

Barry L. Shulkin, M.D.
St. Jude Children's Research Hospital
262 Danny Thomas Place
Mail Stop 220
Memphis, TN 38105
(901) 595-2887
Barry.Shulkin@stjude.org

1. Current Position at St. Jude

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| Chief, Nuclear Medicine Department of Diagnostic Imaging St. Jude Children's Research Hospital Memphis, TN 38105 | 2004 - present |
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2. Education and Training

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| B.A. | University of Texas, Austin (summa cum laude; Highest Honors in Mathematics) | 1973 |
| M.D. | University of Texas Southwestern Medical School, Dallas | 1978 |
| M.B.A. | University of Michigan School of Business, Ann Arbor, MI | 2002 |

3. Professional Career

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| Internal Medicine Intern, University of Texas Southwestern Affiliated Hospitals (Parkland Memorial Hospital and Dallas Veterans Administration Medical Center), Dallas, Texas | 1978-1979 |
| Internal Medicine Resident, University of Texas Southwestern Affiliated Hospitals (Parkland Memorial Hospital and Dallas Veterans Administration Medical Center), Dallas, Texas | 1979-1981 |
| Endocrinology Fellow; University of North Carolina School of Medicine, Chapel Hill, North Carolina (preceptor: Robert D. Utiger, MD) | 1981-1984 |
| Nuclear Medicine, University of Michigan Medical Center, Department of Internal Medicine, Division of Nuclear Medicine, Ann Arbor, Michigan | 1984-1986 |
| Assistant Professor, University of Michigan Medical Center, Department of Internal Medicine, Division of Nuclear Medicine, Ann Arbor, Michigan | 07/1986 – 08/1992 |
| Associate Professor, University of Michigan Medical Center, Department of Internal Medicine, Division of Nuclear Medicine, Ann Arbor, Michigan | 09/1992 – 08/1999 |
| Senior Postdoctoral Training, Visiting Associate Professor, Harvard Medical School, Department of Radiology, Brigham and Women's Hospital, Boston, MA | 07/1996- 12/1996 |
| Professor, University of Michigan Medical Center, Department of Internal Medicine, Division of Nuclear Medicine, Ann Arbor, Michigan | 1999-2004 |
| Director, Pediatric Nuclear Medicine Satellite Clinic, Mott Children's Hospital, University of Michigan Medical Center | 1986-2004 |
| Acting chief, Division of Nuclear Medicine, Department of Radiology, University of Michigan Medical Center, Ann Arbor, Michigan | 2002-2004 |

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Member, Division of Nuclear Medicine, Department
St. Jude Children's Research Hospital, Memphis, Tennessee

2004-present

4. Certifications and Licensure

Medical Licensure:

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| Texas | 1978 |
| North Carolina-inactive | 1981 |
| Michigan-inactive | 1984 |
| California | 1987 |
| Massachusetts-inactive | 1996 |
| Tennessee | 2004 |

Board Certification:

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| National Board of Medical Examiners | July 2, 1979 |
| American Board of Internal Medicine | Sept. 16, 1981 |
| Subspecialty, Endocrinology and Metabolism | Nov. 8, 1983 |
| American Board of Nuclear Medicine | Dec. 8, 1986 |
| Certification Board of Nuclear Cardiology | Nov. 28, 2001 |
| Re-certification, American Board of Nuclear Medicine | Oct. 24, 2003 |

5. Professional Memberships

Phi Beta Kappa
Alpha Omega Alpha
Society of Nuclear Medicine (SNM)
American College of Physicians
Michigan Peer Review Organization
Endocrine Society
American Thyroid Association
American College of Nuclear Physicians
European Association of Nuclear Medicine
Central Society for Clinical Research
Society for Pediatric Radiology: Pediatric Nuclear Medicine ad hoc committee. 1998-2000
Children's Oncology Group
Executive Committee- Pressor: Pheochromocytoma Research Support Organization
(www.pressor.org)
Society of Nuclear Medicine: Procedure Guidelines Task Force. 2008-2010
Society of Nuclear Medicine: Awards Committee. 2008-2011
Society of Nuclear Medicine: Audit Subcommittee. 2010 - 2011
Society of Nuclear Medicine: Continuing Education Committee 2010 – 2011, 2013-2014
Society of Nuclear Medicine: Commission on Finance Committee 2010 - 2011
Society of Nuclear Medicine: SNM Guidelines Committee 2010 – 2011, 2013-2014
Board of Directors: American Board of Nuclear Medicine; January 2004 – January 2011
Chairman, American Board of Nuclear Medicine: January 2010- January 2011
Member, Nuclear Medicine Residency Review Committee, American College of Graduate Medical Education, July 1, 2012, to June 30, 2018

6. Editorial Board Appointments

Director, American Board of Nuclear Medicine; Jan 15, 2004 – Jan 2012
Member, Nuclear Medicine Residency Review Committee, American College of Graduate Medical Education,
Sept 2013 – Sept 2018
Journal of Nuclear Medicine and Molecular Imaging; July 2015 - current

Reviewer

The Journal of Clinical Endocrinology and Metabolism

1983--

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| The Journal of the American Medical Association | 1984-- |
| Archives of Internal Medicine | 1988-- |
| Scientific Program Committee, 36th Annual Meeting of the Society of Nuclear Medicine | 1989-- |
| Journal of Nuclear Medicine | 1993-- |
| New England Journal of Medicine | 1995-- |
| Pediatric Blood and Cancer | 2005-- |
| Journal of Clinical Oncology | 2005-- |

7. Grant Review / Study Activities

Study Sections

Special Emphasis Panel, Development and Application of Imaging in Therapeutic Studies, RFA CA-98-024, April 21-22, 1999, NCI, Rockville, MD

Review Panel of 2 P01 CA045045-17. "Molecular Imaging of Cancer and Its Response to Therapy, Oct 21-23, 2002, Seattle, WA

Review Panel for Children's Oncology Group Phase I Imaging Consortium Proposals, Oct 28, 2003; Rockville, MD

Outside Reviewer. Center for Scientific Review Special Emphasis Panel: Biomedical Imaging and Imaging Technology; October 25, 2005

Invited reviewer for site visit of intramural Laboratory, Medical Neuroendocrinology, Dr. Karel Pacak of the NICHD: The Reproductive Biology and Medicine Branch, Bethesda, MD, December 4 – 6, 2007.

8. Honors and Awards

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| Summa cum laude graduate University of Texas | 1973 |
| Phi Kappa Phi (University of Texas) | 1973 |
| Phi Beta Kappa (University of Texas) | 1973 |
| Alpha Omega Alpha (University of Texas Southwestern Medical School) | 1978 |
| Fellow, American College of Physicians | 1994 |
| Fellow, American College of Nuclear Physicians | 1996 |
| Best Doctors in America | 2009-2010 |

9. Institutional and Committee Assignments

University of Michigan

MCHC design committee, July 1986 – June 1990.

Director, Pediatric Nuclear Medicine Satellite Clinic, July 1986—

Pediatric Sedation Guidelines Task Force, July 1993 – June 1996

PET Operations Committee, June 1995 – August 2004

Graduate Medical Education Ethics Committee: Department of Radiology representative.
July 2001 – June 2002

Department of Radiology Sabbatical Review Committee 2001- 2004

Department of Radiology Information Technology Committee 2001- 2004

Department of Radiology Compensation Review Committee 2002- 2003

Interim Director, Division of Nuclear Medicine, Department of Radiology, July 1, 2002- April 2004

Subcommittee, Human Use of Radioisotopes and Radioactive Drug Research Committee, Institutional Review Board, Aug 1, 2002- July 2004

Other

Board of Medical and Scientific Advisors: National Vascular Malformations Foundation, Inc., 1993-

Nominations Committee, Pediatric Imaging Council, Society of Nuclear Medicine, 1996-1997

Nuclear Medicine Subcommittee, Society for Pediatric Radiology, 1996-

Radiology Committee, representative to neuroblastoma strategy group and lymphoma strategy group, Children's Cancer Group (CCG), 1997-2000

10. Professional Administrative Services

Review Committee: Pediatric Abstracts for 1998 Society of Nuclear Medicine Congress

Review Committee: Endocrinology Abstracts for 1999 Society of Nuclear Medicine Congress. Los Angeles, CA

Review Committee: Abstracts for 2000 spring meeting of Central Chapter of Society of Nuclear Medicine. Dearborn, MI

Review Committee: Endocrinology Abstracts for 2000 Society of Nuclear Medicine Congress; St. Louis, MO

Review Committee: Pediatric Abstracts for 2001 Society of Nuclear Medicine Congress; Toronto, Canada

Treasurer: Pediatric Nuclear Medicine Council, Society of Nuclear Medicine, July 2000-June 2001

President elect: Pediatric Nuclear Medicine Council, Society of Nuclear Medicine, July 2001-June 2002

President: Pediatric Nuclear Medicine Council, Society of Nuclear Medicine, July 2002-June 2004

Guidelines and Communications Committee, Society of Nuclear Medicine, June 28, 2001- June 19, 2002
Radiology Committee, Children's Oncology Group, 2000-present

St. Jude Children's Research Center: Central Protocol Scientific Review and Monitoring Committee August 2004 – August 2009

Review Committee: Pediatric Abstracts for 2002 Society of Nuclear Medicine meeting; Los Angeles, CA

Review Committee: Pediatric Abstracts for 2003 Society of Nuclear Medicine meeting; New Orleans, LA

Review Committee: Pediatric Abstracts for 2004 Society of Nuclear Medicine meeting; Philadelphia, PA

Review Committee: Pediatric Abstracts for 2005 Society of Nuclear Medicine meeting; Toronto, Ontario, CA

Review Committee: Pediatric Abstracts for 2006 Society of Nuclear Medicine meeting; San Diego, CA

Review Committee: Pediatric Abstracts for 2007 Society of Nuclear Medicine meeting; Washington, DC

Review Committee: Pediatric Abstracts for 2008 Society of Nuclear Medicine meeting; New Orleans, LA

Review Committee: Pediatric Abstracts for 2009 Society of Nuclear Medicine meeting; Toronto, Ontario, CA

Review Committee: Pediatric Abstracts for 2010 Society of Nuclear Medicine meeting; Salt Lake City, UT

- Review Committee: Pediatric Abstracts for 2010 World Federation of Nuclear Medicine and Biology. Capetown, South Africa; Sept 2010
- Review Committee: Pediatric Abstracts for 2011 Society of Nuclear Medicine meeting; San Antonio, TX
- Review Committee: Pediatric Abstracts for 2012 Society of Nuclear Medicine meeting; Miami Beach, FL
- Review Committee: Pediatric Abstracts for 2013 Society of Nuclear Medicine meeting; Vancouver, BC, Canada
- Review Committee: Pediatric Abstracts for 2014 Society of Nuclear Medicine meeting; St. Louis, MO
- Review Committee: Pediatric Abstracts for 2015 Society of Nuclear Medicine meeting; Baltimore, MD
- Review Committee: Pediatric Abstracts for 2016 Society of Nuclear Medicine meeting; San Diego, CA
- Review Committee: Exhibit Abstracts for 2017 Society of Nuclear Medicine meeting; Denver, CO
- Review Committee: Exhibit Abstracts for 2018 Society of Nuclear Medicine meeting; Philadelphia, Pa
- Review Committee: Procedures Standards 6/28/2018 through 6/15/2021, Society of Nuclear Medicine and Molecular Imaging

11. Formal Education / Teaching Activities

University of North Carolina

Attending activity

- Endocrinology Consult Service, North Carolina Memorial Hospital, Chapel Hill, North Carolina. Consultative rounds five times weekly, 3-hour sessions June 1983
- Endocrinology Consult Service, North Carolina Memorial Hospital, Chapel Hill, North Carolina. Consultative rounds five times weekly, 3 hour sessions May 1984

University of Michigan

Attending activity

- Pediatric Nuclear Medicine satellite clinic, daily reading session, 2 hours per session, 10 hours per week, 1986-88 1986 -1988
- General Nuclear Imaging clinic, approximately once weekly, 5 hours 1986 --
- Nuclear Medicine Thyroid Imaging and Therapy clinic, once monthly, 4 hours 1986 --
- Pediatric Nuclear Medicine satellite clinic, interpretative sessions approximately three per week, 2 hours per session, 6 hours per week July 1988- June 1990
- Pediatric Nuclear Medicine satellite clinic, reading sessions average two per week, 2 hours per session, 4 hours per week July 1991 --
- Attending physician, Sturgis Medical Service, University of Michigan Hospitals Oct. 1-31, 1991
- Attending physician, Sturgis Medical Service, University of Michigan Hospitals Oct. 1-Nov. 6, 1992
- Attending physician, Dock Medical Service, University of Michigan Hospitals Nov. 1-29, 1993
- Attending physician, Burgundy Medical Service, Ann Arbor Veterans Administration Medical Service, University of Michigan May 1-31, 1997

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| Attending physician, Silver Medical Service, Ann Arbor Veterans Administration Medical Service, University of Michigan | Oct. 1-31, 1997 |
| Attending physician, Silver Medical Service, Ann Arbor Veterans Administration Medical Service, University of Michigan | Dec. 1-31, 1998 |
| Attending physician, gold Medical Service, Ann Arbor Veterans Administration Medical Service, University of Michigan | Nov 1-30, 1999 |

Direct Medical Student Teaching

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| M3, M4: Daily availability to review nuclear imaging studies of pediatric patients | July 1986-- |
| M4: Weekly reading sessions of adult patients undergoing nuclear imaging procedures—for students with nuclear medicine elective or rotating from radiology | July 1986-- |
| M3, M4: Attending physician, Sturgis Medical Service, teaching rounds 3 sessions per week, 6 hours per week. Preceptor rounds: 2 sessions per week, 2 hours per week | Oct. 1991 |
| M3, M4: Attending physician, Sturgis Medical Service, teaching rounds 3 sessions per week, 6 hours per week. Preceptor rounds: 1 session per week, 1 hour per week | Oct. 1-Nov. 6, 1992 |
| M3, M4: Attending physician, Dock Medical Service, teaching rounds 3 sessions per week, 6 hours per week. Preceptor rounds: 1 session per week average, 1 hour per week | Nov. 1-29, 1993 |
| M3: Attending physician, Burgundy Medical Service, Ann Arbor Veterans Administration Medical Service, teaching rounds 3 sessions per week; Preceptor rounds: 1 session per week average, 1 hour per week | May 1-31, 1997 |
| M3: Attending physician, Silver Medical Service, Ann Arbor Veterans Administration Medical Service, teaching rounds 3 sessions per week; Preceptor rounds: 1 session per week average, 1 hour per week | Oct. 1-31, 1997 |
| M2: Preceptor, Introduction to Disease. Average 4 hours per month | Feb.1 – May 31, 1998 |

Direct House Officer Teaching

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| Pediatric Nuclear Medicine satellite clinic, daily reading session, radiological or nuclear medicine house officer, 2 hours per session, 10 hours per week, 1986-88 | July 1986 -June 1988 |
| General Nuclear Imaging clinic, approximately once weekly, nuclear medicine and radiology house officers, 5 hours | July 1986 -- |
| Nuclear Medicine Thyroid Imaging and Therapy clinic, once monthly, nuclear medicine and radiology house officers, 4 hours | July 1986-- |
| Pediatric Nuclear Medicine satellite clinic, interpretative sessions approximately three per week, nuclear medicine or radiology house officer, 2 hours per session, 6 hours per week | July 1988- June 1990 |
| Pediatric Nuclear Medicine satellite clinic, reading sessions approximately two per week, 2 hours per session, 4 hours per week | July 1991-- |
| Faculty preceptor for nuclear medicine imaging: correlation conference, nuclear medicine and radiology house officer, weekly conference, 2 hours per week | Apr. 1-Jun. 30, 1991 |
| Attending physician, Sturgis Medical Service, teaching rounds 3 sessions per week, 6 hours per week | Oct. 1991 |

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| Attending physician, Dock Medical Service, teaching rounds 3 sessions per week, 6 hours per week | Oct. 1-Nov. 6, 1992 |
| Attending physician, Dock Medical Service, teaching rounds 3 sessions per week, 6 hours per week. | Nov. 1-29, 1993 |
| Attending physician, Burgundy Medical Service, Ann Arbor Veterans Administration Medical Service, teaching rounds 3 sessions per week; HO3 rounds:6 sessions per week average, 9 hours per week | May 1-31, 1997 |
| Attending physician, Silver Medical Service, Ann Arbor Veterans Administration Medical Service, University of Michigan, teaching rounds 3 sessions per week; HO3 rounds:6 sessions per week average, 9 hours per week | Oct. 1-31, 1997 |
| Attending physician, Silver Medical Service, Ann Arbor Veterans Administration Medical Service, University of Michigan, teaching rounds 3 sessions per week; HO3 rounds:6 sessions per week average, 9 hours per week | Dec. 1-31, 1998 |
| Attending physician, Gold Medical Service, Ann Arbor Veterans Administration Medical Service, University of Michigan, teaching rounds 3 sessions per week; HO3 rounds: 6 sessions per week, average 9 hours per week | Nov. 1-30, 1999 |

Formal Medical Center Teaching

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| Invited speaker, Pediatric Cardiology conference, "Introduction to Pediatric Nuclear Cardiology" | Oct. 27, 1987 |
| Invited speaker, Pediatric clinical conference, "Pediatric Nuclear Medicine" | Apr. 12, 1988 |
| Invited speaker, Internal Medicine noon conference, "Renal Nuclear Medicine" | May 25, 1989 |
| Invited speaker, Nuclear Medicine Grand Rounds, "In-111 labeled platelets for the study of childhood thrombocytopenia" | Nov. 28, 1989 |
| Invited speaker, University of Michigan 18th Annual Spring Update, Advances in Internal Medicine, "Nuclear Imaging in the diagnosis of infection" | May 11, 1990 |
| Invited speaker, Pediatric Cardiology Conference: "Applications of Nuclear Imaging in Pediatric Cardiology" | Oct. 30, 1990 |
| Invited speaker, Nuclear Medicine Grand Rounds, "PET Studies of Neuroendocrine Tumors" | Dec. 13, 1990 |
| Invited speaker, PET Users Conference, "Hydroxyephedrine PET studies of pheochromocytoma and neuroblastoma" | July 1, 1991 |
| Lecturer, Division of Nuclear Medicine Noon Conference, University of Michigan Medical Center, Ann Arbor, Michigan. "Pediatric Nuclear Medicine I" | Aug. 5, 1991 |
| Lecturer, Division of Nuclear Medicine Noon Conference, University of Michigan Medical Center, Ann Arbor, Michigan. "Pediatric Nuclear Medicine II" | Aug. 14, 1991 |
| Lecturer, Division of Nuclear Medicine, "Thyroid Function Tests" | Aug. 22, 1991 |
| Invited speaker, Diagnostic and Therapeutic Updates in Neonatology, "Positron Emission Tomography" | Oct. 31, 1991 |
| Invited speaker, Pediatric Cardiology Research Conference; "PET Studies of Pheochromocytoma" | Dec. 4, 1991 |
| Guest speaker, Radiology Resident Noon Conference; Recent Cases in Pediatric Nuclear Medicine | Feb. 24, 1992 |
| Invited speaker, Nuclear Medicine Research Conference; "PET Studies of | June 15, 1992 |

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Neuroendocrine and Pediatric Tumors"

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| Guest lecturer, Nuclear Medicine Grand Rounds; "PET Studies of Pediatric and Neuroendocrine Tumors" | July 9, 1992 |
| Lecturer, Division of Nuclear Medicine Noon Conference, University of Michigan Medical Center, Ann Arbor, Michigan. "Pediatric Nuclear Medicine I" | Aug. 11, 1992 |
| Guest speaker, Radiology Resident Noon Conference; Recent Interesting Cases | Jan. 28, 1993 |
| Invited speaker, Nuclear Medicine Research Conference; "Tumor Imaging" | Apr. 5, 1993 |
| Faculty participant and lecturer, 21st Annual Spring Update, Advances in Internal Medicine, "Locating Occult Infection (inflammation)- Anatomical and Functional Approaches" | Apr. 30, 1993 |
| Lecturer, Division of Nuclear Medicine Noon Conference, University of Michigan Medical Center, Ann Arbor, Michigan. "Pediatric Nuclear Medicine I" | Sept. 10, 1993 |
| Invited speaker, Nuclear Medicine Research Conference; "PET Studies of Pediatric Tumors" | Jan. 24, 1994 |
| Guest speaker, Radiology Resident Noon Conference; Pediatric Nuclear Imaging Cases | Feb. 14, 1994 |
| Invited speaker, Radiology Grand Rounds; Pediatric Nuclear Imaging | March 2, 1994 |
| Moderator, Radiology Resident Noon Conference | Aug. 10, 1994 |
| Lecturer, Internal Medicine noon conference; Renal Nuclear Medicine | Oct. 13, 1994 |
| Lecturer, Short Course on Positron Emission Tomography, "Pediatric PET studies" | Dec. 2, 1994 |
| Guest speaker, Radiology Resident Noon Conference; Nuclear Imaging Cases | Jan. 9, 1995 |
| Invited speaker, Nuclear Medicine Research Conference; "PET Studies of Neuroblastoma" | Jan. 22, 1996 |
| Invited speaker, Pediatric Hematology-Oncology Research Conference: "Functional Imaging of Neuroblastoma" | March 7, 1996 |
| Invited speaker, Pediatric Hematology-Oncology Research Conference: "Gallium Imaging of Lymphoma" | March 19, 1997 |
| Invited speaker, Nuclear Medicine Research Conference; "The role of SPECT on the evaluation of the abdomen on gallium-67 scintigraphy" | May 12, 1997 |
| Guest lecturer, Endocrinology Fellows Conference, "Thyroid Scanning" | Sept. 26, 1997 |
| Instructor, Nuclear Medicine Didactic Course: Ga and Tl imaging of tumors | Nov. 18, 1997 |
| Speaker, Controversies in Nuclear Medicine Series: The Role of Cortical Scintigraphy in the Evaluation of Pediatric Renal Diseases | Jan. 26, 1998 |
| Moderator, Nuclear Medicine Research Conference. "End diastolic vs ungated attenuation corrected myocardial perfusion SPECT for the detection of coronary heart disease studies corresponding to clinical conditions" | Feb. 23, 1998 |
| Instructor, Nuclear Medicine Didactic Course: Diuretic Renography and Nuclear Cystography | March 12, 1998 |
| Instructor, Nuclear Medicine Didactic Course: Thyroid Studies- Imaging and In Vitro Tests | April 2, 1998 |
| Guest Speaker, Pediatric Hematology Oncology Grand Rounds, Nuclear Imaging | Sept. 16, 1998 |

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in Pediatric Oncology

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| Instructor, Nuclear Medicine Didactic Course: Tumor Imaging: Gallium and Thallium | October 27, 1998 |
| Speaker and Moderator, Nuclear Medicine Controversies Series. Imaging of Hyperparathyroidism: A Pain in the Neck? | Nov. 2, 1998 |
| Instructor, Nuclear Medicine Didactic Course: Diuretic Renography | Feb. 9, 1999 |
| Instructor, Nuclear Medicine Didactic Course: Functional Thyroid Imaging | March 23, 1999 |
| Speaker, Nuclear Medicine Abstract Review Series: PET Imaging of Neuroblastoma with C-11 Epinephrine | April 5, 1999 |
| Guest Speaker, Pediatric Hematology Oncology Grand Rounds, In Vivo PET and In vitro studies of neuroblastoma | Sept. 15, 1999 |
| Lecturer, Endocrine Fellows Teaching Conference, Physiologic Imaging for Neuroendocrine Tumors | Sept. 16, 1999 |
| Speaker, Medical Grand Rounds, Pheochromocytoma: Patient Presentation and Update | Oct. 15, 1999 |
| Instructor, Nuclear Medicine Didactic Course; Gallium and Thallium Tumor Imaging | Nov. 9, 1999 |
| Lecturer, Endocrine Fellows Teaching Conference, Thyroid Imaging | Jan. 20, 2000 |
| Speaker, Nuclear Medicine Controversies Conference, "Imaging of Pheochromocytoma: Anatomic, Physiologic, or None" | Feb. 15, 2000 |
| Instructor, Nuclear Medicine Didactic Course: Diuretic Renography and Nuclear Cystography | March 7, 2000 |
| Instructor, Nuclear Medicine Didactic Course: Thyroid Imaging | March 30, 2000 |
| Instructor, Radiology resident noon teaching conference | Sept. 6, 2000 |
| Speaker, Endocrine Fellows Teaching Conference: Adrenomedullary Imaging part 1 | Sept. 29, 2000 |
| Lecturer, Imaging of Lymphoma. Controversies in Nuclear Medicine Series | Oct. 16, 2000 |
| Instructor, Radiology resident noon teaching conference | Jan. 8, 2001 |
| Instructor, Radiology resident noon teaching conference | Feb. 19, 2001 |
| Instructor, Nuclear Medicine Case Correlation Conference | March 8, 2001 |
| Instructor, Radiology resident noon teaching conference | March 19, 2001 |
| Instructor, Radiology resident noon teaching conference | April 30, 2001 |
| Instructor, Nuclear Medicine Case Correlation Conference | May 3, 2001 |
| Instructor, Radiology resident noon teaching conference | May 21, 2001 |
| Instructor, Nuclear Medicine Case Correlation Conference | Aug 2, 2001 |
| Instructor, Nuclear Medicine Case Correlation Conference | Sept. 13, 2001 |
| Instructor, Radiology resident noon teaching conference | Sept. 17, 2001 |
| Instructor, Radiology resident noon teaching conference | Oct. 22, 2001 |
| Instructor, Nuclear Medicine Case Correlation Conference | Nov. 1, 2001 |


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| Guest speaker, Cancer Center Research Conference, "PET Studies of Neuroendocrine Tumors" | Nov. 12, 2001 |
| Guest speaker, Pediatric Hematology Oncology Research Conference, "PET Studies of Neuroblastoma" | Nov. 14, 2001 |
| Instructor, Nuclear Medicine Didactic Course, "Gallium and Thallium tumor imaging" | Dec. 6, 2001 |
| Instructor, Nuclear Medicine Case Correlation Conference, Pediatric Nuclear Renal Studies I | Mar. 14, 2002 |
| Instructor, Radiology resident noon teaching conference; senior resident board review cases | April 22, 2002 |
| Instructor, Radiology resident noon teaching conference; senior resident board review cases | April 29, 2002 |
| Instructor, Radiology resident noon teaching conference | Oct. 7, 2002 |
| Guest speaker, Endocrinology and Metabolism weekly clinical conference. Nuclear Endocrinology | Feb. 11, 2003 |
| Instructor, Radiology resident noon teaching conference: Radiopharmaceuticals for palliation of bone pain | Feb. 13, 2003 |
| Instructor, Radiology 4 th year resident Board review | April 4, 2003 |
| Speaker, Controversies in Nuclear Medicine Series, "MIBG for Adrenal Pheochromocytoma: Required or Redundant?" | Feb. 12, 2004 |

Undergraduate Teaching

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| Faculty, UROP program. Serving as mentor to 2 undergraduate students, supervising research project. | Sept. 1997-June 1999 |
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St. Jude Children's Research Hospital

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| Nuclear Imaging of Prosthetic Joints: Infection vs Loosening Tumor Board, | Oct. 29, 2004 |
| Somatostatin Receptor Imaging. Tumor Board, | Nov. 19, 2004 |
| Functional Imaging of Lymphoma. Leukemia and Lymphoma Conference, | April 5, 2005 |
| Function Imaging in Pediatric Oncology (FIPO), Grand Rounds, | June 2, 2005 |
| Bone disease after bone marrow transplant: Caridad Martinez, Barry Shulkin, Usman Yusuf; Leukemia and Lymphoma Conference, | June 28, 2005 |
| Introduction to Nuclear Medicine. Presented to the Memphis Club. SJCRH Pavilion; | Aug. 2, 2005 |
| Upcoming Tracers for Response Evaluation, Anything New? Grand rounds, Tumor Board | Sept. 28, 2007 |
| PET Imaging of a Wilms tumor. Tumor Board, February 27, 2009,  | Jan. 19, 2007 |
| PET Radiopharmaceutical Research at St. Jude Children's Research Hospital (with Scott Snyder PhD), Grand Rounds, | May 14, 2009 |
| Functional Imaging of Pheochromocytoma. Tumor Board | May 7, 2010 |
| Thyroid Cancer in a Patient with untreated Hodgkin Lymphoma. Tumor Board | May 6, 2011 |

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| ABCs of Nuclear Medicine. | April 4, 2014 |
| Cancer Center Grand Rounds (with Scott E. Snyder). PET Radiotracer Research in Pediatric Oncology | April 14, 2014 |
| Brain Tumor Friday morning conference. METPET Studies of Low-Grade CNS tumors | October 16, 2014 |
| Lymphoma Leukemia conference. Utility of PET Scans for HL: When and for Whom | March 5, 2015 |
| PET Tracers for OS. Solid Tumor Research Conference. Barry L. Shulkin MD, Scott E. Snyder, PhD. | July 15, 2015 |
| DTSM lecture. Upcoming Imaging Trials in Pediatric Solid Tumors", Scott E. Snyder, Barry L. Shulkin. SJCRH | Feb 2, 2016 |
| Hematology Conference, Nuclear Cardiology | April 28, 2016 |
| Diagnostic Imaging Research Conference. Upcoming and Ongoing Projects in Nuclear Medicine/Cyclotron Chemistry Molecular Imaging (Shulkin, Snyder) | Sept 23, 2016 |
| PET MRI discussion. Diagnostic Imaging Research Conference. | Nov. 29, 2016 |
| DOT Neuroblastoma Conference New Radioactive Tracers in Pediatric Oncology (Shulkin, Doubrovin) | Feb. 15, 2017 |
| Diagnostic Imaging Research Conference. Update Nuclear Medicine 2017 | Feb. 17, 2017 |
| DBSTP conference. Fluorodopamine and Friends for PET imaging of neuroblastoma (Shulkin, Snyder) | April 6, 2017 |
| DBSTP conference. GD2 PET Imaging in Solid Tumors. (Shulkin, Snyder) | Sept 11, 2018 |
| Clinical Translational Research in Solid Tumors. A Special Type of Neuroblastoma (Caldwell, Shulkin, Santiago) | Dec 14, 2018 |
| Radiology Resident Teaching Conference | Dec 17, 2018 |
| Radiology Resident Teaching Conference | Feb 18, 2020 |
| Clinical Translational Research in Solid Tumors. Thyroid Carcinoma with an Emphasis on Hürthle Cell Carcinoma (Nagel, McFadden, Sheyn, Shulkin) | Jan 29, 2021 |
| Clinical Translational Research in Solid Tumors Primary Adrenal Tumors with Endocrine Findings: Initial Workup and Management (Kirkham, Barnes, Shulkin, Murphy, Lam) | March 19, 2021 |

12. Grant Awards

Completed Grants

Clinical Research Center of the University of Michigan: (MO1 RR 00042), "Localization of Pheochromocytoma with Positron Emission Tomography", Principal Investigator - Barry L. Shulkin, M.D., Total direct costs - approximately \$15,000.

National Cancer Institute: (R01CA51220-01), "Adoptive Therapy of Human Cancer with Sensitized T cells", Principal Investigator - Alfred E. Chang, M.D., 5% effort, Annual direct costs - approximately \$190,000.

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National Institute of Neurologic, Communicative, and Stroke Disorders
(NIH NINCDS 5 P01 NS15655-12),
"PET Study of Biochemistry and Metabolism of the CNS",
12/1/89 - 7/30/93,

Principal Investigator-David E. Kuhl, M.D.;
Project 2: "Amino Acid Uptake" - 5% effort,
Principal Investigator - Bernard Agranoff, M.D.,
Annual direct costs - approximately \$90,000

National Cancer Institute: (5 R29 CA54216),
"PET Evaluation of Neuroendocrine Tumors",
4/1/91 - 3/31/96,
Principal Investigator - Barry L. Shulkin, M.D., 50% effort,
Annual direct costs - approximately \$70,000.

National Cancer Institute: (1 U01 CA 59378-02),
"Imaging Evaluation of Non-CNS Solid Pediatric Tumors",
9/30/93 - 9/29/96, 5% effort,
Principal Investigator - Ramiro J. Hernandez, M.D.,
Annual direct costs - approximately \$60,000.

Clinical Research Center of the University of Michigan: (MO1 RR 00042),
"Assessment of Coronary Artery Reserve in Hypoplastic Left Heart Syndrome after Norwood
Reconstruction",
Principal Investigator - Jon Donnelly, M.D.,
Annual direct costs-approximately \$25,000.

Clinical Research Center of the University of Michigan: (MO1 RR 00042),
"Characterization of Adrenal Masses in Cancer Patients by 2-Fluoro-2-Deoxy-D-Glucose-Positron
Emission Tomographic (FDG-PET) Imaging",
Principal Investigator - Ben A. Dwamena, M.B.,Ch.B.,
Annual direct costs-approximately \$43,600.

Clinical Research Center of the University of Michigan: (MO1 RR 00042),
"PET Evaluation of Neuroendocrine Tumors and other Tumors of Childhood",
Principal Investigator - Barry L. Shulkin, M.D.,
Annual direct costs-approximately \$15,000.

Clinical Research Center of the University of Michigan: (MO1 RR 00042),
"PET Studies of Pheochromocytoma: Endocrine and Metabolic approaches",
Principal Investigator - Barry L. Shulkin, M.D.,
Annual direct costs-approximately \$17,000.

National Cancer Institute:
"Clinical PET and Laboratory Studies of Adrenergic Tumors",
4/1/98 - 8/31/04, R01 CA54216
Principal Investigator - Barry L. Shulkin, M.D., 55% effort,
Annual direct costs - approximately \$188,000.

13. Publication Record

A. Peer Reviewed Publications

i. Original Research Articles

1. **Shulkin BL**, Utiger RD, Emerson CH, Braverman LE, Fay M. Pre-incubation of thyroxine with sulfhydryl reducing agents does not stimulate thyroxine inner or outer ring deiodination. *Endocrinology* 113:851-854, 1983.
2. Groff TL, **Shulkin BL**, Utiger RD, Talbert LM. Amenorrhea-Galactorrhea, hyperprolactinemia and suprasellar pituitary enlargement as presenting features of primary hypothyroidism. *Obstet Gynecol* 73:86S, 1984.

Commented [JL1]: Dr. Shulkin's name should be bolded in all of these.

I'm really sorry, that will be incredibly tedious!

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3. **Shulkin BL**, Utiger RD. Reverse triiodothyronine does not alter pituitary-thyroid function in man. *J Clin Endocrinol Metab* 58:1184, 1984.
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i. Original Research Articles Accepted for Future Publications

ii. Book Chapters

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iii. Abstracts, Preliminary Communications, Panel Discussions

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123. Wong KK, **Shulkin B**, Gross MD, Avram AM. Efficacy of Radioactive Iodine Treatment of Hyperthyroidism Using a Single Calculated ¹³¹I Dose. Presented at the 2016 annual meeting of the Society of Nuclear Medicine and Molecular Imaging, San Diego, CA. *J Nucl Med* 2016: volume 57 supplement 2; page 107
124. DuBois S, Mody R, Van Ryn C, Naranjo A, Kreissman SG, Baker D, Parisi M, **Shulkin B**, Maris J, Batra V, Park J, Matthey K, Yanik G. Clinical, biologic, and outcome differences according to MIBG avidity in children with neuroblastoma: A report from the Children's Oncology Group (COG). Journal of Clinical Oncology 2016.
125. Sokol E, Engelmann R, Pinto N, Starkey A, Nall M, Lai H, Nadel H, **Shulkin B**, Pu Y, Applebaum D, Yanik G, Cohn S, Armato S, Volchenboum S. Computer-assisted Curie scoring for metaiodobenzylguanidine (mIBG) scans in patients with neuroblastoma. Journal of Clinical Oncology 2016.
126. Im H, Wu H, Yi Z, **Shulkin BL**, Cho SY. Baseline Metabolic Tumor Volume Measured by FDG PET CT before Neoadjuvant Chemotherapy Predicts Survival in Pediatric Osteosarcoma. Presented at the 2016 annual meeting of the Society of Nuclear Medicine and Molecular Imaging, San Diego, CA. June 12-15, 2016; *J Nucl Med* 2016: volume 57 supplement 2 page 211P
127. Doubrovin M, Snyder S, Butch E, **Shulkin B** [¹¹C]Methionine PET Metabolic imaging of Low Grade CNS Tumors in Children and Young Adults. . Presented at the 2016 annual meeting of the Society of Nuclear Medicine and Molecular Imaging, San Diego, CA. June 12-15, 2016; *J Nucl Med* 2016: volume 57 supplement 2 page 214P
128. Kaste SC, Metzger ML, Sandlund JT, Snyder SE, **Shulkin BL** Comparison of 11C-Methionine and 18F-FDG PET CT for staging and followup of pediatric lymphoma. Presentation at the 2016 annual meeting of the Society of Nuclear Medicine and Molecular Imaging, San Diego, CA. June 12-15, 2016; *J Nucl Med* 2016: volume 57 supplement 2: page 336-7P
129. Harrison D, Parisi M, **Shulkin BL**, Yi Y, Anderson J, Malempati S, Mascarenhas L, McCowage G, Weigel B, Wolden S, Yock T, Rodeberg, Hayes-Jordan A, Teot L, Spunt SL, Meyer WH, Hawkins DS. 18F 2Fluoro-2deoxy-D-glucose positron emission tomography (FDG-PET) response to predict event-free survival (EFS) in intermediate risk (IR) or high risk (HR) rhabdomyosarcoma (RMS): A report from the Soft Tissue Sarcoma Committee of the Children's Oncology Group (COG) For presentation at ASCO, June 2016
130. Im H-J, Wu H, Yi Z, Wu J, **Shulkin B**, Cho S. Baseline Metabolic Tumor Volume Measured by FDG PET/CT Before Neoadjuvant Chemotherapy Predicts Survival in Pediatric Osteosarcoma *J Nucl Med* 2016 57:429
131. Kroiss A, Uprimny C, Gruber L, Scarpa L, Neururer B, Geraldo I, **Shulkin B**, Virgolini IJ 68Ga-DOTA-TOC uptake in histological proven pancreatic neuroendocrine tumours: differentiation of physiological uptake and pathological processes in pancreatic tissues by PET/CT. *J Nucl Med* 2016 57:1347
132. Mody R, Naranjo A, Van Ryn C, Yu AL, London WB, **Shulkin BL**, Parisi MT, Servaes S, Dicciani MB, Sondel PM, Maris JM, Park JR, Bagatell. Phase II randomized trial of irinotecan/temozolomide (I/T) with temsirolimus (TEM) or dinutuximab plus granulocyte colony stimulating factor (DIN/GMCSF) in children with refractory or relapsed neuroblastoma: A report from the Children's Oncology Group (COG). Journal of Clinical Oncology 2016.

133. Brady SL, **Shulkin BL**. Quantitative 123I-MIBG SPECT/CT in patients with neuroblastoma For presentation at the 2017 annual meeting of the Society of Nuclear Medicine and Molecular Imaging. Denver, CO June 11, 2017. J Nucl Med 2017 58:210P
134. Doubrovin M, Wakefield DV, Cooper DA, Monaole BA, **Shulkin BL**, Lucas J. New delineation of semi-quantitative scoring system for 123I-MIBG guided targeted external beam radiation treatment of bone metastases in high-risk neuroblastoma patients. For presentation at the 2017 annual meeting of the Society of Nuclear Medicine and Molecular Imaging. Denver, CO June 11, 2017. J Nucl Med 2017 58:210P
135. Im HJ, McIlwain S, Ong IM, Lee I, Song C, **Shulkin BL**, Cho SY. Prediction of response to neoadjuvant chemotherapy using machine learning algorithm trained by baseline FDG-PET textural parameters in osteosarcoma. For presentation at the 2017 annual meeting of the Society of Nuclear Medicine and Molecular Imaging. Denver, CO June 11, 2017. J Nucl Med 2017 58:211P
136. Wong KK, Lahti LD, Morawski K, Pollock E, Wynn EA, **Shulkin BL**. Incremental diagnostic utility of pediatric SPECT/CT as a problem solving tool. J Nucl Med 2017 58:176P
137. Furman WL, **Shulkin BL**, Federico SM, McCarville MB, Davidoff AM, Krasin MJ, Wu J, Brennan RC, Bishop MW, Helmig SE, Navid F, Santana VM, Anthony W, Hank JA, Gillies SD, Sondel PM, Leung WH, Pappo AS. Early response rates and Curie scores at end of induction: An update from a phase II study of an anti-GD2 monoclonal antibody (mAb) with chemotherapy (CT) in newly diagnosed patients (pts) with high-risk (HR) neuroblastoma (NB). Journal of Clinical Oncology 2017.
138. Lucas JT, Wakefield DV, Doubrovin M, Li Y, Cooper D, Manole B, Santiago T, Federico SM, Merchant TE, Davidoff AM, Krasin MJ, **Shulkin BL**, Santana VM, Furman WL. Risk factors associated with metastatic site failure in patients with high-risk neuroblastoma. Journal of Clinical Oncology 2017.
139. Wakefield DV, Lucas JT Jr, Li Y, Cooper DA, Manole BA, Merchant TM, Davidoff AM, Krasin M, Santana VM, Furman WL, **Shulkin BL**, Doubrovin M Role of MIBG Studies in Prognostication and Prediction of Metastatic Site Failure in Pediatric Patients with High-Risk Neuroblastoma. International Journal of Radiation Oncology • Biology • Physics , Volume 99 , Issue 2 , S27 - S28
140. Wong KK, Brady SM, Doubrovin M, Hossain M, Rossi M, **Shulkin BL**. Propranolol Decreases Brown Adipose Tissue Uptake on Pediatric Oncology PET/CT. Presented at the 2018 annual meeting of the Society of Nuclear Medicine and Molecular Imaging, June 24, 2018, Philadelphia, PA
141. Brunner M., Cunningham L., Triplett B., Srinivasan A., Madden R., **Shulkin B**. FDG PET-CT for the characterization of extramedullary disease in pediatric patients with acute myelogenous leukemia; presented at the 2019 annual meeting of the Society of Nuclear Medicine and Molecular Imaging. Anaheim, SA. June 24, 2019. J Nucl Med 2019: 60. Supplement 1,160.
142. **Shulkin BL**, Nadel HR, Parisi MT. Questions and comments about 'Pediatric applications of Dotatate: early diagnostic and therapeutic experience'. Pediatr Radiol. 2020 Nov 11. doi: 10.1007/s00247-020-04872-1. Epub ahead of print. PMID: 33175200
143. Gartrell J, **Shulkin BL**, Helmig S, Caldwell KJ, Furman W, Federico SM. Induction Chemotherapy With an Anti-GD2 Monoclonal Antibody (Dinutuximab) and Cytokines in Children With Newly Diagnosed High-risk Neuroblastoma: A Case Series. J Pediatr Hematol Oncol. 2020 Nov 11. doi: 10.1097/MPH.0000000000001992. Epub ahead of print. PMID: 33181583.

B. Non-Peer Reviewed Publications

i. Articles

1. **Shulkin BL**, Utiger RD. Triiodothyronine. American Society of Clinical Pathologists. Advanced Clinical Chemistry, No. ACC 82-2.
2. **Shulkin BL**, Shen S-W, Sisson JC. Laboratory tests of thyroid function. Diagnostic Nuclear Medicine, March 1986.
3. **Shulkin BL**. ¹³¹I-MIBG - A new diagnostic aid for neuroblastoma. Pediatric Rounds, C.S. Mott Children's Hospital, July/August 1987, vol. 7, Number 3, pp. 6-7.

4. **Shulkin BL.** Nuclear imaging in the diagnosis of infection. 18th Annual Spring Update Advances in Internal Medicine, pp. 507-508.

ii. **Work Submitted**

1. McGregor LM, Cooper DA, Snyder SE, **Shulkin BL.** ¹¹C-Methionine Positron Emission Tomography/Computed Tomography for the Detection of Medullary Thyroid Carcinoma in Pediatric Patients
2. Cooper DA, Furman WL, Bahrami A, McCarville MB, **Shulkin BL.** FDG PET CT studies in hepatoblastoma.

14. **Presentations**

A. **Oral Presentations**

1. "Thyroid hormones and illness," guest lecturer, Louisiana State University School of Medicine at Shreveport, Shreveport, LA, October 29, 1983.
2. "Thyroid hormone metabolism in illness," guest lecturer, Endocrinology research conference, University of Connecticut School of Medicine, Farmington CT, January 39, 1984.
3. "Scintigraphic imaging of pheochromocytoma," guest lecturer, Internal Medicine noon conference, Marshall University School of Medicine, Huntington, WV, October 4, 1985.
4. "Detection of pheochromocytoma and neuroblastoma with I-131 MIBG," guest lecturer, Noon conference, University of Illinois School of Medicine, Chicago, IL, November 13, 1985.
5. "Introduction to Pediatric Nuclear Medicine," guest lecturer, Pediatric Grand Rounds, St. John's Hospital, Detroit, MI, July 18, 1989.
6. "Pediatric Nuclear Medicine, Part 2," guest lecturer, Pediatric Grand Rounds, St. John's Hospital, Detroit, MI, August 15, 1989.
7. "CNS applications of pediatric nuclear medicine," guest lecturer, Pediatric Grand Rounds, St. John's Hospital, Detroit, MI, August 21, 1990.
8. "Introduction to pediatric nuclear medicine," guest lecturer, Pediatric Grand Rounds, St. Joseph Mercy-Pontiac General Hospital, Pontiac, MI, January 16, 1991.
9. "Commonly performed procedures in pediatric nuclear medicine," guest lecturer, Pediatric Grand Rounds, St. John's Hospital, Detroit, MI, July 16, 1991.
10. "Less commonly performed procedures in pediatric nuclear medicine," guest lecturer, "Pediatric Grand Rounds, St. John's Hospital, Detroit, MI, August 20, 1991.
11. "PET studies of neuroendocrine tumors," guest lecturer, Nuclear Medicine weekly conference, William Beaumont Hospital, Royal Oak, MI, July 10, 1992.
12. "Commonly performed studies in pediatric nuclear medicine," guest lecturer, Pediatric Grand Rounds, St. John's Hospital, Detroit, MI, July 21, 1992.
13. "Less common studies in pediatric nuclear medicine," guest lecturer, Pediatric Grand Rounds, St. John's Hospital, Detroit, MI, August 18, 1992.
14. "Envisioning the future of tumor imaging," guest lecturer and faculty participant, Tumor Imaging Road Show sponsored by the Central Chapter of the Society of Nuclear Medicine; William Beaumont Troy Hospital, Troy, MI, April 24, 1993.

Commented [JL3]: Now that I'm seeing this listing, this is the format that Dr. Temple's presentations should fall under rather than having the date separate and out to the right.

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15. "Medullary carcinoma of the thyroid: PET imaging with FDG and review of other scintigraphic approaches," guest lecturer, 1993 annual meeting of the Michigan Thyroid Association; Henry Ford Hospital, Detroit, MI, April 27, 1993.
16. "Pediatric PET imaging," guest speaker and faculty, Categorical Seminar PET in Oncology, 40th Annual Meeting of the Society of Nuclear Medicine; Toronto, Ontario, Canada, June 7, 1993.
17. "Clinical PET studies of pediatric tumors." Presented at the 1993 annual meeting of the Institute for Clinical PET; McClean, VA, October 30, 1993.
18. "Pediatric nuclear imaging- bones and tumors," guest lecturer, Pediatric Grand Rounds, St. John's Hospital, Detroit, MI, February 22, 1994.
19. "PET imaging of neuroblastoma: metabolic and endocrinologic approaches," invited speaker, presented at pre-congress of the annual meeting of the German Society of Nuclear Medicine: Ten years of experience in neuroblastoma Quo vadis MIBG, Sylt, Germany, April 25, 1994.
20. "Pediatric nuclear medicine," guest lecturer, Metropolitan General Hospital Diagnostic Imaging Monthly Conference, Windsor, Ontario, Canada, May 10, 1994.
21. "Endocrine Imaging- when good glands go bad," faculty participant in session Pediatric nuclear imaging: honey, I nuked the kids- the sequel. Presented at the 41st annual meeting of the Society of Nuclear Medicine categorical course, Orlando, FL, June 4, 1994.
22. "Children need PET-ing too", faculty participant in session Current Concepts in Pediatric Tumor Imaging. Presented at the 43rd annual meeting of the Society of Nuclear Medicine categorical course, Denver, CO, June 2, 1996.
23. "PET Studies of Neuroblastoma and Pheochromocytoma", invited speaker, Joint Program in Nuclear Medicine research conference, Harvard Medical School, Dana Farber Cancer Institute, Boston, MA, October 31, 1996.
24. "Neuroblastoma: 123I-MIBG vs 131I-MIBG", invited speaker, Society for Pediatric Radiology Update in Nuclear Medicine Symposium, St. Louis, MO, May 17, 1997.
25. "Pediatric Endocrine Imaging", invited speaker, Society of Nuclear Medicine Central Chapter Meeting, Indianapolis, IN, September 13, 1997.
26. "Pediatric Tumor Imaging", invited speaker, Society of Nuclear Medicine Central Chapter Meeting, Indianapolis, IN, September 13, 1997.
27. "Children need PET-ing too: PET studies of pediatric tumors", invited speaker, Pediatric Grand Rounds, Children's Hospital of Los Angeles, University of Southern California School of Medicine, Los Angeles, CA, March 8, 1998.
28. "PET studies of pediatric tumors", invited speaker, Joint Program in Nuclear Medicine research conference, Harvard Medical School, Dana Farber Cancer Institute, Boston, MA, May 29, 1998.
29. "Clinical Correlation conference", Joint Program in Nuclear Medicine research conference, Harvard Medical School, Dana Farber Cancer Institute, Boston, MA, May 30, 1998.
30. "PET studies of pediatric neuroendocrine tumors", categorical course in Pediatrics, 1998 annual meeting of the Society of Nuclear Medicine, Toronto, Canada, June 7, 1998.
31. "Gallium Imaging of childhood lymphoma", Pathology Radiology Seminar, Children's Cancer Group Meeting, Cleveland, OH, November 6, 1998.
32. "PET Studies of neuroendocrine tumors-AKA, Endocrine and Metabolic Imaging Studies of Pheochromocytoma and Neuroblastoma, University of Iowa, Department of Radiology, Guest Lecture Series, Iowa City, IO, March 11, 1999.
33. Scintigraphic Evaluation of the pediatric genitourinary tract. South Central Kansas Radiological Society monthly meeting, Wichita, KS, April 14, 1999.
34. Case Presentations Teaching Conference: Department of Radiology, University of Kansas School of Medicine at Wichita, Wichita, KS, April 15, 1999.

35. Pediatric Nuclear Medicine Tumor Localization: Department of Radiology, University of Kansas School of Medicine at Wichita, Wichita, KS, April 15, 1999.
36. PET Imaging of Neuroblastoma. Children's Cancer Group semiannual meeting, Denver, CO, May 21, 1999.
37. PET Imaging of Childhood Tumors. Categorical course of the Society of Nuclear Medicine, Los Angeles, CA, June 5, 1999.
38. MIBG and PET Imaging in Pediatric Oncology. Plenary session of the Pediatric Oncology Group annual meeting, Chicago, IL, October 23, 1999.
39. Pediatric Endocrine Imaging and Therapy, Central Chapter of the Society of Nuclear Medicine, Dearborn, MI, April 16, 2000.
40. Emerging Applications of PET in pediatrics. Society for Pediatric Radiology, Naples, Florida, May 1, 2000.
41. PET Studies of Neuroendocrine Tumors. Noon seminar. St. Jude Children's Research Hospital, Memphis, TN, August 22, 2000.
42. PET in pediatric oncology. RSNA refresher course, Chicago, IL, December 1, 2000.
43. PET Studies of Neuroendocrine Tumors. Western Regional Chapter of the Society of Nuclear Medicine, Vancouver, B.C., October 13, 2001.
44. PET Studies in Pediatrics: autumn meeting of the New England Chapter of the Society of Nuclear Medicine, Stamford, CT, October 26, 2001.
45. Pediatric Renal Imaging: autumn meeting of the New England Chapter of the Society of Nuclear Medicine, Stamford, CT, October 26, 2001.
46. PET Studies of Pediatric Neoplasms: midwinter meeting of the Society of Nuclear Medicine, Scottsdale, AZ, February 10, 2002.
47. Pediatric PET; in categorical seminar Practical PET for 2002; 2002 annual meeting of the Society of Nuclear Medicine, Los Angeles, CA, June 15, 2002.
48. Pediatric PET overview; in PET continuing education series, Society of Nuclear Medicine Technologist Section, 2002 annual meeting of the Society of Nuclear Medicine, Los Angeles, CA, June 17, 2002.
49. Pediatric PET, in continuing education series, Pediatrics: PET and Gastrointestinal Scintigraphy, Society of Nuclear Medicine Technologist Section, 2002 annual meeting of the Society of Nuclear Medicine, Los Angeles, CA, June 18, 2002.
50. PET Studies in Pediatrics. presented at the 88th Scientific Assembly and Annual Meeting of RSNA, Chicago, IL, December 2, 2002.
51. Update on PET in Pediatric Oncology. Presented at the Pediatric Session of the 2003 midwinter meeting of the Society of Nuclear Medicine, Hollywood, FL, January 26, 2003.
52. Reimbursable indications for PET studies. Presented at the University of Michigan sponsored Radiology at the Seashore program, Captiva Island, FL, January 30, 2003.
53. Nuclear Endocrinology. Presented at the University of Michigan sponsored Radiology at the Seashore program, Captiva Island, FL, January 30, 2003.
54. Scintigraphic Imaging in Breast Cancer. Presented at the University of Michigan sponsored Radiology at the Seashore program, Captiva Island, FL, January 31, 2003.
55. Update on Nuclear Imaging for Infection. Presented at the University of Michigan sponsored Radiology at the Seashore program, Captiva Island, FL, January 31, 2003.
56. Norepinephrine Transporter Tumor Receptor Imaging. Presented at the course Imaging and Targeting Receptors: Two decades of Progress; Johns Hopkins University School of Medicine, Baltimore MD, March 15, 2003.

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57. PET in Pediatrics: Presented at Capri 2003 PET Conference, Capri, Italy, May 8, 2003.
58. PET-CT in pediatric oncology: the early experience. Presented at the Pediatric Categorical Course Managing the Pediatric Patient, 2003 annual meeting of the Society of Nuclear Medicine, New Orleans, LA, June 21, 2003.
59. Pediatric PET: Presented at the 2003 annual meeting of the Society of Nuclear Medicine, Technologist CME session, New Orleans, LA, June 22, 2003.
60. Functional Imaging of Pheochromocytoma. Presented to NHLBI working groups of Drs. Pacak and Eisenhofer, National Institutes of Health, Bethesda, MD, October 28, 2003.
61. Functional Imaging of Neuroblastoma. Presented at the 2003 fall meeting of the Children's Oncology Group. Radiology-Pathology Symposium, Dallas, TX, November 7, 2003.
62. Current Controversies in Functional Imaging of Pediatric Neoplasms: Presented at the 2003 fall meeting of the Children's Oncology Group. Hematology-Oncology Discipline Symposium, Dallas, TX, November 6, 2003.
63. Treatment of Malignant Pheochromocytoma with I-131 MIBG and Metabolic Characterization of Pheochromocytoma. Presented to Pheochromocytoma Working Group meeting, sponsored by NIH and American Society of Hypertension, Cold Springs Harbor, NY, November 14, 2003.
64. Pediatric Aspects of PET. Society for Pediatric Radiology; Savannah, GA, April 2004.
65. Functional Imaging of Neuroblastoma, Children's Oncology Group. Neuroblastoma Committee, April 2, 2004
66. Beyond FDG – Other Tracers Past, Present and Future; Pediatric Categorical Session, Society of Nuclear Medicine, Philadelphia, PA, June 19, 2004.
67. Pediatric Oncologic PET and Scintigraphy. Presented at the 2004 annual meeting of the Radiological Society of North America, Chicago, IL. November 30, 2004
68. FDG PET Imaging in Pediatric Oncology: An Introduction. Presented at the 2005 mid winter meeting of the Society of Nuclear Medicine; Orlando FL, Jan 30, 2005
69. General Pediatric Nuclear Medicine; Presented at the 28th Annual Meeting of the Mississippi Society of Nuclear Medicine – Nuclear Medicine Update. Jackson, MS, February 26, 2005.
70. Oncologic Pediatric Nuclear Medicine; Presented at the 28th Annual Meeting of the Mississippi Society of Nuclear Medicine – Nuclear Medicine Update. Jackson, MS, February 26, 2005.
71. PET and PET/CT in Pediatric Oncology. Presented at the 2005 Annual Conference of the Academy of Molecular Imaging. Orlando, FL, March 23, 2005.
72. PET in Pediatrics I: FDG Applications in Pediatric Oncology. Presented at Children's Hospital Boston, Department of Radiology. Boston, MA April 25, 2005.
73. PET in Pediatrics II: CNS, Cardiac Applications and Uncommon Tracers in Pediatric Oncology. Presented at Children's Hospital Boston, Department of Radiology. Boston, MA April 26, 2005.
74. FDG PET Studies in Pediatric Oncology. Presented at 2005 Annual Meeting of the Society for Pediatric Radiology, New Orleans, LA May 7, 2005
75. Positron Emission Tomography of Neuroendocrine and Pediatric Tumors. Presented at the Cyclotron/PET Symposium: A Quarter Century of Contributions to Research and Patient Care; University of Michigan Medical Center, Ann Arbor, MI, June 17, 2005
76. PET and PET/CT in Childhood Tumors. Presented at the Pediatric Nuclear Medicine Categorical Symposium, 52nd Annual Meeting of the Society of Nuclear Medicine, Toronto, Ontario, Canada, June 18, 2005.
77. Adult Diseases Occurring in Children and Childhood Diseases in Adults. Presented at the 52nd Annual Meeting of the Society of Nuclear Medicine, Toronto, Ontario, Canada, June 20, 2005.

78. Pediatric Oncologic PET and Scintigraphy. Presented at the 2005 annual meeting of the Radiological Society of North America, Chicago, IL. November 27, 2005
79. Introduction to Pediatric Nuclear Medicine. Presented at the monthly meeting of the Southwest Tennessee Nuclear Medicine Technologists Association. Baptist Memorial Hospital, Memphis, TN, January 10, 2006
80. Metabolic characterization of neuroblastoma. Advances in Neuroblastoma Research, Los Angeles, CA, May 17 -20, 2006.
81. Effects of commonly prescribed drugs on MIBG uptake in vitro. Advances in Neuroblastoma Research Los Angeles, CA, May 17 -20, 2006.
82. Implementing a paediatric PET-CT. 5th European Symposium on Paediatric Nuclear Medicine meeting, Girona, Spain, May 25 – 28, 2006.
83. New approaches to imaging of neuroblastoma. Presented at the 2006 meeting of the Advances in Neuroblastoma symposium: Los Angeles, CA May 20, 2006
84. Functional Imaging of Neuroblastoma. Presented at the pediatric categorical session of the Society of Nuclear Medicine; San Diego, CA, June 3, 2006
85. I-131 MIBG Therapy of Neuroblastoma. Presented at the therapy continuing medical education symposium at the 2006 annual meeting of the Society of Nuclear Medicine, San Diego, CA, June 6, 2006
86. Uses of PET in pediatrics. Presented at the Harvey White Memorial lecture, Pediatric Grand Rounds, Children's Memorial Hospital, Northwestern University School of Medicine, Chicago, IL, Nov 2, 2006
87. Interesting pediatric nuclear medicine cases. Radiology resident noon teaching conference. Children's Memorial Hospital, Northwestern University School of Medicine, Chicago, IL, Nov 2, 2006
88. Molecular Functional Imaging in Pediatric Oncology. Pediatric Hematology Oncology tumor board. Children's Memorial Hospital, Northwestern University School of Medicine, Chicago, IL, Nov 2, 2006
89. Nuclear Medicine Therapy in Pediatrics. Presented at the monthly meeting of the Southwest Tennessee Nuclear Medicine Technologists Association. Veterans Administration Medical Center. Memphis, TN, January 9, 2007
90. PET in pediatrics. 2007 annual meeting of the Israeli Society of Nuclear Medicine; En Gedi, Israel, February 3, 2007
91. Overview of Therapy in Pediatric Nuclear Medicine. 2007 annual meeting of the Israeli Society of Nuclear Medicine; En Gedi, Israel, February 3, 2007
92. The Biology of Imaging in neuroblastoma. 2007 winter meeting of the Society of Nuclear Medicine, February 17, 2007, San Antonio, TX
93. Positron Emission Tomography in pediatric oncology. Radiology Grand Rounds, Johns Hopkins Medical Institute, April 4, 2007, Baltimore, MD
94. Thyroid Cancer in Children/Adolescents/ Young Adults. Presented at the 37th Annual Scientific Meeting of the Australia New Zealand Society of Nuclear Medicine, pre-Congress symposium on Thyroid cancer, Adelaide, AU April 27, 2007
95. Application of Nuclear Medicine in Pediatrics. Presented at the 37th Annual Scientific Meeting of the Australia New Zealand Society of Nuclear Medicine, Adelaide, AU April 28, 2007
96. FDG PET/CT imaging of pediatric malignancies. (Plenary session) Presented at the 37th Annual Scientific Meeting of the Australia New Zealand Society of Nuclear Medicine, Adelaide, AU April 29, 2007
97. PET in pediatrics: An introduction. Pediatric Grand Rounds, Presented at the Royal Adelaide Children's Hospital, Adelaide, AU April 30, 2007
98. Functional Imaging of neuroblastoma and pheochromocytoma. (Plenary session) Presented at the 37th Annual Scientific Meeting of the Australia New Zealand Society of Nuclear Medicine, Adelaide, AU May 1, 2007

99. PET in pediatrics: An introduction, New South Wales Branch of the Australia New Zealand Society of Nuclear Medicine, Sydney, AU, May 2, 2007
100. FDG PET/CT imaging of pediatric malignancies, ACT (Australian Capital Territory) Branch of the Australia New Zealand Society of Nuclear Medicine, Canberra, AU, May 3, 2007
101. Functional Imaging of Neuroblastoma. Pediatric Radiotherapy pre-Congress categorical session. Washington, DC June 2, 2007
102. Appropriate Imaging Parameters in Pediatric PET and PET/CT. Presented at the 54th Annual meeting of the Society for Nuclear Medicine. SNM Pediatric Council Continuing Education Program. Washington, DC June 4, 2007
103. Upcoming PET Tracers for Pediatric Tumor Studies. Presented at the 54th Annual meeting of the Society for Nuclear Medicine. SNM Continuing Education Program. Washington, DC June 5, 2007
104. PET and PET/CT in Pediatric Oncology. Categorical Course in Diagnostic Radiology: Clinical PET and PET/CT imaging. Presented at the 93rd Scientific Assembly and Annual Meeting of the Radiological Society of North America, November 30, 2007. Chicago, IL.
105. FDG PET/CT in Pediatrics: How We do it Now – The Right Way, Presented at 2008 Annual Meeting of the Society Nuclear Medicine, New Orleans, LA pediatric categorical session, June14, 2008.
106. Functional Imaging of Neuroblastoma, pediatric, Presented at 2008 Annual Meeting of the Society Nuclear Medicine, New Orleans, LA pediatric CME session, June16, 2008.
107. I-131 MIBG for Therapy of Neuroblastoma, Presented at 2008 Annual Meeting of the Society Nuclear Medicine, New Orleans, LA pediatric technologist CME session, June17, 2008.
108. PET Imaging and Pediatric Oncology at St. Jude Children's Research Hospital: Marked Experience and Plans. This was given at the Hospital for Sick Children, Toronto, Ontario, Canada, November 21, 2008.
109. PET Scanning in Childhood Malignancy – Application and Utility Now and in the Future. The Pediatric Oncology Group of Ontario 2008 Symposium, Toronto, Ontario, Canada, November 21, 2008.
110. FDG PET (CT) Imaging in Pediatric Oncology, PET Symposium, 2008 Annual Meeting, Radiological Society of North America, Chicago, IL, December 5, 2008.
111. FDG PET/CT Dose Reduction, Part of the Radiation Safety in CT RSNA Imaging Symposium, 2008 Annual Meeting, Radiological Society of North America, Chicago, IL, December 5, 2008.
112. PET Imaging in Pediatric Oncology at St. Jude Children's Research Hospital: Experience and Plans. 2009 Presented at the Annual Meeting of the Mississippi Society of Nuclear Medicine, Jackson, MS. February 13, 2009
113. Pediatric Nuclear Medicine. Presented at the Annual Meeting of the Mississippi Society of Nuclear Medicine, Jackson, MS. February 13, 2009.
114. Practical Pediatric Nuclear Medicine. Presented at West Tennessee Nuclear Medicine Technologists meeting. Baptist Memorial Health Care, Memphis, TN, March 28, 2009.
115. PET Imaging in Pediatric Oncology at St. Jude Children's Research Hospital: Experience and Plans. Presented at West Tennessee Nuclear Medicine Technologists meeting. Baptist Memorial Health Care, Memphis, TN, March 28, 2009.
116. Functional Imaging of Pheochromocytoma and Neuroblastoma. Visiting Professor, Children's Hospital of Philadelphia, Department of Radiology, Philadelphia PA. February 12-13, 2009.
117. Upcoming Tracers for use in Pediatric Oncology. Visiting Professor, Children's Hospital of Philadelphia, Department of Radiology, Philadelphia PA. February 12-13, 2009.
118. PET/CT in Pediatric Oncology. Visiting Professor, Children's Hospital of Philadelphia, Department of Radiology, Philadelphia PA. February 12-13, 2009.

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119. Practical Pediatric Nuclear Medicine. High Country meeting of the Society of Nuclear Medicine. Squaw Valley, CA. March 10, 2009
120. Introduction to Neuroblastoma. High Country meeting of the Society of Nuclear Medicine. Squaw Valley, CA. March 10, 2009
121. PET CT Imaging in Pediatric Oncology at St. Jude Children's Research Hospital: Experience and Plans. 54th Annual meeting of the Southwestern Chapter of the Society of Nuclear Medicine. Houston, TX. March 13, 2009
122. Practical Pediatric Nuclear Medicine. 54th Annual meeting of the Southwestern Chapter of the Society of Nuclear Medicine. Houston, TX. March 13, 2009
123. Pediatric Nuclear Medicine. Spring meeting of the West Tennessee Nuclear Medicine Technologists. Memphis, TN. March 28, 2009
124. Image Gently: Radiation Dose and Dose Reduction. 2009 annual meeting of the Society of Nuclear Medicine. Toronto, Ontario, Canada. June 13, 2009
125. Non-Malignant Sources of Abnormal FDG Uptake in Pediatric Oncology. 2009 annual meeting of the Society of Nuclear Medicine. Toronto, Ontario, Canada. June 16, 2009
126. Pediatric PET and PET-CT. Taplin honorary lecture. Presented at the 34th annual Western Regional meeting of the Society of Nuclear Medicine. Monterey, CA. October 30, 2009
127. PET and SPECT Imaging of Pediatric Cancer. Presented at the 34th annual Western Regional meeting of the Society of Nuclear Medicine. Monterey, CA. October 30, 2009
128. Pediatric Grand Rounds: Practical Pediatric Nuclear Medicine (and PET/CT). Visiting Professor. University of Mississippi Medical Center. January 6, 2010
129. PET/CT for Pediatric RO. Radiation Oncology Noon Conference. Visiting Professor. University of Mississippi Medical Center. January 7, 2010
130. Some Random Thoughts and Observations on the Impact of mIBG. Presented at Biomedical Imaging Symposium in honor of Donald M. Wieland, PhD. University of Michigan Medical Center, Ann Arbor, MI. May 14, 2010
131. PET/CT in Thoracic Malignancies: Pediatric Tumors. Presented at the 2010 annual meeting of the Society of Nuclear Medicine. Salt Lake City, UT. June 6, 2010
132. Miscellaneous Solid Tumors in Pediatrics. Presented at the 2010 annual meeting of the Society of Nuclear Medicine. Salt Lake City, UT. June 8, 2010
133. PET and SPECT/CT in Pediatric Age. Presented at the PET/CT and SPECT/CT: Theory, Practice and Clinical Experience. Sonoma, CA. September 8, 2010.
134. PET and SPECT/CT in Pediatric Tumor Imaging. Presented at the PET/CT and SPECT/CT: Theory, Practice and Clinical Experience. Sonoma, CA. September 8, 2010.
135. Updates in the Utility of F18 FDG PET/CT in Childhood Lymphomas. World Federation of Nuclear Medicine and Biology. Cape Town, South Africa. September 23, 2010.
136. Invited speaker, Mid-Winter Society of Nuclear Medicine meeting, Palm Springs, CA, January 20 - 23, 2010. Future Applications: New Tracers and PET/MRI; Jan 22, 2011
137. New Tracers for PET in the diagnosis of Hodgkin lymphoma. Invited speaker, First International Symposium on Childhood, Adolescent, and Young Adult Hodgkin Lymphoma (ISCAYAHL) mtg, Arlington, VA, May 13, 2011.
138. FDG PET CT in Uncommon Pediatric Malignancies. 7th European Symposium on Pediatric Nuclear Medicine. Barcelona, Spain; May 25, 2011
139. Read with the Experts. 2011 Annual meeting of the Society of Nuclear Medicine. San Antonio, TX. June 6, 2011.

140. Invited Speaker, Society of Nuclear Medicine and Molecular Imaging 2013 Annual meeting June 8 – 21, 2013, Vancouver, BC, Canada, June 8, 2013. Amino Acid PET/CT for Evaluation of Pediatric Brain Neoplasms: C-11 Methionine.
141. Majd Visiting Professor of Nuclear Medicine. DC National Children's Hospital. Washington, DC. March 20, 2014, Functional Imaging in Pediatric Oncology.
151. Majd Visiting Professor of Nuclear Medicine. DC National Children's Hospital. Washington, DC. March 20, 2014 Case Presentations.
152. Invited Speaker, 2nd International Symposium Childhood and Adolescent and Young Adult Hodgkin Lymphoma, May 10-14, 2014 Berlin, Germany. FDG PET CT in Hodgkin Lymphoma: Selected Case Presentations.
153. Read with the Experts. Annual Meeting of the Society of Nuclear Medicine, St. Louis, MO, June 7, 2014
Speaker: Molecular Imaging of Neuroblastoma. Continuing Medical Education Course. 2014 Annual Meeting of the Society of Nuclear Medicine. St. Louis, MO, June 8, 2014
154. Guest Lecturer, Hospital for Sick Children. Toronto, Ontario. November 14, 2014. Functional Imaging in Pediatric Oncology: Present and Future.
155. Invited Speaker, 2014 Annual Meeting of the Pediatric Oncology Group of Ontario. Toronto, Ontario. November 15, 2014. Utility of PET scans (in lymphoma). When and for Whom?
156. Invited Faculty. 3rd Annual Nuclear Medicine and Molecular Imaging Update. North Carolina Chapter of the American College of Radiology. March 14, 2015. FDG PET CT in Pediatric Oncology
157. Speaker; C-11 Methionine Studies in Pediatric Oncology. Continuing Medical Education Course. 2015 Annual Meeting of the Society of Nuclear Medicine. Baltimore, MD, June 7, 2015
158. FDG-PET CT in the Evaluation of Primary and Secondary Malignancies of the Pancreas in Children and Young Adults. CE Bohl, SM Federico, GW Robinson, BL Shulkin. Presented at the 2016 European Society of Pediatric Nuclear Medicine conference, Plata de Oro, Spain, May 7, 2016
159. FDG PET CT Studies of Hepatoblastoma. DA. Cooper, MB McCarville, W Furman, BL Shulkin. Presented at the 2016 European Society of Pediatric Nuclear Medicine conference, Plata de Oro, Spain, May 7, 2016
160. [¹¹C]Methionine PET imaging of Low Grade CNS Tumors in Children and Young Adults Presented at the 2016 European Society of Pediatric Nuclear Medicine conference, Plata de Oro, Spain, May 7, 2016
161. Speaker, FDG PET CT Evaluation of Pediatric Soft Tissue Tumors, Continuing Medical Education Course. 2016 Annual Meeting of the Society of Nuclear Medicine. San Diego, CA, June 13, 2016
162. Guest Lecturer, PET Studies at St. Jude Children's Research Hospital, University of Texas Southwestern School of Medicine, Dallas, TX. December 7, 2016
163. Speaker, ¹¹C-methionine: The Optimal agent for Pediatric Brain Tumors? High Country Nuclear Medicine Conference, March 1, 2017. Vail, CO
164. Speaker, PET Radiotracers in Pediatric Oncology. 2018 annual meeting of the American Pharmaceutical Association, March 19, 2018. Nashville, TN
165. Speaker, Functional Imaging of Adrenal Tumors, 2018 meeting of the World Federation of Nuclear Medicine and Biology, April 21, 2018, Melbourne, AU
166. Speaker, Challenging PETCT cases in pediatric oncology. 2018 annual meeting of the Society of Nuclear Medicine and Molecular Imaging. June 22, 2018. Philadelphia, PA
167. Speaker, Pediatric Bone Tumors. PET scan in, bone scan out? 2018 annual meeting of the Society of Nuclear Medicine and Molecular Imaging, June 24, 2018. Philadelphia, PA
168. Guest lecturer: PET Radiotracers in Pediatric Oncology. University of Tennessee School of Pharmacy, Aug 21, 2018 Memphis, TN

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169. Speaker. The role of PET in non-Hodgkin lymphoma. Oncologic Imaging Course sponsored by the Society of Pediatric Radiology and St. Jude Children's Research Hospital. Nov 9, 2018. Memphis, TN
170. PET Center of Excellence Inaugural Lecturer. F-18 FDG PET/CT and C-11 Methionine Studies in Pediatric and Young Adult Patients. 2019 annual meeting of the Southwest Chapter of the Society of Nuclear Medicine and Molecular Imaging. March 23, 2019. Arlington, TX
171. Guest lecturer: Pediatric Oncologic Related Studies. What We Do and What You Can Do. University of Texas Southwestern Medical School, Department of Radiology. March 25, 2019. Dallas, TX
172. Speaker. Pediatric Protocols and Radiotracers. CME session. 2019 annual meeting of the Society of Nuclear and Molecular Imaging. June 24, 2019, Anaheim CA
173. Guest speaker: The Contribution of Nuclear Medicine to Pediatric Oncology. Nuclear Medicine Technologists of TN annual meeting. March 13, 2020. Memphis, TN
174. Invited speaker: Appropriate Use of PET/CT in Paediatrics. (Virtual Event) International Conference on Molecular Imaging and Clinical PET-CT in the Era of Theranostics (IPET-2020). International Association of Atomic Energy. Nov 26, 2020.
175. Invited speaker. C-11 methionine studies in pediatric brain tumors. delivered virtually. High Country Conference Nuclear Medicine. Sun Valley, ID March 7, 2022
176. Invited speaker. C-11 methionine in cancer imaging. delivered virtually. 2022 annual meeting of the Society of Pediatric Radiology, Denver, CO April 30, 2022
177. Molecular Imaging in Pediatric CNS tumors. Presented October 28, 2022, at the PBII Pediatric Biomedical Imaging Initiative 2022 Pediatric Neuro-oncologic Imaging Course. St. Jude Children's Research Hospital, Memphis, TN, October 28, 2022
178. Invited speaker. Molecular Imaging of F.U.O in children. delivered at the mid-winter 2023 meeting of the Society of Nuclear Medicine and Molecular Imaging, San Francisco CA. January 28, 2023
179. Invited speaker. 188F-FDG PET/CT (and 11C-methionine) studies in pediatric and young adult patients. Delivered virtually for Hospital Infantil Teleton de Oncologia April 27, 2023