**Patient**: T.N. (DOB: 1962-04-18)  
**MRN**: 629471  
**Admission**: 2025-03-25 | **Discharge**: 2025-04-01  
**Physicians**: Dr. R. Patel (Medical Oncology), Dr. L. Matthews (Interventional Radiology), Dr. S. Wilson (Pulmonology)

**DISCHARGE DIAGNOSIS**

Hepatocellular Carcinoma on bevacizumab/atezolizumab therapy, with acute bilateral pulmonary emboli

**ONCOLOGICAL DIAGNOSIS**

* **Primary**: Hepatocellular Carcinoma (HCC)
* **Diagnosed**: 2024-10-08
* **Histology**:
  + Ultrasound-guided core needle biopsy of segment V liver mass
  + Moderately differentiated (G2) hepatocellular carcinoma
  + IHC: Hepatocyte-specific antigen+, Glypican-3+, Arginase-1+, CK7-, CK20-
* **Molecular Testing**:
  + TERT promoter mutation, CTNNB1 mutation, TP53 mutation (R249S)
  + No actionable mutations for targeted therapy
* **Initial Staging**:
  + AJCC 8th Ed.: cT3N0M0, Stage IIIA
  + Barcelona Clinic Liver Cancer (BCLC): Stage B (intermediate)
  + ECOG PS: 1
* **Etiology**:
  + Chronic hepatitis B infection (diagnosed 2010)
  + Cirrhosis (Child-Pugh A)
  + MELD score: 9
* **Imaging**:
  + CT Abdomen (2024-10-05): Dominant mass in right hepatic lobe (segment V), 6.8 × 5.7 cm with satellite lesions in segments VI and VIII (1.2 cm and 2.3 cm). No vascular invasion. Multiple intrahepatic metastases. No ascites. Splenomegaly.
  + CT Chest (2024-10-09): No lung metastases.
  + MRI Abdomen (2024-10-07): Confirms CT findings. Arterial phase hyperenhancement and delayed phase washout. Patent vessels. Nodular liver contour consistent with cirrhosis.

**CURRENT TREATMENT**

* **CT Pulmonary Angiogram** (2025-03-25): Bilateral pulmonary emboli involving right main pulmonary artery extending into upper and lower lobe branches, and left lower lobe segmental arteries. No right heart strain.
* **Treatment**:
  + Therapeutic enoxaparin (1 mg/kg SubQ BID) for 7 days
  + Transitioned to apixaban 5 mg PO BID

**TREATMENT HISTORY**

**Locoregional Therapy**:

* TACE × 2 sessions (2024-10-22 and 2024-11-15)
* Switch to systemic therapy due to multifocal disease progression

**Systemic Therapy**:

* Atezolizumab 1200 mg IV + Bevacizumab 15 mg/kg IV
* Cycles 1-5: 2024-12-10 through 2025-03-18

**AFP Trend**:

* At diagnosis (2024-10): 3,450 ng/mL
* Pre-treatment (2024-11): 4,200 ng/mL
* After 2 cycles (2025-01): 1,850 ng/mL
* After 5 cycles (2025-03): 1,100 ng/mL

**Prior Toxicities**:

* Grade 2 fatigue (ongoing)
* Grade 1 infusion reaction with cycle 1 (resolved)
* Grade 2 hypertension (controlled)
* Grade 1 hypothyroidism (on levothyroxine after cycle 3)
* Grade 1 transaminitis (intermittent)

**COMORBIDITIES**

* Chronic hepatitis B (on entecavir 0.5 mg daily since 2012)
* Compensated cirrhosis (Child-Pugh A)
* Hypertension (diagnosed 2019)
* Type 2 diabetes mellitus (diagnosed 2020)
* Esophageal varices Paquet Grade I
* Hyperlipidemia

**HOSPITAL COURSE**

62-year-old male with HBV-related cirrhosis and Stage IIIA HCC on atezolizumab/bevacizumab presented with acute dyspnea, pleuritic chest pain, and tachycardia 7 days after cycle 5.

Presented with tachycardia, tachypnea, and oxygen saturation of 92% on room air. D-dimer elevated at 3.8 mg/L. CT pulmonary angiogram confirmed bilateral pulmonary emboli. Echocardiogram showed preserved LV function (EF 55%) with mild RV dilation but normal function, consistent with submassive PE. Doppler ultrasound demonstrated occlusive DVT in left popliteal vein.

Patient started on therapeutic enoxaparin. Pulmonology recommended against thrombolytic therapy given absence of hemodynamic compromise and underlying cirrhosis with bleeding risk. Interventional radiology determined patient was not a candidate for catheter-directed therapy.

Patient remained hemodynamically stable with improvement to room air by day 5. Liver function remained at baseline and renal function stable. Oncology recommended discontinuation of bevacizumab due to thromboembolic event, with plans to continue atezolizumab monotherapy after stabilization.

Hypercoagulability evaluation initiated but still pending. PE etiology likely multifactorial: malignancy-associated hypercoagulability, bevacizumab therapy, and underlying cirrhosis.

After 7 days of therapeutic anticoagulation, transitioned to apixaban 5 mg BID. DOAC chosen based on stable liver function, patient preference, and emerging data supporting DOAC use in selected patients with compensated cirrhosis.

**DISCHARGE MEDICATIONS**

* Apixaban 5 mg PO BID (indefinite, minimum 6 months)
* Entecavir 0.5 mg PO daily
* Lisinopril 10 mg PO daily
* Metformin 1000 mg PO BID
* Atorvastatin 20 mg PO daily
* Levothyroxine 50 mcg PO daily
* Acetaminophen 500 mg PO Q6H PRN (max 2 g/day)
* Pantoprazole 40 mg PO daily

**Medications Held/Discontinued**:

* Bevacizumab (permanently discontinued due to PE)
* Atezolizumab (temporarily held, resume as monotherapy in 2-4 weeks)

**FOLLOW-UP PLAN**

**Medical Oncology**:

* Dr. R. Patel in 1 week (2025-04-08)
* Resume atezolizumab monotherapy in 2-4 weeks
* Consider switch to durvalumab/tremelimumab

**Pulmonology**:

* Dr. S. Wilson in 2 weeks (2025-04-15)
* Follow-up CT pulmonary angiogram in 3 months

**Hepatology**:

* Dr. C. Ramirez in 2 weeks (2025-04-15)
* Surveillance endoscopy in 3 months for varices

**Laboratory Monitoring**:

* CBC, CMP, PT/INR, AFP weekly for first month, then every 3 weeks
* TSH, fT4 every 6 weeks while on immunotherapy
* HBV viral load every 3 months

**Imaging**:

* CT chest/abdomen/pelvis with contrast in 6 weeks (2025-05-15)

Y^**Patient Education**:

* Signs of recurrent VTE (SOB, chest pain, leg swelling)
* Bleeding precautions on anticoagulation
* Signs of hepatic decompensation (ascites, confusion, jaundice)
* Immune-related adverse events monitoring
* Report any new/worsening symptoms

**KEY LAB VALUES**

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Admission** | **Discharge** | **Reference** |
| WBC | 5.8 | 6.2 | 4.0-11.0 x10^9/L |
| Hemoglobin | 12.3 | 11.8 | 13.5-17.5 g/dL |
| Platelets | 105 | 110 | 150-400 x10^9/L |
| INR | 1.3 | 1.2 | 0.8-1.2 |
| Creatinine | 1.1 | 1.0 | 0.7-1.3 mg/dL |
| AST | 65 | 58 | 10-40 U/L |
| ALT | 48 | 45 | 7-56 U/L |
| Total Bilirubin | 1.8 | 1.7 | 0.1-1.2 mg/dL |
| Albumin | 3.2 | 3.3 | 3.5-5.2 g/dL |
| AFP | 1100 | - | <10 ng/mL |
| D-dimer | 3.8 | 2.6 | <0.5 mg/L |
| BNP | 210 | 165 | <100 pg/mL |
| TSH | 5.8 | - | 0.4-4.0 mIU/L |

**Electronically Signed**:  
Dr. R. Patel (Medical Oncology)  
Dr. S. Wilson (Pulmonology)  
Dr. L. Matthews (Interventional Radiology)  
Date: 2025-04-01