**Patient:** Felix Braun (DOB 1996-09-21)  
**Medical Record Number:** 243789  
**Date of Admission:** 2025-03-15  
**Date of Discharge:** 2025-03-28  
**Admitting Physician:** Dr. M. Weber (Hematology/Oncology)

**Discharge Diagnosis: B-cell Precursor Acute Lymphoblastic Leukemia (B-ALL) receiving Blinatumomab**

**1. Detailed Oncological Diagnosis:**

Primary Diagnosis: B-cell Precursor Acute Lymphoblastic Leukemia (B-ALL)  
Date of Initial Diagnosis: 2024-11-10

Histology/Immunophenotype:

* Bone marrow aspirate/biopsy (2024-11-08): Hypercellular marrow (90%) with 85% lymphoblasts
* Flow cytometry: CD19+, CD20+, CD10+, CD34+, TdT+, CD22+, CD79a+, CD45 dim, CD38+, HLA-DR+
* Negative for myeloid markers (CD13, CD33, MPO) and T-cell markers (CD3, CD5, CD7)
* Consistent with common B-cell precursor phenotype

Cytogenetics:

* Standard karyotype: 46,XY[20]
* FISH: Negative for BCR-ABL1, KMT2A(MLL) rearrangement, ETV6-RUNX1, and TCF3-PBX1
* Negative for iAMP21, hypodiploidy, and hyperdiploidy

Molecular:

* Next-generation sequencing panel: IKZF1 deletion detected (poor prognostic marker)
* JAK2 and CRLF2 mutations negative
* NOTCH1, FBXW7, and TP53 mutations negative

Risk Classification:

* GMALL Risk Group: High Risk based on: Elevated WBC at diagnosis (56 × 10^9/L)
* MRD Status:
  + MRD after Induction (timepoint 1): 5 × 10^-3 (0.5%)
  + MRD after Consolidation I (timepoint 2): 2 × 10^-3 (0.2%)
  + Current MRD prior to blinatumomab: 15 × 10^-4 (0.15%)

CNS Status:

* Initial CSF analysis: Negative for blast cells, no CNS involvement (CNS-1)

**2. Current Oncological Treatment:**

Regimen**:** GMALL protocol

Current Cycle: Blinatumomab continuous IV infusion

* Day 1-28: 28 μg/day (day 14 completed at discharge)
* Planned duration: 28-day continuous infusion via portable infusion pump
* Cycle start date: 2025-03-15

Intrathecal chemotherapy:

* LP with IT cytarabine, methotrexate and dexamethasone on day 1

Premedication:

* Dexamethasone 20 mg IV 1 hour prior to initiation
* Acetaminophen 1000 mg PO and diphenhydramine 50 mg IV as premedication

**3. History of Oncological Treatment:**

GMALL Protocol

* Prephase (2024-11-15 to 2024-11-19):
* Induction Phase I (2024-11-20 to 2024-12-18
* Induction Phase II (2024-12-21 to 2025-01-26)
  + Toxicities during Induction:
    - Grade 4 neutropenia (ANC <0.5 × 10^9/L) with febrile neutropenia requiring hospitalization
    - Grade 3 mucositis
    - Grade 2 hepatotoxicity (transaminitis, hyperbilirubinemia)
    - Grade 2 peripheral neuropathy
* Consolidation I (2025-02-10 to 2025-03-10)

Response Assessment:

* Complete Remission (CR) achieved after Induction Phase II
* Persistent MRD positivity after Consolidation I
* CSF analyses remain negative (last LP in Consolidation I)
* Decision for blinatumomab and then allogeneic stem cell transplant from HLA-identical sister made at multi-disciplinary tumor board on 2025-03-05

**4. Secondary Illnesses (Comorbidities):**

* Reactive Depression (diagnosed 2025-01-15, following ALL diagnosis)
* Asthma (mild, intermittent, well-controlled)
* Vitamin D Deficiency
* History of Appendectomy (2016)
* Chronic Insomnia

**5. Physical Exam at Admission:**

General: 28-year-old male, alert and oriented, appears anxious but in no acute distress. Vitals: BP 122/76 mmHg, HR 84 bpm, RR 16/min, Temp 36.8°C, SpO2 98% on room air, Weight 75 kg, Height 180 cm.

HEENT: Normocephalic, atraumatic. No pallor, icterus, or cyanosis. Mucous membranes moist without ulcerations.

Neck: Supple, no lymphadenopathy, no JVD.

Cardiovascular: Regular rate and rhythm, normal S1/S2, no murmurs, rubs, or gallops.Respiratory: Clear to auscultation bilaterally, normal breath sounds, no wheezes, rhonchi, or crackles.

Abdomen: Soft, non-tender, non-distended. No hepatosplenomegaly. Normal bowel sounds. Surgical scar from appendectomy noted in RLQ.

Musculoskeletal: No joint swelling or tenderness. Normal muscle tone and strength.

Neurological: Alert and oriented x3. Cranial nerves II-XII intact. Motor strength 5/5 in all extremities. Sensory intact to light touch, temperature, and proprioception. Deep tendon reflexes 2+ throughout. No focal deficits.

Skin: Warm, dry, no rashes, petechiae, or ecchymoses. Triple-lumen central venous catheter in right subclavian vein with clean insertion site.

Lymphatics: No palpable cervical, axillary, or inguinal lymphadenopathy.

**6. Epicrisis (Hospital Course Summary):**

Mr. Braun is a 28-year-old male with high-risk Philadelphia-negative B-cell Precursor Acute Lymphoblastic Leukemia (B-ALL) who achieved morphological Complete Remission (CR) after induction chemotherapy but with persistent Minimal Residual Disease (MRD) following Consolidation I. He was admitted for initiation of blinatumomab, a bispecific T-cell engager (BiTE) antibody targeting CD19, as per the GMALL protocol for MRD-positive disease.

The patient was admitted on 2025-03-15 following central line placement and confirmation of MRD positivity (15 × 10^-4). Pre-treatment evaluations including complete blood count, comprehensive metabolic panel, coagulation studies, and ECG were all within acceptable parameters. Cerebrospinal fluid analysis was negative for malignant cells.

Blinatumomab was initiated at 28 μg/day on 2025-03-15 after premedication with dexamethasone 20 mg IV, acetaminophen 1000 mg PO, and diphenhydramine 50 mg IV. The patient experienced mild rigors and low-grade fever (38.2°C) approximately 6 hours after initiation, which was managed with additional antipyretics and resolved within 12 hours. No evidence of Cytokine Release Syndrome (CRS) was observed.

On day 8 (2025-03-22), the patient experienced mild headache and transient confusion (Grade 1 neurotoxicity) which resolved within 24 hours with dexamethasone 4 mg IV q6h for 48 hours, without requiring dose interruption.

Throughout the hospitalization, the patient remained hemodynamically stable with adequate renal and hepatic function. Daily neurological assessments showed no persistent neurological deficits. Serial laboratory monitoring revealed stable blood counts with no significant cytopenias. Prophylactic medications for tumor lysis syndrome, opportunistic infections, and antiemetics were administered as scheduled.

The patient received extensive education regarding the portable infusion pump, which will be used to continue blinatumomab therapy as an outpatient. Home health nursing was arranged for regular pump maintenance and bag changes. The patient and family demonstrated competence in managing the pump and understanding potential complications requiring medical attention.

Psychosocial support was provided throughout the admission, with psychology consultation and initiation of cognitive-behavioral therapy for reactive depression. Sleep hygiene education and pharmacological management for insomnia were also addressed.

At discharge, the patient is clinically stable with no active symptoms of infection, neurotoxicity, or CRS. He is fully ambulatory, tolerating a regular diet, and demonstrates a good understanding of the treatment plan and potential complications.

**7. Medication at Discharge:**

* Blinatumomab 28 μg/day continuous IV infusion via portable pump (to continue until day 28, next bag change scheduled 2025-03-30)
* Acyclovir 400 mg PO BID (herpes prophylaxis)
* Fluconazole 200 mg PO daily (fungal prophylaxis)
* Trimethoprim-sulfamethoxazole 800/160 mg PO Mo/Wed/Fr (PCP prophylaxis)
* Acetaminophen 1000 mg PO Q6H PRN fever or pain
* Ondansetron 8 mg PO Q8H PRN nausea
* Escitalopram 10 mg PO daily (for reactive depression)
* Salbutamol inhaler 2 puffs Q6H PRN wheezing/shortness of breath (for asthma)
* Vitamin D3 2000 IU PO daily

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

Hematology/Oncology Follow-up:

* Clinic visit with Dr. M. Weber on 2025-03-31 (day 17 of blinatumomab)
* Subsequent clinic visits twice weekly during blinatumomab therapy
* Bone marrow MRD assessment planned for end of blinatumomab cycle (approximately 2025-04-12)

Laboratory Monitoring:

* CBC, CMP, LDH, uric acid twice weekly (Monday and Thursday)

Home Health Nursing:

* Daily visits for first week, then three times weekly
* Tasks: Central line care, blinatumomab bag changes, physical assessment, and vital signs monitoring

Treatment Plan:

* Complete current 28-day cycle of blinatumomab (until 2025-04-12)
* Subsequent treatment plan dependent on MRD status:
  + If MRD negative: proceed to allogeneic hematopoietic stem cell transplantation (HSCT)
  + If MRD positive: Inotuzumab ozogamicin, then allogeneic hematopoietic stem cell transplantation (HSCT)

Supportive Care:

* Psychology follow-up appointment on 2025-04-02
* Dietitian consultation arranged for 2025-04-02
* Social work support for financial counseling and HSCT preparation

Patient Education:

* Instructions to contact oncology clinic immediately without any delay for any signs of CRS or ICANS such as:
  + Fever >38.0°C
  + Shaking chills, rigors
  + Neurological symptoms (confusion, disorientation, tremors, speech disorders)
  + Severe headache or other concerning symptoms
  + Other: Bleeding or unusual bruising, infusion pump alarms or discontinuation

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **Admission (2025-03-15)** | **Discharge (2025-03-28)** | **Units** | **Reference Range** |
| WBC | 4.2 | 3.8 | x10^9/L | 4.0-11.0 |
| ANC | 2.8 | 2.4 | x10^9/L | 1.8-7.5 |
| Lymphocytes | 1.1 | 0.9 | x10^9/L | 1.0-4.5 |
| Hemoglobin | 11.5 | 11.2 | g/dL | 13.5-17.5 (M) |
| Platelets | 156 | 142 | x10^9/L | 150-400 |
| Creatinine | 0.9 | 0.8 | mg/dL | 0.7-1.3 |
| BUN | 14 | 15 | mg/dL | 7-20 |
| AST | 32 | 28 | U/L | 10-40 |
| ALT | 38 | 35 | U/L | 7-56 |
| Alk Phos | 95 | 90 | U/L | 45-115 |
| Total Bilirubin | 0.8 | 0.7 | mg/dL | 0.1-1.2 |
| Albumin | 4.0 | 3.9 | g/dL | 3.5-5.2 |
| LDH | 210 | 195 | U/L | 125-220 |
| Uric Acid | 5.8 | 4.5 | mg/dL | 3.5-7.2 |
| Sodium | 139 | 140 | mmol/L | 135-145 |
| Potassium | 4.1 | 4.2 | mmol/L | 3.5-5.1 |
| Calcium | 9.2 | 9.0 | mg/dL | 8.6-10.2 |
| Phosphorus | 3.4 | 3.5 | mg/dL | 2.5-4.5 |
| Magnesium | 2.0 | 2.1 | mg/dL | 1.8-2.4 |
| CRP | 2.8 | 1.5 | mg/L | <5.0 |

Electronically Signed By:  
Dr. M. Weber (Hematology/Oncology)  
Date/Time: 2025-03-28 15:30