

Patient: Emily Anderson (DOB 1968-01-11)

Medical Record Number: SYN130

Date of Admission: 2025-04-05

Date of Discharge: 2025-04-14

Discharge Diagnosis: Pathologic Fracture of Right Femoral Neck Secondary to Metastatic NSCLC, Status Post Surgical Stabilization

1. Detailed Oncological Diagnosis:

Primary Diagnosis: Non-Small Cell Lung Cancer (NSCLC), Adenocarcinoma, Stage IVB

Date of Initial Diagnosis: September 13, 2022

Histology:

- CT-guided biopsy of right lower lobe mass (September 2022) revealed moderately differentiated adenocarcinoma.
- Immunohistochemistry: Positive for TTF-1, CK7, Napsin A. Negative for p40, CK20, GATA3.
- Molecular testing:
 - BRAF: V600E mutation positive
 - EGFR: Wild-type
 - ALK: No rearrangement
 - ROS1: No rearrangement
 - KRAS: Wild-type
 - MET: No exon 14 skipping mutation
 - NTRK: No fusion
 - RET: No rearrangement
- PD-L1 expression: <1% Tumor Proportion Score (TPS), CPS 2, IC <1%

Staging:

- TNM (8th edition): cT2bN1M1b (Stage IVB)
- Imaging Studies:
 - Chest CT (September 2022): 4.3 cm mass in right lower lobe with ipsilateral hilar lymphadenopathy.
 - PET/CT (September 2022): FDG-avid primary mass (SUVmax 13.2), hilar lymphadenopathy, and multiple bone metastases involving the spine (T10, L3), right iliac bone, and right femur.
 - Bone scan (September 2022): Confirmed metastatic involvement of T10, L3 vertebrae, right iliac bone, right proximal femur, and left 7th rib.
 - Brain MRI (September 2022): No evidence of brain metastases.

2. History of Oncological Treatment:

Targeted Therapy:

- Dabrafenib 150 mg PO BID and Trametinib 2 mg PO daily
- Initiated October 5, 2022
- Ongoing with excellent radiographic response and clinical benefit

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- Required one dose reduction of Dabrafenib to 100 mg BID in March 2023 due to pyrexia syndrome
- Subsequently escalated back to full dose in May 2023

Radiation Therapy:

- External beam radiation therapy to L3 vertebral metastasis (October 2022)
 - Total dose: 30 Gy in 10 fractions
- External beam radiation therapy to right iliac bone metastasis (November 2022)
 - Total dose: 30 Gy in 10 fractions
- External beam radiation therapy to T10 vertebral metastasis (January 2023)
 - Total dose: 30 Gy in 10 fractions

Supportive Therapy:

- Denosumab 120 mg SC every 4 weeks (initiated October 2022 for bone metastases)
 - Most recent administration on March 15, 2025
 - Next administration scheduled for April 15, 2025 (to be administered prior to discharge)

3. Imaging:

- CT Chest/Abdomen/Pelvis (March 2025): Near-complete response of primary tumor (now 0.8 cm). No lymphadenopathy. Stable sclerotic bone metastases.
- Right hip X-ray (April 5, 2025, on admission): Displaced subcapital fracture of right femoral neck through area of metastatic involvement.
- Bone scan (April 6, 2025): Increased uptake at right femoral neck fracture site. Previously noted metastatic sites show decreased activity compared to baseline, consistent with treatment response. No new metastatic sites identified.
- Pelvis CT (April 6, 2025): Fracture through metastatic lesion in right femoral neck. Stable sclerotic lesion in right iliac bone.

4. Comorbidities:

- Rheumatoid arthritis (diagnosed 2015, in remission on hydroxychloroquine)
- Osteoporosis (diagnosed 2018)
- Asthma (mild, intermittent)
- Hypothyroidism (diagnosed 2016)
- Depression (diagnosed 2010)
- Migraines (diagnosed 2005)
- Never smoker

5. Physical Exam at Admission:

General: 57-year-old female in acute distress due to right hip pain.

Vitals: BP 135/82 mmHg, HR 96 bpm, RR 18/min, Temp 36.8°C, SpO2 97% on room air.

HEENT: Normocephalic, atraumatic. No scleral icterus. No oral lesions.

Neck: Supple. No cervical or supraclavicular lymphadenopathy.

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Cardiovascular: Regular rate and rhythm. Normal S1, S2. No murmurs, rubs, or gallops.

Respiratory: Clear breath sounds bilaterally. No wheezes or crackles.

Abdomen: Soft, non-tender, non-distended. No hepatosplenomegaly. Normal bowel sounds.

Extremities: Right lower extremity held in external rotation. Significant pain with minimal movement of right hip. No palpable masses. Left lower extremity without deformity or tenderness.

Skin: No rashes or lesions.

Neurological: Alert and oriented x3. Cranial nerves II-XII intact. Motor strength 5/5 throughout except right lower extremity limited by pain. Sensation intact.

ECOG Performance Status: 2 (increased from baseline 1 due to hip fracture)

6. Hospital Course Summary:

Ms. Anderson was admitted following a mechanical fall at home resulting in acute right hip pain and inability to bear weight. Imaging revealed a displaced subcapital fracture of the right femoral neck through a known area of metastatic disease. The patient had been on targeted therapy with dabrafenib/trametinib for BRAF V600E-positive metastatic NSCLC since October 2022 with excellent disease control.

Orthopedic surgery was consulted, and the patient underwent right hip hemiarthroplasty on April 7, 2025. Intraoperative frozen section confirmed metastatic adenocarcinoma, consistent with known NSCLC. The procedure was uncomplicated, with estimated blood loss of 250 mL. Pathology review of the resected femoral head confirmed metastatic adenocarcinoma with extensive osteoblastic reaction and treatment effect, indicating good response to systemic therapy.

Postoperatively, the patient progressed well with physical therapy. She advanced from bed to chair on POD#1 and began ambulation with a walker on POD#2. Dabrafenib and trametinib were held for 48 hours perioperatively and resumed on POD#2 without complications. Pain was initially managed with patient-controlled analgesia, then transitioned to oral medications with good effect.

A multidisciplinary discussion between medical oncology, radiation oncology, and orthopedic surgery determined that postoperative radiation to the surgical bed was not indicated given the excellent disease control with targeted therapy and the placement of prosthesis. Fracture was not related to any disease progression. Denosumab was administered on schedule during the hospitalization.

By discharge on POD#7, the patient was ambulating with a walker for short distances and requiring minimal assistance with activities of daily living. Physical therapy and occupational therapy provided comprehensive home exercise programs and recommendations for adaptive equipment.

7. Medication at Discharge:

Targeted Therapy:

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- Dabrafenib 150 mg PO BID (continued without interruption)
- Trametinib 2 mg PO daily (continued without interruption)

Bone-Targeted Therapy:

- Denosumab 120 mg SC every 4 weeks (administered April 12, 2025, next dose due May 12, 2025)

Pain Management:

- Oxycodone 5 mg PO q6h PRN moderate pain
- Acetaminophen 650 mg PO q6h scheduled x 7 days, then PRN
- Meloxicam 15 mg PO daily with food (hold if inadequate oral intake)

Thromboprophylaxis:

- Enoxaparin 40 mg SC daily for 30 days post-surgery

Pre-existing Chronic Medications:

- Hydroxychloroquine 200 mg PO daily (rheumatoid arthritis)
- Levothyroxine 112 mcg PO daily (take on empty stomach)
- Escitalopram 10 mg PO daily (depression)
- Montelukast 10 mg PO daily (asthma)
- Albuterol inhaler 2 puffs q4-6h PRN wheezing
- Sumatriptan 100 mg PO PRN migraine (maximum 9 tablets/month)
- Calcium carbonate 600 mg + Vitamin D 400 IU PO BID
- Multivitamin 1 tablet PO daily

Bowel Regimen:

- Senna 8.6 mg PO daily
- Docusate sodium 100 mg PO BID
- Polyethylene glycol 17g PO daily PRN constipation

8. Further Procedure / Follow-up:

Orthopedic Surgery Follow-up:

- Follow up with Dr. J. Nguyen in 2 weeks (April 28, 2025)
- Wound check, suture removal, and assessment of healing
- X-ray of right hip to verify prosthesis position

Oncology Follow-up:

- Follow up with Dr. D. Ramirez in 3 weeks (May 5, 2025)
- Continue dabrafenib/trametinib without interruption
- Routine surveillance imaging to be scheduled

Physical Therapy:

- Home physical therapy 3 times weekly for 4 weeks

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- Focus on gait training, right hip precautions, and progressive strengthening
- Transition to outpatient physical therapy after 4 weeks

Occupational Therapy:

- Home occupational therapy 2 times weekly for 2 weeks
- Focus on ADL independence and safety

Laboratory Monitoring:

- CBC, CMP, and LFTs in 2 weeks and prior to next oncology visit
- TSH in 6 weeks

Imaging:

- Right hip X-ray at orthopedic follow-up (April 28, 2025)
- Next routine CT Chest/Abdomen/Pelvis scheduled for June 2025

Patient Education Provided:

- Right hip precautions (no flexion >90 degrees, no internal rotation, no adduction past midline)
- Safe use of walker and other adaptive equipment
- Home exercise program
- Medication management
- Wound care
- Signs and symptoms of infection requiring immediate attention
- Fall prevention strategies
- Importance of continuing targeted therapy without interruption
- When to contact healthcare providers
- DVT prophylaxis and signs/symptoms of DVT/PE

9. Lab Values (Excerpt):

Parameter	Baseline (9/2022)	Previous Visit (3/2025)	Admission (4/5/2025)	Discharge (4/14/2025)	Units	Reference Range
WBC	7.2	6.8	8.5	9.2	× 10 ⁹ /L	4.0-11.0
Hemoglobin	12.8	12.2	11.6	10.4	g/dL	12.0-16.0 (F)
Hematocrit	38.4	36.6	34.8	31.2	%	37.0-47.0 (F)
Platelets	248	232	264	285	× 10 ⁹ /L	150-400
Creatinine	0.72	0.78	0.82	0.76	mg/dL	0.5-1.1
BUN	14	16	18	15	mg/dL	7-20
Sodium	138	139	137	138	mmol/L	135-145
Potassium	4.2	4.0	3.9	4.1	mmol/L	3.5-5.0
Chloride	102	101	99	102	mmol/L	98-107
Bicarbonate	24	25	24	25	mmol/L	22-29

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Parameter	Baseline (9/2022)	Previous Visit (3/2025)	Admission (4/5/2025)	Discharge (4/14/2025)	Units	Reference Range
Glucose	102	98	118	110	mg/dL	70-100
Calcium	9.2	9.4	9.0	8.9	mg/dL	8.6-10.2
Phosphorus	3.6	3.8	3.5	3.4	mg/dL	2.5-4.5
Magnesium	2.0	1.9	1.8	1.9	mg/dL	1.6-2.6
Albumin	4.0	3.8	3.6	3.5	g/dL	3.5-5.0
ALT	28	42	45	38	U/L	7-56
AST	25	38	40	35	U/L	8-48
Alk Phos	118	96	102	110	U/L	45-115
Total Bilirubin	0.6	0.7	0.6	0.5	mg/dL	0.2-1.2
LDH	210	182	196	188	U/L	125-220
TSH	3.4	2.9	3.1	-	mIU/L	0.4-4.0
INR	1.0	1.1	1.2	1.1	Ratio	0.8-1.1
CRP	8.5	3.2	48.5	22.4	mg/L	<5.0
ESR	36	22	54	38	mm/hr	0-20

Pathology Report (Right Femoral Head, 4/7/2025):

- Macroscopic: Femoral head and neck (5.2 cm x 4.8 cm) with pathologic fracture through subcapital region. Cut surface shows 2.4 cm area of firm, white-tan tissue replacing bone marrow and cortex at fracture site.
- Microscopic: Metastatic adenocarcinoma involving trabecular bone with extensive osteoblastic reaction and treatment effect. Tumor cells positive for TTF-1, CK7, and Napsin A, consistent with lung primary. Negative for CK20 and GATA3.
- Margins: Tumor present at fracture margin.
- Molecular Testing: BRAF V600E mutation detected.

Electronically Signed By:

Dr. D. Ramirez (Medical Oncology)
Date/Time: 2025-04-14 14:20

Dr. J. Nguyen (Orthopedic Surgery)
Date/Time: 2025-04-14 11:35

Dr. H. Franklin (Interventional Radiology)
Date/Time: 2025-04-13 16:10