**Patient**: H.R. (DOB 1942-02-24)  
**MRN**: 784915  
**Admission**: 2025-03-05 | **Discharge**: 2025-03-23  
**Physicians**: Dr. L. Kapoor (Hematology/Oncology), 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

**HEMATOLOGICAL DIAGNOSIS**

* **Primary**: Acute Myeloid Leukemia with Myelodysplasia-Related Changes
* **Diagnosed**: February 28, 2025
* **Hematological Findings**:
  + CBC at diagnosis: WBC 32.6 × 10^9/L (45% blasts), Hgb 8.2 g/dL, Plt 45 × 10^9/L
  + Peripheral blood: Circulating myeloblasts with dysplastic features in neutrophil and erythroid lineages
* **Bone Marrow Analysis** (Feb 28, 2025):
  + Hypercellular marrow (90%) with 40% myeloblasts
  + Multilineage dysplasia in >50% of cells (erythroid and megakaryocytic lineages)
  + Flow cytometry: Blasts positive for CD34, CD117, CD13, CD33, HLA-DR, CD123; negative for CD14, CD64, lymphoid markers
  + Cytogenetics: Complex karyotype including del(5q), -7, +8
  + Molecular: NPM1 negative, FLT3-ITD/TKD negative, IDH1/2 negative, RUNX1 positive, ASXL1 positive, TP53 positive (VAF 45%), DNMT3A positive
* **Risk Stratification**: ELN 2022 Adverse Risk (complex karyotype, TP53 mutation, absence of favorable mutations)
* **Reason for Venetoclax/Azacitidine Approach**: Therapy selection based on patient's advanced age (83), multiple comorbidities (especially Parkinson's disease and CKD), and adverse-risk disease features. Alternative intensive induction chemotherapy deemed inappropriate due to high treatment-related mortality risk.

**PRIOR HEMATOLOGICAL HISTORY**

* MDS (RAEB-2) diagnosed October 2024
* Previously managed with transfusion support only (patient preference)
* Rapid progression to AML documented February 2025

**MEDICAL HISTORY**

* Parkinson's disease (2018, mild-moderate)
* Childhood poliomyelitis (residual left leg weakness)
* Bilateral sensorineural hearing loss
* CKD stage 3 (baseline Cr 1.5 mg/dL)
* History of pulmonary TB (1965, treated)
* Diverticular disease with history of diverticulitis (2022)
* BPH
* Melanoma (right shoulder, 2015, surgically treated, no recurrence)
* MGUS (2019)
* Vitamin B12 deficiency (requires monthly injections)
* Allergies: Iodinated contrast (anaphylaxis), latex (contact dermatitis), peanuts (angioedema)

**CURRENT TREATMENT**

**Induction Therapy**:

* Venetoclax/Azacitidine Regimen (initiated March 6, 2025):
  + Venetoclax: Ramp-up schedule 10mg→20mg→50mg→70mg (dose reduction due to posaconazole)
  + Standard dose would be 400mg; reduced to 70mg due to strong CYP3A4 inhibition from posaconazole
  + Azacitidine 75 mg/m² SC daily (days 1-7, March 6-12)
  + Cycle 1 completed

**TLS Prophylaxis**:

* Allopurinol 300 mg PO daily (started 48h pre-venetoclax)
* Aggressive IV hydration
* Close electrolyte monitoring during ramp-up
* Modified venetoclax ramp-up due to renal impairment and high tumor burden

**Supportive Care**:

* Antimicrobial prophylaxis: Levofloxacin, posaconazole, acyclovir
* Transfusion support: 4 units PRBC, 2 units platelets during hospitalization
* G-CSF intentionally avoided due to high blast count at presentation
* Special attention to Parkinson's medications to maintain neurological stability

**HOSPITAL COURSE**

83-year-old male admitted for venetoclax/azacitidine induction therapy for newly diagnosed AML with myelodysplasia-related changes.

Patient tolerated venetoclax ramp-up without TLS. Azacitidine administered days 1-7 (March 6-12). Developed neutropenic fever on day 8 (March 13, T 38.5°C, ANC 0.1 × 10^9/L). Blood cultures obtained, started on meropenem. Chest x-ray showed no pneumonia, but an unclear mass in RUL. Blood cultures remained negative, fever resolved within 48h. Completed 7-day course of IV antibiotics.

Developed grade 2 mucositis during neutropenia, managed with magic mouthwash and pain control. ANC recovered to 1.2 × 10^9/L by day 16 (March 21). Discharge labs (day 18, March 23): WBC 2.8 × 10^9/L, ANC 1.8 × 10^9/L, Hgb 9.5 g/dL, Plt 85 × 10^9/L, no circulating blasts detected.

Renal function remained stable throughout admission with no significant changes in creatinine. Bone marrow biopsy to assess response scheduled for day 28 after treatment initiation.

**DISCHARGE MEDICATIONS**

* Venetoclax 70 mg PO daily
* Posaconazole 300 mg PO daily
* Acyclovir 400 mg PO BID
* Magic mouthwash 5-10 mL swish and spit q4h PRN
* Carbidopa-levodopa 25/100 mg PO TID
* Vitamin B12 1000 mcg IM monthly (next due April 15)
* Omeprazole 20 mg PO daily
* Tamsulosin 0.4 mg PO daily at bedtime
* Cholecalciferol 2000 IU PO daily
* Acetaminophen 650 mg PO q6h PRN

**Temporarily Held**:

* Amantadine (reassess during follow-up)
* Levofloxacin (only when neutropenic)
* Allopurinol (no TLS risk)

**FOLLOW-UP PLAN**

**Hematology/Oncology**:

* Dr. L. Kapoor on March 26, 2025 (3 days post-discharge)
* CBC with differential twice weekly until stable
* CMP weekly
* CT chest scan with contrast scheduled for March 30, 2025 to reassess RUL mass
* Bone marrow biopsy scheduled for April 2, 2025 (day 28) to assess response
* Special attention to fluid status and renal function during follow-up visits due to CKD

**Treatment Plan**:

* If CR: Continue cycle 2 of venetoclax/azacitidine
* If refractory: Discuss alternative approaches or supportive care
* Planned cycle 2 to begin ~April 9, 2025 (contingent on BM findings and count recovery)
* Anticipated total therapy duration: Up to 12 cycles if responding, with reassessment after every 2-3 cycles
* Long-term plan includes consideration of reduced-intensity therapy if stable disease achieved, based on patient's age and comorbidities

**Additional Follow-up**:

* Infectious Disease: Dr. J. Robinson on April 3, 2025
* Nephrology: Dr. E. Washington on April 10, 2025

**Patient Education Provided**:

* Signs/symptoms requiring immediate medical attention
* Infection prevention measures
* Medication compliance importance
* Neutropenic diet
* Home safety to prevent bleeding and falls

**KEY LAB VALUES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **Admission** | **Nadir** | **Discharge** | **Reference** |
| WBC | 32.6 | 0.4 (3/16) | 2.8 | 4.0-11.0 × 10^9/L |
| Blasts (%) | 45 | Not detected (3/20) | Not detected | 0% |
| ANC | 1.4 | 0.0 (3/14-17) | 1.8 | 2.0-7.0 × 10^9/L |
| Hemoglobin | 8.2 | 7.5 (3/14) | 9.5 | 13.5-17.5 g/dL |
| Platelets | 45 | 12 (3/15) | 85 | 150-400 × 10^9/L |
| Creatinine | 1.5 | 1.7 (3/8) | 1.4 | 0.7-1.3 mg/dL |
| Uric Acid | 6.8 | 3.2 (3/8) | 4.5 | 3.5-7.2 mg/dL |
| LDH | 325 | 180 (3/20) | 195 | 135-225 U/L |

**Electronically Signed**:  
Dr. L. Kapoor (Hematology/Oncology)  
Dr. J. Robinson (Infectious Disease)  
Dr. E. Washington (Nephrology)  
Date: 2025-03-23