**Patient:** Harold Richardson (DOB 1942-02-24)  
**Medical Record Number:** 784915  
**Date of Admission:** 2025-03-05  
**Date of Discharge:** 2025-03-23  
**Admitting Physician:** Dr. L. Kapoor (Hematology/Oncology)  
**Consulting Physicians:** Dr. J. Robinson (Infectious Disease), Dr. E. Washington (Nephrology)

**Discharge Diagnosis: Acute Myeloid Leukemia with Myelodysplasia-Related Changes, Status Post Cycle 1 of Venetoclax/Azacitidine**

**1. Detailed Hematological Diagnosis:**

Primary Diagnosis: Acute Myeloid Leukemia with Myelodysplasia-Related Changes  
Date of Diagnosis: February 28, 2025

Hematological Work-up:

* Complete Blood Count at diagnosis: WBC: 32.6 × 10^9/L with 45% blasts, Hemoglobin: 8.2 g/dL, Platelets: 45 × 10^9/L
* Peripheral blood smear: Circulating myeloblasts with dysplastic features in neutrophil and erythroid lineages

Bone Marrow Analysis (February 28, 2025):

* Hypercellular marrow (90%) with 40% myeloblasts
* Multilineage dysplasia evident in >50% of cells in erythroid and megakaryocytic lineages
* Flow cytometry: Blasts positive for CD34, CD117, CD13, CD33, HLA-DR, and CD123; negative for CD14, CD64, and lymphoid markers
* Cytogenetics: Complex karyotype including del(5q), -7, and +8
* Molecular studies: NPM1: Negative, FLT3-ITD and FLT3-TKD: Negative, IDH1 and IDH2: Negative, RUNX1: Positive, ASXL1: Positive, TP53: Positive (VAF 45%), DNMT3A: Positive

Risk Stratification:

* European LeukemiaNet (ELN) 2022 Risk Category: Adverse Risk
  + Based on complex karyotype, TP53 mutation, and absence of favorable mutations

**2. Current Treatment:**

Induction Therapy:

* Venetoclax/Azacitidine Regimen (initiated March 6, 2025):
  + Venetoclax: Ramp-up schedule 10 mg day 1, 20 mg day 2, 50 mg day 3, 70 mg day 4 onward (dose reduction due to Posaconazole cotreatment)
  + Azacitidine 75 mg/m² SC daily (days 1-7)
* Cycle 1 completed (March 6-12, 2025 for azacitidine, continuing venetoclax)

Tumor Lysis Syndrome (TLS) Prophylaxis:

* Allopurinol 300 mg PO daily (started 48 hours prior to venetoclax)
* Aggressive hydration with IV fluids
* Strict monitoring of electrolytes during venetoclax ramp-up

Supportive Care:

* Antimicrobial prophylaxis:
  + Levofloxacin 500 mg PO daily
  + Posaconazole 300 mg PO daily
  + Acyclovir 400 mg PO BID

Management of Complications:

* Febrile neutropenia (March 13, 2025): Treated with Meropenem 2g IV q8h, later de-escalated to oral antibiotics after fever resolution
* Mucositis (grade 2): Managed with magic mouthwash and pain control

**3. Prior Hematological History:**

* Myelodysplastic syndrome (RAEB-2) diagnosed 4 months ago (October 2024)
* Received supportive care only (transfusions) due to patient preference
* Rapid progression to AML documented in February 2025

**4. Medical History:**

Chronic Medical Conditions:

* Parkinson's disease (diagnosed 2018, mild-moderate severity)
* Childhood poliomyelitis (age 7, with residual left leg weakness)
* Bilateral sensorineural hearing loss (uses hearing aids)
* Chronic kidney disease stage 3 (baseline creatinine 1.5 mg/dL)
* History of pulmonary tuberculosis (1965, fully treated)
* Diverticular disease with history of acute diverticulitis (2022)
* Benign prostatic hyperplasia
* History of malignant melanoma (right shoulder, 2015, wide excision with negative margins, no evidence of recurrence)
* Monoclonal gammopathy of undetermined significance (MGUS, diagnosed 2019)
* Vitamin B12 deficiency (requires monthly injections)

Prior Surgeries:

* Wide local excision of melanoma with sentinel lymph node biopsy (2015)
* Mastoid surgery for cholesteatoma (1980)
* Transurethral resection of prostate (TURP, 2021)
* Bilateral cataract surgery (2018)
* Partial gastrectomy for peptic ulcer disease (1975)

Allergies:

* Iodinated contrast (anaphylaxis)
* Latex (contact dermatitis)
* Peanuts (angioedema)

**5. Physical Exam at Admission:**

General: 83-year-old male appearing his stated age, frail but in no acute distress. Bilateral hearing aids in place.

Vitals: BP 134/76 mmHg, HR 72 bpm, RR 18/min, Temp 36.8°C, SpO2 95% on room air.

HEENT: Normocephalic, atraumatic. Oral mucosa with mild pallor. No oral lesions or thrush. Bilateral hearing aids. Post-surgical scar behind right ear from mastoid surgery.

Neck: Supple. No cervical lymphadenopathy. No thyromegaly.

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

Respiratory: Bibasilar crackles, more prominent at right base. No wheezes.

Abdomen: Soft, non-tender, non-distended. No hepatosplenomegaly. Normal bowel sounds. Midline upper abdominal surgical scar from partial gastrectomy.

Extremities: Mild right upper extremity tremor consistent with Parkinson's disease. Mild left leg muscle atrophy and weakness (residual from childhood polio). No edema.

Skin: Multiple ecchymoses on extremities. Surgical scar on right shoulder from melanoma excision. No petechiae or purpura.

Neurological: Alert and oriented x3. Cranial nerves II-XII intact. Motor strength 4/5 in all extremities. No sensory deficits.

ECOG Performance Status: 2 (Ambulatory and capable of all self-care but unable to carry out any work activities. Up and about >50% of waking hours).

**6. Hospital Course Summary:**

Mr. Richardson is an 83-year-old male with recently diagnosed AML with myelodysplasia-related changes that evolved from prior MDS. He was admitted for initiation of venetoclax/azacitidine therapy, chosen due to his advanced age, comorbidities, and adverse-risk disease features.

The patient was admitted on March 5, 2025, for pre-therapy evaluation and TLS prophylaxis. Baseline labs showed WBC 32.6 × 10^9/L with 45% blasts, Hgb 8.2 g/dL, and platelets 45 × 10^9/L. Venetoclax was initiated with a ramp-up schedule alongside TLS prophylaxis with allopurinol and hydration. The patient tolerated the venetoclax ramp-up without evidence of tumor lysis syndrome, and azacitidine was administered on days 1-7 (March 6-12, 2025).

On day 8 of therapy (March 13, 2025), the patient developed neutropenic fever with temperature 38.5°C and an absolute neutrophil count of 0.1 × 10^9/L. Blood cultures were obtained, and empiric antibiotic therapy with Meropenem was initiated. Blood cultures remained negative, and the fever resolved within 48 hours. The patient completed a 7-day course of IV antibiotics.

During the neutropenic period, the patient developed grade 2 mucositis, which was managed with magic mouthwash and appropriate pain control. He required transfusion support with 4 units of packed red blood cells and 2 units of platelets throughout his hospital stay.

By day 16 (March 21, 2025), the absolute neutrophil count had recovered to 1.2 × 10^9/L. Repeat CBC on day 18 (March 23, 2025) showed WBC 2.8 × 10^9/L, ANC 1.8 × 10^9/L, Hgb 9.5 g/dL, and platelets 85 × 10^9/L.

A multidisciplinary approach included infectious disease for management of neutropenic fever and nephrology for monitoring renal function during therapy and TLS prophylaxis. Renal function remained stable throughout admission with no significant changes in creatinine.

The patient was discharged on March 23, 2025. A bone marrow biopsy to assess response is scheduled for day 28 after initiation of therapy.

**7. Medication at Discharge:**

* Venetoclax 70 mg PO daily
* Posaconazole 300 mg PO daily (fungal prophylaxis)
* Acyclovir 400 mg PO BID (viral prophylaxis)
* Magic mouthwash 5-10 mL swish and spit q4h PRN for oral discomfort
* Carbidopa-levodopa 25/100 mg PO TID (for Parkinson's disease)
* Vitamin B12 1000 mcg IM monthly (next due April 15, 2025)
* Omeprazole 20 mg PO daily
* Tamsulosin 0.4 mg PO daily at bedtime
* Cholecalciferol (Vitamin D3) 2000 IU PO daily
* Metoclopramide 10 mg PO q8h for nausea
* Acetaminophen 650 mg PO q6h PRN for pain

Temporarily Held Medications:

* Amantadine (for Parkinson's disease, to be reassessed during follow-up)
* Levofloxacin 500 mg PO daily (bacterial prophylaxis only when neutropenic)
* Allopurinol 300 mg PO daily (no TLS risk anymore)

**8. Further Procedure / Follow-up:**

Hematology/Oncology Follow-up:

* Follow up with Dr. L. Kapoor on March 26, 2025 (3 days after discharge)
* CBC with differential twice weekly until stable
* Comprehensive metabolic panel weekly
* Bone marrow biopsy scheduled for April 2, 2025 (day 28 of therapy) to assess response

**Treatment Plan:**

* If complete remission: Continue with cycle 2 of venetoclax/azacitidine
* If partial response: Consider dose modifications for cycle 2
* If refractory disease: Discuss alternative approaches or supportive care options
* Planned cycle 2 to begin approximately April 9, 2025 (contingent on bone marrow findings and count recovery)

Infectious Disease Follow-up:

* Follow up with Dr. J. Robinson on April 3, 2025 to assess infection status and prophylaxis plan

Nephrology Follow-up:

* Follow up with Dr. E. Washington on April 10, 2025 to monitor renal function

Patient Education Provided:

* Signs and symptoms requiring immediate medical attention
* Infection prevention measures
* Importance of compliance with prophylactic medications
* Nutritional counseling for neutropenic diet
* Home safety measures to prevent bleeding and falls
* Detailed follow-up schedule

**9. Lab Values (Excerpt):**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Admission (3/5/2025)** | **Nadir** | **Discharge (3/23/2025)** | **Units** | **Reference Range** |
| WBC | 32.6 | 0.4 (3/16) | 2.8 | × 10^9/L | 4.0-11.0 |
| Blasts (%) | 45 | Not detected (3/20) | Not detected | % | 0 |
| ANC | 1.4 | 0.0 (3/14-3/17) | 1.8 | × 10^9/L | 2.0-7.0 |
| Hemoglobin | 8.2 | 7.5 (3/14) | 9.5 | g/dL | 13.5-17.5 (M) |
| Platelets | 45 | 12 (3/15) | 85 | × 10^9/L | 150-400 |
| Creatinine | 1.5 | 1.7 (3/8) | 1.4 | mg/dL | 0.7-1.3 |
| BUN | 28 | 35 (3/8) | 26 | mg/dL | 7-20 |
| Potassium | 4.3 | 3.6 (3/15) | 4.1 | mmol/L | 3.5-5.0 |
| Calcium | 8.8 | 8.5 (3/9) | 8.9 | mg/dL | 8.6-10.3 |
| Phosphorus | 3.4 | 2.8 (3/8) | 3.2 | mg/dL | 2.5-4.5 |
| Uric Acid | 6.8 | 3.2 (3/8) | 4.5 | mg/dL | 3.5-7.2 |
| ALT | 32 | - | 35 | U/L | 7-56 |
| AST | 28 | - | 30 | U/L | 8-48 |
| Total Bilirubin | 1.0 | - | 1.1 | mg/dL | 0.2-1.2 |
| LDH | 325 | 180 (3/20) | 195 | U/L | 135-225 |
| Glucose | 152 | - | 145 | mg/dL | 70-100 |

**Electronically Signed By:**  
Dr. L. Kapoor (Hematology/Oncology)  
Date/Time: 2025-03-23 15:45

Dr. J. Robinson (Infectious Disease)  
Date/Time: 2025-03-23 13:30

Dr. E. Washington (Nephrology)  
Date/Time: 2025-03-22 16:15