NEW ENGLAND ONCOLOGY CENTER

DISCHARGE SUMMARY

DIAGNOSES

1. Stage IV non-small cell lung cancer (adenocarcinoma), metastatic to liver
2. Malignant pleural effusion (right), recurrent
3. Febrile neutropenia (resolved)
4. Acute kidney injury (improved)
5. Rheumatoid arthritis
6. Hyperlipidemia
7. Gastroesophageal reflux disease

BRIEF HISTORY

Ms. Henderson is a 60-year-old female with a history of stage IV wild-type non-small cell lung adenocarcinoma diagnosed in October 2021, initially with liver metastases and malignant pleural effusion. She was initiated on first-line therapy with carboplatin/pemetrexed/pembrolizumab on November 9, 2021. After 4 cycles, she transitioned to maintenance pemetrexed/pembrolizumab. She had disease progression after 13 months of therapy (December 2022) and was subsequently treated with docetaxel/ramucirumab (second-line), then gemcitabine/vinorelbine (third-line). She is currently receiving CPT-11 (irinotecan) as fourth-line therapy, started in January 2025.

She was admitted with fever (39.2°C), fatigue, and dyspnea of 3 days' duration, 8 days after her last irinotecan infusion.

HISTORY OF PRESENT ILLNESS

The patient presented to the Emergency Department with fever, fatigue, and progressive dyspnea of 3 days' duration. She reported productive cough with yellowish sputum, decreased oral intake, and one episode of non-bloody emesis prior to arrival. She denied chest pain, hemoptysis, or neurological symptoms.

On initial evaluation, she was febrile to 39.2°C, tachycardic (HR 112), and hypotensive (BP 92/58) with increased work of breathing. Laboratory studies revealed neutropenia (ANC 0.3 × 10^9/L), thrombocytopenia (platelets 76 × 10^9/L), and elevated creatinine (1.7 mg/dL). Chest X-ray showed a large right pleural effusion and patchy infiltrates in the right lower lobe.

The patient was admitted for management of febrile neutropenia, pneumonia, and recurrent malignant pleural effusion in the setting of advanced NSCLC.

RELEVANT ONCOLOGIC HISTORY

Date of Diagnosis: October 19, 2021
Histology: Adenocarcinoma of the lung
Stage at Diagnosis: Stage IV (T2bN2M1c)
Metastatic Sites: Multiple liver metastases, malignant pleural effusion
Molecular Testing: No actionable mutations identified

- EGFR: Wild-type
- ALK: Negative for rearrangement
- ROS1: Negative for rearrangement
- BRAF: Wild-type
- KRAS: Wild-type
- MET: No exon 14 skipping mutations
- RET: No fusions detected
- NTRK: No fusions detected
- PDL1: TPS <1% (0%)

Treatment History:

1. **First-line therapy:** Carboplatin/pemetrexed/pembrolizumab (Nov 2021 - Feb 2022), followed by maintenance pemetrexed/pembrolizumab (Mar 2022 - Dec 2022)
    - Best response: Partial response (PR)
    - Reason for discontinuation: Progressive disease in liver and new pleural metastases
2. **Second-line therapy:** Docetaxel/ramucirumab (Jan 2023 - Jun 2023)
    - Best response: Stable disease (SD)
    - Reason for discontinuation: Progressive disease
3. **Third-line therapy:** Gemcitabine/vinorelbine (Jul 2023 - Dec 2024)
    - Best response: Partial response
    - Reason for discontinuation: Progressive disease and cumulative toxicity
4. **Fourth-line therapy:** Irinotecan monotherapy (Jan 2025 - present)
    - Response assessment pending

Other Oncologic Interventions:

- Therapeutic thoracentesis × 6 (most recent: March 2025)
- PleurX catheter placement (January 2022 - July 2022)
- Partial hepatic radiation therapy for dominant liver lesion (August 2023)

PAST MEDICAL HISTORY

1. Rheumatoid arthritis (diagnosed 2010)

2. Hyperlipidemia
3. Gastroesophageal reflux disease
4. Hypothyroidism
5. Depression
6. Deep vein thrombosis (2022, related to malignancy)
7. Recurrent pleural effusions requiring thoracentesis

PAST SURGICAL HISTORY

1. Appendectomy (1982)
2. Hysterectomy for fibroids (2008)
3. PleurX catheter placement and removal (2022)

SOCIAL HISTORY

Former smoker (30 pack-year history, quit in 2015). Divorced, lives alone. Two adult children who live nearby. Former elementary school teacher, currently retired. No alcohol use. No recreational drug use.

ALLERGIES

1. Penicillin (hives)
2. Sulfa drugs (rash)
3. Contrast dye (bronchospasm)

HOME MEDICATIONS PRIOR TO ADMISSION

1. Irinotecan 350 mg/m² IV every 3 weeks (last dose: April 1, 2025)
2. Enoxaparin 40 mg SC daily (for history of DVT)
3. Levothyroxine 112 mcg PO daily
4. Methotrexate 15 mg PO weekly (held during chemotherapy)
5. Folic acid 1 mg PO daily
6. Prednisone 5 mg PO daily
7. Omeprazole 40 mg PO daily
8. Atorvastatin 20 mg PO daily
9. Sertraline 50 mg PO daily
10. Oxycodone 5 mg PO q6h PRN for pain

PHYSICAL EXAMINATION AT ADMISSION

Vital Signs:

- Temperature: 39.2°C
- Heart Rate: 112 bpm
- Blood Pressure: 92/58 mmHg
- Respiratory Rate: 24/min
- SpO_2: 91% on room air

General: Ill-appearing, diaphoretic female in moderate respiratory distress.

HEENT: Normocephalic, atraumatic. Mucous membranes dry. No oral lesions or thrush.

Neck: Supple, no lymphadenopathy. No JVD.

Cardiovascular: Tachycardic, regular rhythm. No murmurs, rubs, or gallops.

Respiratory: Decreased breath sounds throughout right lung field. Dullness to percussion at right base. No wheezes or rhonchi on left.

Abdominal: Soft, mild tenderness in RUQ without rebound or guarding. No hepatosplenomegaly.

Extremities: Mild bilateral lower extremity edema. No calf tenderness.

Skin: No rashes or lesions. No signs of cellulitis.

Neurological: Alert and oriented x3. No focal deficits.

DIAGNOSTIC STUDIES DURING ADMISSION

Laboratory Data

CBC (04/09/2025):

- WBC: 1.2 × 10^9/L (Low)
- ANC: 0.3 × 10^9/L (Low)
- Hemoglobin: 9.2 g/dL (Low)
- Hematocrit: 28.1% (Low)
- Platelets: 76 × 10^9/L (Low)

Chemistry (04/09/2025):

- Sodium: 134 mmol/L
- Potassium: 3.7 mmol/L
- Chloride: 96 mmol/L
- Bicarbonate: 22 mmol/L
- BUN: 36 mg/dL (High)
- Creatinine: 1.7 mg/dL (High; baseline 0.9 mg/dL)
- Glucose: 152 mg/dL (High)
- Calcium: 8.8 mg/dL
- Magnesium: 1.8 mg/dL
- Phosphorus: 3.2 mg/dL

Liver Function Tests (04/09/2025):

- AST: 42 U/L (High)

- ALT: 38 U/L
- Alkaline Phosphatase: 172 U/L (High)
- Total Bilirubin: 1.3 mg/dL (High)
- Direct Bilirubin: 0.8 mg/dL (High)
- Albumin: 3.1 g/dL (Low)
- Total Protein: 6.4 g/dL

Inflammatory Markers (04/09/2025):

- CRP: 186 mg/L (High)
- Procalcitonin: 2.4 ng/mL (High)

CBC (04/12/2025):

- WBC: 6.8 × 10^9/L
- ANC: 4.2 × 10^9/L
- Hemoglobin: 9.0 g/dL (Low)
- Hematocrit: 27.5% (Low)
- Platelets: 92 × 10^9/L (Low)

Chemistry (04/12/2025):

- BUN: 22 mg/dL
- Creatinine: 1.2 mg/dL (Improved)

Blood Cultures:

- Two sets of blood cultures: No growth after 5 days

Sputum Culture:

- Pseudomonas aeruginosa (sensitive to cefepime, piperacillin-tazobactam, ciprofloxacin)

Pleural Fluid Analysis (04/10/2025):

- Appearance: Bloody
- RBC: 120,000/µL
- WBC: 1,850/µL (predominantly lymphocytic)
- Protein: 4.2 g/dL
- LDH: 632 U/L
- Glucose: 48 mg/dL
- pH: 7.28
- Cytology: Positive for malignant cells, consistent with adenocarcinoma of lung primary
- Culture: No growth

Imaging Studies

Chest X-ray (04/09/2025): Large right pleural effusion with compressive atelectasis of the right lower lobe. Patchy infiltrates in right lower lobe. Stable left upper lobe mass compared to prior studies.

CT Chest/Abdomen/Pelvis with contrast (04/10/2025):

- Left upper lobe mass measuring 3.2 cm (increased from 2.8 cm in January 2025)
- Large right pleural effusion with loculations
- Right lower lobe consolidation consistent with pneumonia
- Multiple liver lesions with overall stable to slightly increased disease burden
- Largest liver lesion in segment VII measuring 3.4 cm (previously 3.0 cm)
- No evidence of pulmonary embolism
- No new sites of metastatic disease

Ultrasound-guided thoracentesis (04/10/2025): 1.2 L of bloody fluid removed from right pleural space with symptomatic improvement. Residual loculated fluid remains.

HOSPITAL COURSE

Infectious Disease Management

Patient was admitted with febrile neutropenia and right lower lobe pneumonia. She was started empirically on cefepime 2g IV q8h and vancomycin 15 mg/kg IV q12h. Filgrastim 480 mcg SC daily was administered for 3 days with recovery of neutrophil count. Sputum culture grew Pseudomonas aeruginosa sensitive to cefepime. Blood cultures showed no growth. Vancomycin was discontinued after 48 hours. Patient became afebrile after 36 hours of antibiotics. She completed a 5-day course of IV cefepime and was transitioned to oral ciprofloxacin 750 mg BID for an additional 5 days.

Pulmonary Management

Ultrasound-guided thoracentesis was performed on 4/10/2025 with removal of 1.2 L of bloody pleural fluid, resulting in significant symptomatic improvement. Cytology was positive for malignant cells. Pulmonology was consulted regarding management of recurrent malignant pleural effusion. Given the patient's overall clinical status and anticipated poor prognosis, the risks of pleurodesis or indwelling pleural catheter placement were deemed to outweigh potential benefits at this time. Plan is for as-needed therapeutic thoracentesis for symptom management.

Renal Management

Patient presented with acute kidney injury (Cr 1.7 mg/dL from baseline 0.9 mg/dL), likely multifactorial due to volume depletion and nephrotoxic effects of irinotecan. She was treated with IV hydration and renal-adjusted antibiotics. Creatinine improved to 1.2 mg/dL by discharge.

Oncologic Management

Patient has metastatic NSCLC with disease progression on multiple lines of therapy, currently receiving fourth-line irinotecan with significant toxicity (febrile neutropenia). Oncology team discussed prognosis and treatment options with the patient. Given her poor functional status (ECOG 3) and limited benefit from further cytotoxic chemotherapy, recommendation was to transition to supportive care or consider a phase I clinical trial. Patient requested time to discuss options with family before making a decision. Next oncology appointment scheduled for 1 week after discharge.

Pain Management

Pain was initially controlled with IV hydromorphone, transitioning to oral oxycodone prior to discharge. Right-sided chest discomfort improved significantly after thoracentesis.

MEDICATIONS ON DISCHARGE

1. Ciprofloxacin 750 mg PO BID for 5 more days
2. Levothyroxine 112 mcg PO daily
3. Methotrexate 15 mg PO weekly (to restart 2 weeks after discharge)
4. Folic acid 1 mg PO daily
5. Prednisone 5 mg PO daily
6. Omeprazole 40 mg PO daily
7. Atorvastatin 20 mg PO daily
8. Sertraline 50 mg PO daily
9. Oxycodone 5-10 mg PO q6h PRN for pain
10. Acetaminophen 650 mg PO q6h PRN for pain/fever
11. Enoxaparin 40 mg SC daily

DISCHARGE DISPOSITION

Patient was discharged home with home health services for medication management and wound care.

CONDITION AT DISCHARGE

Stable. Afebrile. Neutropenia resolved. Breathing improved but with persistent dyspnea on exertion. Oxygen saturation 94% on room air at rest.

FUNCTIONAL STATUS AT DISCHARGE

ECOG Performance Status: 3 Patient is capable of only limited self-care, confined to bed or chair more than 50% of waking hours.

FOLLOW-UP APPOINTMENTS

1. Medical Oncology: Dr. Robert Blackwell - April 20, 2025 at 10:00 AM
2. Pulmonology: Dr. Sarah Chen - April 27, 2025 at 2:00 PM
3. Primary Care: Dr. James Wilson - May 4, 2025 at 11:00 AM

ONCOLOGIC ASSESSMENT

Ms. Henderson has stage IV wild-type non-small cell lung adenocarcinoma (PDL1 TPS <1%) diagnosed in October 2021. She initially received carboplatin/pemetrexed/pembrolizumab with partial response, but progressed after 13 months of therapy. She subsequently received docetaxel/ramucirumab (6 months PFS) and gemcitabine/vinorelbine (18 months PFS). She is currently on fourth-line irinotecan monotherapy initiated in January 2025.

Recent imaging shows progressive disease with increased size of primary tumor and liver metastases. She has had recurrent malignant pleural effusions requiring multiple thoracenteses. Her current admission for febrile neutropenia, pneumonia, and recurrent pleural effusion reflects declining functional status and increased treatment toxicity.

While she has demonstrated reasonable responses to multiple lines of therapy, her clinical trajectory is consistent with advanced, treatment-refractory disease. Given her current ECOG status of 3, further cytotoxic chemotherapy is unlikely to provide meaningful clinical benefit and carries substantial risk of toxicity.

Treatment options at this point include:

1. Transition to supportive care/hospice
2. Consider phase I clinical trial if functional status improves
3. Continuation of current irinotecan therapy with dose reduction (not recommended)

The estimated prognosis at this stage is 2-4 months with supportive care only. The patient has been informed of these options and prognosis and will discuss with family before next oncology appointment.

ADDITIONAL RECOMMENDATIONS

1. Close monitoring for recurrent pleural effusion with as-needed thoracentesis for symptomatic relief
2. Consider palliative care consultation at next oncology visit
3. Complete advance directives if not already in place
4. Nutrition consultation for optimization of caloric intake
5. Home oxygen evaluation if dyspnea worsens

Dictated by: Robert Blackwell, MD
Electronically signed: 04/13/2025 16:42
Medical Oncology
New England Oncology Center

PATIENT ID: SYN046
NAME: Patricia Henderson
DOB: January 12, 1965 Fem
DATE OF ADMISSION: April 9, 2025
DATE OF DISCHARGE: April 13, 2025
ATTENDING PHYSICIAN: Dr. Robert Blackwell, MD