

## CURRICULUM VITAE

Scott Howard, MD, MSc  
 University of Tennessee Health Science Center  
 College of Nursing  
 920 Madison Avenue, Suite 536  
 Memphis, TN 38163  
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**EDUCATION:**

<b><u>Institution</u></b>	<b><u>Degree</u></b>	<b><u>Major</u></b>	<b><u>Year</u></b>
University of Alabama Huntsville Huntsville, AL	BS	Chemistry	1989
University of Alabama School of Medicine Birmingham, AL	MD		1994
UT Health Science Center Memphis, TN	MSc	Epidemiology	2001
University of Tennessee at Memphis Memphis, TN	Resident	Internal Medicine/	1998
St. Jude Children's Research Hospital Memphis, TN	Pediatrics Fellowship	Pediatric Hematology/ Oncology	2001

**HONORS/AWARDS:**

Honorary Organizations

Institutional, regional, national, or international awards — may be grouped according to educational (e.g., undergraduate, or graduate) and/or professional subcategories.

**BOARD CERTIFICATION:**

Internal Medicine, Pediatrics, Pediatric Hematology/Oncology

**LICENSURE:**

MD, Tennessee, Active

**SOCIETY MEMBERSHIPS:**

American Society of Clinical Oncology 1999-present  
 American Society of Pediatric Hematology/Oncology 1998-present  
 American Society of Hematology 2009-present  
 International Pediatric Oncology Society (SIOP) 2001-present  
 Central American Pediatric Hematology/Oncology Association 1998-present

Columbian Pediatric Hematology/Oncology Society 2003-present

**UNIVERSITY AND HOSPITAL/CLINICAL APPOINTMENTS:**

1987-1990 Research Assistant in Chemistry, University of Alabama at Huntsville  
1988-1990 High-school Physics Teacher, Westminster Christian Academy  
1994-1998 Resident, Internal Medicine/Pediatrics, University of Tennessee at Memphis, Tennessee  
1995-1999 House Physician, Rehabilitation Hospital of the Mid-South  
1995-1998 Residency, Internal Medicine/Pediatrics, University of Tennessee at Memphis, Tennessee  
1998-2001 Fellowship, Pediatric Hematology/Oncology, University of Tennessee and St. Jude Children's Research Hospital, Memphis, Tennessee  
2001-2007 Assistant Professor, University of Tennessee College of Health Sciences, Memphis, TN  
2001-2007 Assistant Member, Department of Oncology, St. Jude Children's Research Hospital, TN  
2007-2012 Associate Professor, University of Tennessee College of Health Sciences, Memphis, TN  
2007-2012 Associate Member, Department of Oncology, St. Jude Children's Research Hospital, TN  
2009-2013 Medical Information Officer, Department of Information Sciences, St. Jude Children's Research Hospital, TN  
2010-2013 Chair, Pediatric Oncology in Developing Countries, Société Internationale d'Oncologie Pédiatrique (SIOP)  
2011-2016 Chair, Guidelines Committee of the American Society of Pediatric Hematology/Oncology  
2012-2014 Professor, University of Tennessee College of Health Sciences, Memphis, TN  
2012-2014 Full Member, Department of Oncology, St. Jude Children's Research Hospital, TN  
2013-2014 Director, St. Jude Global Health Fellowship Program, Memphis, TN  
2014-2014 Chief Medical Officer and Executive Vice President, Remedy Informatics, Sandy, Utah  
2014-2016 Consultant, Oncology, Healthcare Informatics, Research, Global Health, Memphis, TN  
2014-present Adjunct Professor, University of Memphis, Memphis, TN  
2017-present Professor and Associate Dean for Research in the College of Nursing, University of Tennessee College of Health Sciences, Memphis, TN

**TEACHING AND MENTORING EXPERIENCE:**

**TEACHING**

Toxicity Coding in Oncology Research – series of 24 lectures 2011-2014, St. Jude Children's Research Hospital, Memphis, USA  
Biostatistics and Study Design Course – 2012-2013, St. Jude Children's Research Hospital, Memphis, USA  
Fall 2017: Epidemiology in Clinical Practice NSG827  
Spring 2018: Pediatric Subspecialty Fellow Research Bootcamp – Manuscript writing  
Spring 2018: St. Jude Global Academic Leadership Program – Clinical research methods, manuscript writing  
Spring 2018: Epidemiology in Clinical Practice NSG827

**MENTORING – FACULTY**

Christine Hartford, MD 2010-2014 Hepatic veno-occlusive disease in pediatric hematopoietic stem cell transplantation, Memphis, USA  
Catherine Lam, MD 2010-2014 Global childhood cancer care program, Outcome evaluation for pediatric cancer in Davao, the Philippines and Palliative care in low-income and middle-income countries. Memphis

Jacquelyn Baskin, MD 2007-2012 Complications of central venous catheter use in low-income countries, catheter thrombosis in children with cancer, early diagnosis of brain cancers in low-income countries, Los Angeles, USA  
Fatima Bachir, MD 2011-2013 Outcomes in patients with mixed phenotype acute leukemia in Morocco.  
Laila Hessissen, MD 2009-2014 Improving the prognosis of pediatric Hodgkin lymphoma in developing countries: A Moroccan Society of Pediatric Hematology and Oncology Study.  
Sara Day, PhD 2012-2013 Use of joint commission international standards to evaluate and improve pediatric oncology nursing care in Guatemala.  
Monika Metzger, MD 2002-2008 Toxicity of Hodgkin lymphoma therapy, impact of race on Hodgkin lymphoma outcome, ALL treatment in low-income countries

### **FELLOWS and RESIDENTS MENTORED**

Angela Recht, MD 2005 Importance of traumatic lumbar puncture in childhood leukemia in Brazil  
Robert Sanders, MD 2003-2005 Complications of blood product transfusion  
Jane Hankins, MD 2003-2005 Thesis committee – Hydroxyurea in children with sickle cell anemia  
Jessica Roberson, MD 2006-2008 Endocrinopathy in childhood ALL  
Anupama Borker, MD 2006 ASH Visiting Fellow, Hyponatremia in childhood ALL  
Eduardo Delgado, MD 2006-2008 Palliative care in low-income countries  
Jacquelyn Baskin, MD 2007-2008 Complications of central venous catheter use in low-income countries  
Beth Kurt, MD 2007-2008 Cardiac toxicity after treatment for pediatric Hodgkin lymphoma  
Holly Spraker, MD 2007-2008 Gastrointestinal toxicity in childhood leukemia  
Sabrina Hutchins, MD 2003 Hyponatremia in children with acute leukemia  
Peter Sinton, MD 2005 Hypoglycemia in children with ALL

### **STUDENTS MENTORED**

Kevin Messacar, MD 2004 Data management infrastructure in resource-poor countries  
Paulina Velasquez, MD 2005 Definition and clinical importance of intermediate-risk Hodgkin lymphoma  
Matthew Ladra, MD 2005 Outcome of childhood ALL in Morocco  
Lisa Ayoub, MD 2005 Analysis of childhood leukemia data management in Honduras  
Van Morris, MD 2007 Thrombocytopenia and thrombocytosis in severe pediatric iron deficiency  
Brian Lewis, MS 2017-2018 Prevention and mitigation of drug shortages involving essential chemotherapy in low- and middle-income countries

### **VISITING PROFESSORSHIPS AND INVITED LECTURES:**

#### **INVITED LECTURES (2018)**

June 2018 New York Cancer Associates “Tumor lysis syndrome in clinical practice” Montauk, NY  
June 2018 APHON “Hypersensitivity reactions during ALL therapy” Peoria, IL  
April 2018 Jornadas Pediatricas “Management of anemia in children” Bucaramanga, Colombia  
April 2018 Jornadas Pediatricas “Early diagnosis of childhood cancer” Bucaramanga, Colombia  
April 2018 APHON “Toxicity of ALL therapy in children: hyperglycemia and thrombosis” Syracuse, NY  
March 2018 APHON “Supportive care for children with cancer” Louisville, KY  
March 2018 APHON “Updates in childhood leukemia – what’s new in 2018?” Lexington, KY  
February 2018 AHOPCA “Information systems in pediatric cancer programs: using data to improve care and outcomes” Panama City, Panama  
February 2018 AHOPCA “Management of toxicities of ALL therapy” Panama City, Panama  
January 2018 Mexican Hematology Society “Supportive care for leukemia patients” Monterrey, Mexico  
January 2018 APHON “New regimens and complications in acute lymphoblastic leukemia” Honolulu, HI  
January 2018 PORTAGE Workshop on Global Access to Essential Chemotherapy. “Data systems to predict and mitigate drug shortages in low- and middle-income countries.” Sharjah, United Arab Emirates

January 2018 Grand rounds “Cooperative groups and improving cancer care in all countries.” Al Ain, United Arab Emirates

### **INVITED LECTURES (2017)**

November 2017 World Health Organization workshop on access to care for cancer patients, Mexico City  
November 2017 HEMO “Toxicities of asparaginase in ALL patients” Curitiba, Brazil  
November 2017 APHON “Updates in acute leukemia” Atlanta, GA  
October 2017 APHON “Updates in acute leukemia” Charlotte, SC  
September 2017 St. Jude Affiliate Conference “Nursing issues in the management of ALL” Memphis, TN  
September 2017 Mexican Hematology Workshop “Salvage therapy for relapsed/refractory ALL” Cancun, MX  
August 2017 Philippine Pediatric Oncology Workshop “Estimating workforce requirements and training needs for pediatric oncologists in the Philippines” Manila, the Philippines  
June 2017 Mexican Pediatric Oncology Society “Developing an ALL treatment program” Leon, Mexico  
June 2017 APHON Louisville “Updates in the management of acute lymphoblastic leukemia” Louisville, KY  
May 2017 International Pediatric Oncology Society “Innovative treatment strategies for children with non-Hodgkin lymphoma” Bangkok, Thailand  
May 2017 International Pediatric Oncology Society “Toxicities of high-dose methotrexate in children with cancer” Bangkok, Thailand  
April 2017 Colombian Pediatric and Adult Hematology “Severe aplastic anemia – integrated care” Cartagena, Colombia  
April 2017 Colombian Pediatric and Adult Hematology “Updates in the management of relapsed acute lymphoblastic leukemia” Cartagena, Colombia  
April 2017 African Society of Pediatric Oncology “Ethics in childhood cancer research” Marrakech, Morocco  
April 2017 African Society of Pediatric Oncology “Integration of supportive care and quality improvement into pediatric oncology practice in French-speaking Africa” Marrakech, Morocco  
April 2017 Grand Rounds of Mohammed VI University “Roles, impact, and quality of care of advanced practice nurses in high-income countries” Casablanca, Morocco  
March 2017 Jornadas Pediátricas of the University del Valle “Early diagnosis of childhood cancer” Cali, Colombia  
March 2017 Jornadas Pediátricas of the University del Valle “Tumor lysis syndrome” Cali, Colombia  
March 2017 Webex Cochin Symposium on Childhood Cancer “Overcoming treatment failure for children with cancer one cause at a time – integration of quality improvement into daily practice in India” Cochin, India  
February 2017 Invited lecture “Tumor lysis syndrome – updates in physiology and management” Toledo, OH  
January 2017 APHON Minneapolis “Childhood acute lymphoblastic leukemia” Minneapolis, MN

### **COMMITTEES AND OFFICES HELD:**

#### **COMMITTEE and OFFICES HELD**

1. Medical Executive Committee 2006-2014
2. Chair, Patient Education Committee 2006-2014
3. Chair, Electronic Roadmap Taskforce 2011-2013
4. Clinical Protocol Scientific Review and Monitoring Committee 2007-2009
5. Chair, Clinical Protocol Monitoring Committee 2008-2009
6. Transfusion and Laboratory Medicine Committee 2003-2006
7. Pharmacy and Therapeutics Committee 2004-2006
8. Institutional Review Board 2001-2005
9. Electronic Thesis and Dissertation Committee 2017-present
10. Executive Committee, College of Nursing 2017-present
11. Clinical Trials Governance Board 2017-present
12. Chairman of the Board, World Child Cancer USA (2011 to Present) - World Child Cancer works in low- and middle-income countries to save the lives of children with cancer and reduce their suffering by raising awareness of the early symptoms of childhood cancer and improving

diagnosis, treatment, and access to treatment. The organization also works to improve emotional and practical support for children and their families, to provide palliative care where a cure is no longer possible, and to develop long-term sustainability of cancer programs.

13. Secretary General, International Pediatric Oncology Society (SIOP, 2017 to 2020) – elected by the Society’s global membership to provide executive oversight and leadership in all aspects of SIOP governance, membership, and program implementation

## **RESEARCH AND OTHER EXTERNAL SUPPORT:**

PI, BTG, Inc. (3/2014 to 9/2015) \$290,882

Impact of the timing of glucarpidase rescue on organ damage in a young pig model of delayed high-dose methotrexate elimination

PI, Jazz Pharmaceuticals (3/2014 to 2/2015) \$129,803

Validating the young pig as a model of asparaginase-induced pancreatitis

Collaborator, Abbott Nutrition (12/2009 to 11/2010) \$30,000

Abbott Nutrition Study ZA18: The neonatal pig as a model for chemotherapy-induced mucositis

PI, Canadian Government (3/2013 to 9/2017) \$500,000

Central American Outcome Evaluation Program for Childhood Cancer in Middle-Income Countries

PI, Cure2Children Foundation (6/2011-5/2013) \$50,000

Global Neuroblastoma Network Development Project

PI, Until Every Child Survives (7/2011-6/32013) \$25,000

Impact of Nursing Education and Leadership in Guatemala

PI, Pediatric Oncology Group of Ontario (1/2004 to 12/2010) \$583,000

Central American research facilitation and core facility development grant to support data manager training and salaries in 7 Central American countries for 6 years (competitive renewal after 3 years was successful)

PI, Sanofi-Aventis (4/2005-3/2010) \$645,475

RASALL Multicenter Protocol – safety and efficacy of rasburicase in pediatric cancer patients with a history of asthma and allergy at high risk for tumor lysis syndrome

PI, Sanofi (10/2008-9/2009), \$25,000

International Pediatric Oncology Education Initiative of the International Pediatric Oncology Society (SIOP)

Sanofi (10/2007-9/2008) \$50,000

International Pediatric Oncology Education Initiative of the International Pediatric Oncology Society (SIOP)

Sanofi (9/2006-8/2007) \$60,000

International Pediatric Oncology Education Initiative of the International Pediatric Oncology Society (SIOP)

PI, Eisai (4/2009-3/2014) \$163,102

VTE1 Study of dalteparin pharmacodynamics in children with cancer and thrombosis

PI, St. Jude Children’s Research Hospital Intramural Protocol (1999-2010) \$600,000

VOD01 protocol evaluating low-dose continuous infusion unfractionated heparin to prevent hepatic veno-occlusive disease in children undergoing allogeneic stem cell transplantation

## **BOOKS AND BOOK CHAPTERS:**

1. **Howard SC**, Ribeiro RC and Pui CH. Acute Complications. Chapter 29, pp 709-749, In: Pui CH (ed). Childhood Leukemias, 2<sup>nd</sup> Edition. Cambridge, 2006.
2. Ribeiro RC, **Howard SC**, and Pui CH. Acute Leukemia in Countries with Limited Resources. Chapter 24, pp 625-638, In: Pui CH (ed). Childhood Leukemias, 2<sup>nd</sup> Edition. Cambridge, 2006.
3. **Howard SC**, Castellino SM, Quillen JH, Arkansas-Nation C, Grawe GH, Cripe TP. Myelodysplastic

- Syndrome. *eMedicine Pediatrics* 2006.
4. **Howard SC**, Metzger ML, Hudson MM. Pediatric Hodgkin Lymphoma. In: Antillon FA, Bernaola E, Sierrasesumaga L (eds). *Pediatric Oncology*. Pearson Education, 2006.
  5. Barfield RC, **Howard SC**. Chronic Leukemias in Children. In: Antillon FA, Bernaola E, Sierrasesumaga L (eds). *Pediatric Oncology*. Pearson Education, 2006.
  6. Castellino SM, Quillen JH, Arkansas-Nation C, **Howard SC**. Myelodysplastic Syndrome. *eMedicine Pediatrics* 2008, 2009, 2010.
  7. Bhojwani D, Antillon FA, **Howard SC**. Childhood Cancer in the Developing World, In: William Carroll and Jonathan Finlay (eds). *Cancer in Children*. Jones and Bartlett Publishers, Inc., 2009.
  8. **Howard SC**, Molyneux E. Cancer treatment in low- and middle-income countries. In: *Cancer in Children: Clinical Management*, 6<sup>th</sup> Edition. Michael Stevens, Hubert Caron, and Andrea Biondi (eds), 2011.
  9. Banavali S, **Howard S**, Mehta P, Sala A, Barr R, Magrath I. Hematological Malignancies in Children, Adolescents and Young Adults: Special Considerations in Low and Middle Income Countries. In: *Hematological Malignancies in Children, Adolescents and Young Adults*. Cairo MS (ed), 2011.
  10. **Howard SC**, Ribeiro RC and Pui CH. Acute Complications. Chapter 29, In: Pui CH (ed). *Childhood Leukemias*, 3<sup>rd</sup> Edition. Cambridge, 2012.
  11. Ribeiro RC, **Howard SC**, and Pui CH. Acute Leukemia in Countries with Limited Resources. Chapter 24, In: Pui CH (ed). *Childhood Leukemias*, 3<sup>rd</sup> Edition. Cambridge, 2012.
  12. **Howard SC**. eMedicine Tumor lysis syndrome. *eMedicine Pediatrics* 2012, 2013
  13. **Howard SC**, Montelenone PM. Pediatric Thromboembolism. *eMedicine Pediatrics* 2008 through 2014.
  14. Dixon N, Castellino SM, **Howard SC**, Quillen JH, Arkansas-Nation C, Grawe GH, Cripe TP. Myelodysplastic Syndrome. *eMedicine Pediatrics* 2011, 2012, 2013, 2014.
  15. **Howard SC**. Tumor lysis syndrome. In *Abeloff's Clinical Oncology* 5<sup>th</sup> edition. Edited by Niederhuber, Armitage, Doroshow, Kastan, and Tepper, 2013
  16. Inam C, **Howard SC**. Oncologic Emergencies. In *Pediatric Hematology-Oncology in Countries with Limited Resources: A Practical Manual*, edited by Cristina Stefan and Carlos Rodriguez-Galindo, 2013
  17. **Howard SC**, Pui C-H, Ribeiro RC. Tumor lysis syndrome. In *Renal Diseases in Cancer Patients*, edited by Kevin Finkel and Scott Howard, Elsevier, 2013

#### PEER-REVIEWED JOURNAL ARTICLES:

1. Paley MS, Meehan EJ, Rosenberger FE, **Howard SC**, Harris JM. Synthesis and characterization of a novel betaine dye: 2,4-dimethyl-6-(2,4,6-triphenyl-N-pyridinio)phenolate. *J Organic Chem* 1989; 54:3432.
2. Paley MS, McGill RA, **Howard SC**, Wallace SE, Harris JM. Solvatochromism. A new method for polymer characterization. *Macromolecules* 1990; 23(21):4557-4564.
3. Herman M, Glass T, **Howard SC**. Case Records of LeBonheur Children's Medical Center: A seventeen month old female with abdominal distension and portal vein gas. *Pediatric Emergency Care* 1997; 13(3):237-242.
4. Willner IR, Uhl MD, **Howard SC**, Williams EQ, Riely CA, Waters B. Serious hepatitis A: an analysis of patients hospitalized during an urban epidemic in the United States. *Ann Intern Med* 1998; 128(2):111-4.
5. **Howard SC**, Gajjar A, Ribeiro RC, Rivera GK, Rubnitz J, Sandlund JT, Harrison PL, de Armendi A, Dahl GV, Pui C-H. Safety of lumbar puncture for children with acute lymphoblastic leukemia and thrombocytopenia. *JAMA* 2000; 284(17):2222-2224.
6. McCarville B, Hoffer FA, **Howard SC**, Goloubeva O, Kauffman W. Hepatic veno-occlusive disease in children undergoing bone-marrow transplantation: usefulness of sonographic findings. *Pediatr Radiol* 2001; 31:102-105.

7. **Howard SC**, Gajjar AJ, Cheng C, Kritchevsky SB, Somes GW, Harrison PL, Ribeiro RC, Rivera GK, Rubnitz JE, Sandlund JT, Armendi AJ de, Razzouk BI, Pui C-H. Traumatic lumbar puncture in pediatric patients with acute lymphoblastic leukemia. *JAMA* 2002; 288:2001-2007.
8. Crews K, Wimmer P, **Howard SC**, Razzouk B. Pharmacokinetics of 2-CDA in a pediatric patient undergoing hemofiltration and hemodialysis for acute renal failure. *J Pediatr Hematol Oncol* 2002; 24:677-680.
9. **Howard SC**, Pui C-H. Endocrinopathy in children with acute lymphoblastic leukemia. *Blood Reviews* 2002; 16:225-243.
10. **Howard SC**, Armendi AJ, Pui C-H. Racial difference in rates of traumatic lumbar puncture (letter). *JAMA* 2003; 289:548-549.
11. **Howard SC**, Kaplan SD, Razzouk BI, Sandlund JT, Ribeiro RC, Gajjar AJ, Skoch JP, Roy III S, Hudson M, Pui C-H. Urolithiasis in pediatric patients with acute lymphoblastic leukemia. *Leukemia* 2003;17:541-6
12. Pui C-H, Sandlund JT, Pei D, Rivera GK, **Howard SC**, Ribeiro RC, Rubnitz JE, Razzouk BI, Hudson M, Cheng C, Raimondi SC, Behm FG, Downing J, Relling MV, Evans WE. Recent improvements in therapy for acute lymphoblastic leukemia extend to black children. *JAMA* 2003; 290:2001-2007.
13. Metzger M, **Howard SC**, Fu LC, Peña A, Stefan R, Hancock ML, Zhang Z, Pui C-H, Wilimas J, Ribeiro RC. Improving the outcome of childhood acute lymphoblastic leukemia in countries with limited resources: insights from Honduras. *Lancet* 2003; 362:706-708.
14. **Howard SC**, Naidu PE, Hu XJ, Jeng MR, Rodriguez-Galindo C, Rieman MD, Wang WC. The natural history of moderate aplastic anemia in children. *Pediatr Blood Cancer* 2004; 43:545-551.
15. **Howard SC**, Pedrosa M, Lins M, Pedrosa A, Pui CH, Ribeiro RC, Pedrosa F. Establishment of a pediatric oncology program and outcomes of childhood acute lymphoblastic leukemia in a resource-poor area. *JAMA* 2004; 291:2471-2475.
16. Pui CH, Sandlund JT, Pei D, Campana D, Rivera GK, Ribeiro RC, Rubnitz JE, Razzouk BI, **Howard SC**, Hudson MM, Cheng C, Kun LE, Raimondi SC, Behm FG, Downing JR, Relling MV, Evans WE. Improved outcome for children with acute lymphoblastic leukemia: results of Total Therapy Study XIII B at St. Jude Children's Research Hospital. *Blood* 2004; 104:2690-2696.
17. El Saleeby CM, **Howard SC**, Hayden R, McCullers JA. Association between tea ingestion and invasive *Bacillus cereus* infection in children with cancer: a case control study. *CID* 39:1536-1539; 2004.
18. Tamburro RF, Gordon PL, D'Apolito JP, **Howard SC**. Unsafe and violent behavior in commercials aired during televised major sporting events. *Pediatrics* 2004; 114(6):e694-698.
19. Hudson MM, Krasin M, Link MP, Donaldson SS, Billups C, Merchant TE, Kun L, Billet AL, Kaste S, Tarbell NJ, **Howard S**, Friedmann AM, Hurwitz CA, Young JA, Marcus KC, Rai S, Cowan T, Weinstein HJ. Risk-adapted combined modality therapy with VAMP/COP and response-based, involved-field radiation for unfavorable pediatric Hodgkin's disease. *J Clin Oncol* 2004; 22:4541-4550.
20. Hijiya N, Onciu M, **Howard SC**, Zhang Z, Cheng C, Sandlund JT, Kyzer EP, Behm FG, Pui C-H. Utility of automated counting to determine absolute neutrophil counts and absolute phagocyte counts for pediatric cancer treatment protocols. *Cancer* 2004; 101(11):2681-2686.
21. Relling MV, Yang W, Das S, Cook EH, Rosner GL, Neel M, **Howard S**, Ribeiro R, Sandlund JT, Pui C-H, Kaste SC. Pharmacogenetic risk factors for osteonecrosis of the hip among children with leukemia. *J Clin Oncol* 2004; 22:3930-3936.
22. Hijiya N, Metzger ML, Pounds S, Schmidt JE, Razzouk BI, Rubnitz JE, **Howard SC**, Nunez CA, Pui C-H, Ribeiro RC. Severe cardiopulmonary complications consistent with systemic inflammatory response syndrome caused by leukemia cell lysis in childhood acute myelomonocytic or monocytic leukemia. *Pediatr Blood Cancer* 2005; 44(1):63-69.
23. **Howard SC**, Wilimas JA. Delays in diagnosis and treatment of childhood cancer: Where in the world are they important? *Pediatr Blood Cancer* 2005; 44:303-304.
24. Kaste SC, **Howard SC**, McCarville EB, Krasin MJ, Kogon PG, Hudson MM. <sup>18</sup>F-FDG-avid sites

- mimicking active disease in pediatric Hodgkin's. *Pediatric Radiology* 2005; 35:141-154.
25. Sandlund JT, **Howard SC**, Hijiya N, Pui C-H, Shenep JL, Adderson EE. Myositis complicating Viridans streptococcal sepsis in childhood leukemia. *Pediatr Blood Cancer* 2005; 44(3):277-279.
  26. **Howard SC**, Campana D, Coustan-Smith E, Antillon F, Bonilla M, Fu L, Pui, C-H., Ribeiro RC, Wilimas JA, Lorenzana R. Development of a regional flow cytometry center for diagnosis of childhood leukemia in Central America. *Leukemia* 2005; 19:323-325.
  27. Antillon F, Baez FL, Barr R, Barrantes Zamorra JC, Fu Carrasco L, Moreno B, Bonilla MM, Tognoni G, Valsecchi MG, **Howard S**, Ribeiro RC, Masera G. AMOR: A proposed cooperative effort to improve outcomes of childhood cancer in Central America. *Pediatr Blood Cancer* 2005; 45(2):107-110.
  28. **Howard SC**, Ribeiro RC, Pui C-H. Strategies to improve outcomes of children with cancer in low-income countries. *Eur J Cancer* 2005; 41(11):1584-1587.
  29. Krasin MJ, Rai SN, Kun LE, Merchant TE, Metzger ML, **Howard SC**, Hudson MM. Patterns of treatment failure in pediatric and young adult patients with Hodgkin's disease: local disease control with combined-modality therapy. *J Clin Oncol* 2005; 23(33):8406-13.
  30. Rech A, de Carvalho GP, Meneses CF, Hankins J, **Howard S**, Brunetto AL. The influence of traumatic lumbar puncture and timing of intrathecal therapy on outcome of pediatric acute lymphoblastic leukemia. *Pediatr Hematol Oncol* 2005; 22(6):483-488.
  31. Hijiya N, Liu W, Sandlund JT, Jeha S, Razzouk BI, Ribeiro RC, Rubnitz JE, **Howard SC**, Kyzer EP, Redd DS, Cheng C, Rivera GK, Hudson MM, Relling MV, Pui C-H. Overt testicular disease at diagnosis of childhood acute lymphoblastic leukemia: Lack of therapeutic role of local irradiation. *Leukemia* 2005; 19(8):1399-403.
  32. Pui C-H, Pei D, Sandlund JT, Campana D, Ribeiro RC, Razzouk BI, Rubnitz JE, **Howard SC**, Hijiya N, Jeha S, Cheng C, Downing JR, Evans WE, Relling MV, Hudson M. Risk of adverse events after completion of therapy for childhood acute lymphoblastic leukemia. *J Clin Oncol* 2005; 23(31):7936-41.
  33. Sanders RP, Maddirala SD, Geiger TL, Pounds S, Sandlund JT, Ribeiro RC, Pui C-H, **Howard SC**. Premedication with acetaminophen or diphenhydramine for transfusion with leucoreduced blood products in children. *Br J Haematol* 2005; 130(5):781-787.
  34. Quintana Y, **Howard S**, Norland M, Patel A, O'Brien R, Ribeiro R. Pond4Kids - a multi-site online Pediatric Oncology Research Database for collaborative protocol research. *AMIA Annu Symp Proc*. 2005; 1090.
  35. Metzger ML, **Howard SC**, Hudson MM, Gow KW, Li C-S, Krasin MJ, Merchant T, Kun L, Shelso J, Pui C-H, Shochat SJ, McCarville MB. Natural history of thyroid nodules in survivors of pediatric Hodgkin lymphoma. *Pediatr Blood Cancer* 2006; 46(3):314-319.
  36. Reddick WE, Shan ZY, Glass JO, Helton S, Xiong X, Wu S, Bonner MJ, **Howard SC**, Christensen R, Khan RB, Pui C-H, Mulhern RK. Smaller white matter volumes are associated with larger deficits in attention and learning among long-term survivors of acute lymphoblastic leukemia. *Cancer* 2006; 106(4):941-9. PMID: PMC2396784
  37. Bachir H, Mot S, Metzger ML, **Howard SC**, Kaste S, Krasin MP, Hudson MM. Itraconazole-enhanced chemotherapy toxicity in a patient with Hodgkin lymphoma. *J Pediatr Hematol Oncol* 2006; 28(1):33-35.
  38. Hendrick JM, Kaste SC, Tamburro RF, Hoffer FA, Onciu M, Sandlund JT, Ribeiro RC, Chandler JC, **Howard SC**. Abdominal compartment syndrome in a newly diagnosed patient with Burkitt lymphoma. *Pediatr Radiol* 2006; 36(3):254-257.
  39. Karimova EJ, Rai SN, Ingle D, Ralph AC, Deng X, Neel MD, **Howard SC**, Pui CH, Kaste SC. MRI of knee osteonecrosis in children with leukemia and lymphoma: part 2, clinical and imaging patterns. *AJR Am J Roentgenol* 2006; 186(2):477-82.
  40. Metzger ML, Hudson MM, Somes GW, Shorr RI, Li C-S, Krasin MJ, Shelso J, Pui C-H, **Howard SC**. White race as a risk factor for hypothyroidism after treatment for pediatric Hodgkin's lymphoma. *J Clin Oncol* 2006; 24:1516-1521.



41. **Howard SC**, Pui C-H. Pitfalls in predicting tumor lysis syndrome. *Leuk Lymph* 2006 47(5):782-785.
42. DiSessa TG, **Howard SC**, Salim MA. Congenital right ventricular diverticulum associated with a ventricular septal defect: a rare echocardiographic finding. *Echocardiography* 2006; 23(9):787-9.
43. Caniza M, Clara W, Maron G, Navarro-Marin JE, Rivera R, **Howard SC**, Camp J, Barfield RC. Establishment of ethical oversight of human research in El Salvador: lessons learned. *Lancet Oncol* 2006; 7(12):1027-1033
44. Franklin J, Pluetschow A, Paus M, Specht L, Anselmo A-P, Aviles A, Biti G, Bogatyreva T, Bonadonna G, Brillant C, Cavalieri E, Diehl V, Eghbali H, Fermé C, Henry-Amar M, Hoppe R, **Howard S**, Meyer R, Niedzwiecki D, Pavlovsky S, Radford J, Raemaekers J, Ryder D, Schiller P, Shakhatarina S, Valagussa P, Wilimas J, Yahalom J. Second malignancy risk associated with treatment for Hodgkin lymphoma: meta-analysis of the randomised trials. *Ann Oncol* 2006; 17(12):1749-1760.
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