the continuity of care of the above named patient and for the purpose and conditions designated on this form. This request does not include alcohol and drug abuse/treatment, psychological and social work counseling, HIV/AIDS and communicable disease or infections, including sexually transmitted disease, tuberculosis and demographic information, unless express patient consent has been received for this information. Moreover, treatment or payment may not be conditioned upon the execution of this authorization by any health care provider. This authorization expires one (1) year from the date it has been signed.

Records

	Record	Date Range
✓	**Pathology Reports**	ALL
✓	**Radiology Reports**	ALL
✓	**Progress Notes**	Last 90 Days
	indicated reports are needed ASAP to schedule patient appt.	**

Delivery Instructions

Please fax reports t
.

As one of this patient's healthcare provider(s), I authorize and request you to release the above patient's medical records and protected health information under HIPAA Continuity of Care provisions and submit my signature below as authorization:

Signature of requesting provider representative:
Name of requesting provider representative: M. Wayne
Title of requesting provider representative: patient coordinator
Date: 11/01/2016

LABORATORY: 10/04/2016

Office Visit on 10/4/16

Component	Value	Ref Range	Status
• Sodium	138	135 - 145 mmol/L	Final
• Potassium	3.8	3.5 - 5.0 mmol/L	Final
• Chloride	102	98 - 107 mmol/L	Final

• CO2	24.0	22.0 - 30.0 mmol/L	Final
• BUN	13	7 - 21 mg/dL	Final
• Creatinine	1.27	0.70 - 1.30 mg/dL	Final
• BUN/Creatinine Ratio	10		Final
• GFR MDRD Non Af Amer	>=60	>=60 mL/min/1.73 m2	Final
• GFR MDRD Af Amer	>=60	>=60 mL/min/1.73 m2	Final
• Anion Gap	12	9 - 15 mmol/L	Final
• Glucose	91	65 - 179 mg/dL	Final
• Calcium	9.4	8.5 - 10.2 mg/dL	Final
• Albumin	4.2	3.5 - 5.0 g/dL	Final
• Total Protein	6.6	6.6 - 8.0 g/dL	Final
• Total Bilirubin	0.6	0.0 - 1.2 mg/dL	Final
• AST	53	19 - 55 U/L	Final
• ALT	93*	19 - 72 U/L	Final
• Alkaline Phosphatase	100	38 - 126 U/L	Final
• LDH	437	338 - 610 U/L	Final
• WBC	2.3*	4.5 - 11.0 10*9/L	Final
• RBC	2.63*	4.50 - 5.90 10*12/L	Final
• HGB	9.9*	13.5 - 17.5 g/dL	Final
• HCT	27.1*	41.0 - 53.0 %	Final
• MCV	102.9*	80.0 - 100.0 fL	Final
• MCH	37.7*	26.0 - 34.0 pg	Final
• MCHC	36.6	31.0 - 37.0 g/dL	Final
• RDW	13.7	12.0 - 15.0 %	Final
• MPV	10.0	7.0 - 10.0 fL	Final
• Platelet	72*	150 - 440 10*9/L	Final
• Absolute Neutrophils	0.6*	2.0 - 7.5 10*9/L	Final
• Absolute Lymphocytes	0.9*	1.5 - 5.0 10*9/L	Final
• Absolute Monocytes	0.5	0.2 - 0.8 10*9/L	Final

• Absolute Eosinophils	0.1	0.0 - 0.4 10*9/L	Final
• Absolute Basophils	0.0	0.0 - 0.1 10*9/L	Final
• Large Unstained Cells	8*	0 - 4 %	Final
• Macrocytosis	Moderate*	Not Present	Final
• Hyperchromasia	Slight*	Not Present	Final
• Smear Review Comments	See Comment*	Undefined	Final

Progress Notes by **Dr. Read** 09/13/2016

Patient: Mr. Man

CONSULTING PHYSICIANS:

Patient Care Team:

Dr. Read **PCP - General**

Dr. Red **Consulting Physician (Oncology)**
(Hematology and Oncology)

L. Stone, RN **Transplant Coordinator (Hematology and Oncology)**

PRIMARY CARE PROVIDER:

Diagnosis:

ABC-DLBCL that likely transformed from follicular lymphoma s/p most recent treatment of stem cell transplant following BEAM with relapsed disease noted on PET from 8/21/2016 showing some mesenteric adenopathy; retroperitoneal soft tissue and most avid focus within a mesenteric/pericecal mass

HISTORY OF PRESENT ILLNESS:

Mr. Man is seen in consultation at the request of Dr. Red for consideration of biopsy for tissue diagnosis for presumed relapse of lymphoma on recent imaging.

The patient denies fevers chills or sweats. He denies abdominal pain. His weight is stable. He complains of complications of chemotherapy treatment to include neuropathy which makes him have hand and foot pain as well as unsteadiness of gait. His bowel habits are normal. He denies melanoma hematochezia. He denies nausea or vomiting.

ALLERGIES:

has No Known Allergies.

MEDICATIONS: Reviewed in EPIC

MEDICAL HISTORY:

Past Medical History:

Diagnosis	Date

- Anxiety
- Lymphoma (RAF-HCC)
  Suspected transformed follicular lymphoma
- Substance abuse
  Self-reported drinking a 12-pack of beer a day prior to his diagnosis of relapse. No alcohol since then
- Traumatic brain injury (RAF-HCC) 2005
  short term and long term memory loss also has some emotionally unstable

Objective: :

Vital Signs for this encounter:
BSA: 1.97 meters squared
BP 120/74 | Pulse 87 | Temp 36.6 °C (97.8 °F) (Oral) | Resp 16 | Ht 177.9 cm (5' 10.04") | Wt 78.7 kg (173 lb 8 oz) | SpO2 100% | BMI 24.87 kg/m²

PHYSICAL ASSESSMENT:

Progress Notes by Dr. Read

General: Alert. Oriented x 3. In NAD
HEENT: PERRL. Sclerae anicteric.
Neck: Supple; trachea midline. No significant thyroid enlargement or nodules.
Heart: RRR; no murmur
Lungs Normal respiratory effort; CTAB; no rhonchi or wheeze.
Abdomen: Soft, non-tender. No masses.
MSK: Extremities without clubbing, cyanosis or edema. Ambulates with a cane.
Neuro: Nonfocal. Sensation grossly intact.
Psych: Normal affect. Judgement and insight seem appropriate
Skin: Skin color, texture, turgor normal, no rashes or lesions.

DIAGNOSTIC STUDIES: **09/07/2016**

	Ref. Range	
WBC	Latest Ref Range: 4.5 - 11.0 10*9/L	3.9 (L)
RBC	Latest Ref Range: 4.50 - 5.90 10*12/L	2.49 (L)
HGB	Latest Ref Range: 13.5 - 17.5 g/dL	9.4 (L)
HCT	Latest Ref Range: 41.0 - 53.0 %	26.0 (L)
MCV	Latest Ref Range: 80.0 - 100.0 fL	104.3 (H)
MCH	Latest Ref Range: 26.0 - 34.0 pg	37.7 (H)
MCHC	Latest Ref Range: 31.0 - 37.0 g/dL	36.1
RDW	Latest Ref Range: 12.0 - 15.0 %	16.9 (H)
MPV	Latest Ref Range: 7.0 - 10.0 fL	8.5
Platelet	Latest Ref Range: 150 - 440 10*9/L	61 (L)
Absolute Neutrophils	Latest Ref Range: 2.0 - 7.5 10*9/L	2.2
Absolute Lymphocytes	Latest Ref Range: 1.5 - 5.0 10*9/L	0.9 (L)
Absolute	Latest Ref	0.6

Monocytes	Range: 0.2 - 0.8 10*9/L	
Absolute Eosinophils	Latest Ref Range: 0.0 - 0.4 10*9/L	0.1
Absolute Basophils	Latest Ref Range: 0.0 - 0.1 10*9/L	0.0
Macrocytosis	Latest Ref Range: Not Present	Marked (A)
Anisocytosis	Latest Ref Range: Not Present	Slight (A)
Hyperchromasia	Latest Ref Range: Not Present	Slight (A)
Smear Review	Latest Ref Range: Undefined	See Comment (A)
Large Unstained Cells	Latest Ref Range: 0 - 4 %	3
Sodium	Latest Ref Range: 135 - 145 mmol/L	140
Potassium	Latest Ref Range: 3.5 - 5.0 mmol/L	3.9
Chloride	Latest Ref Range: 98 - 107 mmol/L	106
CO2	Latest Ref Range: 22.0 - 30.0 mmol/L	23.0
Bun	Latest Ref Range: 7 - 21 mg/dL	15
Creatinine	Latest Ref Range: 0.70 - 1.30 mg/dL	1.27
BUN/Creatinine Ratio	Unknown	12
GFR MDRD Non Af Amer	Latest Ref Range: >=60 mL/min/1.73m2	>=60
GFR MDRD Af Amer	Latest Ref Range: >=60 mL/min/1.73m2	>=60
Anion Gap	Latest Ref	11

	Range: 9 - 15 mmol/L	
Glucose	Latest Ref Range: 65 - 179 mg/dL	89
Calcium	Latest Ref Range: 8.5 - 10.2 mg/dL	9.7
Magnesium	Latest Ref Range: 1.6 - 2.2 mg/dL	
Phosphorus	Latest Ref Range: 2.4 - 4.5 mg/dL	
Albumin	Latest Ref Range: 3.5 - 5.0 g/dL	4.3
Total Protein	Latest Ref Range: 6.6 - 8.0 g/dL	6.5 (L)
Total Bilirubin	Latest Ref Range: 0.0 - 1.2 mg/dL	1.1
Bilirubin, Direct	Latest Ref Range: 0.00 - 0.40 mg/dL	
AST	Latest Ref Range: 19 - 55 U/L	32
ALT	Latest Ref Range: 19 - 72 U/L	50
Alkaline Phosphatase	Latest Ref Range: 38 - 126 U/L	84
Uric Acid	Latest Ref Range: 4.0 - 9.0 mg/dL	
CK Total	Latest Ref Range: 70.0 - 185.0 U/L	
CRP	Latest Ref Range: <10.0 mg/L	
Ferritin	Latest Ref Range: 27.0 - 377.0 ng/mL	
TSH	Latest Ref Range: 0.600 - 3.300 uIU/mL	
T3, Free	Latest Ref Range: 2.71 -	

	6.16 pg/mL	
Free T4	Latest Ref Range: 0.71 - 1.40 ng/dL	
LDH	Latest Ref Range: 338 - 610 U/L	419
PT	Latest Ref Range: 10.3 - 13.3 sec	12.1
INR	Unknown	1.03
APTT	Latest Ref Range: 25.1 - 36.0 sec	34.9
Heparin Correlation	Unknown	<0.2
IgM	Latest Ref Range: 35 - 290 mg/dL	
Total IgG	Latest Ref Range: 600 - 1,700 mg/dL	
IgA	Latest Ref Range: 40.0 - 400.0 mg/dL	
Hepatitis B Surface Ag	Latest Ref Range: Nonreactive	Nonreactive
Hepatitis B Surface Ab Quant	Latest Ref Range: <8.00 m(IU)/mL	<8.00
Hep B S Ab	Latest Ref Range: Nonreactive	Nonreactive
Hepatitis C Ab	Latest Ref Range: Nonreactive	Nonreactive
HIV Antigen/Antibody Combo	Latest Ref Range: Nonreactive	Nonreactive

Bone marrow bx:

Final Diagnosis
Bone marrow, left iliac, aspiration and biopsy
- Hypocellular bone marrow (30%) with trilineage hematopoiesis
- No morphologic or immunophenotypic evidence of lymphoma
- Cytogenetic studies are pending.

Peripheral blood, smear review
- Pancytopenia

HEALTH CARE

Progress Notes by Dr. Read

PET 08/27/16
IMPRESSION:

Findings suspicious for recurrent active lymphoma in the abdomen (Deauville 5)
- New FDG accumulation within the pericecal mass
- Increasing mesenteric adenopathy
- Increased FDG activity within retroperitoneal soft tissue

- Diffuse mild pulmonary activity and nodular opacities likely related to inflammation/infection or possibly drug toxicity

ASSESSMENT:
ABC-DLBCL that likely transformed from follicular lymphoma s/p most recent treatment of stem cell transplant following BEAM with relapsed disease noted on PET from 8/21/2016; showing some mesenteric adenopathy; retroperitoneal soft tissue and most avid focus within a mesenteric/pericecal mass

PLAN:
Excisional biopsy of the pericecal mass may involve ileocecectomy given location. This was discussed the the medical oncology team and the patient. They have decided against going forward with attempt to obtain tissue.

Progress Notes by

Author: B. Anderson , PharmD CPP | Service: (none) | Author Type: Clinical Pharmacist Practitioner
Filed: 09/20/2016 | Encounter Date: 09/20/2016 | Status: Signed
Editor: B. Anderson PharmD CPP (Clinical Pharmacist Practitioner)

HEALTH CARE

Clinical Pharmacist Practitioner: Lymphoma Clinic
Oral Chemotherapy Program

Patient Name: Mr. Man
Patient Age: 42
Encounter Date: 09/20/2016

Initial reason for consult: Revlimid new start
Referred by:

Chemotherapy regimen:
Rituximab + revlimid per Haematologica
Rituximab 375mg/m2 IV on days 1 and 21
Revlimid 20mg po days 1-21/28

Current place in therapy is new start.

Start date: TBD

Mr. Man is a patient with DLBCL likely transformed from follicular lymphoma who is seen in consultation at the request of Dr. Red for evaluation of starting revlimid.

.....

Plan and Recommendations:
1) Relapsed DLBCL: plan to start revlimid + dexamethasone
The following information was reviewed with the patient and their caregivers:

- Safe handling: Do not share your medicine with others. Keep the medicine in the original container with a child-proof top. Only you should handle this medicine or your caregiver if the caregiver is wearing gloves.

- Food/drug Considerations: Lenalidomide can be taken with or without food. Pomalidomide should be taken on an empty stomach (2 hours before or after a meal). You should take them around the same time each day. Swallow the capsule whole and do not break, open or chew.

- Major side effects: Complications of myelosuppression, thrombosis, and teratogenicity

- Drug Drug Interactions: Lenalidomide is a substrate of P-glycoprotein and should not be used in combination with certain other medicines. Pomalidomide is a substrate of P-glycoprotein and CYP 1A2 and 3A4. Encouraged to discuss all new medicines with your oncologist or pharmacist before taking them including over the counter medicines, vitamins, herbal supplements or neutraceuticals.

- Access to medication: This medicine requires enrollment in a risk evaluation and mitigation strategy program managed by the drug manufacturer, Celgene.

- Also counseled patient on potential side effects with rituximab. Side effects discussed included but were not limited to: infusion-related reactions, complications associated with myelosuppresion (such as infection/fever, fatigue, and bleeding), nausea/vomiting, diarrhea/constipation, flu-like symptoms, rash, peripheral neuropathy, myalgia, cough, dyspnea, and fatigue.

- Instructed patient to pick-up aspirin 81mg for VTE ppx to start taking with revlimid

I spent 15 minutes in direct patient care.

B. Anderson , PharmD
PGY2 Hematology/Oncology Pharmacy Resident
Pager: 123-456-7800

PHARMACIST ATTESTATION: I was the precepting pharmacist in the delivery of services. I agree with the plan as documented.

M. Myer PharmD, MS, BCOP, CPP
Pager 234-568-0000

Chief complaint: New revlimid start

History of Present Illness:
We had the pleasure of seeing Mr. Man in the Lymphoma Clinic at the University of Healthcare on 9/20/2016

His/her oncologic history is as follows:

Lymphoma, large-cell, follicular (RAF-HCC)

11/19/2014	**Cancer Staged** CT: 9.4 cm colonic cecum lesion, mesenteric and retroperitoneal LAD up to 12.6 cm, splenic lesions, BL inguinal lesions, R pleural effusion, BL axillary lesions. BMBx initially read as no evidence of lymphoma (? lymphoid aggregates). S3B vs S4B
12/14/2014	**Initial Diagnosis** Lymphoma, large-cell, follicular (RAF-HCC). Inguinal core Bx showed large cell lymphoma with t(14:18). Initial Dx was DLBCL. BMBx was initially read as no evidence of lymphoma; however, possible small lymphoid aggregate detected on secondary review/
12/18/2014-5/1/2015	**Chemotherapy** R-CHOP x6

5/1/2015	**Cancer Staged** PET-CT: Decrease is colonic mass size to 2.5 x 4.7 cm (SUV 5.2) and RP LAD now 1.6 x 3.2 cm (SUV 2.0). Splenic lesions resolved. No other FDG avid LAD.
8/7/2015	**Progression** PET-CT: Increase in size of colonic lesion (5.5 x 3.8 cm, SUV = 5.2) and new lung nodules (1.7 x 1.4 cm, SUV = 5.2).
9/7/2015	**Biopsy** Messenteric mass biopsy: CD10+ mature B-cell lymphoma. FISH also identified t(14;18). Consistent with follicular lymphoma or lower grade version of prior high grade lymphoma
9/16/2015-11/23/2015	**Chemotherapy** R-ICE x3
11/20/2015	**Cancer Staged** PET-CT: Decrease in colonic mass (now 4.5 x 3.0 CM, SUV = 3.4) and left lung nodule (now 1.3 x 0.8 cm , SUV = 3.4)
12/2/2015-1/20/2016	**Chemotherapy** R-Gem-Ox x 3
1/22/2016	**Stable Disease** PET-CT: Stable exam, persistent LLL hilar nodule and distal ileum/cecum lesions w/ stable size and metabolic uptake
2/17/2016-3/13/2016	**Chemotherapy** O-DHAP x2
3/31/2016	**Cancer Staged** PET-CT shows decrease is size and FDG avidity of pericecal mass (Deauville 3). Resolution of hilar nodes
4/4/2016- 5/7/2016	**Chemotherapy** O-DHAP x2 more cycles

Progress Notes by B. Anderson

5/17/2016	**Cancer Staged** No FDG avid nodes. Pericecal mass has no FDG avidity. (Deauville 1)
6/1/2016- 6/2/2016	**Other** Stem cell mobilization with Etoposide 300 mg/m2 x 2 doses + Granix 10mg/kg. Required 1 dose of Plerixafor on 6/12. Collected 3.52 x 10 ^ CD34+ cells in one day [redacted]
6/21/2016- 6/26/2016	**Chemotherapy** BEAM conditioning prior to auto SCT
6/27/2016	**Transplant** Autologous stem cell tranplant. CD34 DOSE INFUSE: 3.52

INTERVAL HISTORY:

Mr. Man presents today in clinic prior to starting rituximab + revlimid. He feels well today and has no complaints. In the past he has had issues with infusion reactions related to rituximab but usually resolve after the first infusion. He has neuropathy in both hands and feet from prior treatment but it does not interfere with ADLs. He does report he has some trouble sleeping but does not attribute this to his past treatments. He has no history of blood clots. Denies any recent fevers, N/V/D/C, new lumps/bumps, headaches, or bleeding/bruising.

MEDICATIONS:

Current Outpatient Prescriptions

Medication	Sig	Dispense	Refill
• busPIRone (BUSPAR) 30 MG tablet	Take 1 tablet (30 mg total) by mouth Two (2) times a day.	60 tablet	0
• famotidine (PEPCID) 20 MG tablet	Take 1 tablet (20 mg total) by mouth two (2) times a day as needed for heartburn.	60 tablet	0
• FLUoxetine (PROZAC) 40 MG capsule	Take 1 capsule (40 mg total) by mouth daily.	30 capsule	0
• mv,Ca,min-iron-FA-lycopene	Take 1 tablet by mouth		

(CENTRUM MEN) 8 mg iron- 200 mcg-600 mcg Tab	daily.		
• ondansetron (ZOFRAN) 8 MG tablet	Take by mouth every eight (8) hours as needed for nausea.		
• oxyCODONE (OXY-IR) 5 mg capsule	Take 1 capsule (5 mg total) by mouth every six (6) hours as needed for pain.	60 capsule	0
• traZODone (DESYREL) 100 MG tablet	Take 1 tablet (100 mg total) by mouth nightly.	30 tablet	0
• valACYclovir (VALTREX) 500 MG tablet	Take 1 tablet (500 mg total) by mouth daily.	30 tablet	11

No current facility-administered medications for this visit.

ALLERGIES:
No Known Allergies

REVIEW OF SYSTEMS:
See HPI. A 10 system ROS is otherwise negative.

LABORATORY DATA: **9/20/2016**
CMP
Recent Labs

	1106
NA	138
K	3.6
CL	103
CO2	25.0
BUN	10
CREATININE	1.33*
GLU	92
MG	1.8
CALCIUM	9.5
AST	44
ALT	68
ALKPHOS	80

Complete Blood Count
Recent Labs

	1106
WBC	2.1*
RBC	2.47*
HGB	8.6*
HCT	25.9*

Progress Notes by B. Anderson

MCV	105.0*
MCH	38.7*
MCHC	36.9
PLT	68*
MPV	8.3

Differential (Absolute)

Recent Labs

	1106
NEUTROABS	0.6*
LYMPHSABS	0.3*
MONOSABS	0.5
EOSABS	0.1
BASOSABS	0.0

Imaging Information

Exam Information

Performed Procedure	Study Status	Begin Time	End Time
Echocardiogram W Colorflow Spectral Doppler	Final	Wed Sep 6, 2016 12:53 PM	Wed Sep 6, 2016 1:17 PM

Staff Information

Technologist	Transcriptionist	Assigned Physician(s)	Assigned Pool(s)
Dr. Cope	N/A	N/A	N/A

Imaging Information (continued)

Verification Information

Signed By	Signed On
Dr. Cope	Sep 7, 2016

Study Result

- Normal left ventricular systolic function, ejection fraction 55 to 60%
- Normal right ventricular systolic function
- No significant valvular abnormalities

Questionnaire

Order Entry

Question	Answer	Comment
1. Performed at		
2. Bubble Study?		
3. Reason for Exam:	study related	
4. (REX/Caldwell/Pardee REQUIRED) Requested Reading Physician:		

Begin Exam

IMAGING BEGIN NIC

Question	Answer	Comment
1. Does the patient have any history of allergic reaction during injection of IV contrast?		
2. Which contrasted exam brought on allergic reaction?		

End Exam

IMAGING END ALL

Question	Comment
1. Confirm Resource:	

Author: L. Stone | Service: (none) | Author Type: Research Coordinator
Filed: 09/07/16 1548 | Encounter Date: 09/07/16 | Status: Signed
Editor: L. Stone (Research Coordinator)

Cycle / Day: Screening #2112
September 7, 2016
Performance Status: 1

Medical History	Date Started	Date Ended	Grade	Attribution	Clinically Significant? (Y / N)
Anxiety	unknown			Prestudy, unrelated	N
Substance abuse	unknown			Prestudy, unrelated	N
Traumatic brain injury	unknown			Prestudy, unrelated	N
Insomnia	unknown			Prestudy, unrelated	N
Peripheral neuropathy	2016			Prestudy, unrelated	N
Sleepiness/fatigue	2016			Prestudy, unrelated	N
Weakness	2016			Prestudy, unrelated	N
Lack of coordination	2016			Prestudy, unrelated	N
Poor appetite	unknown			Prestudy, unrelated	N
Diarrhea	unknown			Prestudy, unrelated	N
DLBCL - initial diagnosis	12/14/2014				
R-CHOP x6 cycles	12/18/2014	5/1/2015			
R-ICE x 3 cycles	9/16/2015	11/23/2015			
R-Gem-Ox x 3 cycles	12/2/2015	1/20/2016			
O-DHAP x 2 cycles	2/17/2016	3/13/2016			
O-DHAP x 2 cycles	4/4/2016	5/7/2016			
Autologous stem cell transplant	5/22/2016	5/22/2016			

All lab values and assessments were reviewed by the investigator and are considered not clinically significant unless otherwise noted.

Narrative: Pt returns to clinic today to complete screening procedures for the GO29383 trial. He reports no new adverse events since signing consent on 08/30/2016. His neuropathy continues, for which he continues to take oxycodone for relief. Medical history as recorded above, updated from patient report and EPIC. Patient completed ECHO yesterday and bone marrow biopsy and labs today. He is having an abdominal diagnostic CT this afternoon to determine tumor burden. We continue to assess for eligibility, depending on what his procedures yesterday and today reveal. He is still needing a lymph node biopsy which is being scheduled. The patient will be notified of the decision on his eligibility once all results are obtained. Patient appears to understand and agrees to the plan. All questions were answered at this time.

Assessment: Stable and willing to participate in trial. Platelets are below eligibility today at 61 (need to be at least 75 to be eligible.) Will retest closer to potential day of treatment.

Progress Notes by L. Stone

Vital Signs:

Temp: 36.1 °C
Pulse: 80
B/P: 115/75
Weight: 79.9 kg

Labs:

ANC: 2.2
WBC: 3.9
HGB: 9.4
HCT: 26.0
PLT: 61
ANC: 2.2
Abs. Lymphocytes: 0.9
Abs. Monocytes: 0.6
Abs. Eosinophils: 0.1
Abs. Basophils: 0.0

Sodium:140
Potassium: 3.9
Chloride: 106
CO2: 23.0
BUN: 15
Creatinine: 1.27
Glucose: 89
Calcium: 9.7
Magnesium: 1.8
Phosph: 4.4
Albumin: 4.3
Total protein: 6.5
Total Bili: 1.1
AST: 32
ALT: 50
ALP: 84
Uric Acid: 5.8
TSH: 1.860
T3, Free: 3.46
T4, Free: 1.05
Pt: 12.1
INR: 1.03

Plan: If lymph node biopsy has been done, and all results and eligibility confirmation received, we will plan for C1D1 treatment on September 13, 2016. If there is a delay on the biopsy, we may need to delay start of treatment by about a week.

Surgical Pathology Report Case: 123456

Ordering Location: **oncology** Received: 9/07/2016, 1100

Pathologist: Dr. Brown

Specimens: B) - Bone Marrow Left - Aspirate
C) - Bone Marrow Left - Biopsy
D) - Peripheral Blood

Final Diagnosis

Result: **Bone marrow, left iliac, aspiration and biopsy**
- **Hypocellular bone marrow (30%) with trilineage hematopoiesis**
- **No morphologic or immunophenotypic evidence of lymphoma**
- **Routine cytogenetic results reveal a normal karyotype; FISH [t(14;18)] results are normal; see details below**

Peripheral blood, smear review
- **Pancytopenia**

Clinical History

Result: The patient is a 43 year-old male with a history of diffuse large B-cell lymphoma likely transformed from follicular lymphoma, status-post a variety of treatment regimens and an autologous stem cell transplant in 6/2016. He appears to have relapsed disease per 8/21/2016 PET/CT.

Gross Description

Result: Received are left iliac aspirate and left biopsy measuring 0.2 cm x 1.8 cm. Cytogenetic studies are requested. Flow cytometric analysis is performed.

B. BMAL. Aspirate is submitted in 1 block(s).

C. BMBL. Biopsy is submitted in 1 block(s).

Microscopic Description

Result: **Peripheral Blood:**
Platelets: Decreased
Erythroid: Macrocytosis
Leukocytes: Lymphopenia

Bone Marrow Aspirate:
Cellularity: Cellular marrow particles
Megakaryocytes: Adequate in number
Erythropoiesis: Orderly maturation
Granulopoiesis: Orderly maturation

M:E ratio: 1:1 **Differential:** 500 cells counted/si

<1% blasts
3% promyelocytes
5% myelocytes
29% maturing granulocytes
47% erythroid
6% lymphocytes
5% monocytes
4% eosinophils

<1% basophils
1% plasma cells

Touch Prep: Confirmatory

Bone Marrow Clot and/or Biopsy:
The bone marrow clot and biopsy sections are confirmatory. There is no morphological evidence of lymphoma.

Cellularity: **Clot:** 40% **Biopsy:** 30%

Special Stains:
Clot and biopsy sections are stained.
CD3: CD3 stains scattered small lymphocytes.
PAX5: PAX5 stains scattered predominantly small cells, much fewer than CD3.

EMBEDDED IMAGES
Result: **Peripheral Blood:**
Platelets: Decreased
Erythroid: Macrocytosis
Leukocytes: Lymphopenia

Bone Marrow Aspirate:
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M:E ratio: 1:1 **Differential:** 500 cells counted/si

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3% promyelocytes
5% myelocytes
29% maturing granulocytes
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Cellularity: **Clot:** 40% **Biopsy:** 30%

Special Stains:
Clot and biopsy sections are stained.
CD3: CD3 stains scattered small lymphocytes.
PAX5: PAX5 stains scattered predominantly small cells, much fewer than CD3.

Disclaimer
Result: *For cases in which immunostains have been performed, the following statement applies: Appropriate positive controls and negative controls (external and/or internal) have been evaluated. These immunostains have not been separately validated for use on decalcified specimens and should be interpreted with caution in that setting. Some of the immunohistochemical reagents used in this case may be classified as analyte specific reagents (ASR). ASRs have performance characteristics determined by the Anatomic Pathology*

Department, [redacted] and have not been cleared or approved by the US Food and Drug Administration (FDA). The FDA has determined that such clearance or approval is not necessary. These tests are used for clinical purposes. They should not be regarded as investigational or for research. This laboratory is certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA-88) as qualified to perform high complexity clinical laboratory testing.

Flow Cytometry Summary

Result:

Flow Cytometric Immunophenotyping Results: Bone marrow aspirate

Heme WBC	13,700 cells/uL

Flow Differential (% of Total)

Viability:	N/A
Total of Markers Charged	4
Markers-1 Charged	3

Gated Population: 8% Lymphocytes

Description of Gated Cells (% of Gated)

B-Cell Markers:

CD19	<1%
Kappa	<1%
Lambda	<1%

Miscellaneous:

CD45	100% Bright

Flow Cytometry Interpretation:

Directed flow cytometric analysis of the bone marrow aspirate reveals a cellular specimen 13,700 cells/uL.

A population of 8% cells is gated on the lymphocyte region and includes less than 1% B-cells.

Flow cytometric analysis does NOT show a monotypic B-cell population.

Review of the stained smear prepared from the flow cytometry specimen fails to reveal spicules; thus, the flow cytometry specimen of marrow most likely represents a hemodiluted sample.

This test, utilizing analyte-specific reagents (ASR) was developed and its performance characteristics determined by the [redacted] Clinical Flow Cytometry Laboratory. It has not been cleared or approved by the U.S. Food and Drug Administration (FDA). The FDA has determined that such clearance or approval is not necessary. This test is used for clinical purposes. It should not be regarded as investigational or for research.

END OF REPORT

Study Result (continued)

EXAM: CT abdomen and pelvis with contrast
DATE9/7/2016
ACCESSION:
DICTATED: 9/7/2016 **Dr. Snow**
INTERPRETATION LOCATION: Main Campus

CLINICAL INDICATION: 42 years old Male with Lymphoma, large-cell, follicular (RAF-HCC)

COMPARISON: PET/CT 8/21/2016

TECHNIQUE: A spiral CT scan was obtained with IV contrast from the lung bases to the pubic symphysis. Images were reconstructed in the axial plane. Coronal and sagittal reformatted images were also provided for further evaluation.

FINDINGS:

LOWER CHEST: Heart size is normal. Central venous catheter tip in the right atrium. Lung bases are clear.

ABDOMEN/PELVIS:

HEPATOBILIARY: Unremarkable liver. No biliary ductal dilatation. Cholelithiasis. Mild focal thickening of the left anterior lateral gallbladder wall, similar to prior.
PANCREAS: Within normal limits.
SPLEEN: Ill-defined hypodense lesions in the spleen (2:22 and 28), also present on the prior study.
ADRENAL GLANDS: No thickening or focal nodule.
KIDNEYS/URETERS: Symmetric nephrograms. Stable subcentimeter hypodense lesions in the upper pole the left kidney, too small to characterize. Punctate nonobstructing stone in the lower pole of the right kidney.
VISUALIZED BOWEL/PERITONEUM/RETROPERITONEUM: No significant change in size of pericecal mass in the right lower quadrant mesentery measuring 3.7 x 1.9 cm (2:51). No bowel obstruction. No acute inflammatory process. No ascites or fluid collection.
VASCULATURE: Abdominal aorta patent and normal in caliber. Inferior vena cava normal in caliber.
LYMPH NODES: Allowing for differences in technique, no significant change in size or appearance of prominent but nonenlarged mesenteric and retroperitoneal lymph nodes measuring up to 7 mm in short axis dimension. Abnormal soft tissue along the posterior IVC, right renal vein, and right renal artery has not appreciably changed.

BONES/SOFT TISSUES: No suspicious lytic or blastic osseous lesions. Stable mild sclerosis involving the T11 superior endplate, favored degenerative.

IMPRESSION:
No significant change in the right lower quadrant mesenteric/pericecal mass, mesenteric lymph nodes, or retroperitoneal lymph nodes/soft tissue. No new disease in the abdomen.

Questionnaire

Order Entry

Question	Answer	Comment
1. REASON FOR EXAM	MALIG LYMPHOMA	
2. What is the patient's sedation requirement?		
3. Does the patient have any history of allergic reaction during injection of IV contrast?	No	
4. Performed at		

Begin Exam

IMAGING BEGIN CONTRAST

Question	Answer	Comment
1. Does the patient have any history of allergic reaction during injection of IV contrast?	No	
2. Which contrasted exam brought on allergic reaction?		
3. Have you checked labs?		
4. Creatinine Value		
5. BUN value		
6. GFR value		

End Exam

IMAGING END ALL

Question	Comment
1. Confirm Resource:	

END OF REPORT

Study Result

EXAM: Positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomic localization: skull base to mid-thigh
DATE: 08/21/2016
ACCESSION: 12345
DICTATED: 08/21/2016
INTERPRETATION LOCATION: Main Campus

CLINICAL INDICATION: 42 years old Male: LYMPHOMA-C82.80-Lymphoma, large-cell, follicular (RAF-HCC) , status post chemotherapy and autologous stem cell transplant. Increased fatigue and joint pain.

RADIOPHARMACEUTICAL: F-18 Fluorodeoxyglucose (FDG), IV

TECHNIQUE: Following the administration of radiopharmaceutical, PET images were acquired using 3D-acquisition and reconstructed with attenuation-correction. A single-breathhold CT scan was obtained at quiet end-expiration with oral contrast for anatomic localization and attenuation-correction. The coregistered PET and CT images were evaluated in axial, coronal, and sagittal planes.

Scanner: Siemens Biograph mCT
Serum glucose: 87 mg/dL
Injected activity: 12.6 mCi
Site of injection: Access port
Time of injection: 9:52
Time of scan: 10:54
Liver SUVavg: 3.0

COMPARISON: 05/17/2016

FINDINGS:

Head/Neck:
- No abnormal focal radiotracer uptake
- No cervical adenopathy

Chest:
- Thyroid: Unremarkable
- Axillae: No adenopathy
- Lungs:
  - Scattered nodular opacities, particularly in the right middle and upper lobes, with background of diffuse mildly increased pulmonary activity
- Mediastinum/hila: No adenopathy
- Pleura: No effusions
- Cardiovascular: Right sided Port-A-Cath terminating in the right atrium

Abdomen/Pelvis:
- Liver: No focal abnormality
- Gallbladder: Cholelithiasis
- Spleen: No splenomegaly. No focal abnormalities.
- Pancreas: No focal abnormality
- Adrenal glands: Unremarkable
- Kidneys: Unremarkable
- GI Tract: Unremarkable

Imaging Information (continued)

Study Result (continued)

- GU Tract: Unremarkable
- Adenopathy:
  - Soft tissue mass adjacent to the cecum has not significantly changed in size, but now with heterogeneous FDG activity (including a focus with activity much greater than liver, CT 118/PET 79). In addition, there are new mesenteric nodes with mild FDG activity. Pericaval soft tissue at the level of the renal veins has mild activity which has increased compared to the prior study.

MUSCULOSKELETAL:
- No suspicious metabolically active osseous lesions are identified
- No foci of abnormal FDG uptake are noted involving the external soft tissues

IMPRESSION:

Findings suspicious for recurrent active lymphoma in the abdomen (Deauville 5)
- New FDG accumulation within the pericecal mass
- Increasing mesenteric adenopathy
- Increased FDG activity within retroperitoneal soft tissue

- Diffuse mild pulmonary activity and nodular opacities likely related to inflammation/infection or possibly drug toxicity

Questionnaire

Order Entry

Question	Answer	Comment
1. REASON FOR EXAM	LYMPHOMA	

End Exam

Procedure Questionnaire

IMAGING END ALL

Question

1. Confirm Resource:

Progress Notes by Dr. Davis

Author: Dr. Davis | Service: (none) | Author Type: Physician
Filed: 08/23/2016 | Encounter Date: 8/23/2016 | Status: Signed
Editor: Dr. Davis

HEALTH CARE

BMT Clinic Follow-up

Patient Name: Mr. Man
MRN: 12345
Encounter date: 08/23/2016

Primary care physician: Dr. Read
Referring physician:
BMT Attending: Dr. Vett

Dr. Davis
Disease: DLBCL
Type of Transplant: Autologous
Transplant Date: 06/23/16
Transplant Day: +57

Mr. Man underwent an autologous stem cell transplant following BEAM conditioning for relapsed ABC-DLBCL likely transformed from follicular lymphoma. His post-transplant course has been relatively uncomplicated.

Interval History:

Mr. Man presents to clinic today for follow-up. He states that since he returned home he has not done well. He was started on gabapentin for his peripheral neuropathy; however, he states that he developed increasing sleepiness, weakness and lack of coordination. He self-tapered to 300 mg po bid but still has some Sx. In addition he does not think that the gabapentin has helped his neuropathy Sx. He still uses PRN oxycodone for for his neuropathy particularly at night. Mr. Man also notes that his appetite is not back to normal and he still gets easily fatigued. He denies any fevers or night sweats. He has not noticed any new LAD. His bowel habits have been regular and he reports no urinary difficulties.

Lymphoma, large-cell, follicular (RAF-HCC)

11/19/2014 -	**Cancer Staged** CT: 9.4 cm colonic cecum lesion, mesenteric and retroperitoneal LAD up to 12.6 cm, splenic lesions, BL inguinal lesions, R pleural effusion, BL axillary lesions. BMBx initially read as no evidence of lymphoma (? lymphoid aggregates). S3B vs S4B
12/14/2014	**Initial Diagnosis** Lymphoma, large-cell, follicular (RAF-HCC). Inguinal core Bx showed large cell lymphoma with t(14:18). Initial Dx was DLBCL. BMBx was initially read as no evidence of lymphoma; however, possible small lymphoid aggregate detected on

12/18/2014-5/1/15	**Chemotherapy** R-CHOP x6
5/1/15	**Cancer Staged** PET-CT: Decrease is colonic mass size to 2.5 x 4.7 cm (SUV 5.2) and RP LAD now 1.6 x 3.2 cm (SUV 2.0). Splenic lesions resolved. No other FDG avid LAD.
8/7/15	**Progression** PET-CT: Increase in size of colonic lesion (5.5 x 3.8 cm, SUV = 5.2) and new lung nodules (1.7 x 1.4 cm, SUV = 5.2).
9/7/2015	**Biopsy** Messenteric mass biopsy: CD10+ mature B-cell lymphoma. FISH also identified t(14;18). Consistent with follicular lymphoma or lower grade version of prior high grade lymphoma
9/16/2015-11/23/2016	**Chemotherapy** R-ICE x3
11/20/2015	**Cancer Staged** PET-CT: Decrease in colonic mass (now 4.5 x 3.0 CM, SUV = 3.4) and left lung nodule (now 1.3 x 0.8 cm , SUV = 3.4)
12/2/2015-1/20/2016	**Chemotherapy** R-Gem-Ox x 3
1/22/2016	**Stable Disease** PET-CT: Stable exam, persistent LLL hilar nodule and distal ileum/cecum lesions w/ stable size and metabolic uptake
2/17/2016-3/13/2016	**Chemotherapy** O-DHAP x2
3/31/2016	**Cancer Staged**

Progress Notes by Dr. Davis 08/23/2016

PET-CT shows decrease is size and FDG avidity of pericecal mass (Deauville 3). Resolution of hilar nodes

4/4/2016- 5/7/2016

Chemotherapy
O-DHAP x2 more cycles

5/17/2016

Cancer Staged
No FDG avid nodes. Pericecal mass has no FDG avidity. (Deauville 1)

6/1/2016- 6/2/2016

Other
Stem cell mobilization with Etoposide 300 mg/m2 x 2 doses + Granix 10mg/kg. Required 1 dose of Plerixafor on 6/12. Collected 3.52 x 10 ^ CD34+ cells in one day (

6/21/2016- 6/26/2016

Chemotherapy

BEAM conditioning prior to auto SCT

6/27/2016

Transplant
Autologous stem cell tranplant. CD34 DOSE INFUSE: 3.52

Review of Systems:
A comprehensive ROS was negative expect pertinent positives listed in interval history.

Vital signs:
Vitals:

BP:	111/60
Pulse:	91
Resp:	16
Temp:	36.4 °C (97.5 °F)
SpO2:	97%

Vitals:

Weight:	81.5 kg (179 lb 10.8 oz)

Test Results:
All lab results last 24 hours:
Recent Results (from the past 24 hour(s))
Comprehensive Metabolic Panel

Result	Value	Ref Range
Sodium	138	135 - 145 mmol/L

Progress Notes by Dr. Davis 08/23/2016

Potassium	3.6	3.5 - 5.0 mmol/L
Chloride	103	98 - 107 mmol/L
CO2	23.0	22.0 - 30.0 mmol/L
BUN	13	7 - 21 mg/dL
Creatinine	1.24	0.70 - 1.30 mg/dL
BUN/Creatinine Ratio	10	
GFR MDRD Non Af Amer	>=60	>=60 mL/min/1.73m2
GFR MDRD Af Amer	>=60	>=60 mL/min/1.73m2
Anion Gap	12	9 - 15 mmol/L
Glucose	110	65 - 179 mg/dL
Calcium	9.5	8.5 - 10.2 mg/dL
Albumin	4.4	3.5 - 5.0 g/dL
Total Protein	6.6	6.6 - 8.0 g/dL
Total Bilirubin	0.7	0.0 - 1.2 mg/dL
AST	34	19 - 55 U/L
ALT	54	19 - 72 U/L
Alkaline Phosphatase	86	38 - 126 U/L

Magnesium Level

Result	Value	Ref Range
Magnesium	1.7	1.6 - 2.2 mg/dL

CBC w/ Differential

Result	Value	Ref Range
WBC	4.1 (L)	4.5 - 11.0 10*9/L
RBC	2.54 (L)	4.50 - 5.90 10*12/L
HGB	9.3 (L)	13.5 - 17.5 g/dL
HCT	26.1 (L)	41.0 - 53.0 %
MCV	102.8 (H)	80.0 - 100.0 fL
MCH	36.5 (H)	26.0 - 34.0 pg
MCHC	35.5	31.0 - 37.0 g/dL
RDW	18.4 (H)	12.0 - 15.0 %
MPV	9.6	7.0 - 10.0 fL
Platelet	75 (L)	150 - 440 10*9/L
Variable HGB Concentration	Slight (A)	Not Present
Absolute Neutrophils	2.3	2.0 - 7.5 10*9/L
Absolute Lymphocytes	0.9 (L)	1.5 - 5.0 10*9/L
Absolute Monocytes	0.7	0.2 - 0.8 10*9/L
Absolute Eosinophils	0.1	0.0 - 0.4 10*9/L
Absolute Basophils	0.0	0.0 - 0.1 10*9/L
Large Unstained Cells	4	0 - 4 %
Macrocytosis	Marked (A)	Not Present
Anisocytosis	Moderate (A)	Not Present

Morphology Review

Result	Value	Ref Range
Smear Review Comments	See Comment (A)	Undefined

Allergies: No Known Allergies

Medications:

Progress Notes by Dr. Davis 08/23/2016

Were updated in EPIC

Physical Exam (was performed by me and updated as needed):

General : Age appropriate man sitting in a chair. Patient is awake and alert in NAD.
Central venous access: Port-a-cath is accessed on right.
ENT: Moist mucous membranes. Oropharhynx without lesions, erythema or exudate.
Cardiovascular: Pulse normal rate, regularity and rhythm. S1 and S2 normal, without any murmur, rub, or gallop.
Lungs: Clear to auscultation bilaterally, without wheezes/crackles/rhonchi. Good air movement.
Skin: No rash noted.
Psychiatry: Alert and oriented to person, place, and time.
Abdomen : Normoactive bowel sounds, abdomen soft, non-tender
Extremeties: No edema.
Musculo Skeletal: Full range of motion in shoulder, elbow, hip knee, ankle, left hand and feet.
Nodes: No palpable cervical, supraclavicular, axillary or inguinal LAD
Neurologic: CNII-XII intact. Normal strength and sensation throughout

Karnofsky/Lansky Performance Status

Cares for self; unable to carry on normal activity or to do active work (ECOG equivalent 1)

PET-CT 08/21/2016

Impression

Findings suspicious for recurrent active lymphoma in the abdomen (Deauville 5)
- New FDG accumulation within the pericecal mass
- Increasing mesenteric adenopathy
- Increased FDG activity within retroperitoneal soft tissue

- Diffuse mild pulmonary activity and nodular opacities likely related to inflammation/infection or possibly drug toxicity

Assessment/Plan:

Disease: Transformed follicular lymphoma vs. DLBCL with a small cell component. His disease has been refractory to multiple lines of chemotherapy, but he underwent BEAM auto-SCT in an apparent PET- CR. Unfortunately his disease appears to have relapsed.

BMT: BEAM with autologous stem cell transplant on Day 0 06/27/16
- Counts are slowly recovering, but there is still pancytopenia from his SCT.
- Mr. Man **unfortunately appears to have have early relapse following his SCT.**
- I have spoken with the patient and **will see him next week to discuss possible enrollment on a clinical trial given his early relapse.**

Hem: Transfusion criteria: Transfuse 2 units of PRBCs for Hgb <8 and 1 unit of platelets for Plt <10K or bleeding. No history of transfusion reactions.
- Pancytopenia is from prior chemotherapy and SCT. There is no need for transfusion or growth factor support. At this time further cytotoxic chemotherapy is unlikely to be of much benefit and may be too marrow toxic,

ID:

Prophylaxis:

Progress Notes by

- Valtrex 500 mg po daily for 1 year post transplant
- Bactrim DS has been stopped

GI:
- Pepcid BID for GERD prophylaxis.

Renal: Creatinine is at baseline (1.24)

Hepatic: Normal bilirubin and LFTs

CV: No current issues. Echo with EF 60%. EKG NSR QTc 425

Pulm:
- Mild pulmonary infiltrates with no Sx. These could represent lymphoma or less likely infection. Mr. Man is asymptomatic. Lesions do not seem readily amenable to bronchoscopy so will monitor for now.

Neuro/Pain:
- Peripheral neuropathy has not responded to gabapentin, and gabapentin may be worsening drowsiness and coordination Sx. Will taper gabapentin and use oxycodone PRN for pain

Psych:
Insomnia:
- Continue Trazodone 100 mg for sleep.

Summary:

- PET-CT shows evidence of early relapse.
- Will taper gabapentin to off over the next week.

Future Appointments

Date	Time	Provider
08/31/2016	2:30 PM	ADULT ONC PERIPHERAL LAB
08/31/2016	3:30 PM	Dr. Davis

ATTENDING ADDENDUM

I saw and evaluated the patient, participating in the key portions of the service. I reviewed the fellow's note, and agree with the fellow's findings and plan.

Diagnosis: ABC-DLBCL (transformed from FL)
Stage: IVB, Relapsed
IPI: 3
CNS Risk: Intermediate
Regimen: GO Trial (s/p O-DHAP (2/17/16- 6/2016 '); R-Gem/Ox (12/2015- 1/2016); RICE 09/16- 11/23/16 RCHOP (12/2014- 5/2015)

The patient has ABC-DLBCL that likely transformed from follicular lymphoma. He initially presented with B-symptoms and was found to have inguinal LAD with biopsy concerning for DLBCL with t(14;18) (on UNC review of biopsy, could be consistent with follicular lymphoma although can't exclude DLBCL given high Ki67). He was treated with 6 cycles of R-CHOP with initial PR and then progression. Biopsy of mesenteric mass was consistent with CD10+ mature B-cell lymphoma most consistent with follicular lymphoma. He was subsequently treated with 3 cycles of R-ICE. Post-treatment PET/CT showed minor response so he was started on R-Gem-Ox and PET/CT after 3 cycles showed stable disease with FDG-avid cecal mass and left hilar lymph node. He most likely has a background follicular lymphoma which potentially transformed to DLBCL, especially given his initial more acute presentation. We initiated therapy with salvage O-DHAP for DLBCL and his interim PET shows a CR (Deuville 3). After C4, he went for BEAM auto, and unfortunately had an early relapse at roughly 2 months post-auto. Overall, his disease continues to be extremely chemo-refractory, and further chemotherapy based approaches are unlikely to be successful. Options are GO trial with PD1/EZH2 inhibitor, ibrutinib, or rev/rituximab. Will start screening for GO trial today and if he meets eligibility, will enroll him.

Dr. Red
Assistant Professor of Medicine
Division of Hematology and Oncology

IDENTIFICATION: This is a 42 y.o. male who presents for a follow-up visit.

ASSESSMENT:

Mr. Man has a history of activated B-cell type diffuse large B-cell lymphoma likely transformed from follicular lymphoma, now relapsed s/p 4 different chemotherapy courses and auto transplant.

He initially presented with B-symptoms and was found to have inguinal LAD with biopsy concerning for DLBCL with t(14;18) (on review of biopsy, could be consistent with follicular lymphoma although can't exclude DLBCL given high Ki67). He was treated with 6 cycles of R-CHOP with initial PR and then progression. Biopsy of mesenteric mass was consistent with CD10+ mature B-cell lymphoma most consistent with follicular lymphoma. He was subsequently treated with 3 cycles of R-ICE. Post-treatment PET/CT showed minor response so he was started on R-Gem-Ox and PET/CT after 3 cycles showed stable disease with FDG avid cecal mass and left hilar lymph node. He most likely has a background follicular lymphoma which potentially transformed to DLBCL, especially given his initial more acute presentation. We initiated therapy with salvage O-DHAP for DLBCL and his subsequent PET showed CR.

He subsequently underwent ataga stem cell transplant following BEAM conditioning on 06/27/16 . He is now day +64, but has unfortunately recently been found to have relapsed disease on the PET/CT.

PLAN:
Diagnosis: ABC-DLBCL
Stage: IVB, relapsed
IPI/IELSG: 3
CNS Risk: Intermediate
Regimen: s/p RCHOP, RICE, R-GemOx, O-DHAP, and BEAM auto HSCT
- Patient is interested in going on GO29383 trial, a phase 1B trial evaluating atezolizumab (PDL1-inhibitor) and tazemetostat (EZH2-inhibitor) in relapsed DLBCL
- Awaiting addended read from radiology for size of nodes on most recent PET/CT
- If enrolling/eligible based on PET/CT (he meets all other inclusion criteria), he will need a bone marrow biopsy and repeat lymph node biopsy
- Could also consider lenalidomide or ibrutinib therapy if either progressive on this trial, or otherwise not eligible
- RTC in one month; will have him meet with them as well to discuss potential Lyrica vs Cymbalta for neuropathic pain

INTERVAL HISTORY:
Patient has had increasing fatigue, but no new adenopathy, no new night sweats or fevers. He is discouraged about his relapse, understandably, and as result has had poor sleep recently.

His neuropathy is stable, but he recently stopped taking gabapentin due to side effects of that drug.

Lymphoma, large-cell, follicular (RAF-HCC)

11/19/2014	**Cancer Staged** CT: 9.4 cm colonic cecum lesion, mesenteric and retroperitoneal LAD up to 12.6 cm, splenic lesions, BL inguinal lesions, R pleural effusion, BL axillary lesions. BMBx initially read as no evidence of lymphoma (? lymphoid aggregates). S3B vs S4B
12/14/2014	**Initial Diagnosis** Lymphoma, large-cell, follicular (RAF-HCC). Inguinal core Bx showed large cell lymphoma with t(14:18). Initial Dx was DLBCL. BMBx was initially read as no evidence of lymphoma; however, possible small lymphoid aggregate detected on secondary review/
12/18/2014	**Chemotherapy**

5-01-15

R-CHOP x6

5-01-15

Cancer Staged
PET-CT: Decrease is colonic mass size to 2.5 x 4.7 cm (SUV 5.2) and RP LAD now 1.6 x 3.2 cm (SUV 2.0). Splenic lesions resolved. No other FDG avid LAD.

8-07-2015

Progression
PET-CT: Increase in size of colonic lesion (5.5 x 3.8 cm, SUV = 5.2) and new lung nodules (1.7 x 1.4 cm, SUV = 5.2).

9/7/2015

Biopsy
Messenteric mass biopsy: CD10+ mature B-cell lymphoma. FISH also identified t(14;18). Consistent with follicular lymphoma or lower grade version of prior high grade lymphoma

9-16-2015
11-23-2015

Chemotherapy

R-ICE x3

11-20-2015

Cancer Staged
PET-CT: Decrease in colonic mass (now 4.5 x 3.0 CM, SUV = 3.4) and left lung nodule (now 1.3 x 0.8 cm , SUV = 3.4)

12-2-2015
1-20-2016

Chemotherapy

R-Gem-Ox x 3

1-22-2016

Stable Disease
PET-CT: Stable exam, persistent LLL hilar nodule and distal ileum/cecum lesions w/ stable size and metabolic uptake

2-17-2016
3-13-2016

Chemotherapy

O-DHAP x2

3-31-2016

Cancer Staged
PET-CT shows decrease is size and FDG avidity of pericecal mass (Deauville 3). Resolution of hilar nodes

4/4/2016- 5/7/2016	**Chemotherapy** O-DHAP x2 more cycles
5/17/2016	**Cancer Staged** No FDG avid nodes. Pericecal mass has no FDG avidity. (Deauville 1)
6/1/2016- 6/2/2016	**Other** Stem cell mobilization with Etoposide 300 mg/m2 x 2 doses + Granix 10mg/kg. Required 1 dose of Plerixafor on 6/12. Collected 3.52 x 10 ^ CD34+ cells in one
6/21-6/26/2016	**Chemotherapy** BEAM conditioning prior to auto SCT
6/27/2016	**Transplant** Autologous stem cell tranplant. CD34 DOSE INFUSE: 3.52

PAST MEDICAL HISTORY:

Past Medical History:

Diagnosis	Date

- Anxiety
- Lymphoma (RAF-HCC)
  Suspected transformed follicular lymphoma
- Substance abuse
  Self-reported drinking a 12-pack of beer a day prior to his diagnosis of relapse. No alcohol since then
- Traumatic brain injury (RAF-HCC)
  short term and long term memory loss also has some emotionally unstable

ALLERGIES:

No Known Allergies

REVIEW OF SYSTEMS:

See HPI. A 10 system ROS is otherwise negative.

VITAL SIGNS:

Vitals:

BP:	102/70
Pulse:	92
Resp:	16
Temp:	36.8 °C (98.3 °F)

Progress Notes by Dr. Red

TempSrc:	Oral
SpO2:	98%
Weight:	80.7 kg (177 lb 14.4 oz)
Height:	177.9 cm (5' 10.04")

EXAM:
ECOG: 1
GENERAL: NAD, Awake, Alert
HEENT: Oropharynx clear.
LYMPH: No cervical, supraclavicular, axillary, or inguinal LAD
LUNGS: Clear to auscultation bilaterally. Normal effort.
HEART: Regular rate and rhythm. No rubs, gallops or murmurs.
ABDOMEN: Soft, nontender, nondistended. No hepatosplenomegaly.
EXTREMITIES: No edema.
Neuro: paresthesias in distal extremities

LABORATORY: 08/30/2016

Component	Value	Ref Range	Status
• WBC	5.4	4.5 - 11.0 10*9/L	Final
• RBC	2.62*	4.50 - 5.90 10*12/L	Final
• HGB	9.7*	13.5 - 17.5 g/dL	Final
• HCT	26.8*	41.0 - 53.0 %	Final
• MCV	102.3*	80.0 - 100.0 fL	Final
• MCH	37.1*	26.0 - 34.0 pg	Final
• MCHC	36.3	31.0 - 37.0 g/dL	Final
• RDW	17.8*	12.0 - 15.0 %	Final
• MPV	8.6	7.0 - 10.0 fL	Final
• Platelet	75*	150 - 440 10*9/L	Final
• Variable HGB Concentration	Slight*	Not Present	Final
• Absolute Neutrophils	3.4	2.0 - 7.5 10*9/L	Final
• Absolute Lymphocytes	1.1*	1.5 - 5.0 10*9/L	Final
• Absolute Monocytes	0.6	0.2 - 0.8 10*9/L	Final
• Absolute Eosinophils	0.1	0.0 - 0.4 10*9/L	Final
• Absolute Basophils	0.0	0.0 - 0.1 10*9/L	Final
• Large Unstained Cells	3	0 - 4 %	Final
• Macrocytosis	Marked*	Not Present	Final

Hematopathology Order (continued)

Follicular lymphoma grade I, unspecified body region (RAF-HCC) [C82.00]

Questionnaire

Question	Answer
SPECIFIC ORDER	BONE MARROW WORKUP
Patient History/Reason for Testing	RESTAGING

Result

Hematopathology

Resulted: 06/12/2016 Result status: Edited Result - FINAL

Hematopathology Order

Ordering provider: Dr. Red

Resulting lab: LABORATORIES

Specimen Information

Type	Source	Collected On
AP Specimen	Peripheral Blood	05/17/16 1000

Components

Component	Value	Reference Range	Flag	Lab
Case Report				

Result:

Surgical Pathology Report

Authorizing Provider: Dr. Red Collected: 05/17/2016, 1000

Ordering Location: oncology clinic Received: 05/17/2016, 1030

Pathologist: Dr. Brown

Specimens: A) - Bone Marrow Right - Aspirate
B) - Bone Marrow Right - Biopsy
C) - Peripheral Blood

Final Diagnosis

Result: **Bone marrow, right iliac, aspiration and biopsy**
- **Cellular bone marrow (30%) with left-shifted granulopoiesis, consistent with therapy effect**
- **Negative for lymphoma**
- **Routine cytogenetic results reveal a normal karyotype; FISH [t(14;18)] results are normal; see details below .**

Clinical History

Result: The patient is a 42 year-old male with a history of follicular lymphoma with possible transformation to diffuse large B-cell lymphoma, status post 4 cycles of O-DHAP. Recent medications include Neulasta.

Gross Description

Result: Received are right iliac aspirate and 3 right biopsies measuring 0.2 cm x 1.0 cm (1), 0.2 cm x 0.6 cm (2),0.2 cm x 0.6 cm (3) respectively. The first and second biopsies are sent for histologic evaluation. Cytogenetic studies are requested on the third biopsy. Flow cytometric analysis is not performed.

A. BMAR. Aspirate is submitted in 1 block(s).

B. BMBR. Biopsy is submitted in 1 block(s).

Microscopic Description

Result: **Peripheral Blood:**

Platelets: Decreased

Erythroid: Mild anisocytosis, polychromasia, nucleated red blood cells
Leukocytes: Leukopenia, neutropenia, lymphopenia, occasional pelgeroid forms, toxic granulation, dohle bodies

Bone Marrow Aspirate:
Cellularity: Scant cellular marrow particles
Megakaryocytes: Present
Erythropoiesis: Decreased, mild dyserythropoiesis
Granulopoiesis: Decreased, left-shifted

M:E ratio: 0.6:1 **Differential:** 300 cells counted/se

4% blasts
24% promyelocytes
2% myelocytes
4% maturing granulocytes
55% erythroid
8% lymphocytes
1% monocytes
1% eosinophils
0% basophils
0% plasma cells

Touch Prep: Confirmatory

Bone Marrow Clot and/or Biopsy:
The bone marrow clot contains blood with minimal marrow for evaluation. The bone marrow biopsy sections are confirmatory.
Cellularity: **Clot:** Blood with minimal marrow for evaluation **Biopsy:** Variable, 30**% overall**

EMBEDDED IMAGES
Result: **Peripheral Blood:**
Platelets: Decreased
Erythroid: Mild anisocytosis, polychromasia, nucleated red blood cells
Leukocytes: Leukopenia, neutropenia, lymphopenia, occasional pelgeroid forms, toxic granulation, dohle bodies

Bone Marrow Aspirate:
Cellularity: Scant cellular marrow particles
Megakaryocytes: Present
Erythropoiesis: Decreased, mild dyserythropoiesis
Granulopoiesis: Decreased, left-shifted

M:E ratio: 0.6:1 **Differential:** 300 cells counted/se

4% blasts
24% promyelocytes
2% myelocytes
4% maturing granulocytes
55% erythroid
8% lymphocytes
1% monocytes
1% eosinophils
0% basophils
0% plasma cells

Imaging Information

Exam Information

Performed Procedure	Study Status	Begin Time	End Time
PET CT FDG SKULL TO THIGH	Final	Wed May 17 2016	Wed May 17, 2016

Staff Information

Technologist	Transcriptionist	Assigned Physician(s)	Assigned Pool(s)
Dr. Long	N/A	N/A	N/A

Verification Information

Signed By	Signed On
Dr. Long	May 17, 2016

Study Result

EXAM: Positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomic localization: skull base to mid-thigh
DATE: 05/17/16
ACCESSION: 12345
DICTATED: 5/17/16
INTERPRETATION LOCATION: Main Campus

CLINICAL INDICATION: 42 years old Male: LYMPHOMA-C82.00-Follicular lymphoma grade I, unspecified body region (RAF-HCC) Refractory DLBCL/transformed Follicular Lymphoma. For restaging.

RADIOPHARMACEUTICAL: F-18 Fluorodeoxyglucose (FDG), IV

TECHNIQUE: Following the administration of radiopharmaceutical, PET images were acquired using 3D-acquisition and reconstructed with attenuation-correction. A single-breathhold CT scan was obtained at quiet end-expiration with oral contrast for anatomic localization and attenuation-correction. The coregistered PET and CT images were evaluated in axial, coronal, and sagittal planes.

Scanner: Siemens Biograph mCT
Serum glucose: 174 mg/dL
Injected activity: 13.88 mCi
Site of injection: Port
Time of injection: 1534
Time of scan: 1630
Liver SUVavg: 2.39

COMPARISON: PET/CT dated 03/31/2016

Imaging Information (continued)

Study Result (continued)

FINDINGS:

Head/Neck:
-Focus of uptake overlying the left masseter muscle has resolved.
- No abnormal focal radiotracer uptake
- No cervical adenopathy

Chest:
-Right upper chest porta-catheter with tip at the cavoatrial junction.
- Axillae: No adenopathy
- Lungs: No pulmonary nodules
- Mediastinum/hila: No adenopathy
- Pleura: No effusions
- Cardiovascular: Scattered vascular calcifications. No pericardial effusion.

Abdomen/Pelvis:
- Liver: No focal abnormality
- Gallbladder: Cholelithiasis without evidence of cholecystitis.
- Spleen: Splenomegaly. Measures up to approximately 15.9 cm in craniocaudad dimension. No focal abnormalities.
- Pancreas: No focal abnormality
- Adrenal glands: Unremarkable
- Kidneys: Unremarkable
- GI Tract: Further interval decrease in size of soft tissue mass adjacent to the cecum. This mass now demonstrates no significant radiotracer uptake.
- GU Tract: Unremarkable
- Adenopathy: None

MUSCULOSKELETAL:
-Diffuse bone marrow uptake is likely therapy related.
- No suspicious metabolically active osseous lesions are identified
- No foci of abnormal FDG uptake are noted involving the external soft tissues

IMPRESSION:
- Response to therapy--Deauville 1. Pericecal mass demonstrates no significant FDG uptake.

Questionnaire

Order Entry

Question	Answer	Comment
1. REASON FOR EXAM	LYMPHOMA	

End Exam

Procedure Questionnaire

IMAGING END ALL

Question	Comment
1. Confirm Resource:	

Imaging Information

Exam Information

Performed Procedure	Study Status	Begin Time	End Time
CT Abdomen Pelvis W Contrast	Final	Fri Mar 10, 2016 10:07 PM	Fri Mar 10, 2016 10:27 PM

Staff Information

Technologist	Transcriptionist	Assigned Physician(s)	Assigned Pool(s)
Dr. Snow	N/A	N/A	N/A

Verification Information

Signed By	Signed On
Dr. Snow	Mar 11, 2016

Study Result

EXAM: CT abdomen and pelvis with contrast
DATE: 03/10/2016
ACCESSION: 1234567
DICTATED: 03/11/2016
INTERPRETATION LOCATION: Main Campus

CLINICAL INDICATION: 42 Year Old (M): OTHER-Distention and right sided abdominal pain with palpation in pt with cecal lymphoma - chemo pending results of scan

COMPARISON: Outside institution PET/CT 01/22/2016

TECHNIQUE: A spiral CT scan was obtained with IV contrast from the lung bases to the pubic symphysis. Images were reconstructed in the axial plane. Coronal and sagittal reformatted images were also provided for further evaluation.

FINDINGS:
LINES/DEVICES: None.

LOWER CHEST: Unremarkable.

ABDOMEN/PELVIS

HEPATOBILIARY: Unremarkable liver. No biliary ductal dilatation. Gallbladder is slightly underdistended with posteriorly located calcified gallstones.
PANCREAS: Unremarkable.
SPLEEN: Multiple hypoechoic foci within the spleen. Spleen mildly enlarged, 14.2 cm craniocaudal dimension.
ADRENAL GLANDS: Unremarkable.
KIDNEYS/URETERS: Subcentimeter hypoattenuating lesions in the kidney are too small to characterize. No hydronephrosis.
BLADDER: Unremarkable.
BOWEL/PERITONEUM/RETROPERITONEUM: 4.3 x 2.2 cm soft tissue mass arising from the cecum just above the terminal ileum extending into the mesentery (2:58) is slightly decreased in size from prior. Appendix unremarkable. No bowel obstruction. No ascites or free air. Moderate ill-defined fat stranding at the root of the mesentery and within the mid mesentery.
VASCULATURE: Abdominal aorta within normal limits for patient's age. Unremarkable inferior vena cava.
LYMPH NODES: Multiple mildly prominent retroperitoneal/aortocaval lymph nodes, some of which are upper limits

Imaging Information (continued)

Study Result (continued)

normal of size measuring up to 1.0 cm (2:42). There is a small amount of ill-defined soft tissue about the celiac axis, interposed between the portosplenic confluence and the IVC, and posterior to the IVC partially encircling the right renal artery and vein (for example 2:40). Multiple mildly prominent mesenteric lymph nodes are present measuring up to 0.7 cm (2:44).
REPRODUCTIVE ORGANS: Prostate normal size with small calcifications.

BONES/SOFT TISSUES: No worrisome soft tissue lesion identified. No lytic or blastic osseous lesion identified.

IMPRESSION:
-- No acute abdominopelvic process identified.
-- Cecal soft tissue mass extending into the mesentery is sightly decreased in size, compatible with known lymphoma.
-- Multiple mildly prominent retroperitoneal and mesenteric lymph nodes, as well as a small amount of ill-defined retroperitoneal soft tissue as above are suspicious for lymphomatous involvement. Findings are similar to prior.
-- Moderate mesenteric fat stranding is stable to slightly increased from prior. Lymphomatous involvement not excluded.
-- Multiple hypoattenuating lesions in the spleen with mild splenomegaly. Lymphomatous involvement of the spleen is not excluded.
-- Cholelithiasis.

Questionnaire

Order Entry

Question	Answer	Comment
1. Reason For Exam	OTHER	Distention and right sided abdominal pain with palpation in pt with cecal lymphoma - chemo pending results of scan
2. What is the patient's sedation requirement?	No Sedation	
3. Does the patient have any history of allergic reaction during injection of IV contrast?	No	PLEASE GIVE ORAL CONTRAST

Begin Exam

IMAGING BEGIN CONTRAST

Question	Answer	Comment
1. Does the patient have any history of allergic reaction during injection of IV contrast?	No	PLEASE GIVE ORAL CONTRAST
2. Which contrasted exam brought on allergic reaction?		
3. Have you checked labs?		
4. Creatinine Value		
5. BUN value		
6. GFR value		

End Exam

IMAGING END ALL

Question	Comment
1. Confirm Resource:	

Imaging Information (continued)

Results **PET CT Skull To Thigh**

Imaging Information

Exam Information

Performed Procedure	Study Status	Begin Time	End Time
PET CT FDG SKULL TO THIGH	Final	Fri Mar 31, 2016	Fri Mar 31, 2016

Staff Information

Technologist	Transcriptionist	Assigned Physician(s)	Assigned Pool(s)
Dr. Snow	N/A	N/A	N/A

Verification Information

Signed By	Signed On
Dr. Snow	03/31/2016

Study Result

EXAM: Positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomic localization: skull base to mid-thigh
DATE: 03/31/2016
ACCESSION: 123456
DICTATED: 03/31/2016
INTERPRETATION LOCATION: Main Campus

CLINICAL INDICATION: 42 year old M. RESTAGING LYMPHOMA-. Refractory DLBCL/transformed Follicular Lymphoma, s/p 2 cycles O-DHAP chemotherapy

RADIOPHARMACEUTICAL: F-18 Fluorodeoxyglucose (FDG), IV

TECHNIQUE: Following the administration of radiopharmaceutical, PET images were acquired using 3D-acquisition and reconstructed with attenuation-correction. A single-breathhold CT scan was obtained at quiet end-expiration with oral contrast for anatomic localization and attenuation-correction. The coregistered PET and CT images were evaluated in axial, coronal, and sagittal planes.

Scanner: Siemens Biograph mCT
Serum glucose: 91 mg/dL
Injected activity: 14.24 mCi
Site of injection: Right wrist
Time of injection: 926
Time of scan: 1025
Liver SUVavg: 2.9

COMPARISON: PET CT dated 01/22/16 and CT abdomen and pelvis dated 3/10/16

FINDINGS:

Head/Neck:
- Focus of uptake is again noted overlying the left masseter muscle (image 18) is decreased in size and uptake compared to prior.
- No other abnormal focal radiotracer uptake or adenopathy.

Imaging Information (continued)

Study Result (continued)

Chest:
- Thyroid: Unremarkable
- Axillae: No adenopathy
- Lungs: No pulmonary nodules
- Mediastinum/hila: No adenopathy, with resolution of uptake and decreased size of left hilar node.
- Pleura: No effusions
- Cardiovascular: Right chest wall port with tip in the right atrium.

Abdomen/Pelvis:
- Liver: No focal abnormality
- Gallbladder: Cholelithiasis without cholecystitis.
- Spleen: Splenomegaly with largest diameter measuring 16.2 cm. No focal abnormalities.
- Pancreas: No focal abnormality
- Adrenal glands: Unremarkable
- Kidneys: Unremarkable
- GI Tract: There is interval decrease in size of the soft tissue mass adjacent to the cecum (image 122). FDG activity has also decreased and is now similar to liver.
- GU Tract: Unremarkable
- Adenopathy: Small ill-defined mesenteric nodules are stable to decreased in size and minimal FDG activity (less than blood pool).

MUSCULOSKELETAL:
- Diffuse osseous FDG uptake likely therapy related.
- No foci of abnormal FDG uptake are noted involving the external soft tissues

IMPRESSION:
Response to therapy (Deauville 3).
- Interval decrease in size and FDG activity of pericecal mass.
- Interval resolution of left hilar node.
- Splenomegaly.
- Focus of uptake along the left masseter is also decreased in size and uptake, favored to be benign; however, continued attention on follow-up.

Questionnaire

Order Entry

Question	Answer	Comment
1. REASON FOR EXAM	RESTAGING LYMPHOMA	

End Exam

Procedure Questionnaire

IMAGING END ALL

Question

1. Confirm Resource:

Progress Notes by Dr. Red

Author: Dr. Red
Filed:
Editor: Dr. Red

Service: (none)
Encounter Date: 10/04/2016

Author Type:
Status: Attested

Patient: Mr. Man

Diagnosis: tDLBCL, ABC
Stage: IVB, Relapsed
IPI: 3
CNS Risk: Intermediate
Regimen: Rev/Ritux (10/4/16); s/p O-DHAP (2/7/16-6/2016); R-Gem/Ox (12/2015- 1/20/2016); RICE 9/15-11/23/15); RCHOP (12/2014-5/2015

The patient has ABC-DLBCL that likely transformed from follicular lymphoma. He initially presented with B-symptoms and was found to have inguinal LAD with biopsy concerning for DLBCL with t(14;18). He was treated with 6 cycles of R-CHOP with initial PR and then progression. Biopsy of mesenteric mass was consistent with CD10+ mature B-cell lymphoma most c/w follicular lymphoma. He was subsequently treated with 3 cycles of R-ICE. Post-treatment PET/CT showed minor response so he was started on R-Gem-Ox and PET/CT after 3 cycles showed stable disease with FDG-avid cecal mass and left hilar lymph node. We initiated therapy with salvage O-DHAP, and his interim PET showed a CR (D3). After C4, he went for BEAM auto, and unfortunately had an early relapse at 2 months post-auto. Overall, his disease continues to be chemo-refractory, and further chemotherapy based approaches are unlikely to be successful. We considered him for two trials, but, unfortunately, he doesn't qualify for either (GO Trial- needs 2 or more lesions; TAK- needs to be 6mo out from autoSCT). Will start revlimid/rituximab locally . Also gave the patient information on CD19 CAR-T trials, which have shown excellent responses in DLBCL. Pt will RTC in

2-3 months - should have imaging at that time (either here or locally).

Dr. Mathew Red

Assistant Professor of Medicine
Division of Hematology and Oncology

HEALTH CARE

Lymphoma Clinic Follow Up

IDENTIFICATION: This is a 42 y.o. male who presents for a follow-up visit.

Diagnosis: tDLBCL, ABC
Stage: IVB, Relapsed
IPI: 3
CNS Risk: Intermediate

The patient has ABC-DLBCL that likely transformed from follicular lymphoma. He initially presented with B-symptoms and was found to have inguinal LAD with biopsy concerning for DLBCL with t(14;18). He was treated with 6 cycles of R-CHOP with initial PR and then progression. Biopsy of mesenteric mass was consistent with CD10+ mature B-cell lymphoma most c/w follicular lymphoma. He was subsequently treated with 3 cycles of R-ICE. Post-treatment PET/CT showed minor response so he was started on R-Gem-Ox and PET/CT after 3 cycles showed stable disease with FDG-avid cecal mass and left hilar lymph node. We initiated therapy with salvage O-DHAP, and his interim PET showed a CR (D3). After C4, he went for BEAM auto, and unfortunately had an early relapse at 2 months post-auto. Overall, his disease continues to be chemo-refractory, and further chemotherapy based approaches are unlikely to be successful. We considered him for two trials, but, unfortunately, he doesn't qualify for either (GO Trial- needs 2 or more lesions; TAK- needs to be 6mo out from autoSCT). Plan to start lenalidomide/rituximab as per his last visit. He would like to pursue this with his local oncologist Dr Davis , and return to see us if he has progression or other complicated therapy decisions.

His Revlimid pre-auth is pending and Pharmacy will follow up on this today. Plan for him to follow with local oncologist

We also discussed contacting CD19 CAR-T trial centers, so that Mr. Man can be known to their programs when/if he progresses and desires to pursue CAR-T therapy.

He should come back and see us after 2 cycles of Rev/Rituxan, which should be in about 2-3 months.

INTERVAL HISTORY:
Reports feeling well. Has stable significant neuropathy and fatigue. Weight and appetite stable. No new fevers, chills, night sweats, or lymphadenopathy.

Lymphoma, large-cell, follicular (RAF-HCC)

11/19/2014	**Cancer Staged** CT: 9.4 cm colonic cecum lesion, mesenteric and retroperitoneal LAD up to 12.6 cm, splenic lesions, BL inguinal lesions, R pleural effusion, BL axillary lesions. BMBx initially read as no evidence of lymphoma (? lymphoid aggregates). S3B vs S4B
12/14/2014	**Initial Diagnosis** Lymphoma, large-cell, follicular (RAF-HCC). Inguinal core Bx showed large cell lymphoma with t(14:18). Initial Dx was DLBCL. BMBx was initially read as no evidence of lymphoma; however, possible small lymphoid aggregate detected on secondary review/
12/18/2014-5/1/2015	**Chemotherapy** R-CHOP x6
5/1/2015	**Cancer Staged** PET-CT: Decrease is colonic mass size to 2.5 x 4.7 cm (SUV 5.2) and RP LAD now 1.6 x 3.2 cm (SUV 2.0). Splenic lesions resolved. No other FDG avid LAD.
8/7/2015	**Progression** PET-CT: Increase in size of colonic lesion (5.5 x 3.8 cm, SUV = 5.2) and new lung nodules (1.7 x 1.4 cm, SUV = 5.2).
9/7/2015	**Biopsy** Messenteric mass biopsy: CD10+ mature B-cell lymphoma. FISH also identified t(14;18). Consistent with follicular lymphoma or lower grade version of prior high grade lymphoma
9/16/2015-11/23/2015	**Chemotherapy** R-ICE x3

11/20/2015	**Cancer Staged** PET-CT: Decrease in colonic mass (now 4.5 x 3.0 CM, SUV = 3.4) and left lung nodule (now 1.3 x 0.8 cm , SUV = 3.4)
12/2/2015-1/20/2016	**Chemotherapy** R-Gem-Ox x 3
1/22/2016	**Stable Disease** PET-CT: Stable exam, persistent LLL hilar nodule and distal ileum/cecum lesions w/ stable size and metabolic uptake
2/17/2016-3/13/2016	**Chemotherapy** O-DHAP x2
3/31/2016	**Cancer Staged** PET-CT shows decrease is size and FDG avidity of pericecal mass (Deauville 3). Resolution of hilar nodes
4/4/2016- 5/7/2016	**Chemotherapy** O-DHAP x2 more cycles
5/17/2016	**Cancer Staged** No FDG avid nodes. Pericecal mass has no FDG avidity. (Deauville 1)
6/1/2016- 6/2/2016	**Other** Stem cell mobilization with Etoposide 300 mg/m2 x 2 doses + Granix 10mg/kg. Required 1 dose of Plerixafor on 6/12. Collected 3.52 x 10 ^ CD34+ cells in one day
6/21/2016-6/26/2016	**Chemotherapy** BEAM conditioning prior to auto SCT
6/27/2016	**Transplant** Autologous stem cell tranplant. CD34 DOSE INFUSE: 3.52

Progress Notes by Dr. Red

PAST MEDICAL HISTORY:

Past Medical History:

Diagnosis	Date
• Anxiety	
• Lymphoma (RAF-HCC) *Suspected transformed follicular lymphoma*	
• Substance abuse *Self-reported drinking a 12-pack of beer a day prior to his diagnosis of relapse. No alcohol since then*	
• Traumatic brain injury (RAF-HCC) *short term and long term memory loss also has some emotionally unstable*	2005

ALLERGIES:

No Known Allergies

REVIEW OF SYSTEMS:

See HPI. A 10 system ROS is otherwise negative.

VITAL SIGNS:

Vitals:

BP:	99/55
Pulse:	78
Resp:	18
Temp:	36.5 °C (97.7 °F)
TempSrc:	Oral
SpO2:	97%
Weight:	79.9 kg (176 lb 1.6 oz)

EXAM:

ECOG: 0
GENERAL: NAD, Awake, Alert
HEENT: Oropharynx clear.
LYMPH: No cervical, supraclavicular, axillary LAD palpable
LUNGS: Clear to auscultation bilaterally. Normal effort.
HEART: Regular rate and rhythm. No rubs, gallops or murmurs.
ABDOMEN: Soft, nontender, nondistended. No hepatosplenomegaly.
EXTREMITIES: No edema.
NEURO: Restricted, borderline flat, affect, neuropathy over bilateral palms

LABORATORY: 10/04/2016

Office Visit

Component	Date	Value	Ref Range	Status
• Sodium		138	135 - 145 mmol/L	Final
• Potassium		3.8	3.5 - 5.0 mmol/L	Final
• Chloride		102	98 - 107 mmol/L	Final