#### DONALD S. KARCHER, MD, FCAP

#### **CURRICULUM VITAE**

(current as of June, 2021)

Current Position: Professor and Immediate Past Chair of Pathology

The George Washington University Medical Center

Office: Department of Pathology

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**Place of Birth:** New Orleans, Louisiana, U.S.A.

Family: Spouse: Lois Hortman Karcher

Children: Adam Michael

Sarah Lynn

Emily Suzanne

Grandchildren: Kaitlyn Elisabeth

Sean Ronin

Andrew Michael Soren James Griffin James Clara Emerson Emmett Jake

**Education:** 

1961-1966 Jesuit High School

New Orleans, Louisiana

1966-1970 University of New Orleans

New Orleans, Louisiana

1970-1974 Louisiana State University School of Medicine

New Orleans, Louisiana

MD Degree

#### **Graduate Medical Education:**

1974-1975 Rotating Internship

(with pathology emphasis) Brooke Army Medical Center Fort Sam Houston, Texas

1975-1978 Anatomic and Clinical Pathology Residency

(with hematopathology emphasis)

Chief Resident, 1977-1978 Brooke Army Medical Center Fort Sam Houston, Texas

**Medical License:** District of Columbia

Louisiana (inactive, effective 2004)

**Board Certification:** 

1978 Anatomic and Clinical Pathology

American Board of Pathology

1980 Hematopathology

American Board of Pathology

#### **Academic Positions:**

Louisiana State University School of Medicine, New Orleans, LA

1981-1982 Assistant Professor of Pathology

1982-1984 Clinical Assistant Professor of Pathology

The George Washington University School of Medicine and Health Sciences,

Washington, DC

1984-1992 Assistant Professor of Pathology 1992-1997 Associate Professor of Pathology

1992-present Tenured

1997-present Professor of Pathology

1999-2019 Chair, Department of Pathology

2019-present Immediate Past Chair, Department of Pathology

#### **Administrative Positions:**

#### Walter Reed Army Medical Center, Washington, D.C.

1978-1981 Medical Director, Hematopathology Section

#### Charity Hospital of Louisiana, New Orleans, LA

1981-1982 Director, Hematopathology Laboratory

#### Hotel Dieu Hospital, New Orleans, LA

1982-1984 Associate Laboratory Director, Dir. of Hematopathology

#### St. Tammany Parish Hospital, Covington, LA

1982-1984 Associate Laboratory Director, Staff Pathologist

#### Riverside Medical Center, Franklinton, LA

1982-1984 Laboratory Director, Staff Pathologist

#### American Bio-Science Laboratories, New Orleans, LA Branch

1982-1984 Associate Medical Director

### The George Washington University Medical Center, Washington, D.C.

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	1984-1993	Chief, Hematopathology Service
	1984-present	Chief, Flow Cytometry Service
	1992-2015	Medical Director, Clinical Lab. Sci. (Med. Tech.) Program
	1992-1996	Director, Division of Clinical Pathology
	1994-2020	Director of Laboratories, Anatomic and Clinical Pathology
	2001-2011,	Director, Pathology Residency Program
	2018-2020	
	1999-2019	Chair, Department of Pathology

#### Special Administrative Assignment:

1994 On-Site Program Director

Saudi-George Washington University Health Care

Cooperative Project

King Faisal Specialist Hospital and Research Centre

Riyadh, Kingdom of Saudi Arabia

Dates: May-August, 1994

#### **Military Experience:**

1973-1981 U.S. Army Medical Corps

Highest Rank: Major

# **Honors:**

1967	Phi Eta Sigma Honor Fraternity
1060	University of New Orleans
1969	Alpha Theta Epsilon Honor Society University of New Orleans
1973	Alpha Omega Alpha Honor Medical Society
	Louisiana State University School of Medicine
	(elected in Junior year)
1973	Undergraduate Medical and Surgical Honor Society
	Louisiana State University School of Medicine
1977-1978	Chief Resident in Pathology
	Brooke Army Medical Center
1978	Outstanding Resident Mini-Fellowship, Brooke AMC
	Location: National Cancer Institute
	Hematopathology Section (Dr. Costan Berard)
	Bethesda, Maryland
	Dates: April 24 - May 5, 1978
1990	Golden Apple Award for Excellence in Teaching
	Pathology Residency Program
	The George Washington University Medical Center
1993, 1994,	Finalist, Distinguished Pre-Clinical Teaching (Golden
1995	Apple) Award
	The George Washington University School of Medicine
1996-	Elected Member, Academy of Medicine of Wash., D.C.
1996-	Who's Who in America
1996-	Who's Who in Medicine and Healthcare
1999	Outstanding Speaker Award
	American Association for Clinical Chemistry
2002	"Top Doctor" in the Washington Guide to Top Doctors
2003	Golden Apple Award for Excellence in Teaching
	Pathology Residency Program
	The George Washington University Medical Center
2004-	Who's Who Among America's Teachers
2004-	Who's Who in Medical Sciences Education
2007	Golden Apple Award for Teaching Excellence
	Second-Year Medical Student Class
	The George Washington University School of Medicine
2010	American Association of Medical Colleges
	Invited Participant, Leadership Forum on Health Care Reform
2011 2010	
2011-2019 2011	"Top Doctor" in the Washington Guide to Top Doctors
2011	American Association of Medical Colleges  Invited Portionant Londorship Forum on Londorship
	Invited Participant, Leadership Forum on Leadership
	Development in Academic Medicine

# Honors (cont.):

2012	Elected President-Elect, Association of Pathology Chairs
2012	President's Honors, College of American Pathologists
2013-	Who's Who in Academia
2015	Pathologist-of-the-Year Award, College of American
	Pathologists
2016, 2019	Elected Board of Governors, College of Amer. Pathologists
2018	Who's Who in America, Albert Nelson Marquis Lifetime
	Achievement Award
2019	President's Honors, College of American Pathologists
2020	President's Honors, College of American Pathologists

# **Professional Organizations:**

1975-1978	San Antonio Society of Pathologists – Resident Member
1978-	College of American Pathologists – Fellow
1978-	American Society for Clinical Pathology – Fellow
1981-	Society for Hematopathology – Charter Member
1986-	International Academy of Pathology – Member
1986-	US and Canadian Academy of Pathology – Member
1992-1993	Assoc. of Medical Laboratory Immunologists – Member
1993-2001	National Committee for Clinical Laboratory Standards –
	Corresponding Member
1995-	Association of American Medical Colleges – Member,
	Various Units
1999-2003	Universities Associated for Research and Education
	in Pathology – Member, Board of Directors
1999-	Association of Pathology Chairs – Chair Member
2014-	American Society for Investigative Pathology – Member
2020-	California Society of Pathologists – Member
2020-	Florida Society of Pathologists – Member
2020-	Texas Society of Pathologists – Member
2020-	Chinese American Pathologists Association – Member
2020-	Association of Indian Pathologists in North America –
	Member

## **Professional Service:**

1978-1981	Cancer and Leukemia Group B
	Pathology Committee
	Hematology Subcommittee
1981-1982	Southwest Oncology Group
	Pathology Committee
1981-1982	Pediatric Oncology Group
	Lymphoma Pathology Committee
1985-1993	Mid-Atlantic Oncology Group
	Pathology Committee
1994-	College of American Pathologists
	Laboratory Accreditation Inspection Team Leader, 1994-
	Quality Practices Committee, 2009-2014
	OPPE-FPPE Task Force, 2011-2014
	Chair, DC Delegation, CAP House of Del., 2011-2016
	Transformation Initiative, Modules 2B and 3, 2011-2012
	Accountable Care Organization (ACO) Network, '11-'17
	Network Chair, 2011-2017
	Steering Committee Chair, 2011-2014
	Representative to ACLC, 2011-2017
	DIHIT-CGPA HIT Policy Work Group, 2011-2014
	Enterprise Strategy for Informatics Advisory Group,
	2012-2013
	ACO-HIT Work Group, 2012-2014
	Value-Based Care Strat. Steering Grp., Chair, 2013-2017
	Pathology Workforce/GME Workgroup, 2013-present
	Policy Roundtable Subcommittee, 2014-present
	CAP/APC/API Informatics Curriculum Core Team,
	Co-Chair, 2014-2016
	CAP/APC/API Pathology Informatics Essentials for
	Residents (PIER) Curriculum Leadership
	Committee, 2016-2017
	Board of Governors, 2016-present
	Executive Committee, 2017-present
	Finance Committee, 2017-present
	Audit Committee, 2019-2020
	Constitution and Bylaws Committee, 2020-present
	Council on Government and Professional Affairs, 2011-p.
	Chair, 2017-2019
	Vice Chair, 2019-2020
	Council on Education, 2016-2017, 2019-present
	Vice Chair, 2016-2017
	Chair, 2019-present
	Annual Meeting Strat. Exec. Steering Comm. 2019-pres.

#### **Professional Service (cont.):**

College of American Pathologists (cont.) Value-Based Care Steering Committee, 2017-2018 Pathology Roundtable Representative, 2018-present Pathology Roundtable Moderator, 2018-present Information Technology Leadership Committee, 2019-p. Artificial Intelligence/Machine Learning Project Team, 2020-2021. Artificial Intelligence Committee, 2021-present 1995-Association of American Medical Colleges (AAMC) Group on Educational Affairs, 1995-2001 Council of Academic Societies (CAS), 2010-2012 Leadership Development Committee, 2010-2011 Nominating Committee, 2011 Council of Faculty and Academic Societies, 2013-Advocacy Task Force, 2014-Value Proposition Working Group, 2014-2016 1999-Association of Pathology Chairs (APC) For-Profit Hospital Task Force, 1999-2003 Practice and Management Committee, 1999-present Advocacy Committee, Chair, 2006-2010 Health Information Tech. Comm., Chair, 2010-2012 Fellowship Match Task Force, 2010-2012 Academic Caucus, Transformation of Pathology, 2010-2012 APC Council, Acting Councilor-at-Large, 2008-2009 APC Council, Councilor-at-Large, 2009-2012 President-Elect, 2012-2014 President, 2014-2016 Immediate Past-President, 2016-2018 Journal Development Task Force, 2013-2014 Pathology Workforce Summit Steering Committee, 2013 Pathology Workforce MD Survey Task Force, 2014-p. Pathology Workforce PhD Task Force, 2014-2018 Pathology Workforce Scope of Practice Task Force, (Chair), 2014-2015 Recruitment Pipeline Subcommittee, Advocacy Committee, 2014-2017 Pathology Roundtable Representative, 2014-2018 Graduate Medical Education Committee, 2020-present 2006-2010 National Caucus of Basic Biomedical Science Chairs –

**APC** Representative

# **Professional Service (cont.):**

2007-	District of Columbia
	Member, Search Panel, Chief Medical Examiner, 2007
	Health Commissioner; Member, Advisory Committee on
	Clinical Laboratory Practitioners, 2018-present
2013-2014	Accreditation Council for Graduate Medical Education
	Advisor, Clinical Informatics Fellowship Program Req.
	Advisor, Clinical Informatics Fellowship Milestones
2014-2016	American Society for Investigative Pathology (ASIP)
	Education Committee, 2014-2016
2015-	Intersociety Council for Pathology Information (ICPI)
	Board Member (Board Chair, 2020)
2018-	American Board of Pathology
	Test Development and Advisory Committee, Laboratory
	Management and Informatics
2018-	Pathology Roundtable
	Moderator
2020-	International Collaborative of Pathologists
	Founding Board Member

# **University Service:**

Louisiana State University			
	1981-1982	Department of Pathology Curriculum Committee	
	1981-1982	Director, Year 2 Clinical Pathology Course	
George Wash	ington Universi	ity	
Depart	tment of Pathol	ogy -	
	1985-present	Curriculum Committee	
	1985-present	Residency Training Committee (Chair, '01-'10, '18-pres.)	
	1985-1999	Departmental Advisory Committee	
	1992-2007	Departmental Executive Committee (Chair, 1999-2007)	
	1993	Search Comm. (Chair), Chief of Hematopathology, GWUH	
	1993	Search Committee, Director of Hematopathology	
		Children's National Medical Center	
	1994-1995	Search Committee (Chair), Chief of Molecular Diagnostics	
		The University Hospital	
	1995-1996	Ad Hoc Faculty Practice Plan Advisory Committee	
	1996	Ad Hoc Faculty Productivity Plan Evaluation Committee	
	1996	Ad Hoc Faculty Productivity Plan Implementation Comm.	
	1996-1997	Search Committee, Director of Hematopathology, CNMC	
	1997-1998	Search Committee, Surgical Pathologist	
		The University Hospital	
	1997-1998	Ad Hoc Departmental Review Committee	

# **University Service (cont.):**

# George Washington University (cont.)

e Washington University (cont.)		
Medical Center -		
1985-20	015	Introduction to Clinical Medicine Committee
		Hematology/Oncology Subcommittee
1987-19	990	Graduate Medical Education Committee (Chair, 1989-90)
1988-19	991,	Faculty Senate, Pathology Representative
1995-20		
1994		Member, GWUMC Site-Visit Team
		King Faisal Specialist Hospital and Research Centre
		Riyadh, Kingdom of Saudi Arabia
		Dates: February 17-24, 1994
1994-19	995	Second Year Advisory Committee
1995-19		Practice of Medicine III, Neoplasia Coordinator
1995-19		SMHS Education Council (Chair)
1995-20		Transfusion Medicine Research and Education Committee
1996		Institutional Research Retreat
		Discussion Group Facilitator
1997		Faculty Educational Retreat
-,,,		Overall Moderator
1998-19	999	Ad Hoc Classroom Space and Instructional Equip. Task
-,,,,		Force (Chair)
1998-20	000	Medical Center Strategic Planning Group
1998-20		Committee on Undergraduate Medical Curricula (Chair)
1998-20		Medical Center Education Council
1998-20		Basic Science Faculty Assembly Council (Vice Chair)
1999		Cancer Center Strategic Planning Group
1999		Ad Hoc Microbiology/Infectious Dis. Course Task Force
1999-pı	resent	Basic Science Chairs Group
2000-20		LCME Self-Study M.D. Curriculum Committee (Chair)
2000-20		Educational Information Technology Task Force
2003-20		GWUMC Cancer Institute
		Academic Advisory Board (Chair)
2004-20	800	Search Committee, Chair of Dermatology
2007-20		Medical Center Expansion Project Committees (3)
2007-20		Strategic Planning Committee, Communication and
		Collaboration Group
2007-20	800	LCME Educational Programs Self-Study Committee
2015-20		Faculty Senate Executive Committee (Chair, 2018-2019)
University -		, and
1996-20	000	Educational Policy Committee
2000		Strategic Planning for Academic Information Technology
		Task Force
2000-20	002	Fiscal Planning and Budgeting Committee
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# **University Service (cont.):**

# George Washington University (cont.)

<u>e Washington University (cont.)</u>		
University Hospital -		
	1993-1996	Utilization Management Committee
	1996	Medical Staff Executive Committee
		Ad Hoc Nominating Committee
	1996-1997	Ad Hoc Ancillary Services Utilization Committee
	1996-1997	Ad Hoc Supply Cost Savings Committee
	1996-2020	Hospital Quality Council
	1997-1998	Ad Hoc Improving Organization Performance Committee
	1998	Staff Reengineering Performance Improvement Team
	1998	Ad Hoc Compliance with JCAHO Autopsy Criteria Task
		Force
	1998	Ad Hoc "Office of Serious Illness" Task Force
	1999-2019	Medical Staff Executive Committee
	2000-2012	Trauma Advisory Committee
	2001-present	Radiation Safety Committee
	2006-2008	Physician Information Technology Task Force
	2010-2013	UHS Computer Physician Order Entry Design Team
		UHS Laboratory Information System Design Team
	2013-present	Transfusion Advisory Committee
Medica	al Faculty Asso	•
	1994-1995	Ad Hoc Bylaws Task Force
	1995	Search Committee, Chief Financial Officer
	1995	Ad Hoc Quality, Effectiveness, and Value Committee
	1995	Ad Hoc Business Operations Committee
	1995	Search Committee, Chief Operating Officer
	1995-1999	Governing Board, Hospital Cluster Representative
		(First Term 1995-1997; Second Term 1997-1999)
		(Board Secretary, 1996-1999)
	1995-2000	Finance Committee (Chair)
	1995-1998	GWUHP Capitation Committee
	1995-1997	Ad Hoc Incorporation Committee
	1995-1997	Ad Hoc Capitalization and Management Services Comm.
	1996	Selection Committee, Chief Executive Officer
	1996-1997	Ad Hoc Billing and Collection Task Force
	1997-1998	Ad Hoc Physician Compensation Task Force
	1998-2000	Financial Audit Subcommittee (Chair)
	1999-2000	Advisory Board, Chair Representative
		(Board Secretary, 1999-2000)
	2000	Academic Affiliation Negotiating Committee
	2000-2011	Finance Committee (under new MFA corporate structure)
	2011-2014	Accountable Care Organization Task Force

## **University Service (cont.):**

## George Washington University (cont.)

Medical Faculty Associates (cont.) -

2011-2018	Katzen Cancer Research Center, Science & Research
	Committee
2014-2017	Clinical Transformation Advisory Board
2015-2016	EPIC Information System Implementation Panel
2016-2019	Finance Committee, Co-Chair (under new administration)

## **Teaching Activities:**

Walter Reed Army Medical Center –			
1978-1981	Pathology Residency Program		
1978-1981	Medical Technology Program		
1978-1981	Immunohematology Fellowship Program		
Louisiana State Unive	ersity Medical Center –		
1981-1984	Second Year Systemic Pathology Course		
	Medical Students		
1981-1984	Second Year Clinical Pathology Course (Director)		
	Medical Students		
1981-1982	Pathology Residency Program		
The George Washing	ton University Medical Center –		
1984-present	Systemic Pathology Curriculum for Medical Students		
1984-present	Systemic Pathology Curriculum for Physician Assistant		
	Students		
1984-2015	Clinical Laboratory Science (Med. Technology) Program		
1984-present	Pathology Residency Program (Director '01-'11, '18-'20)		
1991-present	Fourth Year Clinical Pathology Elective for		
	Medical Students		
1995-1997	Practice of Medicine 3 for Medical Students		
2000-2002	Oncology 221 for BMS Ph.D. Candidates		
2001-2003	Pathophysiology 219 for BMS Ph.D. Candidates		
2001-present	NIH Hematopathology Fellowship Program		
2014-present	Transitions to Residency for Medical Students		

### **Funded Research Activities:**

1986-1987	"Gene Rearrangement Studies in the Clinical Detection of
	Lymphoma"

Role: Principal Investigator

The George Washington University, BRSG Grant

\$12,000 direct expenses

#### **Funded Research Activities (cont.):**

1996-1998 "Analysis of the Pathogenetic Relationship of Human

Herpesvirus-8 to HIV-Related and Unrelated Kaposi's Sarcoma and HIV-Related Non-Hodgkin's Lymphoma"

Role: Principal Investigator

National Institutes of Health 5 U01 CA66535-03 (subaward)

AIDS and Cancer Specimen Bank

\$49,740 direct expenses

2009-2010 "Validation Studies of Novel Targets for Cancer Diagnostics

and/or Therapeutics"

Role: Co-Investigator (0.5% funded time/effort)

Celera Genomics, Inc., Rockville, MD

\$23,750 direct expenses

2010-present District of Columbia Developmental Center for AIDS Research

(DC D-CFAR)

Role: Investigator Member National Institutes of Health

#### **Research Study Section Activities:**

2005-2008 Member, NIH Cardiovascular Sciences Small Business Activities Study

Section (Special Emphasis Panel ZRG1 CVS-K)

2005-2008 Member, NIH Hematology Small Business Activities Study Section

(Special Emphasis Panel ZRG1 HEME-E)

#### **Editorial Activities:**

#### Editorial Boards/Panels/Committees

1989-2012 Editorial Review Panel

Human Pathology

2006-2007 Editorial Advisory Board

Body: The Complete Human National Geographic Society

2012-present Executive Editorial Advisory Board

Archives of Pathology and Laboratory Medicine

2013-2014 Editorial Advisory Board

The Body: A User's Guide

National Geographic Society

2014-present Editorial Board

Academic Pathology

#### **Editorial Activities (cont.):**

#### Editorial Boards/Panels/Committees (continued from previous page)

2018-present Editorial Board

Health and Medical Informatics

2021- Editorial Board

Journal of Clinical and Translational Pathology

2021- Steering Committee, "Emerging Topics in Anatomic Path."

Archives of Pathology and Laboratory Medicine

#### Manuscript Reviewer

1996-2012 Archives of Pathology and Laboratory Medicine
 1997-2010 Cancer
 2003-2010 Journal of Clinical Laboratory Analysis
 2014-present Journal of Pathology Informatics
 2020-present Journal of Pathology

#### **Publications:**

### Refereed Journals:

**Karcher DS**, Head DR, Mullins JD. Malignant histiocytosis occurring in patients with acute lymphocytic leukemia. *Cancer* 1978; 41:1967-1973.

Cerezo L, Head DR, **Karcher DS**, Chaffin JC. Lymphoblastic crisis in polycythemia vera. *Am J Clin Pathol* 1980; 73:309.

**Karcher DS**, Pearson CE, Butler WM, Hurwitz MA, Cassell PF. Giant lymph node hyperplasia involving the thymus with associated nephrotic syndrome and myelofibrosis. *Am J Clin Pathol* 1982; 77:100-104.

**Karcher DS**, Perry DJ, Hurwitz MA, Detrick-Hooks B. T-cell lymphoma occurring in the oropharynx. *Cancer* 1982; 50:1155-1159.

Taylor HG, Butler WM, Rhoads J, **Karcher DS**, Detrick-Hooks B. Prolymphocytic leukemia: Treatment with combination chemotherapy to include doxorubicin. *Cancer* 1982; 49:1524-1529.

Wargotz EC, Hyde JE, **Karcher DS**, Hitlan JP, Wilkinson DS. Urine sediment analysis by the Yellow IRIS automated urinalysis workstation. *Am J Clin Pathol* 1987; 88:746-748.

#### Refereed Journals (cont.):

Taylor HG, Butler WM, **Karcher DS**, Zaloznik AJ. Thymic carcinoma: Clinical findings in two patients with extrathoracic metastases. *South Med J* 1988; 81:664-666.

Paulson JA, Marti GE, Fink JK, Sato N, Schoen M, **Karcher DS**. Richter's transformation of lymphoma complicating Gaucher's disease. *Hem Pathol* 1989; 3:91-96.

Rishi M, Ahmad A, Makheja A, **Karcher DS**, Bloom S. The effect of reduced dietary Mg on platelet production and function in hamsters. *Lab Invest* 1990; 63:717-721.

**Karcher DS**, Frost AR. The bone marrow in HIV-related disease: Morphology and clinical correlation. *Am J Clin Pathol* 1991; 95:63-71.

**Karcher DS**. Clinically unsuspected Hodgkin's disease presenting initially in the bone marrow of patients infected with the human immunodeficiency virus. *Cancer* 1993; 71:1235-1238. [Also selected for special Residents' and Fellows' Edition of Cancer, February, 1993, pp. 15-18RF.]

Mittelman M, **Karcher DS**, Kammerman LA, Lessin LS. High Ia (HLA-DR) and low CD11b (Mo1) expression may predict early conversion to leukemia in myelodysplastic syndromes. *Am J Hematol* 1993; 43:165-171.

### **Publications (cont.):**

Werner M, Gallagher JV, Ballo M, **Karcher DS**. Effect of analytical uncertainty of conventional and point-of-care aPTT assays on clinical decisions in heparin therapy. *Am J Clin Pathol* 1994; 102:237-241.

Lehman CM, Sarago C, Nasim S, Comerford J, **Karcher DS**, Garrett C. Comparison of PCR with Southern hybridization for the routine detection of immunoglobulin heavy chain gene rearrangements. *Amer J Clin Pathol* 1995; 103:171-176.

Alkan S, Lehman C, Sarago C, Sidawy MK, **Karcher DS**, Garrett CT. Polymerase chain reaction detection of immunoglobulin gene rearrangement and bcl-2 translocation in archival glass slides of cytologic material. *Diagn Mol Pathol* 1995; 4:25-31.

Alkan S, **Karcher DS**. Low-grade lymphomas in the elderly. *Ann Clin Lab Sci* 1995; 25:218-227.

**Karcher DS**, Alkan S. Herpes-like DNA sequences, AIDS-related tumors, and Castleman's disease. *N Engl J Med* 1995; 333:797-798.

#### Refereed Journals (cont.):

Alkan S, **Karcher DS**. Indolent lymphomas: Classic subtypes and newer entities. *Cancer Control* 1996; 3:152-157.

Alkan S, **Karcher DS**, Newman MA, Cohen P. Regression of salivary gland MALT lymphoma following treatment for Helicobacter pylori. *Lancet* 1996; 348:268-269.

Frost AR, **Karcher DS**, Terahata S, Siegel RS, Silverberg SG. DNA analysis and S-phase fraction determination by flow cytometry of infiltrating lobular carcinoma of the breast. *Modern Pathol* 1996; 9:930-937. [Abstracted in Breast Diseases: A Year Book Quarterly, Chicago, IL, Mosby-Year Book, June, 1997.]

Alkan S, **Karcher DS**, Ortiz A, Khalil S, Akhtar M, Ali MA. Human herpesvirus-8/Kaposi's sarcoma-associated herpesvirus in organ transplant patients with immunosuppression. *Br J Haematol* 1997; 96:412-414.

**Karcher DS**, Alkan S. Human herpesvirus-8-associated body cavity-based lymphoma in HIV-infected patients: A unique B-cell neoplasm. *Human Pathol* 1997; 28:801-808. [Abstracted in PRPath 22-7 (12), Educational Reviews, LLC, Birmingham, AL, November, 1997.]

Alkan S, Eltoum I, Tabbara S, Day E, **Karcher DS**. Usefulness of molecular detection of human herpesvirus-8 in the diagnosis of Kaposi's sarcoma by fine-needle aspiration. *Am J Clin Pathol* 1999; 111:91-96.

DeMonye C, **Karcher DS**, Boelaert JR, Gordeuk VR. Bone marrow macrophage iron grade and survival of HIV-seropositive patients. *AIDS* 1999; 13:375-380.

Maric I, Washington S, Schwartz A, Anandan V, **Karcher DS**. Human herpesvirus-8-positive body cavity-based lymphoma involving the atria of the heart: A case report. *Cardiovascular Pathology* 2002; 11:244-247.

Kelly JJ, **Karcher DS**. Lymphoma and peripheral neuropathy: A clinical review. *Muscle & Nerve* 2005; 31:301-313.

El-Ayass W, Yu E, **Karcher DS**, Aragon-Ching JB. Complete response to EPOCH in an HIV patient with extracavitary primary effusion lymphoma involving the colon: A case report and review of the literature. *Clin Lymphoma Myeloma Leuk* 2012; 12:144-147.

Nesterenko TH, Acun C, Mohamed MA, Mohamed AN, **Karcher DS**, Larsen J, Aly H. Is it a safe practice to administer oxygen during uncomplicated delivery: A randomized controlled trial? *Early Hum Dev* 2012; 88:677-681.

#### Refereed Journals (cont.):

Venkataraman G, Uldrick TS, Aleman K, O'Mahony D, **Karcher DS**, Steinberg SM, Raffeld MA, Marshall V, Whitby D, Little RF, Yarchoan R, Pittaluga S, Maric I. Bone marrow findings in HIV positive patients with Kaposi sarcoma herpesvirus-associated multicentric Castleman's disease. *Am J Clin Pathol* 2013; 139:651-61.

Sinard JH, Powell SZ, **Karcher DS**. Pathology training in informatics: Evolving to meet a growing need. (invited peer-reviewed article) *Arch Pathol Lab Med* 2014; 138 (No. 4, April): 505-511.

Lehman CM, Howanitz PJ, Souers R, **Karcher DS**. Utility of repeat testing of critical values. A Q-Probes analysis of 86 clinical laboratories. *Arch Pathol Lab Med* 2014; 138 (No. 6, June):788-793.

**Karcher DS**, Lehman CM. Clinical consequences of specimen rejection. A College of American Pathologists Q-Probes study of 78 clinical laboratories. *Arch Pathol Lab Med* 2014; 138 (No 8, August):1003-1008.

Howanitz PJ, Perrotta PL, Bashleben CP, Ramsey GE, Meier FA, Ramsey GE, Massie LW, Zimmerman RL, **Karcher DS**. Twenty-five years of accomplishments of the College of American Pathologists Q-Probes programs for clinical pathology. *Arch Pathol Lab Med* 2014; 138 (No. 9, September):1141-1149.

Nakhleh RE, Souers RJ, Bashleben CP, Talbert ML, **Karcher DS**, Meier FA, Howanitz PJ. Q-TRACKS: Fifteen years' experience of a College of American Pathologists program for continuous monitoring and improvement, *Arch Pathol Lab Med* 2014; 138 (No. 9, September):1150-1155.

Volmar KE, Idowu MO, Souers RJ, **Karcher DS**, Nakhleh RE. Turnaround time for large or complex specimens in surgical pathology. A College of American Pathologists Q-Probes study of 56 institutions. *Arch Pathol Lab Med* 2015;139 (No. 2, February): 171-177.

Meier FA, Souers RJ, Howanitz PJ, Tworek JA, Perrotta PL, Nakhleh RE, **Karcher DS**, Bashleben C, Darcy TP, Schifman RB, Jones BA. Seven Q-Track monitors of laboratory quality drive general performance improvement: Experience from the College of American Pathologists Q-Tracks program, 1999-2011. *Arch Pathol Lab Med* 2015;139 (No 6, June):762-775.

#### Refereed Journals (cont.):

Robboy SJ, Gupta S, Crawford JM, Cohen MB, Friedberg RC, **Karcher DS**, et al. The pathologist workforce in the United States: II. An interactive modeling tool for analyzing future qualitative and quantitative staffing demands for services. *Arch Pathol Lab Med* 2015;139 (No. 11, November):1413-1430.

Gupta S, Black-Schaffer WS, Crawford JM, Gross D, **Karcher DS**, et al. An innovative interactive modeling tool to analyze scenario-based physician workforce supply and demand. *Academic Pathology* 2015;2 (No. 4, October-December; DOI: 10.1177/2374289515606730):1-21.

Perrotta PL, **Karcher DS**. Validating laboratory results in electronic health records. *Arch Pathol Lab Med* 2016;140 (No. 9, September):926-931.

Henricks WH, **Karcher DS**, Harrison JH, et al. Pathology Informatics Essentials for Residents (PIER): A flexible informatics curriculum linked to Accreditation Council for Graduate Medical Education (ACGME) Milestones. *Academic Pathology* 2016;3:1–13. (DOI: 10.1177/2374289516659051)

Henricks WH, **Karcher DS**, Harrison JH, et al. Pathology Informatics Essentials for Residents (PIER): A flexible informatics curriculum linked to Accreditation Council for Graduate Medical Education (ACGME) Milestones. *J Pathol Inform* 2016;7 (January):27-38. (DOI: 10.4103/2153-3539.185673)

Henricks WH, **Karcher DS**, Harrison JH, et al. Pathology Informatics Essentials for Residents (PIER): A flexible informatics curriculum linked to Accreditation Council for Graduate Medical Education (ACGME) Milestones. *Arch Pathol Lab Med* 2017;141 (January):113-124. (DOI: 10.5858/arpa.2013-0328-RA)

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**Karcher DS**. Chemical aspects of hematology. In: Dufour DR, Christenson RH, eds. *Professional Practice in Clinical Chemistry: A Review*. Washington, D.C., AACC Press, 1993:99-116.

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#### **Books**:

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#### Computer Programs:

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**Karcher DS**, Alkan S. KSHV-associated body cavity-based lymphoma in HIV-infected patients. A unique B-cell neoplasm. U.S. and Canadian Academy of Pathology, Washington, DC, March, 1996. [*Lab Invest* 1996; 74:114a]

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DeMonye C, **Karcher D**, Zaloujnyi I, Gordeuk V. Bone marrow iron stores and survival in patients with HIV infection. International Conference on HIV and Iron, Brugge, Belgium, March, 1997.

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Huang JC, **Karcher DS**, Thomas M, Alkan S. Primary central nervous system (CNS) lymhomas lack expression of CD56 (NCAM). U.S. and Canadian Academy of Pathology, San Francisco, CA, March, 1999. [*Modern Pathol* 1999; 12:139a]

**Karcher D**. Pathology faculty productivity assessment: A case study. Southeastern Association of Pathology Chairs and Administrators. Kiawah Island (Charleston), SC, October, 2000.

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Mills A, Davis MS., **Karcher DS**, Latham P, Krum J, Jurjus RA. Medical students in microscopic anatomy and pathology laboratories: Design of an e-learning histology and histopathology atlas as an evolving response to interdisciplinary pre-clinical curricular needs. George Washington University Research Day, April, 2015.

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Johnson RL, Black-Schaffer WS, **Karcher DS**, et al. Evidence-based GME for a medical specialty: An approach to assessing and refining the training and certification of pathologists. Association of American Medical Colleges, Workforce Research Conference, Chicago, IL, May, 2016.

Pantanowitz L, Henricks WH, **Karcher DS**, et al. Pathology Informatics Essentials for Residents (PIER): Outcome of alpha testing by pathology resident programs. Pathology Informatics Summit, Pittsburg, PA, May, 2016

Jariwala AR, Alakeel F, Lee E, **Karcher DS**. Concurrent presentation of Waldenstrom's macroglobulinemia and angioimmunoblastic T-cell lymphoma. College of American Pathologists Annual Meeting, Las Vegas, NV, September, 2016.

Jariwala AR, **Karcher DS**. Acute myelomonocytic leukemia with tetrasomy 8: Histologic and immunophenotypic features mimicking acute promyelocytic leukemia. College of American Pathologists Annual Meeting, Washington, DC, October, 2017.

Tizro P, Hashemi Zonouz T, Almutairi F, **Karcher DS**. A rare case of Kimura disease in the wrist. American Society of Hematology, Orlando, FL, December, 2019. *Blood* 2019;134 (Supplement 1): 4881.

Alsherif R, Nassereddine S, Akin E, **Karcher D**, Smith M, Sotomayor E, Dunleavy K. Short-Course Therapy in Newly Diagnosed Immunodeficiency-Associated Aggressive B-Cell Lymphoma. American Society of Hematology, Orlando, FL, December, 2019. *Blood* 2019; 134 (Supplement 1): 5355. (https://doi.org/10.1182/blood-2019-124081)

Bhavsar TM, DeRosa P, Tizro P, Dunleavy K, **Karcher D**, Pittaluga S, Jaffe ES. Transformation of nodular lymphocyte predominant Hodgkin lymphoma to diffuse large B-cell lymphoma in the same biopsy. European Association for Haematopathology – Society for Hematopathology Joint Meeting (virtual), April 24, 2021.

Bhavsar TM, Estrella M, Tizro P, Dunleavy K, **Karcher D**, Pittaluga S, Jaffe ES. Atypical paracortical hyperplasia mimicking T-cell lymphoma. European Association for Haematopathology – Society for Hematopathology Joint Meeting (virtual), April 24, 2021.

#### Abstracts:

Bhavsar TM, Bhalli R, Tizro P, Dunleavy K, **Karcher D**. Primary effusion lymphoma, extracavitary variant, with plasmablastic morphology. European Association for Haematopathology – Society for Hematopathology Joint Meeting (virtual), April 24, 2021.

#### **Directorships of National Courses and Workshops:**

Course Co-Director

New Tools in Diagnostic Pathology

National Meeting, College of American Pathologists, San Francisco, CA, March 31, 1987 Delivered Lectures:

"Monoclonal Antibodies in the Diagnosis of Hematopoietic Malignancies"

"DNA Probes in the Diagnosis of Lymphoproliferative Disorders"

#### Course Co-Director

New Tools in Diagnostic Pathology

National Meeting, College of American Pathologists, New Orleans, LA, October 28, 1987

Delivered Lectures:

"Monoclonal Antibodies in the Diagnosis of Hematopoietic Malignancies"

"DNA Probes in the Diagnosis of Lymphoproliferative Disorders"

#### Course Co-Director

New Tools in Diagnostic Pathology

National Meeting, College of American Pathologists, Kansas City, MO, April 17, 1988 Delivered Lectures:

"Monoclonal Antibodies in the Diagnosis of Hematopoietic Malignancies"

"DNA Probes in the Diagnosis of Lymphoproliferative Disorders"

#### Course Co-Director

Molecular Pathology of Malignancy

National Meeting, College of American Pathologists, Chicago, IL, March 13, 1989 Delivered Lecture:

"Use of DNA Probes in Neoplasia"

### **Directorships of National Courses and Workshops (cont.):**

Course Co-Director

Molecular Pathology of Malignancy

National Meeting, College of American Pathologists, Washington, DC, November 1, 1989

Delivered Lecture:

"Use of DNA Probes in Neoplasia"

Course Co-Director

Molecular Pathology of Malignancy

National Meeting, College of American Pathologists, Nashville, TN, March 6, 1991 Delivered Lecture:

"Clinical Relevance of Molecular Pathology in Hematopoietic Neoplasms"

Course Co-Director

Molecular Pathology of Malignancy

National Meeting, College of American Pathologists, New Orleans, LA, September 25, 1991

Delivered Lecture:

"Clinical Relevance of Molecular Pathology in Hematopoietic Neoplasms"

Course Co-Director

Molecular Pathology of Malignancy

National Meeting, College of American Pathologists, Boston, MA, April 8, 1992 Delivered Lecture:

"Clinical Relevance of Molecular Pathology in Hematopoietic Neoplasms"

Director and Overall Moderator

"The HIT and Informatics Superhighway: Maximizing Pathology's Value in Practice, Research, and Education"

National Meeting, Association of Pathology Chairs, Monterey, CA, July 10-11, 2012.

Director and Overall Moderator

"Academic Pathology in the Evolving Health Care System"

National Meeting, Association of Pathology Chairs, Boston, MA, July 9-12, 2013.

Director and Overall Moderator

"Academic Pathology in 2020: Where Are We Headed and How Do We Get There Together"

National Meeting, Association of Pathology Chairs, Boston, MA, July 8-11, 2014.

#### **Directorships of National Courses and Workshops (cont.):**

Director and Overall Moderator
Annual Policy Meeting
College of American Pathologists, Washington, DC, April 30-May 2, 2018.
Delivered Lecture:

"CAP Policy and Advocacy Agenda"

Director and Overall Moderator Annual Policy Meeting College of American Pathologists, Washington, DC, April 29-May 1, 2019 Delivered Lecture:

"Is the Congressional Focus on Laboratory-Developed Tests Moving in the Right Direction?"

#### **Invited Presentations:**

"Classification of Non-Hodgkin's Lymphomas" and "Laboratory Diagnosis of Hemolytic Anemias", Department of Pathology, Louisiana State University Medical Center, New Orleans, LA, February 16 and 17, 1981.

"T-Cell Lymphoproliferative Disorders", Department of Pathology, George Washington University Medical Center, Washington, DC, August 30 and 31, 1984.

"Non-Hodgkin's Lymphomas", District of Columbia Society for Medical Technology, Washington, DC, May 2, 1985.

"FAB Classification of Acute Leukemia", in Hematology Board Review Course, sponsored by the George Washington University Medical Center, Bethesda, MD, October 18, 1986.

"Some Uses for Monoclonal Antibodies and DNA Probes in the Hematology Laboratory", District of Columbia Society for Medical Technology, Washington, DC, May 5, 1987.

"FAB Classification of Acute Leukemia" and "Immunophenotyping of Hematopoietic Neoplasms", in Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Washington, DC, October 17, 1987.

"Genotyping and Gene Rearrangement in Malignancy", Department of Hematology, Children's National Medical Center, Washington, DC, December 17, 1987.

"Cell Markers in Hematologic Malignancy", Cancer Teaching Conference, George Washington University Medical Center, Washington, DC, January 22, 1988.

"Clinical Relevance of DNA Probe Analysis in Hematopoietic Neoplasms", in Advances in Surgical Pathology, sponsored by the George Washington University Medical Center, Washington, DC, May 2, 1988.

"Clinical Applications of Flow Cytometry", District of Columbia Society for Medical Technology, Washington, DC, May 4, 1988.

"FAB Classification of Acute Leukemias" and "Immunophenotyping of Hematopoietic Neoplasms", in Hematology Board Review Course, sponsored by the George Washington University Medical Center, Washington, DC, October 15 and 16, 1988.

"Bone Marrow Morphology in HIV Infection", National Naval Medical Center, Bethesda, MD, January 4, 1989.

"Hematopathology of AIDS", in Advances in Surgical Pathology, sponsored by the George Washington University Medical Center, Washington, DC, May 20, 1989.

"Use of Gene Rearrangement in the Evaluation of Hematologic Malignancies", National Meeting, American Society for Medical Technology, Washington, DC, June 28, 1989.

"Immunophenotyping of Hematopoietic Neoplasms", in Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Bethesda, MD, October 16, 1989.

"Hematopathology of HIV Infection", National Naval Medical Center, Bethesda, MD, January 17, 1990.

"Clinical Relevance of Molecular DNA Studies in Hematopoietic Neoplasms", Center for Advanced Training in Cell and Molecular Biology, Catholic University of America, Washington, DC, June 21, 1990.

Chemical Aspects of Hematology", in Professional Practice in Clinical Chemistry: A Review, sponsored by the American Association for Clinical Chemistry and the National Academy of Clinical Biochemistry, Washington, DC, June 29, 1990.

"FAB Classification of Acute Leukemia" and "Hematologic Effects of HIV Infection", in Hematology Board Review Course, sponsored by the George Washington University Medical Center, Washington, DC, October 13 and 15, 1990.

"The Pathology of AIDS in Lymph Nodes and Bone Marrow", Frederick Memorial Hospital, Frederick, MD, April 26, 1991.

"Chemical Aspects of Hematology", in Professional Practice in Clinical Chemistry: A Review, sponsored by the American Association for Clinical Chemistry and the National Academy of Clinical Biochemistry, Washington, DC, May 23, 1991

"Clinical Relevance of Molecular DNA Studies in Hematopoietic Neoplasms", Center for Advanced Training in Cell and Molecular Biology, Catholic University of America, Washington, DC, June 12, 1991.

"FAB Classification of Acute Leukemia", in Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Bethesda, MD, October 16, 1991.

"Chemical Aspects of Hematology", in Professional Practice in Clinical Chemistry: A Review, sponsored by the American Association for Clinical Chemistry and the National Academy of Clinical Biochemistry, Arlington, VA, May 13, 1992.

"Recombinant DNA and Polymerase Chain Reaction Methods for Diagnosis of Microbial and Neoplastic Disease", Center for Advanced Training in Cell and Molecular Biology, Catholic University of America, Washington, DC, June 11, 1992.

"Malignant Lymphoma in HIV Infection", National Meeting, Association of Medical Laboratory Immunologists, Alexandria, VA, August 14, 1992.

"FAB Classification of Acute Leukemia" and "Immunophenotyping of Hematologic Malignancies", in Hematology Board Review Course, sponsored by the George Washington University Medical Center, Bethesda, MD, October 15 and 17, 1992.

"Clinical Relevance of Molecular Pathology in Hematopoietic Neoplasms", in Impact of Molecular Biology on the Practice of Laboratory Medicine, sponsored by the Catholic University of America, Washington, DC, March 4, 1993.

"Chemical Aspects of Hematology", in Professional Practice in Clinical Chemistry: A Review, sponsored by the American Association for Clinical Chemistry and the National Academy of Clinical Biochemistry, Arlington, VA, April 26, 1993.

"Bone Marrow Pathology in HIV Disease" and "Anatomic Pathology of HIV Disease: Lymphoreticular", in The Pathology of HIV Disease: Anatomic and Clinical Aspects, sponsored by the George Washington University Medical Center, Arlington, VA, April 30 and May 1, 1993.

"Clinical Relevance of Molecular Pathology in Hematopoietic Neoplasms", National Meeting, American Society for Medical Technology, Washington, DC, June 23, 1993.

- "FAB Classification of Acute Leukemia", in Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Bethesda, MD, October 11, 1993.
- "The Bone Marrow in HIV Infection", Georgetown University Medical Center, Washington, DC, April 1, 1994.
- "The Bone Marrow in HIV Infection", in Update in Bone Marrow Pathology, sponsored by the Washington Hospital Center, Washington, DC, April 23, 1994.
- "Hematopathology of HIV Infection", King Faisal Specialist Hospital and Research Centre, Riyadh, Kingdom of Saudi Arabia, June 22, 1994.
- "Clinical Relevance of Molecular DNA Studies in Hematopoietic Neoplasms", Visiting Professor, Department of Pathology, King Saud University Medical Center, Riyadh, Kingdom of Saudi Arabia, July 5, 1994.
- "Immunophenotyping of Hematopoietic Neoplasms", King Fahad National Guard Hospital, Riyadh, Kingdom of Saudi Arabia, July 26, 1994.
- "FAB Classification of Acute Leukemia" and "Immunophenotyping of Hematopoietic Neoplasms", in Hematology Board Review Course, sponsored by the George Washington University Medical Center, Arlington, VA, October 13 and 15, 1994.
- "Chemical Aspects of Hematology", in Professional Practice in Clinical Chemistry: A Review, sponsored by the American Association for Clinical Chemistry and the National Academy of Clinical Biochemistry, Arlington, VA, April 30, 1995.
- "Acute Lymphocytic Leukemia", in Seventeenth Annual Hematopathology Course, sponsored by the American Registry of Pathology and the Armed Forces Institute of Pathology, Bethesda, MD, May 4, 1995.
- "Immunophenotyping of Hematopoietic Neoplasms", in Hematology Board Review Course, sponsored by the George Washington University Medical Center, Bethesda, MD, October 12, 1996.
- "Cased-Based, Computer-Assisted Instructional Programs in Hematopathology for Medical Students Featuring Virtual Microscopy", in Innovative Simulations for Assessing Professional Competence: From Paper-and-Pencil to Virtual Reality, sponsored by the Department of Medical Education, University of Illinois at Chicago (in conjunction with the Annual Meeting of the American Educational Research Association), Chicago, IL, March 22-23, 1997.

"Basic Laboratory Hematology for Non-Hematologists" and "Chemical Aspects of Hematology", in Professional Practice in Clinical Chemistry: A Review, sponsored by the American Association for Clinical Chemistry and the National Academy of Clinical Biochemistry, Arlington, VA, April 29, 1997.

"Body Cavity-Based Lymphoma in HIV-Infected Patients", Pathology Grand Rounds, Medical College of Virginia Medical Center, Richmond, VA, October 10, 1997.

"Hematology Morphology Review", in Hematology and Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Washington, D.C, October 18, 1998.

"Basic Laboratory Hematology for Non-Hematologists" and "Chemical Aspects of Hematology", in Professional Practice in Clinical Chemistry: A Review, sponsored by the American Association for Clinical Chemistry and the National Academy of Clinical Biochemistry, Alexandria, VA, April 22, 1999.

"Hematology Morphology Review", in Hematology and Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Washington, D.C, October 10, 1999.

"Hematology Morphology Review", in Hematology and Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Arlington, VA, October 15, 2000.

"Hematology Morphology Review", in Hematology and Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Arlington, VA, October 14, 2001.

"Hematology Morphology Review", in Hematology and Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Alexandria, VA, October 13, 2002.

"Basic Laboratory Hematology for Non-Hematologists" and "Chemical Aspects of Hematology", in Professional Practice in Clinical Chemistry: A Review and Update, sponsored by the American Association for Clinical Chemistry and the National Academy of Clinical Biochemistry, Arlington, VA, May 1, 2003.

"Hematology Morphology Review", in Hematology and Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Alexandria, VA, October 11, 2003.

"Hematology Morphology Review", in Hematology and Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Alexandria, VA, October 9, 2004.

Invited Panelist, BRAC and the Future of Health Care in the National Capitol Region, sponsored by the U.S. Medicine Institute for Health Studies, Washington, DC, September 21, 2005.

"Hematology Morphology Review", in Hematology and Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Alexandria, VA, September 24, 2005.

Invited Panelist, Improving Bio-Preparedness in the National Capital Region, sponsored by the U.S. Medicine Institute for Health Studies, Washington, DC, April 7, 2006.

"Hematology Morphology Review", in Hematology and Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Arlington, VA, October 7, 2006.

"HIV and the Hematopoietic System", Pathology Grand Rounds, Medical College of Virginia Medical Center/Virginia Commonwealth University, Richmond, VA, March 23, 2007.

"Inspecting the Hematology Laboratory", CAP National Laboratory Accreditation Inspector Training Seminar, sponsored by the College of American Pathologists, Bethesda, MD, May 19, 2007.

"Hematology Morphology Review", in Hematology and Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Washington, DC, October 2, 2007.

Invited Panelist, Revision and Updating of the U.S. Medical Licensure Examination, sponsored by the National Board of Medical Examiners, Bethesda, MD, February 6, 2008.

"USMLE Gateway 1: Loss of Identity for Basic Science?", National Meeting, Assoc. of Pathology Chairs, Colorado Springs, CO, July 19, 2008.

"Hematology Morphology Review", in Hematology and Medical Oncology Board Review Course, sponsored by the George Washington University Medical Center, Washington, DC, August 25, 2008.

"APC Advocacy: Standing Up for Academic Pathology", National Meeting, Assoc. of Pathology Chairs, Seattle, WA, July 17, 2009.

"Hematology Morphology Review", in Hematology and Medical Oncology Best Practices Course, sponsored by the George Washington University Medical Center, Washington, DC, October 11, 2009.

Discussion Leader, "Inventing and Reinventing Yourself as an Academic Health Care Leader", Association of American Medical Colleges, Council of Academic Societies, Spring Meeting, Austin, TX, March 6, 2010.

Invited Participant, Leadership Forum on Health Care Reform, Association of American Medical Colleges, Washington, DC, June 22-23, 2010.

"APC and Cooperating Societies: Alignment for the Future of Pathology", National Meeting, Assoc. of Pathology Chairs, Seattle, WA, July 16, 2010.

"Hematology Morphology Review", in Hematology and Medical Oncology Best Practices Course, sponsored by the George Washington University Medical Center, Washington, DC, October 10, 2010.

"Pathology Subspecialty Fellowship Application Reform", Society for Hematopathology, San Antonio, TX, February 27, 2011.

Panel Moderator, "New Pathways for Pathologists in ACOs and Other Emerging Delivery Models", Annual Policy Meeting, College of American Pathologists, Washington, DC, May 2, 2011.

Panel Moderator, "Leadership Forum: The Value Proposition for Pathologists", National Meeting, Assoc. of Pathology Chairs, Monterey, CA, July 13, 2011.

"Hematology Morphology Review", in Hematology and Medical Oncology Best Practices Course, sponsored by the George Washington University Medical Center, Washington, DC, September 9, 2011.

"Professional Practice Evaluation and the Joint Commission: What You Need to Know to Comply", National Meeting, College of American Pathologists, Dallas, TX, September 13, 2011.

Panel Moderator, "Risks and Rewards: Lessons Learned From the Front Lines of Accountable Care", National Meeting, College of American Pathologists, Dallas, TX, September, 13, 2011.

"ACOs: Opportunities and Obstacles for Pathologists", National Meeting, College of American Pathologists, House of Delegates, Vancouver, BC, March 16, 2012.

Panelist, "Accountable Care Organizations: What is the Role of the Pathologist? What Are the Public Policy Implications?", Annual Policy Meeting, College of American Pathologists, Washington, DC, May 7, 2012.

Panel Moderator, "Primer on HIT and Informatics for Pathologists", National Meeting, Assoc. of Pathology Chairs, Monterey, CA, July 10, 2012.

Moderator, "The HIT and Informatics Superhighway: Maximizing Pathology's Value in Practice, Research, and Education", National Meeting, Assoc. of Pathology Chairs, Monterey, CA, July 11-12, 2012.

Panel Moderator, "New Roles for Pathologists and New Payment Models", National Meeting, Assoc. of Pathology Chairs, Monterey, CA, July 12, 2012.

"Hematology Morphology Review", in Hematology and Medical Oncology Best Practices Course, sponsored by the George Washington University Medical Center, Washington, DC, August 24, 2012.

"Pathology and ACOs: What's Next", National Meeting, College of American Pathologists, House of Delegates, San Diego, CA, September 8, 2012.

"Professional Practice Evaluation and the Joint Commission: What You Need to Know to Comply", National Meeting, College of American Pathologists, San Diego, CA, September 10, 2012.

"Evalumetrics<sup>TM</sup> System for OPPE-FPPE Documentation for Pathologists", National Meeting, College of American Pathologists, San Diego, CA, September 11, 2012.

"Pathology in the Era of Accountable/Coordinated Care", Northeast Association of Pathology Chairs, Cambridge Beaches, Bermuda, September 22, 2012.

"ACOs and Pathology: What Do We Need to Know?" National Meeting. College of American Pathologists, House of Delegates, Baltimore, MD, March 2, 2013.

"The ACO Opportunity", Nationally broadcast webinar, College of American Pathologists, April 18, 2013.

Panel Moderator, "Live or Let Die: Clinical Informatics as a Transformative Discipline for Pathologists in the New Era of Value-Based Health Care", National Meeting, Association of Pathology Chairs, Boston, MA, July 9, 2013.

Panel Moderator, "Primer on Health Care Financing, Health Care Payment and Delivery Models, and Health Care Delivery Management for Pathologists", National Meeting, Association of Pathology Chairs, Boston, MA, July 10, 2013.

Panel Moderator, "Workforce in Pathology and Laboratory Medicine", National Meeting, Association of Pathology Chairs, Boston, MA, July 12, 2013.

"Hematology Morphology Review", in Hematology and Medical Oncology Best Practices Course, sponsored by the George Washington University Medical Center, Washington, Roslyn, VA, August 18, 2013.

"Evalumetrics™ – Simplify Compliance, Demonstrate Excellence", Nationally broadcast webinar, College of American Pathologists, September 24, 2013.

"ACOs and Value-Based Health Care: What Does It Mean for Pathology?", Southeastern Association of Pathology Chairs, Asheville, NC, October 3, 2013.

"ACOs and Value-Based Health Care", National Meeting, College of American Pathologists, Resident Forum, Orlando, FL, October 12, 2013.

"Professional Practice Evaluation and the Joint Commission: What You Need to Know to Comply", National Meeting, College of American Pathologists, Orlando, FL, October 13, 2013.

"Evalumetrics<sup>TM</sup> System for OPPE-FPPE Documentation for Pathologists", National Meeting, College of American Pathologists, Orlando, FL, October 15, 2013.

Invited Panelist, Pathology Workforce Summit, sponsored by 24 national pathology organizations, Washington, DC, December 3, 2013.

"Pathology Workforce Summit", Association of Pathology Chairs, Spring Meeting, San Diego, CA, March 3, 2014.

Invited Panelist, "Workforce in Pathology", Annual Policy Meeting, College of American Pathologists, Washington, DC, May 5, 2014.

Invited Panelist, "Computational Pathology", Harvard University/ Massachusetts General Hospital, Boston, MA, July 8, 2014.

Panel Moderator, "Academic Pathology by 2020: Assuring Value in New Practice Paradigms", National Meeting, Association of Pathology Chairs, Boston, MA, July 10, 2014.

Panel Moderator, "Informatics and GME: Teaching the Essentials of Informatics to Residents", National Meeting, Association of Pathology Chairs, Boston, MA, July 10, 2014.

"Hematology Morphology Review", in Hematology and Medical Oncology Best Practices Course, sponsored by the George Washington University Medical Center, Washington, Roslyn, VA, August 18, 2014.

Invited Panelist, "Town Hall Meeting for Residents: The Evolution of Pathology Residency Training", National Meeting, College of American Pathologists, Resident Forum, Chicago, IL, September 6, 2014.

Panel Moderator, "Pathologist Value: Making a Difference in ACOs", National Meeting, College of American Pathologists, Chicago, IL, September 8, 2014.

"Pathology Informatics Essentials for Residents (PIER): A New National Curriculum", Annual Meeting, West, Mid-West, and Canada Association of Pathology Chairs, Kauai, Hawaii, October 22, 2014.

"The Impact of Health Care Reform on Pathology Practice and Payment: Value Over Volume", National Meeting, Association for Molecular Pathology, Washington, DC, November 15, 2014.

Invited Panelist, "Framework for Regulatory Oversight of Laboratory Developed Tests (LDTs)", Food and Drug Administration, Bethesda, MD, January 9, 2015.

"The Value-Added Role of Pathologists in the Emerging New Healthcare System", Office of Clinical Practice Innovation, George Washington University, Washington, DC, February 20, 2015.

"Pathology and Value-Based Health Care: From Volume to Value", National Meeting, Association of Directors of Anatomic and Surgical Pathology, Boston, MA, March 21, 2015.

Invited Panelist, "Pathology Leadership Forum", Annual Policy Meeting, College of American Pathologists, Washington, DC, May 4, 2015.

Invited Panelist: "Practical Applications of Computational Pathology", Annual Meeting, Association of Pathology Chairs, Rancho Bernardo (San Diego), CA, July, 2015.

Panel Moderator: "A Colloquium on FDA Oversight and Pathology Practice: LDTs, NGS, and Whole-Slide Imaging", Annual Meeting, Association of Pathology Chairs, Rancho Bernardo (San Diego), CA, July, 2015.

"Hematology Morphology Review", in Hematology and Medical Oncology Best Practices Course, sponsored by the George Washington University Medical Center, Washington, Arlington, VA, August 17, 2015.

Panel Moderator, "Pathologist Value: Making a Difference in ACOs", National Meeting, College of American Pathologists, Nashville, TN, October 5, 2015.

Panel Moderator, "Pathologist Value: Contributing to Peer Review and Patient Safety in a Value-Based Health Care System", National Meeting, College of American Pathologists, Nashville, TN, October 6, 2015.

"Value-Based Care and Genomic Medicine: From Volume to Value to the Promise of Personalized Health Care". College of American Pathologists, Personalized Health Care Committee Meeting, Chicago, IL, October 16, 2015.

Panel Moderator, "Transition from Trainee to Academic Pathologist: Crossing the Bridge to a Successful Academic Career", National Meeting, United States and Canadian Academy of Pathology, Seattle, WA, March 14, 2016.

Panel Moderator, "Integration of Clinical and Anatomic Pathology into the Graduate Student Program", National Meeting, American Society for Investigative Pathology, San Diego, CA, April 2, 2016.

Panel Member, "Integration of Specialty Care into Accountable Care Organizations", The Seventh National Accountable Care Organization Summit, Washington, DC, June 10, 2016.

Panel Member, "Pathology Informatics Essentials for Residents (PIER): Practical Suggestions for Implementation Success", Annual Meeting, Association of Pathology Chairs, Rancho Bernardo (San Diego), CA, July 13, 2016.

Panel Member, "Evaluation and Improvement of Pathology Residency Training: An Update", College of American Pathologists Resident Forum, Las Vegas, NV, September 24, 2016.

Panel Moderator, "Pathologist Value: Making a Difference in ACOs and Other Value-Based Care Delivery Models", National Meeting, College of American Pathologists, Las Vegas, NV, September 26, 2016.

Panel Moderator, "From Volume to Value: The Role of Information Management in Providing and Documenting Value in Pathology Practice", National Meeting, College of American Pathologists, Las Vegas, NV, September 26, 2016.

Panel Moderator, "Launching the Young Pathologist: A Forum on the Transition from Pathology Trainee to Effective Pathology Practitioner", National Meeting, College of American Pathologists, Las Vegas, NV, September 27, 2016.

"Pathologists and Value-Based Health Care: An Update", Annual Meeting, West, Mid-West, and Canada Association of Pathology Chairs, Maui, Hawaii, October 26, 2016.

"Pathologists and Value-Based Care: Risks and Rewards", Massachusetts Society of Pathologists, Boston, MA, November 1, 2016.

"Pathologists and Value-Based Care: Risks and Rewards", Maryland Society of Pathologists, Baltimore, MD, February 2, 2017.

Panelist, "Career Choices in Pathology: Job Offers and Contracts", National Meeting, College of American Pathologists Residents Forum, San Antonio, TX, March 4, 2017.

"The Autopsy in Pathology Residency: Current Status and Efforts to Improve the Quality of Training", Annual Meeting, Association of Pathology Chairs, Washington, DC, July, 2017.

Panel Moderator, "Launching the Young Pathologist: A Forum on the Transition from Pathology Trainee to Effective Pathology Practitioner", National Meeting, College of American Pathologists, National Harbor (Washington, DC), October, 2017.

Panel Member, "Advocacy Town Hall", National Meeting, College of American Pathologists, National Harbor (Washington, DC), October, 2017.

"Payment for Pathology Services: How Is It Determined? Pathology Payment Advocacy and the CAP", Maryland Society of Pathologists, Anne Arundel County, MD, February 24, 2018.

"Pathology Advocacy Update", College of American Pathologists, House of Delegates and Resident Forum Joint Meeting, Vancouver, BC, March 17, 2018.

"LDTs, IVDs, and DAIA (Diagnostic Accuracy and Innovation Act): What Every Academic Leader Needs to Know", Association of Pathology Chairs National Webinar Series, April 5, 2018.

"CAP Policy and Advocacy Agenda", College of American Pathologists, Annual Policy Meeting, Washington, DC, April 30, 2018.

"Pathology Advocacy Update", National Meeting, College of American Pathologists, House of Delegates, Chicago, IL, October 20, 2018.

"An Interview with David Axelrod", National Meeting, College of American Pathologists, House of Delegates and Resident Forum Joint Meeting, Chicago, IL, October 20, 2018.

Panel Member, "The State of State Advocacy in Pathology", National Meeting, College of American Pathologists, House of Delegates, Chicago, IL, October 20, 2018.

Panel Moderator, "Launching the Young Pathologist: A Forum on the Transition from Pathology Trainee to Effective Pathology Practitioner", National Meeting, College of American Pathologists, Chicago, IL, October 22, 2018.

Panel Moderator, "The CAP Advocacy Agenda", National Meeting, College of American Pathologists, Chicago, IL, October 22, 2018.

"Helping Pathologists Navigate in an Era of Evolving Health Care", New Hampshire Society of Pathologists, Concord, NH, November 10, 2018.

"Regulatory and Payment Issues for Pathologists: How We Can All Help", Virginia Society for Pathology, Richmond, VA, December 1, 2018.

Panel Member, "Federal and State Advocacy Update", Academy of Pathology and Laboratory Medicine of Puerto Rico, San Juan, PR, March 2, 2019.

"Pathology Advocacy Update", College of American Pathologists, House of Delegates and Resident Forum Joint Meeting, National Harbor (Washington, DC), March 16, 2019.

"Helping Pathologists Navigate in an Era of Evolving Health Care", Illinois Society of Pathologists and Chicago Pathology Society (first ever joint meeting), Chicago, IL, April 8, 2019.

"Is the Congressional Focus on Laboratory-Developed Tests Moving in the Right Direction?", Annual Policy Meeting, College of American Pathologists, Washington, DC, April 29, 2019.

"Pathology Advocacy and Payment Issues: What's New; What's Coming?", Grand Rounds, Department of Pathology, Virginia Commonwealth University Medical Center, Richmond, VA, September 16, 2019.

"Pathology Advocacy Update", National Meeting, College of American Pathologists, House of Delegates and Resident Forum Joint Meeting, Orlando, FL, September 21, 2019.

Panel Moderator, "Advocacy Timely Topic: Surprise Billing Legislation", National Meeting, College of American Pathologists, Orlando, FL, September 22, 2019.

Panel Moderator, "Advocacy Town Hall", National Meeting, College of American Pathologists, Orlando, FL, September 23, 2019.

"The CAP Pathologist Pipeline Initiative: Where We've Been, Where We Are, Where We Need to Be", Resident Forum Meeting, College of American Pathologists, Los Angeles, CA, February 29, 2020.

"In Pursuit of Accurate Pathologist Workforce Counts: Why Undercounting Matters", National Podcast, College of American Pathologists, July 9, 2020.

"The Pathologist Pipeline: What Has Worked, What Hasn't, What's New", Annual Meeting, Association of Pathology Chairs (Virtual), July 22, 2020.

Panel Member, "Career Development for Young Pathologists", Annual Meeting, Chinese American Pathologists Association (Virtual), October 11, 2020

"State of the Job Market for Pathologists: The Good, the Bad, and the Ugly", Meeting, Illinois Society of Pathologists (Virtual), November 13, 2020

"The CAP and the Future of Pathology", Grand Rounds (virtual), East Carolina University School of Medicine, March 17, 2021.

"The CAP and the Future of Pathology", Grand Rounds (virtual), Pritzker School of Medicine, University of Chicago, April 1, 2021.

"The CAP and the Future of Pathology", Grand Rounds (virtual), University of California Irvine School of Medicine, April 13, 2021.

Panel Member, "Pathologist Workforce: Assessing the Landscape", College of American Pathologists House of Delegates, Pathologist Leadership Summit, May 1, 2021.

"The CAP and the Future of Pathology", Grand Rounds (virtual), Renaissance School of Medicine, Stony Brook University, May 20, 2021