

Allogeneic Stem Cell Transplantation: What to expect after the first year?

Linda M. Perry, MS PA-C

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Disclosures:

- ▶ Speakers Bureau: Incyte, Abbvie
- ▶ Consultant: Incyte, Kadmon

Survivorship

- ▶ Definition: the state or condition of being a survivor
- ▶ Providers
 - Understanding range of potential long-term complications
 - Timely implementation of screening practices
 - Patient education
 - Collaboration with referring/ primary providers
- ▶ Patients and caregivers
 - Adapting to the “new normal”
 - Coping with long-term complications
 - Being proactive/ compliant with preventative practices

Allogeneic HCT: Long-term risks

- ▶ Eyes
- ▶ Mouth
- ▶ Lungs
- ▶ Cardiovascular
- ▶ Liver
- ▶ Kidneys
- ▶ Musculoskeletal
- ▶ Immune System
- ▶ Endocrine
 - Thyroid, Menopause, Infertility, Sexual difficulties
- ▶ Second cancers
 - Skin, Breast, Colon, Thyroid, Oral, Cervical
- ▶ Cognitive
- ▶ Psychosocial/ Emotional

Forming a Survivorship Plan: Special Considerations

- ▶ Myeloablative v non-myeloablative
- ▶ Total body irradiation
- ▶ Chemotherapy: pre- HCT, conditioning, post-HCT; cumulative dosing
- ▶ Acute and/or chronic GVHD
- ▶ Corticosteroid exposure
- ▶ Active immunosuppression
- ▶ Patient age and sex

Multidisciplinary Approach to Survivorship

- ▶ Transplant Physician/ APP
- ▶ Specialists:
 - Dermatology
 - Pulmonology
 - Ophthalmology
 - Gastroenterology
 - Endocrinology
 - Gynecology
 - Urology
 - Oral Medicine
 - Infectious Disease
 - Cardiology
 - Orthopedics
 - Sleep Medicine
 - Psychology/ Psychiatry
- ▶ Physical/ Occupational Therapy
- ▶ Nutrition
- ▶ Social Work



The Survivorship Visit



First Visit: Six to Twelve Months

Labs

- ▶ CBC
- ▶ CMP, Mg, LDH
- ▶ Ferritin
- ▶ Hb A1C
- ▶ Quantitative Immunoglobulins
- ▶ Immune Deficiency Panel (CD4)
- ▶ Antibody testing for vaccines
- ▶ FSH, LH, testosterone
- ▶ Cortisol, ACTH
- ▶ Vitamin D
- ▶ Vitamin B12
- ▶ Thyroid function tests
- ▶ Urine protein/ urine creatinine
- ▶ Lipid panel

Diagnostics

- ▶ ECHO, EKG
- ▶ Carotid doppler
- ▶ PFTs
- ▶ Mammogram, Breast MRI
- ▶ DEXA
- ▶ Low dose chest CT
- ▶ Colonoscopy
- ▶ EGD
- ▶ Thyroid ultrasound
- ▶ Specialist referrals
 - Dental exam; TBSE; Eye exam; GYN exam/ PAP

Chronic GVHD

- ▶ Chronic graft-versus-host disease is a multisystem disorder with considerable variation in clinical features
- ▶ Frequently presents with symptoms similar to those seen in inflammatory autoimmune diseases or other immune-mediated disorders (Sjogren's syndrome, primary biliary cirrhosis, scleroderma, bronchiolitis obliterans, immune cytopenias, chronic immunodeficiency)
- ▶ Complications from the disorder as well as the treatment can lead to significant impairment in quality of life and decreased survival.

Chronic GVHD Risk Factors

- ▶ Higher degree of HLA mismatching
- ▶ Older age of donor and/or recipient
- ▶ Gender disparity (female donor to male recipient)
- ▶ Alloimmunization of the donor (history of pregnancy, transfusions)
- ▶ Source of stem cells (PBSC rather than bone marrow or umbilical cord blood)
- ▶ Prior acute GVHD
- ▶ Donor lymphocyte infusions
- ▶ Cytomegalovirus seropositivity (donor and/or recipient)

Chronic GVHD

Incidence

- ▶ 2 year cumulative incidence of cGVHD requiring *systemic treatment* is ~30-40% by NIH diagnostic criteria

Timing

- ▶ No true time limit but....
- ▶ Tends to occur after the first 3 months post-transplant
- ▶ Onset after 1 year occurs in <10%

Chronic GVHD Identification and Screening

- ▶ Timely recognition of symptoms is crucial
 - Patient/ caregiver education
- ▶ Referral to specialists as needed

Chronic GVHD- Identification and Screening

System/others	Inquire/description
Skin	Skin feels tight or hard, increased dryness, pruritus, or looks different (i.e., new rash, papules, discoloration, shining scar-like, scaly)?
Sweat glands	Inability to sweat or to keep body warm?
Skin appendages	Loss of hair (scalp or body including brows or lashes), or nail changes (ridges or brittle, loss)?
Fasciae/joints	Stiffness or pain in the wrists, fingers, or other joints?
Eyes	Eye dryness, sensitivity to wind or dry environments (air conditioning), pain?
Mouth	Oral dryness, taste alterations, sensitivities (spicy/carbonate drinks, toothpaste), ulcers/sores, pain?
Esophagus	Foods or pills gets stuck upon swallowing?
Lungs	Cough, dyspnea (on exertion or rest) or wheezes?
Genital tract	Vaginal dryness, pain, dyspareunia (female); pain or dysuria due to stenosis of urethra (male)?
Weight loss	Unexplained weight loss or inability to gain weight (pancreatic insufficiency or hypercatabolism)?

Mary E. D. Flowers, and Paul J. Martin Blood 2015;125:606-615

Resources

- ▶ ASTCT
- ▶ BMT Infonet
- ▶ Be the Match
- ▶ U.S. Preventative Services Task Force

