**Patient**: N.R. (DOB 2005-12-21)  
**MRN**: 357802  
**Admission**: 2025-03-18 | **Discharge**: 2025-03-25  
**Physicians**: Dr. E. Morgan (Pediatric Oncology), Dr. J. Harrington (Orthopedic Oncology)

**DISCHARGE DIAGNOSIS**

Ewing Sarcoma of the Right Proximal Femur, high-risk, receiving cycle 6 (IE) of planned 9 cycles of neoadjuvant chemotherapy

**ONCOLOGICAL DIAGNOSIS**

* **Primary**: Ewing Sarcoma
* **Diagnosed**: 2024-12-23
* **Histology**:
  + Incisional biopsy of right proximal femur mass
  + Small round blue cell tumor with extensive necrosis
  + IHC: CD99 (MIC2) strongly positive, FLI1 positive
  + Negative for desmin, myogenin, cytokeratin, LCA
* **Molecular/Genetic**:
  + FISH: EWSR1 gene rearrangement positive
  + RT-PCR: EWSR1-FLI1 fusion transcript (type 1)
  + NGS: No additional actionable mutations
* **Staging**:
  + Tumor: 9.3 × 7.2 × 6.5 cm in right proximal femur with soft tissue extension
  + TNM (AJCC 8th): cT2bN0M0, Stage IIB
  + Metastatic workup: No evidence of metastatic disease
* **Risk Classification**: High-risk based on:
  + Large tumor volume (> 200 mL)
  + Extraosseous extension
  + Elevated LDH at presentation (525 U/L, 2.1× ULN)

**CURRENT TREATMENT**

**Regimen**: Alternating IE/VDC protocol (Cycle 6 - IE)

* Ifosfamide 1800 mg/m² IV daily × 5 days (2025-03-18 to 2025-03-22)
* Etoposide 100 mg/m² IV daily × 5 days (2025-03-18 to 2025-03-22)
* MESNA 360 mg/m² IV with ifosfamide, then 360 mg/m² IV at 4 and 8 hours after each dose

**TREATMENT HISTORY**

* **Cycle 1 - VDC** (2025-01-05 to 2025-01-07)
* **Cycle 2 - IE** (2025-01-19 to 2025-01-25):
  + Grade 4 neutropenia with febrile neutropenia (hospitalized)
  + Grade 1 transaminitis
* **Cycle 3 - VDC** (2025-02-03 to 2025-02-05):
  + Cyclophosphamide reduced to 1000 mg/m² due to prior febrile neutropenia
  + Grade 2 neutropenia, Grade 2 anemia (required transfusion), Grade 2 peripheral neuropathy
* **Cycle 4 - IE** (2025-02-17 to 2025-02-22):
  + Grade 3 neutropenia, Grade 1 hemorrhagic cystitis, Grade 2 anemia, Grade 1 transient encephalopathy
  + 7.9 x 106 kg/KG CD34+ stem cells collected
* **Cycle 5 - VDC** (2025-03-04 to 2025-03-06):
  + Cyclophosphamide reduced to 1000 mg/m²
  + Grade 2 neutropenia, Grade 2 anemia (required transfusion), Grade 2 peripheral neuropathy

**Response Assessment** (2025-02-28):

* MRI: 35% reduction in tumor volume (9.3 × 7.2 × 6.5 cm → 6.8 × 5.1 × 5.3 cm)
* PET/CT: Decreased metabolic activity (SUVmax 12.8 → 6.3)
* Chest CT: No pulmonary metastases

**Interventions**:

* Tunneled central venous catheter placement: 2024-12-30
* Definitive surgery planned after Cycle 9

**COMORBIDITIES**

* Mild asthma (well-controlled)
* History of anxiety disorder
* Vitamin D deficiency
* History of recurrent otitis media in childhood

**HOSPITAL COURSE**

19-year-old male with high-risk, non-metastatic Ewing Sarcoma admitted for cycle 6 (IE) of neoadjuvant chemotherapy. Pre-chemotherapy labs showed mild anemia (Hgb 10.2 g/dL), adequate neutrophil count (ANC 1.8 × 10^9/L), and platelet count (145 × 10^9/L). Renal and hepatic function were normal.

Chemotherapy was administered 2025-03-18 to 2025-03-22 with aggressive hydration and MESNA. Urinalysis showed trace hematuria on day 3 that resolved with increased hydration.

On day 5 (2025-03-22), patient developed mild confusion and disorientation consistent with ifosfamide-induced encephalopathy. Ifosfamide was temporarily held, and thiamine was administered with symptom resolution within 8 hours. Future ifosfamide doses should be given with methylene blue prophylaxis.

Patient experienced expected myelosuppression with nadir ANC of 0.8 × 10^9/L on day 7 and platelet count of 92 × 10^9/L. Pegfilgrastim was administered on day 6 (2025-03-23). No febrile episodes occurred.

Pain management of primary tumor site was achieved with scheduled acetaminophen and as-needed oxycodone with good control (pain scores ≤3/10). Physical therapy provided gait training and strengthening exercises. Psychosocial support was provided by child life specialists and psychology.

At discharge, patient is clinically stable with improving blood counts, adequate pain control, and no active infections.

**DISCHARGE MEDICATIONS**

* Enoxaparin 40 mg SubQ daily
* Ondansetron 8 mg PO TID PRN nausea
* Oxycodone 5 mg PO Q6H PRN moderate-severe pain
* Acetaminophen 650 mg PO Q6H PRN mild pain or fever
* Albuterol inhaler 2 puffs Q6H PRN wheezing
* Vitamin D3 2000 IU PO daily
* Thiamine 200 mg PO BID
* Sertraline 150 mg PO daily
* Sennosides 8.6 mg PO nightly PRN constipation
* Docusate sodium 100 mg PO BID PRN constipation
* Methylene blue 50 mg IV TID with ifosfamide

**FOLLOW-UP PLAN**

**Pediatric Oncology**:

* Dr. E. Morgan on 2025-03-28
* Weekly clinic visits until neutrophil recovery

**Laboratory Monitoring**:

* CBC with differential, CMP twice weekly until count recovery
* Urinalysis weekly to monitor for hematuria

**Imaging**:

* PET/CT and MRI scheduled for 2025-06-30 (after completion of neoadjuvant therapy)

**Treatment Plan**:

* Cycle 7 (VDC) scheduled to begin 2025-04-06
* Continue alternating IE/VDC protocol through cycle 9
* Orthopedic oncology consultation with Dr. J. Harrington on 2025-06-15
* Definitive surgical resection planned for approximately 2025-07-10
* Post-operative radiation therapy to be determined based on surgical margins and histologic response
* Adjuvant chemotherapy to complete a total of 14 cycles planned post-surgery

**Supportive Care**:

* Physical therapy twice weekly
* Psychology follow-up on 2025-04-05
* Nutritional assessment on 2025-04-05

**Patient Education**:

* Contact oncology immediately for:
  + Fever ≥38.3°C or ≥38.0°C for >1 hour
  + Signs of infection
  + Bleeding or unusual bruising
  + Persistent nausea/vomiting
  + Changes in mental status
  + Blood in urine
  + Severe pain uncontrolled with prescribed medications

**KEY LAB VALUES**

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Admission** | **Discharge** | **Reference** |
| WBC | 3.5 | 2.4 | 4.0-10.5 x10^9/L |
| ANC | 1.8 | 1.4 | 1.8-7.5 x10^9/L |
| Hemoglobin | 10.2 | 9.5 | 13.0-16.0 g/dL |
| Platelets | 145 | 105 | 150-450 x10^9/L |
| AST/ALT | 28/32 | 35/42 | 10-40/7-56 U/L |
| Alk Phos | 210 | 195 | 115-350 U/L |
| LDH | 325 | 310 | 120-250 U/L |

**Electronically Signed**:  
Dr. E. Morgan (Pediatric Oncology)  
Dr. J. Harrington (Orthopedic Oncology)  
Date: 2025-03-25