

NATIONAL INSTITUTES OF HEALTH

BMT LATE EFFECTS INITIATIVE

STEERING COMMITTEE:

Minoo Battiwalla, Intramural NHLBI/HB

Shahrukh Hashmi, Mayo Clinic

Navneet Majhail, Cleveland Clinic & ASBMT

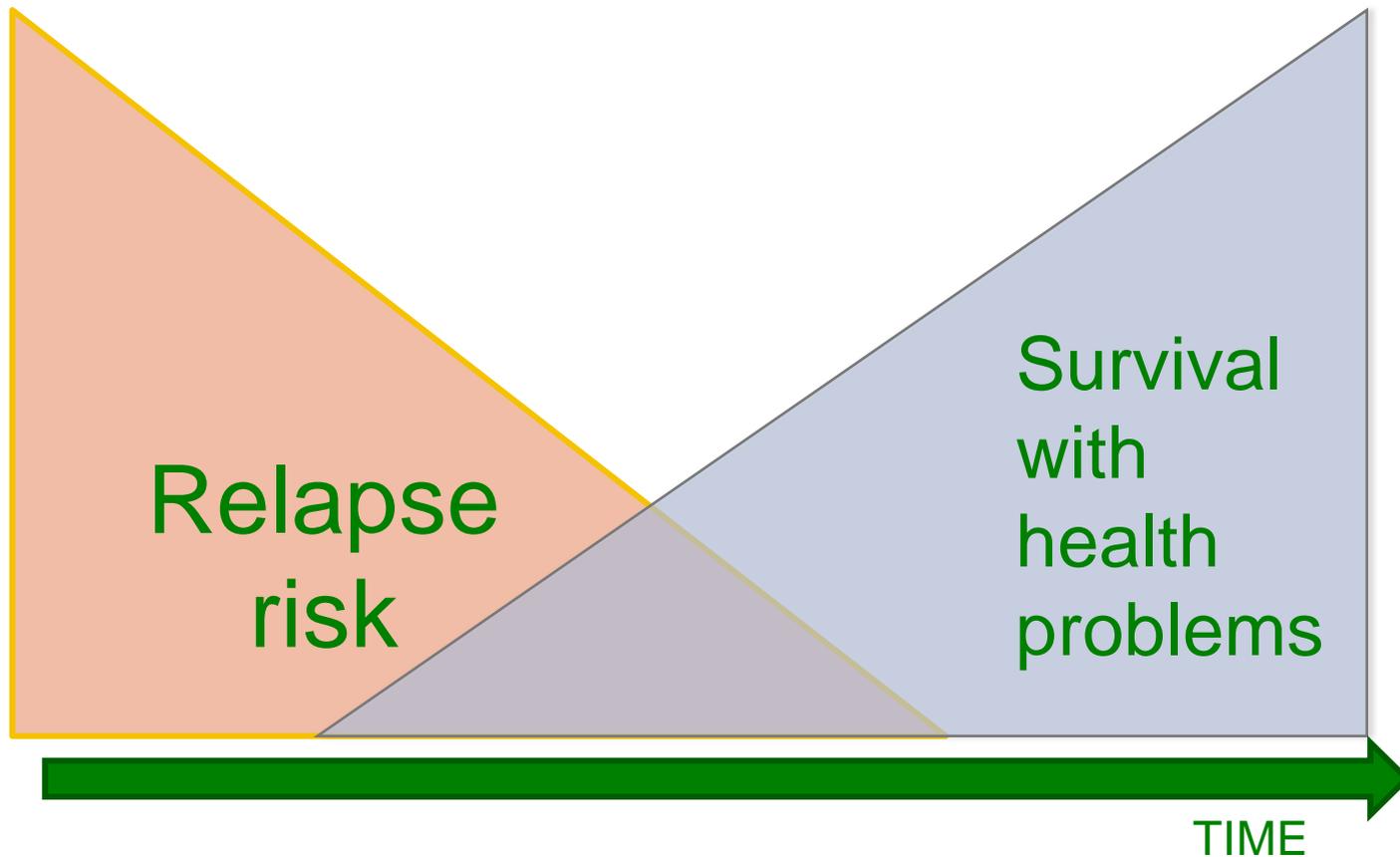
Steve Pavletic, Intramural NCI/ETIB

Bipin Savani, Vanderbilt University

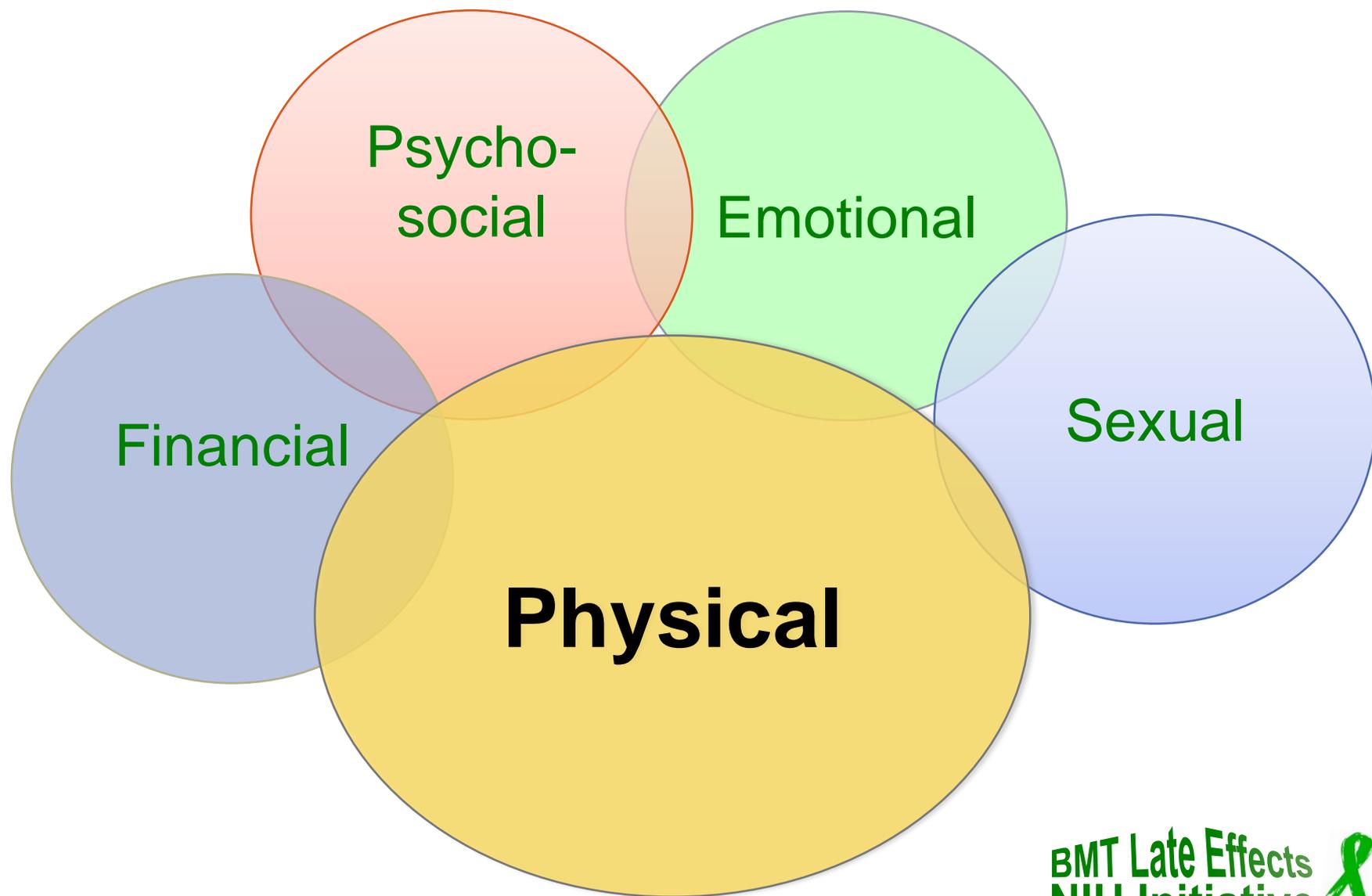
Nonniekaye Shelburne, NCI/DCCPS

2020

500,000 HSCT survivors worldwide



Impact on multiple domains of health

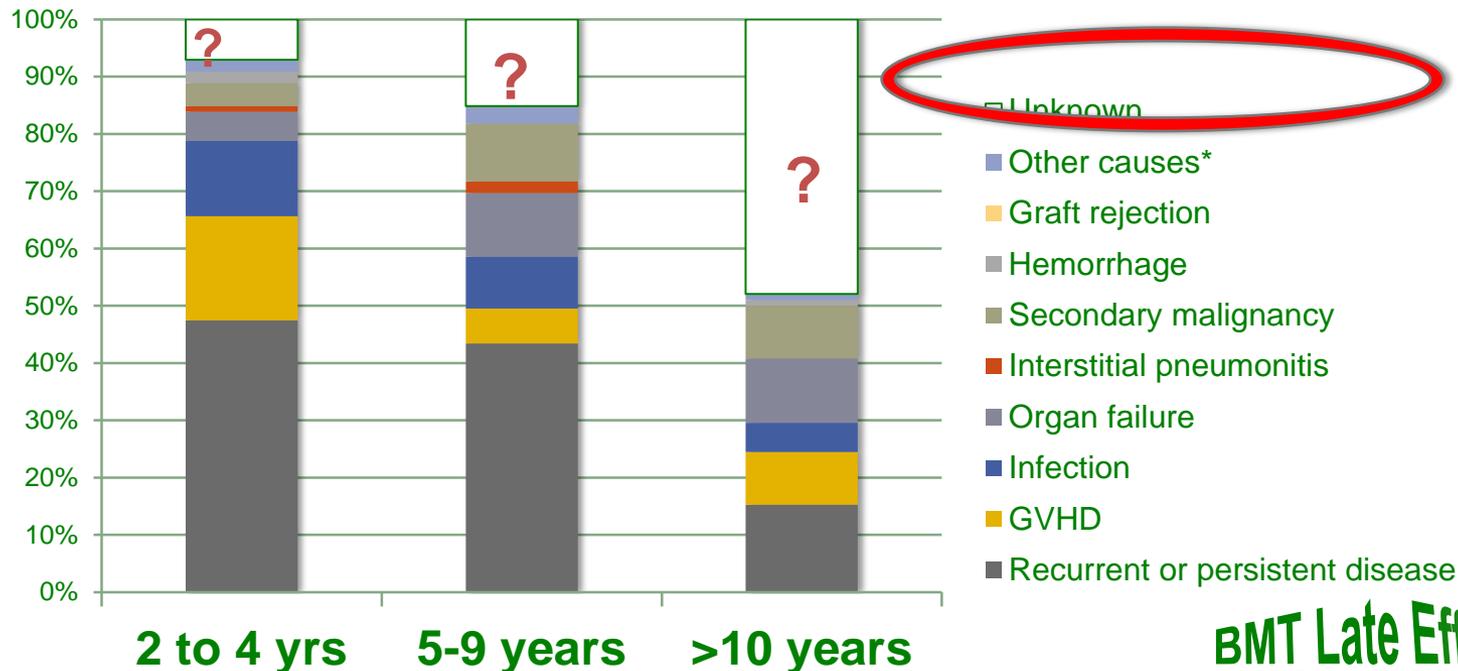


Increased mortality in survivors

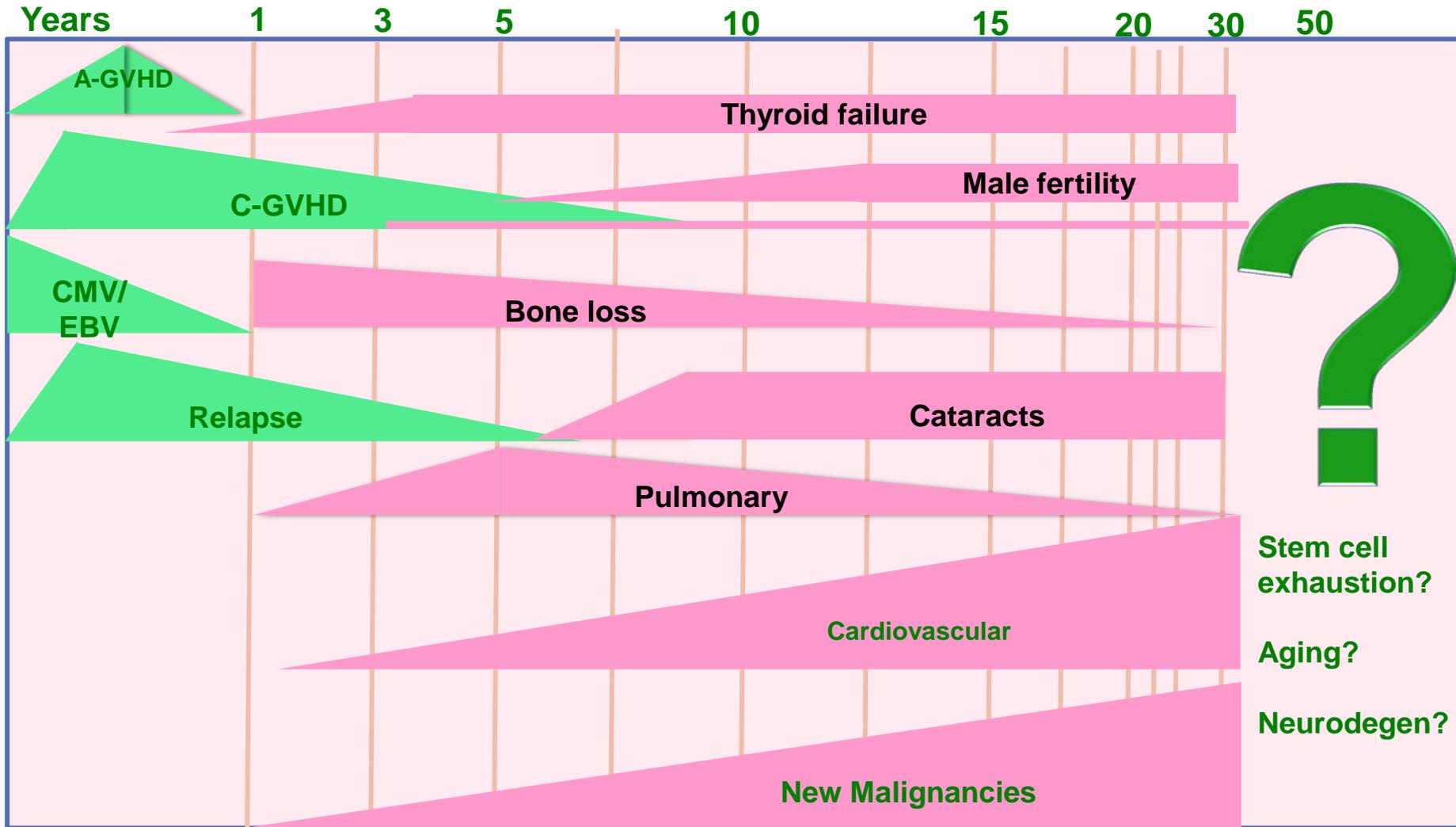
- In the Bone Marrow Transplant Survivor Study (BMTSS) relative mortality was found to be **9.9**.
- Relative mortality remained significantly elevated even at 15 years after HSCT (standardized mortality ratio [SMR] = **2.2**).

Bhatia, S., et al. Blood (2007). Late mortality after allogeneic hematopoietic cell transplantation and functional status of long-term survivors: report from the Bone Marrow Transplant Survivor Study.

Cause of mortality in >2 year survivors with AML, n=1479



TIMEFRAMES FOR POST SCT COMPLICATIONS



Potentially lethal complications

- only observational studies
- pathobiology poorly understood
- latency measurable in decades
- no data on effective prevention

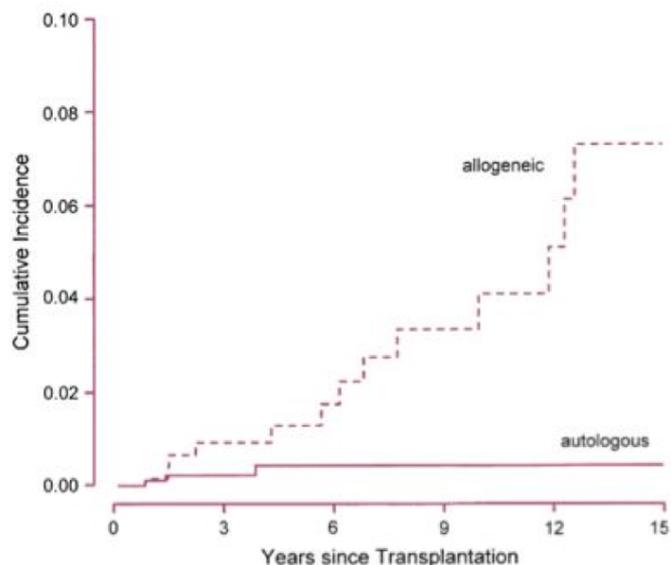


FIG 1. The cumulative incidence of cardiovascular event at 15 years, adjusted for age (Tichelli A. et al. Blood. 2007)

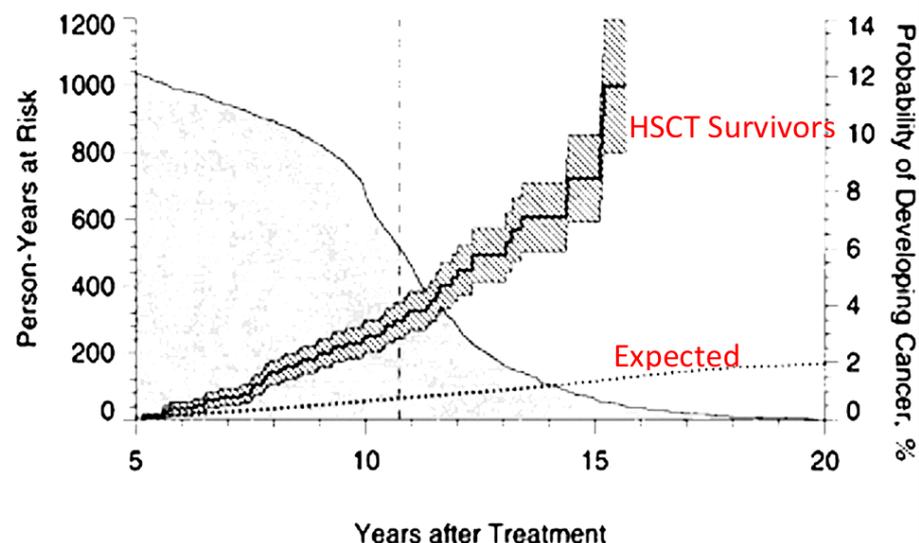


FIG 2. The cumulative incidence of new malignancy in HSCt survivors (Kolb, H.J. et al. Ann Intern Med. 1999)

The NIH Late Effects Initiative

OBJECTIVES

- to define the critical issues and barriers in the field
- to set research priorities for future effort and funding
- create a successful organizational framework for studying late-effects (biology, observational and interventional trials)

METHODS

- Collaborative: International, multidisciplinary, ped/adult, federal/ ASBMT/CIBMTR/NMDP/advocacy groups
- Follow the successful template for chronic GVHD project
- WGs in 6 critical areas unique to transplant and avoiding overlap with cGVHD

Health Care Delivery

Research Methodology & Study Design

New Malignancy

Quality of Life and Psychosocial Outcomes

Immune Dysregulation & Pathobiology

Vascular & Metabolic

Guidance for Working Committees

1. **FOCUS:** only the most critical challenges- Hi frequency but minor VS less common but lethal VS biologically interesting
1. **POTENTIAL IMPACT:** How will the selected focus advance the science OR change guidelines/clinical care/standard approach?
2. **METRICS:** How would you measure impact in the short term and, ultimately, long term health outcomes?
1. **LONG TERM VISION:** Do not be limited by where the field is now but define what you want it to be.
1. **BORROW FROM OTHER DISCIPLINES:**
 - Parallel survivorship efforts in pediatric oncology & HIV.
 - Reach out to subject matter experts as needed outside the WC.
1. **CONTRIBUTION TO OTHER FIELDS:** Unique problems (scientific or infrastructural) in this field may lead to generalizable solutions.

Working Committees

New Malignancy	Linda Burns*, MD	NMDP
	Lindsay Morton*, PhD	NIH Radiation Biology
	Steve Pavletic, MD	NCI, ETIB
	A. John Barrett, MD	NIH, NHLBI Hematology Branch
	Shahinaz M. Gadalla, MD	NCI, DCGE, genetics branch
	David Kleiner, MD	NCI, Pathology
	Wael Saber, MD	CIBMTR, Med College Wisconsin
	Smita Bhatia, M.D., MPH	Univ of Alabama at Birmingham
	Eric Engels	NCI, DCEG, Epidemiology
	Scott Baker, MD	FHCRC, Pediatric

Cardiovascular & Metabolic Impairment	Saro Armenian*, D.O., M.P.H.	City of Hope
	Mino Battiwalla*, M.D., M.S.	NIH
	Marcus Chen	NHLBI, NIH
	Nina Salooja	Hammersmith, London
	Alicia Rovo	Univ Hospital of Basel, Switzerland
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	Alan Remaley	NHLBI, NIH
	Mike Pulsipher	Children's Hospital Los Angeles
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	Wassim Chemaitilly, MD	St. Jude

Working Committees

Immune Dysregulation & Pathobiology	Juan C. Gea-Banacloche*, M.D.	NIH
	John Wingard*, M.D.	Univ of Florida
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	Kirk Schultz	BC Children's Hospital
	Robert Q. Le	FDA-CBER
	Linda Griffith	NIAID
	Krishna Komanduri	Univ of Miami, FL
	Paul Carpenter	FHCRC
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	Sophie Paczesny	Indiana University
	Nahed El Kassar	NHLBI
Bipin Savani	Vanderbilt	

Health Care Delivery	Shahrukh Hashmi*, M.D.	Mayo Clinic
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	Rafael Duarte	Madrid, EBMT WP chair
	Doug Rizzo	Medical College of Wisconsin
	Courtney Fitzhugh	NHLBI, NIH
	Chris Bredeson	ASBMT, Univ of Ottawa
	Patricia Martin, RN	Anthem, Director Specialty Network
	Dennis Gastineau	Mayo
	Kim Schmit-Pokorny, RN	Univ of Nebraska / Nursing SIG
	Sue Ferrey	Moffit (ANP)
	Scott Ramsey/HEALTH ECON	Fred Hutch Cancer Research Center

Working Committees

Research Methodology & Study Design	Smita Bhatia*, M.D., MPH	Univ of Alabama at Birmingham
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	Nonniekaye Shelburne	NCI
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	Flora Hoodin	UM Ann Arbor
	Lori Wiener	NCI pediatric branch
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	Matt Hsieh	NIH, Sickle Cell
	Paul Jacobsen	Moffitt, Tampa, FL
	Bill Wood	UNC
	Erin Kent	NIH
	Kate Tierney	Stanford
	Areej El-Jawahri, M.D	Harvard
	Ellen Denzen	NMDP, Health Services Research
	Nonniekaye Shelburne	NIH

PROGRESS TIMELINE



Steering committee

Planning Meeting: (ARLINGTON, VA)

Steering committee, WC chairs, federal stakeholders, ex-officio (ASBMT/CIBMTR/NMDP)

Working Committee Teleconferences

Working Committee Draft Presentations: Tandem BMT conference, Honolulu, HI, 2016 WC draft presentations

Final NIH Consensus Conference:
NCI, Shady Grove

DELIVERABLE OUTCOMES

1. Consensus conference at NIH, summer 2016
 2. Conference proceedings, BBMT
 3. Research prioritization- program announcements
 4. Consortium of interested centers to study late effects (trials, data, biological samples)
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1. Impact on registry data collection, transplant outcomes assessment, clinical trials

Thank you

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- Navneet Majhail, Cleveland Clinic & ASBMT
- Steve Pavletic, Intramural NCI/ETIB
- Bipin Savani, Vanderbilt University
- Nonniekaye Shelburne, NCI/DCCPS

Federal Sponsors:

- NHLBI, NCI, HRSA

Support:

- CTN, ASBMT, CIBMTR, NMDP
- Patient advocacy groups