**Patient**: Sophia Carter  
**MRN**: 579236  
**Admission**: 2025-03-17 | **Discharge**: 2025-03-24  
**Physicians**: Dr. R. Nelson (Hematology), Dr. J. Kim (Nephrology), Dr. T. Edwards (Gastroenterology)

**Discharge diagnosis: PNH with breakthrough hemolysis**

**1. Detailed Diagnosis**

* **Initial Diagnosis**: 2022-05-18
* **Flow Cytometry at Diagnosis**: RBC PNH clone 55%, Granulocyte 68%, Monocyte 72%
* **Current Clone Size** (2025-03-18): RBC 42%, Granulocyte 70%, Monocyte 74%
* **Molecular**: PIGA gene mutation c.756C>G (p.Tyr252\*); NGS panel negative for myeloid mutations
* **Bone Marrow** (2022-05-15): Hypocellular (40%), erythroid hyperplasia, no evolution to MDS/AML
* **Thrombotic History**: Mesenteric vein thrombosis (2022-08-12)

**2. Current Episode**

* **Presentation**: 3-day history of fatigue, cola-colored urine, abdominal pain, low-grade fever
* **Etiology**: Parvovirus B19 positive (PCR)
* **Labs**: Hgb 6.8 g/dL, LDH 1,850 U/L, haptoglobin <10 mg/dL, creatinine 1.6 mg/dL
* **Treatment**:
  + Eculizumab 900 mg IV (given 1 week early)
  + Piperacillin-tazobactam for 5 days
  + IVIG 0.4 g/kg/day (25g) × 5 days
  + RBC transfusion: 2 units
  + IV hydration
* **Response**:
  + Hemolysis improved (LDH 1,850 → 420 U/L)
  + Hemoglobin stabilized (6.8 → 9.2 g/dL)
  + Renal function normalized (Cr 1.6 → 0.9 mg/dL)
  + Parvovirus B19 viral load significantly decreased

**3. Treatment History**

* **Initial Management** (2022-05 to 2022-09):
  + RBC transfusions (~12 units)
  + Prednisone trial (minimal response)
  + Anticoagulation: enoxaparin → apixaban (for MVT)
* **Eculizumab** (started 2022-09):
  + Induction: 600 mg IV weekly × 4
  + Maintenance: 900 mg IV every 2 weeks
  + Prior breakthrough (2023-11-15): Resolved with additional dose
* **Meningococcal Vaccination**: MenACWY and MenB series completed

**4. Comorbidities**

* Iron deficiency
* Anxiety disorder
* Hypothyroidism
* GERD
* Vitamin D deficiency

**5. Discharge Medications**

* Eculizumab 1200 mg IV every 2 weeks (increased from 900 mg) - Next: 2025-03-31
* Penicillin VK 500 mg PO BID (meningitis prophylaxis)
* Apixaban 5 mg PO BID
* Levothyroxine 75 mcg PO daily
* Ferrous sulfate 325 mg PO daily
* Folic acid 1 mg PO daily
* Vitamin D3 2000 IU PO daily
* Pantoprazole 40 mg PO daily
* Acetaminophen 650 mg PO Q6H PRN

**6. Follow-up Plan**

* **Hematology**: Dr. R. Nelson in 1 week (3/31/25) for eculizumab infusion
  + Labs prior: CBC, reticulocytes, LDH, haptoglobin, CMP
  + PNH clone size in 3 months
  + Weekly CBC, LDH × 4 weeks, then biweekly if stable
  + Urinalysis monthly
* **Nephrology**: Dr. J. Kim in 2 weeks (4/7/25)
  + Weekly creatinine and urinalysis × 4 weeks
* **Infectious Disease**:
  + Parvovirus B19 PCR in 2 weeks
  + Consider additional IVIG if viral load persists
  + Meningococcal status: MenACWY booster due 9/10/25, MenB booster due 2026-10
* **Treatment Plan**:
  + Continue increased eculizumab dose (1200 mg q2weeks)
  + Consider ramucirumab if breakthrough recurs

**7. Laboratory Values (Admission → Discharge)**

* WBC: 4.1 → 4.8 × 10^9/L
* Hemoglobin: 6.8 → 9.2 g/dL
* Platelets: 95 → 110 × 10^9/L
* Reticulocytes: 12.3 → 8.5%
* LDH: 1,850 → 420 U/L
* Haptoglobin: <10 → 12 mg/dL
* Total Bilirubin: 3.6 → 1.8 mg/dL
* Creatinine: 1.6 → 0.9 mg/dL
* Serum Free Hemoglobin: 428 → 58 mg/dL
* Urinalysis: Large hemoglobin → Negative for hemoglobin

**Electronically Signed By**:  
Dr. R. Nelson (Hematology) - 2025-03-24 15:30  
Dr. J. Kim (Nephrology) - 2025-03-24 14:45