

Blood & Marrow Transplant Certified Nurse (BMTCN®) Test Content Outline (Effective 2018)



I. Foundations of Transplant - 16%

- A. Basic concepts of transplantation
 - 1. Hematopoietic cell lineage and function
 - 2. Immune system and function
 - 3. Histocompatibility
 - 4. Cellular goals of therapy (e.g., graft-versus-tumor effect, hematologic/immune reconstitution)
- B. Indications for transplantation
 - 1. Malignant diseases
 - a. Hematologic malignancies
 - b. Solid tumor
 - 2. Non-malignant diseases
 - a. Immunodeficiency
 - b. Genetic
 - c. Metabolic
 - d. Hematologic
- C. Types of transplants
 - 1. Autologous
 - 2. Allogeneic
- D. Sources of stem cells
 - 1. Peripheral blood
 - 2. Bone marrow
 - 3. Umbilical cord
- E. Recipient suitability and evaluation
- F. Recipient education
- G. Caregiver education
- H. Donor selection, care, and education

II. Cellular Collection, Preparative Regimens, and Infusion - 16%

- A. Mobilization, collection, and storage
- B. Procurement and harvest
- C. Preparative regimens
 - 1. Intensity of therapy
 - 2. Chemotherapy
 - 3. Radiation therapy
 - 4. Biotherapy
 - 5. Immunotherapy
 - 6. Targeted therapies
- D. Management of acute complications related to preparative regimens
- E. Cellular infusion
 - 1. Fresh vs. cryopreserved
 - 2. Infusion management

3. Hematologic compatibilities

F. Cellular therapies (e.g., donor lymphocyte infusion, chimeric antigen receptor T-cells)

III. Early Post-Transplant Management and Education - 24%

A. Immunosuppressive therapy

B. Acute graft-versus-host disease (GVHD)

C. Infection prevention and management

D. Sepsis

E. Hematologic (e.g., engraftment, pancytopenia, transfusion support)

F. Immune reconstitution (e.g., engraftment syndrome, cytokine release syndrome)

G. Nutritional support

H. Acute system specific complications (e.g., veno-occlusive disease)

I. Graft rejection or failure

IV. Late Post-Transplant Management and Education - 22%

A. Chronic graft-versus-host disease (GVHD) (e.g., medical management, photopheresis)

B. System-specific late effects (e.g., bronchiolitis obliterans, cataracts, infertility)

C. Infection prevention and management (e.g., immunizations)

D. Disease relapse

E. Secondary malignancy

F. Follow-up care and milestone visits

V. Quality of Life - 12%

A. Navigation and coordination throughout the continuum

B. Psychosocial (e.g., coping, family and caregiver support)

C. Health promotion and maintenance

D. Sexuality

E. Cultural and spiritual competence

F. Survivorship

G. Palliative care

H. End-of-life care (e.g., legacy building)

I. Transitional concerns (e.g., financial, disability, employment, discrimination)

VI. Professional Performance - 10%

A. Standards of care (nursing process)

B. Standards of professional performance

1. Patient and donor advocacy

2. Education

3. Evidence-based practice and research

4. Quality improvement

5. Communication

6. Leadership
 7. Interdisciplinary collaboration
 8. Professional practice evaluation
 9. Resource utilization
 10. Environmental health (e.g., safety, personal protective equipment, safe handling)
- C. Ethical and legal considerations (e.g., informed consent, advance directives, confidentiality, professional boundaries, documentation)
 - D. Accreditation (e.g., FACT)
 - E. Self-care (e.g., compassion fatigue)