

## CURRICULUM VITAE

### TOBY CHARLES CORNISH, M.D., Ph.D.

#### I. PERSONAL INFORMATION

##### Current Position:

Professor (with Tenure), University of Colorado School of Medicine  
 Vice-Chair for Informatics, Department of Pathology, University of Colorado  
 Medical Director of Informatics, Department of Pathology, University of Colorado  
 Medical Director of the Laboratory Information System, UCHealth System

##### Contact Information:

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#### II. EDUCATION AND TRAINING

1995	B.S.	Bradley University, Peoria, IL	Biochemistry
2004	Ph.D.	University of Illinois, Urbana, IL	Neuroscience
2005	M.D.	University of Illinois, Chicago, IL	Medicine
2006	Intern	Johns Hopkins Hospital	Anatomic Pathology
2007	Asst. Resident	Johns Hopkins Hospital	Anatomic Pathology
2008	Research Fellow	Johns Hopkins University	Pathology
2009	Resident	Johns Hopkins Hospital	Anatomic Pathology
2010	Clinical Fellow	Johns Hopkins Hospital	GI & Liver Pathology
2011	Certificate	Johns Hopkins University	Clinical Informatics

#### III. ACADEMIC APPOINTMENTS

July 2010 - Jun 2011	Assistant (Faculty), GI & Liver Pathology	JHU School of Medicine
July 2011 - Jan 2016	Assistant Professor, Pathology	JHU School of Medicine
Jan 2016 - Present	Adjunct Assistant Professor, Pathology	JHU School of Medicine
Jan 2016 - Jun 2017	Visiting Associate Professor, Pathology	University of Colorado School of Medicine
July 2017 - Present	Associate Professor, Pathology	University of Colorado School of Medicine
Apr 2022 - Present	Associate Professor, Biomedical Informatics (secondary appointment)	University of Colorado School of Medicine

Aug 2023 - Present	Professor, Pathology	University of Colorado School of Medicine
Aug 2023 - Present	Tenure	University of Colorado School of Medicine
Aug 2023 - Present	Professor, Biomedical Informatics (secondary appointment)	University of Colorado School of Medicine

#### IV. OTHER PROFESSIONAL POSITIONS

##### Hospital positions:

July 2010 - Jan 2016	Pathologist	Johns Hopkins Hospital
July 2010 - Jan 2016	Pathologist	Johns Hopkins Bayview Medical Center
July 2012 - Jan 2016	Pathologist	Howard County General Hospital
July 2014 - Jun 2015	Associate Director	Division of Informatics, Pathology Department, JHU Hospital
July 2015 - Jan 2016	Interim Director	Division of Informatics, Pathology Department, JHU Hospital
Jan 2016 - Present	Medical Director of Informatics	Department of Pathology, University of Colorado School of Medicine
Jan 2016 - Present	Medical Director of the LIS	UC Health System
Jan 2016 - Present	Pathologist	University of Colorado Hospital
Sep 2018 - Jul 2021	Medical Director of Clinical Informatics, Pathology and Lab Medicine	Children's Hospital Colorado

##### Consultantships:

2010	Consultant	Hamamatsu, Inc
2010 - 2014	Sci. Advisory Board	Digipath, Inc.
2012 - 2013	Sci. Advisory Board	Accelpath, Inc.
2013	Consultant	Virginia Hospital Center
2015	Consultant	Guidepoint Global

##### Other:

2011 - 2012	Member, Aperio, Inc. Repository Project Advisory Group
2012 - 2016	Co-director, Imaging and Image Analysis, Oncology Tissue Services Lab (formerly the Tissue Microarray Lab), JHU
2015 - 2017	Member, Advisory Panel, Digital Pathology Congress
2016 - present	Member, American Registry of Pathology Editorial Advisory Board, Next Generation of ARP Publications (5th Series)
2017 - 2018	Member, Epic Systems Corp. Pathology Steering Board

2017 - 2019	Section Editor (Informatics), Editorial Board, <i>American Journal of Clinical Pathology</i>
2017 - 2019	Member, Leica, Inc. Pathology Imaging Advisory Board
2017 - present	Member, Cerner Corp. CoPathPlus Pathology Advisory Committee
2019 - present	Associate Editor (Informatics), Editorial Board, <i>American Journal of Clinical Pathology</i>
2019 - present	Member, Leica, Inc. Advanced Staining and Imaging Advisory Board
2019 - 2020	Member, Editorial Advisory Board, <i>Springer Lecture Notes in Artificial Intelligence: State-of-the-Art Survey: AI/Machine Learning for Digital Pathology</i>
2021	Member, Bristol Meyers Squibb, Ozanimod (ZEPOSIA®) Advisory Board: GI Pathologists' Insights on True North Biopsy Data and Real-World Biopsy Data Reporting to Guide Future BMS Trials

## V. HONORS, SPECIAL RECOGNITIONS AND AWARDS

1998 - 1999	Program in Arms Control, Defense and International Security Research Fellowship (University of Illinois, Urbana-Champaign)
2000	University Fellowship (University of Illinois, Urbana-Champaign)
2000 - 2002	Developmental Neuroscience and Psychobiology Training Grant Fellow (NIH; University of Illinois, Urbana-Champaign)
2004	Daniel K. and Frances Bloomfield Award ("Outstanding Student Entering the Last Year of Studies in the Medical Scholars Program," University of Illinois, Urbana-Champaign College of Medicine)
2005	Donald Thrush Award for Excellence in Pathology (University of Illinois, Urbana-Champaign College of Medicine)
2008	Excellence in Basic Research, Pathology Young Investigators (JHU)
2008	College of American Pathologists Travel Grant, APIII (Advancing Practice, Instruction, and Innovation through Informatics) Meeting
2009 - 2010	Ruth L. Kirchstein NRSA Fellowship (JHU training grant)
2010	Excellence in Clinical Research, Pathology Young Investigators (JHU)
2010 - 2011	Yardley Fellow (Division of GI & Liver Pathology, JHU)
2012	Dr. Frank Netter Award for Special Contributions to Medical Education (Vesalius Trust)
2012	Grover Hutchins, M.D., Endowment, Faculty Support Award (JHU)
2014	Educational Innovation Award, Institute for Educational Excellence (JHU SOM)
2019	Summit Award for Excellence in Teaching and the Education of Pathologists (CU SOM Pathology Dept)
2020	Medical Student Small Group Teaching Certificate ("Awarded in recognition of exceptional service in teaching 10 or more small group sessions by a faculty member"; CU SOM Pathology Dept)
2020	The Power List 2020, "Big Breakthroughs", <i>The Pathologist Magazine</i>
2021	Medical Student Small Group Teaching Certificate ("Awarded in recognition of exceptional service in teaching 6 or more small group sessions by a faculty member"; CU SOM Pathology Dept)
2023	Summit Award for Excellence in Teaching and the Education of Pathologists (CU SOM Pathology Dept)
2023	Pathologist of the Year (CU SOM Pathology Dept)

## VI. MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

2005 - 2021	Member, United States and Canadian Academy of Pathology (USCAP)
2006 - present	Member, College of American Pathologists (CAP)
2006 - present	Member, American Society for Clinical Pathology (ASCP)
2007 - present	Member, Association for Pathology Informatics (API)
2009 - 2011	Member, American Association for Cancer Research (AACR)
2012 - present	Member, Digital Pathology Association (DPA)
2015 - 2016	Member, American Medical Informatics Association (AMIA)
2016 - present	Member, American Telemedicine Association (ATA)
2018 - present	Member, Gastrointestinal Pathology Society (GIPS)
2019 - present	Member, Healthcare Information and Management Systems Society (HIMSS)
2019 - present	Member, Society for Imaging Informatics in Medicine (SIIM)
2019 - present	Member, Pathology Innovation Collaborative Community (PICC)/Alliance for Digital Pathology

## VII. MAJOR COMMITTEE AND SERVICE RESPONSIBILITIES

### Departmental:

2009 - 2016	Member, Web Site Committee, JHU SOM Pathology Dept
2011 - 2015	Member, Residency Selection Committee, JHU SOM Pathology Dept
2014 - 2015	Associate Director, Division of Informatics, JHU SOM Pathology Dept
2015 - 2016	Interim Director, Division of Informatics, JHU SOM Pathology Dept
2016 - present	Medical Director, Pathology Informatics, CU SOM Pathology Dept
2017 - present	Chairperson, Web Site Committee, CU SOM Pathology Dept
2019 - 2021	Co-Chairperson, Colorado Genetic Laboratory (CGL) & Colorado Molecular Correlates Laboratory (CMOCO) LIS Search Committee, CU SOM Pathology Department
2021 - present	Vice-Chair for Informatics, CU SOM Pathology Dept
2021 - present	Member, AP/CP Program Evaluation Committee, CU SOM Pathology Dept
2021 - present	Chairperson, Subcommittee on Technology for Education, AP/CP Program Evaluation Committee, CU SOM Pathology Dept
2022 - present	Member, AP/CP Curriculum Committee, CU SOM Pathology Dept
2022 - 2023	Member, Vice-Chair for Clinical Pathology and Laboratory Medical Director Recruitment Committee, CU SOM Pathology Dept
2023	Chairperson, Medical Director of the University of Colorado Hospital Core Laboratory Recruitment Committee, CU SOM Pathology Dept
2023	Member, Promotions Advisory Committee, CU SOM Pathology Dept

### University / School of Medicine:

2010 - 2014	Member, caTissue Steering Committee, JHU SOM
2011 - 2016	Member, Education Technology Committee, JHU SOM
2012 - 2016	Co-director, Imaging and Image Analysis, Oncology Tissue Services Lab (formerly the Tissue Microarray Lab), JHU SOM
2014 - 2016	Member, OpenSpecimen Steering Committee, JHU SOM
2021 - present	Member, Center for Health Artificial Intelligence (CHAI), CU SOM
2022 - present	Affiliate Member, University of Colorado Cancer Center

**Hospital / Health System:**

2009 - 2010	GI Biopsy Quality Improvement Effort, Johns Hopkins Hospital
2010 - 2016	GI Pathology Interesting Case/Quality Assurance Conference, Johns Hopkins Hospital
2011 - 2016	PDS/Pathology Information Systems Steering Committee, Johns Hopkins Hospital
2012	Member, College of American Pathologists Laboratory Accreditation Inspection Team, Johns Hopkins Hospital
2015 - 2016	Autopsy Pathology Quality Assurance Conference, Johns Hopkins Hospital
2015 - 2016	Member, Health IT Safety Committee, Johns Hopkins Medicine
2015 - 2016	Epic Physician Champions (Pathology Representative), Johns Hopkins Medical Institutions
2015 - 2016	Member, Data Trust Research Data Sub-Council, Johns Hopkins Medicine
2015 - 2016	Member, Laboratory Advisory Committee, Johns Hopkins Hospital
2015 - 2016	Member, Clinical Advisory/Laboratory Management Committee, Johns Hopkins Department of Pathology
2016 - present	Member, Joint Informatics Group, UC Health
2016 - present	Member, LIS Steering Committee, UC Health
2016 - present	Medical Director, Laboratory Information System, UC Health
2016 - present	Member, Pharmacogenomics Implementation Committee Colorado (PICColo), CU / UCHealth
2018 - 2021	Medical Director of Clinical Informatics, Pathology and Lab Medicine, Children's Hospital Colorado (CHCO)

**Clinical (Service) Responsibilities:**

2010 - 2016	Gastrointestinal pathology, Johns Hopkins Hospital
2011 - 2016	Autopsy pathology, Johns Hopkins Hospital
2011 - 2016	Autopsy pathology, Johns Hopkins Bayview Medical Center
2012 - 2016	Gastrointestinal pathology, Howard County General Hospital
2016 - present	Gastrointestinal pathology, University of Colorado Hospital
2016 - 2021	Gastrointestinal pathology, UCHealth Broomfield Hospital
2016 - 2018	Gastrointestinal pathology, UCHealth Grandview Hospital
2020 - present	Gastrointestinal pathology, UCHealth Cherry Creek Medical Center

**Professional Society:**

2012 - 2013	Member, College of American Pathologists Digital Pathology Working Group
2013 - 2014	Member, College of American Pathologists Digital Pathology Project Team
2014 - 2019	Member, College of American Pathologists Digital Pathology Committee
2017 - 2018	Member, AACR 2018 Annual Meeting Program Committee
2018 - 2019	Co-chair, Association for Pathology Informatics Training and Education Committee
2019 - 2020	Member, College of American Pathologists Digital and Computational Pathology Committee
2019 - 2022	Member, HIMSS-SIIM Enterprise Imaging Community's Multimedia Interactive Content Reporting Workgroup

2020 - present	Member, HIMSS-SIIM Enterprise Imaging Community Advisory Council
2020 - 2022	Member, Digital Pathology Association Artificial Intelligence / Machine Learning (AI/ML) Task Force
2021	President-Elect, Association for Pathology Informatics
2021 - present	Member, College of American Pathologists Artificial Intelligence Committee
2022	President, Association for Pathology Informatics
2023 - 2024	Past President, Association for Pathology Informatics
2023 - 2024	Member, American Society of Clinical Pathology (ASCP) Taskforce on the <i>American Journal of Clinical Pathology (AJCP)</i>

## VIII. LICENSURE AND BOARD CERTIFICATION

### Licensure:

2008 - 2010	Medical Physician and Surgeon, Commonwealth of Pennsylvania, MD435996 (status: inactive)
2010 - 2016	Medical Physician and Surgeon, State of Maryland, D70746 (status: inactive)
2015 - present	Physician, State of Colorado, DR.0056128

### Board Certification:

2009 - 2029	Diplomate, Anatomic Pathology, The American Board of Pathology
2015 - 2025	Diplomate, Clinical Informatics, The American Board of Pathology

## IX. INVENTIONS, PATENTS, INTELLECTUAL PROPERTY

2015	Halushka MK and <b>Cornish TC</b> . "Method and System to Digitize Pathology Slides in a Stepwise Fashion for Review", Co-inventor (with Marc K. Halushka), US Patent 9,214,019; filed Feb 15, 2012, and issued Dec 15, 2015.
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## X. REVIEW AND REFEREE WORK

### Editorial Board Service:

2017 - 2019	Section Editor	<i>American Journal of Clinical Pathology</i> (Informatics, GI & Liver Pathology)
2019 - present	Associate Editor	<i>American Journal of Clinical Pathology</i> (Informatics)
2019 - present	Editorial Advisory Board	<i>American Registry of Pathology, Fascicles of Pathology, 5th Series</i>
2019 - 2020	Editorial Advisory Board	<i>Springer Lecture Notes in Artificial Intelligence: State-of-the-Art Survey: AI/ML for Digital Pathology</i>
2020 - present	Editorial Board	<i>Modern Pathology</i>

### Ad-hoc Review for Journals:

2009	Ad-hoc Reviewer	<i>Annals of the British Machine Vision Association</i>
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2010 - 2023	Ad-hoc Reviewer	<i>Laboratory Investigation</i>
2012	Ad-hoc Reviewer	<i>Diagnostic Cytopathology</i>
2012	Ad-hoc Reviewer	<i>Journal of Neuropathology and Exp Neurology</i>
2013 - 2023	Ad-hoc Reviewer	<i>Archives of Pathology &amp; Laboratory Medicine</i>
2014 - present	Ad-hoc Reviewer	<i>Journal of Pathology Informatics</i>
2014	Ad-hoc Reviewer	<i>Journal of Visualized Experiments</i>
2015	Ad-hoc Reviewer	<i>AIMS Medical Science</i>
2015	Ad-hoc Reviewer	<i>Scientific Reports</i>
2015	Ad-hoc Reviewer	<i>Advances in Medical Sciences</i>
2016	Ad-hoc Reviewer	<i>Microscopy and Microanalysis</i>
2017 - 2019	Ad-hoc Reviewer	<i>Pathology</i>
2017 - present	Ad-hoc Reviewer	<i>American Journal of Clinical Pathology</i>
2017 - 2023	Ad-hoc Reviewer	<i>Journal of Clinical Investigation</i>
2018	Ad-hoc Reviewer	<i>JAMA Oncology</i>
2018	Ad-hoc Reviewer	<i>Clinical Medicine Insights: Pathology</i>
2018	Ad-hoc Reviewer	<i>Histopathology</i>
2019 - 2020	Ad-hoc Reviewer	<i>Modern Pathology</i>
2019	Ad-hoc Reviewer	<i>JAMA Network Open</i>
2019	Ad-hoc Reviewer	<i>Research Square</i>
2019	Ad-hoc Reviewer	<i>npj Digital Medicine</i>
2020	Ad-hoc Reviewer	<i>Medical Image Analysis</i>
2020 - 2021	Ad-hoc Reviewer	<i>Clinical Chemistry</i>
2020	Ad-hoc Reviewer	<i>Human Pathology: Case Reports</i>
2020	Ad-hoc Reviewer	<i>Mayo Clinic Proceedings: Innovations, Quality &amp; Outcomes</i>
2021	Ad-hoc Reviewer	<i>Journal of the American Medical Informatics Association (JAMIA)</i>
2021 - 2022	Ad-hoc Reviewer	<i>Journal of Pathology</i>
2021	Ad-hoc Reviewer	<i>Journal of Pathology: Clinical Research</i>
2021	Ad-hoc Reviewer	<i>American Journal of Pathology</i>
2021	Ad-hoc Reviewer	<i>Journal for ImmunoTherapy of Cancer</i>
2021	Ad-hoc Reviewer	<i>Computerized Medical Imaging and Graphics</i>
2022	Ad-hoc Reviewer	<i>Future Medicinal Chemistry</i>
2022	Ad-hoc Reviewer	<i>Translational Oncology</i>
2022	Ad-hoc Reviewer	<i>Gastroenterology</i>
2022 - 2023	Ad-hoc Reviewer	<i>International Journal of Computer-Assisted Radiology and Surgery (IJCARS)</i>
2022	Ad-hoc Reviewer	<i>Biomedicines</i>
2022	Ad-hoc Reviewer	<i>Cybernetics and Systems</i>
2023	Ad-hoc Reviewer	<i>IEEE Journal of Biomedical and Health Informatics</i>
2023	Ad-hoc Reviewer	<i>Case Reports in Pathology</i>
2023	Ad-hoc Reviewer	<i>International Journal of Surgical Pathology</i>
2023	Ad-hoc Reviewer	<i>Clinica Chimica Acta</i>

**Grant Review:**

2019	External Reviewer	Mitacs Elevate Postdoctoral Fellowship Award Program
2019	External Reviewer	Ontario Research Fund – Research Excellence Round

2020	External Reviewer	Ontario Institute for Cancer Research (OICR) - Ontario Molecular Pathology Research Network (OMPRN) Cancer Pathology Translational Research Grants (CPTRG)
2021	Expert Reviewer	Canada Foundation for Innovation (CFI) - John R. Evans Leaders Fund
2021	Member	NIH Emerging Imaging Technologies and Applications (EITA) Study Section
2021 - 2022	Member	Colorado Clinical and Translational Sciences Institute (CCTSI) Translational Methods (TM-Pilot) Grant Program 2022 Study Section
2022	Expert Reviewer	Swiss National Science Foundation (SNSF) National Roadmap for Research Infrastructures 2023
2022 - 2023	Member	Colorado Clinical and Translational Sciences Institute (CCTSI) Colorado Pilot (CO-Pilot) Grant Program 2023 Study Section
2023	External Reviewer	Swiss National Science Foundation (SNSF) BRIDGE Discovery
2023	Member	NCI Informatics Technologies for Cancer Research (R21 and U01) Special Emphasis Panel Study Section

#### Scientific Meeting Abstract / Proposal Review:

2019	Reviewer	Pathology Informatics Summit Abstracts
2020	Reviewer	Pathology Informatics Summit Abstracts
2021	Reviewer	SIIM 2022 Annual Meeting Session Proposals
2021	Reviewer	SIIM 2022 Annual Meeting Abstracts
2022	Reviewer	ASCP 2022 Annual Meeting Abstracts
2022	Reviewer	SIIM 2023 Annual Meeting Session Proposals
2022	Reviewer	SIIM 2023 Annual Meeting Abstracts
2023	Reviewer	ASCP 2023 Annual Meeting Abstracts
2023	Reviewer	SIIM 2024 Annual Meeting Session Proposals

#### XI. INVITED EXTRAMURAL LECTURES, PRESENTATIONS AND VISITING PROFESSORSHIPS

##### Local:

1. "From Pushing Glass to Pushing Bits," presented at Grand Rounds, Department of Pathology, Johns Hopkins School of Medicine, Baltimore, MD, 11/23/2015.
2. "Artificial Intelligence in Histopathology," presented at Grand Rounds, Department of Pathology, University of Colorado, Aurora, CO, 3/4/2022.
3. "Pathology Informatics," presented at the Department of Biomedical Informatics Retreat, University of Colorado, Aurora, CO, 8/30/2022.

##### Regional:



1. "Cultured Cells Respond to Substrate-Attached Synaptic Differentiation Cues," presented at the Midwest Developmental Biology Meeting in Urbana, IL, 2000.

**National:**

1. "Pancreatic cancer precursors: early detection," presented at Grand Rounds, Department of Pathology, Medical College of Wisconsin, Milwaukee, WI, 8/27/2010.
2. "Summarize the Basic Concepts in Digital Pathology and Image Analysis," 12th Annual Current Topics in Gastrointestinal and Liver Pathology, Johns Hopkins School of Medicine, Baltimore, MD, 11/10/2012.
3. "Test Utilization in GI and Liver Pathology," 12th Annual Current Topics in Gastrointestinal and Liver Pathology, Johns Hopkins School of Medicine, Baltimore, MD, 11/10/2012.
4. "A Practical Introduction to Digital Pathology," 13th Annual Current Topics in Gastrointestinal and Liver Pathology, Johns Hopkins School of Medicine, Baltimore, MD, 10/26/2013.
5. "Test Utilization in GI and Liver Pathology," 13th Annual Current Topics in Gastrointestinal and Liver Pathology, Johns Hopkins School of Medicine, Baltimore, MD, 10/26/2013.
6. "The Promise and Challenges of mPathology," presented at The Emerging Clinical & Laboratory Diagnostics Conference, American Association for Clinical Chemistry, San Jose, CA, 4/24/2014.
7. "Panel Discussion HER2 Testing: Multi-institutional Perspectives," 14th Annual Current Topics in Gastrointestinal and Liver Pathology, Johns Hopkins School of Medicine, Baltimore, MD, 10/11/2014.
8. "Practical Pediatric Gastrointestinal Pathology," 14th Annual Current Topics in Gastrointestinal and Liver Pathology, Johns Hopkins School of Medicine, Baltimore, MD, 10/12/2014.
9. "CAP Digital Pathology Committee Update," presented at Pathology Visions 2014, Digital Pathology Association, San Francisco, CA, 10/20/2014.
10. "Is In-Sourcing for me? -- Selection and Implementation of a Digital Pathology Consultation Platform," presented at Pathology Visions 2014, Digital Pathology Association, San Francisco, CA, 10/21/2014.
11. "Approaches to and Perspectives on Digital Insourcing of Pathology Consultation and Second Opinion," presented at Digital Pathology Congress USA, San Diego, California, 6/23/2015.
12. "From Pushing Glass to Pushing Bits," presented to Department of Pathology, University of Colorado School of Medicine, Aurora, Colorado, 7/9/2015.
13. "Practical Pediatric Gastrointestinal Pathology," 15th Annual Current Topics in Gastrointestinal and Liver Pathology, Johns Hopkins School of Medicine, Baltimore, MD, 10/17/2015.

14. "8003. In-Sourcing Digital Consults: Is it For Me?" American Society for Clinical Pathology (ASCP) Annual Meeting, Long Beach, CA, 10/28/2015.
15. "8005. A Primer on Regulatory and Legal Aspects of Whole Slide Imaging and Telepathology," American Society for Clinical Pathology (ASCP) Annual Meeting, Long Beach, CA, 10/29/2015.
16. "Selection and Implementation of a Digital Pathology System," Key Topics in Pathology Informatics Workshop, Pathology Informatics Summit 2016, Pittsburgh, PA, 5/23/2016.
17. "API4-16. Use of Digital Pathology for Establishing a Consultation Practice," American Society for Clinical Pathology (ASCP) Annual Meeting, Las Vegas, NV, 9/14/2016.
18. "The Current and Future State of Digital Pathology," American Association of Pathologists' Assistants Spring Meeting, Denver, CO, 3/22/2017.
19. "API8-17. Beyond the FDA: Regulations, Requirements, and Reimbursement in Digital Pathology," American Society for Clinical Pathology (ASCP) Annual Meeting, Chicago, IL 9/7/2017.
20. "Computational Pathology," part of "The Role of Artificial Intelligence in Digital Pathology" webinar presented by *The Pathologist*, broadcast to North America, 12/20/2017.
21. "Computational Pathology," Pathology Informatics Bootcamp, Pathology Informatics Summit 2018, Pittsburgh, PA, 5/21/2018.
22. "Revisiting the 'Gold Standard' in the Era of Computational Pathology," presented to the Division of Anatomic Pathology, Department of Laboratory Medicine and Pathology, Mayo Clinic, Rochester, Minnesota, 6/15/2018.
23. "Integrating Our Digital Future," presented to PDAS track, Association of Pathology Chairs Annual Meeting, San Diego, CA, 7/18/2018.
24. "Revisiting the 'Gold Standard' in the Era of Computational Pathology," presented to the Department of Pathology, University of Michigan, Ann Arbor, Michigan, 10/24/2018.
25. "Artificial Intelligence and the Practice of Pathology," presented to the Department of Pathology, University of Utah, Salt Lake City, Utah, 3/4/2019.
26. "From Pushing Glass to Pushing Bits: Building a Truly Digital Pathology Workflow," Association for Pathology Informatics Companion Society Meeting, USCAP Annual Meeting, National Harbor, MD, 3/14/2019.
27. "Buy, Build or Borrow? Filling functional gaps in your LIS," Foundational Topics in Pathology and Clinical Laboratory Informatics, Pathology Informatics Summit 2019, Pittsburgh, PA, 5/6/2019.
28. "KiNet: Single-stage Nuclear Recognition and Classification for Measuring Ki-67 Proliferation Index (PI) in Pancreatic Neuroendocrine Tumors," Histopathology Image Analysis (HIMA) Imaging Science, Pathology Informatics Summit 2019, Pittsburgh, PA, 5/6/2019.

29. "The Application of Artificial Intelligence to the Practice of Pathology," Frontiers in Pathology Imaging Informatics Session, Society for Imaging Informatics in Medicine (SIIM) Annual Meeting 2019, Aurora, CO, 6/28/2019.
30. "An Introduction to Artificial Intelligence in the Practice of Pathology," New Frontiers in Cytopathology Lecture, American Society of Cytopathology (ASC) Annual Meeting 2019, Salt Lake City, UT, 11/15/2019.
31. "Short Course 51: Adopting Digital and Computational Pathology in Clinical Practice: A Practical, Technical, Regulatory and Legal Primer," USCAP Annual Meeting 2020, Los Angeles, CA, 3/2/2020.
32. "Multimedia Interactive Reporting in Pathology" in "Enterprise Imaging – Multimedia Interactive Reporting in Imaging Centric Specialties," Course ID: 1010, Society for Imaging Informatics in Medicine (SIIM) Annual Meeting 2020, Virtual Meeting, 6/24/2020.
33. "Artificial Intelligence in Pathology Practice" in "Artificial Intelligence and Machine Learning in Pathology," Association for Pathology Informatics Virtual Classroom Series 2020, 12/9/2020.
34. "Short Course 51: Adopting Digital and Computational Pathology in Clinical Practice: A Practical, Technical, Regulatory and Legal Primer," USCAP Virtual Annual Meeting 2021, 3/14/2021.
35. "Brief Introduction to AI with Definitions," Association for Pathology Informatics Companion Society Meeting, USCAP Virtual Annual Meeting 2021, 3/16/2021.
36. "Application of Pathology Informatics in Cancer Centers," presented at Moffitt Cancer Center, Tampa, Florida, 4/8/2021.
37. "Short Course 51: Adopting Digital and Computational Pathology in Clinical Practice: A Practical, Technical, Regulatory and Legal Primer," USCAP Annual Meeting 2022, 3/23/2022.
38. "Security Panel Discussion," Pathology Informatics Summit 2022, Pittsburgh, PA, 5/12/2022.
39. "Quantitative Analysis of Ki67, a Prognostic Biomarker in Gastroenteropancreatic Neuroendocrine Tumors," Image Guided Cancer Therapy (IGCT) Seminar Series (Virtual), MD Anderson Cancer Center, Houston, Texas, 5/19/2022.
40. "Digital Pathology: Current State, Next Steps, Future Visions," Session ID: 1021S, Society for Imaging Informatics in Medicine (SIIM) Annual Meeting 2022, Kissimmee, FL, 6/9/2022.
41. "Impact of Digital Pathology and Artificial Intelligence on Routine Pathology Practice: To be or Not to be," Session ID: 2029V, Society for Imaging Informatics in Medicine (SIIM) Annual Meeting 2022, Kissimmee, FL, 6/10/2022.
42. "Bridging Histology and Molecular Pathology with Computational Pathology: An Introduction," Association for Molecular Pathology (AMP) Companion Society Meeting, USCAP Annual Meeting 2023, New Orleans, Louisiana, 3/12/2023.

43. "Digital and Computational Pathology in Routine Diagnosis: The Nuts and Bolts of Adoption" in 2023 Long Course: "Next Generation Pathology: Technological Advances in Anatomical Pathology," USCAP Annual Meeting 2023, 3/23/2023.
44. "Telepathology: Then and Now," presented to the Department of Pathology, Medical College of Wisconsin, Milwaukee, WI, 6/22/2023.

### **International:**

1. "Pancreatic Cancer? There's an App for that," presented at 20<sup>th</sup> Congress of Chinese Society of Pathology and 4<sup>th</sup> Annual Meeting of Chinese Pathologists, Chongqing, Sichuan Province, China, 11/15/2014.
2. "Overcoming Barriers in Adoption of Digital Pathology," panel discussion, presented at Digital Pathology Congress, London, England, 12/4/2014.
3. "Global Insourcing of Pathology Consultation and Second Opinion Using Digital Pathology," presented at Digital Pathology Congress, London, England, 12/5/2014.
4. "Global Insourcing of Pathology Consultation and Second Opinion Using Digital Pathology," presented at Royal College of Pathologists Digital Pathology Symposium, Bradford, West Yorkshire, UK, 9/24/2015.
5. "The Future of Digital Pathology in Asia," panel discussion, presented at Digital Pathology Congress Asia, Kuala Lumpur, Malaysia, 8/22/2016.
6. "WSI Telepathology for International Expert Consultation and Second Opinion," presented at Digital Pathology Congress Asia, Kuala Lumpur, Malaysia, 8/23/2016.
7. "Computational Pathology," part of "The Role of Artificial Intelligence in Digital Pathology" webinar presented by *The Pathologist*, broadcast to Europe, 12/19/2017.
8. "Integrating Our Digital Future," presented at Digital Pathology Congress Asia, Tokyo, Japan, 5/9/2018.
9. "Legal and Regulatory Aspects of Telepathology," presented at International Symposium of Innovation in Transplantation: The Digital Era, Verona, Italy, 6/8/2018.
10. "The Current State of Digital Pathology in Clinical Practice," Artificial Intelligence and Digital Pathology Pre-Course, presented at the 11<sup>th</sup> Asia Pacific International Association of Pathology (APIAP) Congress Hefei, China, 10/11/2019.
11. "Buy, Build or Borrow? Filling Functional Gaps in your LIS," XV Health Informatics Conference: JIS Go Live 2020, Virtual Meeting, Buenos Aires, Argentina, 11/2/2020.

### **Industry:**

1. "Integrating Our Digital Future," presented to Leica Biosystems (Aperio) Associates, Vista, CA, 7/16/2018.

2. "Crossing the Chasm? Adoption of Digital Pathology and Artificial Intelligence in Mainstream Pathology Practice," presented at Pathology Grand Rounds (Virtual Session), AstraZeneca, Gaithersburg, MD, 11/20/2020.

## XII. TEACHING RECORD

### Undergraduate:

1994 - 1995 Teaching Assistant, "Chemistry Laboratory" (CHEM 110), Bradley University

### Graduate / Medical School:

1995 - 1996 Teaching Assistant, "Biochemistry Laboratory" (BCHM 355), University of Illinois Urbana-Champaign School of Chemical Sciences.

1997 - 1998 Teaching Assistant, "Experimental Techniques in Biochemistry" (BCHM 452), University of Illinois Urbana-Champaign School of Chemical Sciences.

2005 - 2010 Small Group Instructor, 2<sup>nd</sup> Year Medical Student Pathology Course, Johns Hopkins School of Medicine

2009 - 2016 Lecturer, "Pathology Informatics," Pathology Residency Didactic Lecture Series, Johns Hopkins School of Medicine

2010 - 2016 Pathology Demonstration Instructor in Gross Anatomy (1<sup>st</sup> year medical students), Johns Hopkins School of Medicine

2010 - 2016 Small Group Instructor in Pathology, Genes to Society Curriculum (2<sup>nd</sup> year medical students), Johns Hopkins School of Medicine

2010 - 2016 Lecturer, "Small Intestine," Genes to Society Curriculum (2<sup>nd</sup> year medical students), Johns Hopkins School of Medicine

2011 - 2012 Lecturer, "Digital microscopy and quantitative microscopy for research applications and publication," ME:680.712 Phenotyping for Functional Genetics, Johns Hopkins School of Medicine

2012 - 2016 Small Group Instructor in Histopathobiology, Scientific Foundations of Medicine, Genes to Society Curriculum (1<sup>st</sup> year medical students), Johns Hopkins School of Medicine

2013 Lecturer, "An introduction to digital whole slide imaging and whole slide image analysis," ME:680.712 Phenotyping for Functional Genetics, Johns Hopkins School of Medicine

2014 Visiting Lecturer, "Pancreatic Tumors: An Algorithmic Approach to Diagnosis," Zhejiang University School of Medicine, Hangzhou, Zhejiang Province, China. 11/17/2014.

2014 Visiting Lecturer, "Pancreatic Cancer Precursors and Early Detection of Pancreatic Cancer," Zhejiang University School of Medicine, Hangzhou, Zhejiang Province, China. 11/18/2014.

2014 Visiting Lecturer, "From Pushing Glass to Pushing Bits: An Introduction to Digital Pathology and Image Analysis for Clinical and Research Applications," Zhejiang University School of Medicine, Hangzhou, Zhejiang Province, China. 11/18/2014.

2015 Lecturer, "An introduction to digital whole slide imaging and whole slide image analysis," ME:680.712 Phenotyping for Functional Genetics, Johns Hopkins School of Medicine. 7/31/2015.

2016 - 2021	Small Group Facilitator, "Cardiovascular Pulmonary Renal Block: Pathology," 1st Year Medical Curriculum, University of Colorado School of Medicine.
2016 - 2019	Small Group Facilitator, "Disease & Defense Block," 1st Year Medical Curriculum, University of Colorado School of Medicine.
2016 - 2021	Small Group Facilitator, "GI & Liver Block," Digestion, Endocrine and Metabolic Systems Block, IDPT 6002, 2nd Year Medical Curriculum, University of Colorado School of Medicine.
2017	Preceptor, Foundations of Medicine, University of Colorado School of Medicine.
2017	Preceptor, PATH 8600 Research Elective, University of Colorado School of Medicine.
2017 - 2019	Lecturer, "Diseases of the Lower GI Tract," Digestion, Endocrine and Metabolic Systems Block, IDPT 6002, 2nd Year Medical Curriculum, University of Colorado School of Medicine.
2018 - 2021	Lecturer, "Neoplasms of the Lower GI Tract," Digestion, Endocrine and Metabolic Systems Block, IDPT 6002, 2nd Year Medical Curriculum, University of Colorado School of Medicine.
2021 - present	Lecturer, "Pathology of GI Polyps & Carcinoma: Part 1, GI Polyps," Plains - Gastrointestinal Systems Course, IDPT 5018-A11P, Medical Sciences (Plains) level, 1st Year Medical Curriculum, University of Colorado School of Medicine.
2021 - present	Small Group Facilitator, Plains - Gastrointestinal Systems Course, IDPT 5018-A11P, Medical Sciences (Plains) level, 1st Year Medical Curriculum, University of Colorado School of Medicine.

**Resident:**

2010	Presenter, "Pancreatic Tumors," slide-based unknowns conference, Medical College of Wisconsin, Milwaukee, WI (8/26/2010)
2013 - 2016	Lecturer, "Pediatric GI Pathology," Pathology Residency Didactic Lecture Series, Johns Hopkins School of Medicine
2018 - 2020	Lecturer, "Introduction to Pathology Informatics," Pathology Residency Didactic Lecture Series, CU School of Medicine
2021 - present	Lecturer, "Introduction to Laboratory Information Systems," Pathology Residency Immersion Block, CU School of Medicine
2021 - present	Lecturer, "Overview of Pathology Informatics," Pathology Residency Didactic Lecture Series, CU School of Medicine (12/13/2021)

**Fellow:**

2019	Lecturer, "LIS Implementation/Selection," Lab Management Lecture Series, Pediatric Pathology Fellowship, Children's Hospital Colorado, Aurora, CO (9/18/2019)
2021	Lecturer, "LIS Selection and Implementation," Lab Management Lecture Series, Pediatric Pathology Fellowship, Children's Hospital Colorado, Aurora, CO (1/20/2021)
2021	Lecturer, "LIS Selection and Implementation," Lab Management Lecture Series, Pediatric Pathology Fellowship, Children's Hospital Colorado, Aurora, CO (10/29/2021)

**Clinical instruction:**

2010 - 2016	Instruction of pathology residents and fellows rotating on the Gastrointestinal Pathology service, Johns Hopkins School of Medicine
2011 - 2016	Instruction of pathology residents on the Autopsy Pathology service, Johns Hopkins School of Medicine
2012 - 2016	Instruction of pathology residents on the Pathology Informatics elective, Johns Hopkins School of Medicine
2016 - present	Instruction of pathology residents and fellows rotating on the Gastrointestinal Pathology service, University of Colorado School of Medicine
2016 - 2017	Course director and instructor, Pathology Informatics Elective, University of Colorado School of Medicine
2018 - present	Course director and instructor, Pathology Informatics Rotation, University of Colorado School of Medicine

**Workshops/Seminars:**

2011	Lecturer, "Digital microscopy and quantitative microscopy for research applications and publication," 2011 Mouse Pathobiology and Phenotyping Short Course, (concurrent with ME:680.712), Johns Hopkins School of Medicine, Baltimore, MD (7/29/2011)
2012	Lecturer, "Digital microscopy and quantitative microscopy for research applications and publication," 2012 Mouse Pathobiology and Phenotyping Short Course, (concurrent with ME:680.712), Johns Hopkins School of Medicine, Baltimore, MD (8/3/2012)
2013	Lecturer, "An introduction to digital whole slide imaging and whole slide image analysis," 2013 Mouse Pathobiology and Phenotyping Short Course, (concurrent with ME:680.712), Johns Hopkins School of Medicine, Baltimore, MD (7/19/2013)
2015	Lecturer, "An introduction to digital whole slide imaging and whole slide image analysis," ME:680.712 Phenotyping for Functional Genetics, Johns Hopkins School of Medicine (7/31/2015)
2017	"RT2017THUR Beyond the FDA: Discussing Digital Pathology with Primary Dx," American Society for Clinical Pathology (ASCP) Annual Meeting, Chicago, IL (9/7/2017).
2018	"The Role of the LIS in Digital Pathology: Driver, Passenger or Bystander?" Pathology Visions (Digital Pathology Association Annual Meeting), San Diego, CA (11/5/2018).
2018	"Artificial Intelligence and the Practice of Pathology" Association for Pathology Informatics (API) Digital Pathology and AI Workshop 2.0, Columbus, OH (12/8/2018).
2019	"Artificial Intelligence and Digital Pathology: What Pathologists Need to Know" Association for Pathology Informatics (API) Digital Pathology and AI Workshop 3.0, Pittsburg, PA (12/14/2019).
2020	"How Enterprise Imaging is Leveraged for Patient Care from a Distance," Panelist, HIMSS-SIIM Enterprise Imaging Community Roundtable, Webinar (4/15/2020).
2020	"Brief Introduction to AI with Definitions," Association for Pathology Informatics (API) Digital Pathology and AI Workshop 4.0, Virtual Meeting, New York, NY (10/22/2020).

2023 “Applications of Artificial Intelligence in Histopathology-based Prognosis,” MW011: Pathology for Cancer Researchers Methods Workshop, American Association for Cancer Research (AACR) Annual Meeting 2023, Orlando, FL (4/15/2023).

### Session / Conference Chair:

2018 Moderator, Informatics Platform Session, USCAP Annual Meeting 2018, Vancouver, BC (3/20/2018)

2018 Moderator / Co-chair, Pathology Informatics Boot Camp, Pathology Informatics Summit 2018, Pittsburgh, PA (5/21/2018)

2018 Moderator, Short Abstract Presentations, Pathology Informatics Summit 2018, Pittsburgh, PA (5/22/2018)

2019 Moderator / Co-chair, Pathology Informatics Boot Camp, Pathology Informatics Summit 2019, Pittsburgh, PA (5/6/2019)

2019 Moderator, Short Abstract Presentations, Pathology Informatics Summit 2018, Pittsburgh, PA (5/8/2019)

2019 Co-chair, Frontiers in Pathology Imaging Informatics Session, Society for Imaging Informatics in Medicine (SIIM) Annual Meeting 2019, Aurora, CO (5/28/2019)

2022 Chair / Moderator, Digital Pathology: Current State, Next Steps, Future Visions, Session 1021S, Society for Imaging Informatics in Medicine (SIIM) Annual Meeting 2022, Kissimmee, FL, 6/9/2021.

2022 Moderator, Association for Pathology Informatics (API) Digital Pathology and AI Workshop 6.0, Virtual Meeting, Philadelphia, PA (11/3/2022).

### III. GRANT SUPPORT

#### Current Support:

Grant Source: NCI (1R21CA274487-01A1)  
Title: Geles: A Novel Imaging Informatics System for Generalizable Lesion Identification in Neuroendocrine Tumors  
Role on Project: Co-investigator (Xing, PI)  
Inclusive Dates: 7/1/2023 to 6/30/2025  
Total Direct Costs: \$414,218

#### Pending Support:

None.

#### Previous support:

Grant Source: NCI (1R21CA237493-01)  
Title: Development and Dissemination of KiNet: A Novel Imaging Informatics Tool for Gastrointestinal and Pancreatic Neuroendocrine Tumors  
Role on Project: Co-Principal investigator (Xing, co-PI)  
Effort: 0.6 calendar months  
Inclusive Dates: 4/2/2019 to 3/31/2022



Total Direct Costs: \$108,750

Grant Source: NCI  
Title: Cancer Center Support Grant  
Role on Project: Co-investigator (Nelson, PI)  
Effort: 0.6 calendar months  
Inclusive Dates: 5/1/2012 to 4/30/2017  
Total Direct Costs: \$4,100,428

Grant Source: Commonwealth Grand Fund  
Title: Tumor Microenvironment  
Role on Project: Co-investigator (Pardoll, PI)  
Effort: 2.4 calendar months  
Inclusive Dates: 2014 to 2015

Grant Source: AACR / Phillip A. Sharp Award  
Title: The Intersection of Epigenetic and Immune Checkpoint Therapy  
Role on Project: Co-investigator (Baylin, PI)  
Effort: 0.24 calendar months  
Inclusive Dates: 7/1/2014 to 6/30/2015  
Total Direct Costs: \$227,275

Grant Source: NCI  
Title: SPORE in Prostate Cancer  
Role on Project: Co-investigator (Nelson, PI)  
Effort: 0.6 calendar months  
Inclusive Dates: 9/1/2014 to 8/31/2019  
Total Direct Costs: \$1,564,392

Grant Source: DOD  
Title: SPORE in Prostate Cancer  
Role on Project: Co-investigator (Sfanos, PI)  
Effort: 0.6 calendar months  
Inclusive Dates: 9/30/2014 to 9/29/2017  
Total Direct Costs: \$230,833

Grant Source: Prostate Cancer Foundation  
Title: Evaluation of PSMA based PET as functional imaging biomarkers  
Role on Project: Collaborator (Cho, PI)  
Effort: 0.36 calendar months  
Inclusive Dates: 2011 to 2013  
Total Direct Costs: \$300,000

Grant Source: Amy and Jane Goldman (gift)  
Title: Quantitative Study of PanIN volume: implications for the early detection of pancreatic cancer  
Role on Project: Principal Investigator  
Effort: 1.2 calendar months  
Inclusive Dates: 12/2009 to 12/2010  
Total Direct Costs: \$75,000

Grant Source: Sol Goldman Pancreatic Cancer Research Center

<u>Title:</u>	Quantitative Study of PanIN volume: implications for the early detection of pancreatic cancer
<u>Role on Project:</u>	Principal Investigator
<u>Effort:</u>	1.2 calendar months
<u>Inclusive Dates:</u>	12/2009 to 12/2010
<u>Total Direct Costs:</u>	\$50,000
<u>Grant Source:</u>	NIH (5 T32 CA067751-12)
<u>Title:</u>	Ruth L. Kirschenstein National Research
<u>Role on Project:</u>	Trainee
<u>Effort:</u>	9.0 calendar months
<u>Inclusive Dates:</u>	7/2009 to 6/2010
<u>Total Direct Costs:</u>	\$46,992

#### XIV. BIBLIOGRAPHY

##### Google Scholar (actively maintained):

<https://scholar.google.com/citations?user=9uuZu6YAAAAJ&hl=en>

##### NCBI My Bibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/toby.cornish.1/bibliography/public/>

##### Peer-Reviewed Scientific Papers:

1. Braun KM, **Cornish T**, Valm A, Cundiff J, Pauly JL, and Fan S. Immunotoxicology of cigarette smoke condensates: Effects on interferon g-inducible macrophage functional capacities. *Toxicol Appl Pharmacol*. 1998; 149:136-143. doi: [10.1006/taap.1997.8346](https://doi.org/10.1006/taap.1997.8346). PMID: [9571981](https://pubmed.ncbi.nlm.nih.gov/9571981/).
2. **Cornish T**, Chi J, Johnson S, Lu Y, and Campanelli JT. Globular domains of agrin are functional units which collaborate to induce acetylcholine receptor clustering. *J Cell Sci*. 1999; 112:1213-1223. PMID: [10085256](https://pubmed.ncbi.nlm.nih.gov/10085256/).
3. **Cornish T**, Branch DW, Wheeler BC, and Campanelli JT. Microcontact printing: a versatile technique for the study of synaptogenic molecules. *Mol Cell Neurosci*. 2002; 20:140-153. doi: [10.1006/mcne.2002.1101](https://doi.org/10.1006/mcne.2002.1101). PMID: [12056845](https://pubmed.ncbi.nlm.nih.gov/12056845/).
4. Gurel B, Iwata T, Koh CM, Jenkins RB, Lan F, Van Dang C, Hicks JL, Morgan J, **Cornish TC**, Sutcliffe S, Isaacs WB, Luo J, and De Marzo AM. Nuclear MYC protein overexpression is an early alteration in human prostate carcinogenesis. *Mod Pathol*. 2008; 21(9):1156-67. doi: [10.1038/modpathol.2008.111](https://doi.org/10.1038/modpathol.2008.111). PMID: [18567993](https://pubmed.ncbi.nlm.nih.gov/18567993/); PMCID: [PMC3170853](https://pubmed.ncbi.nlm.nih.gov/PMC3170853/); NIHMS285485
5. Yegnasubramanian S, Haffner MC, Zhang Y, Gurel B, **Cornish TC**, Wu Z, Irizarry RA, Morgan J, Hicks J, DeWeese TL, Isaacs WB, Bova GS, De Marzo AM, and Nelson WG. DNA hypomethylation arises later in prostate cancer progression than CpG island hypermethylation and contributes to metastatic tumor heterogeneity. *Cancer Res*. 2008;

- 68(21):8954-67. doi: [10.1158/0008-5472.CAN-07-6088](https://doi.org/10.1158/0008-5472.CAN-07-6088). PMID: [18974140](https://pubmed.ncbi.nlm.nih.gov/18974140/); PMCID: [PMC2577392](https://pubmed.ncbi.nlm.nih.gov/PMC2577392/).
6. Halushka MK, Selvin E, Lu J, Macgregor AM, **Cornish TC**. Use of Human Vascular Tissue Microarrays for Measurement of Advanced Glycation End Products. *J Histochem Cytochem*. 2009; 57(6):559-66. doi: [10.1369/jhc.2009.953273](https://doi.org/10.1369/jhc.2009.953273). PMID: [19223295](https://pubmed.ncbi.nlm.nih.gov/19223295/); PMCID: [PMC2690436](https://pubmed.ncbi.nlm.nih.gov/PMC2690436/).
  7. **Cornish TC**, Bagnasco SM, Macgregor AM, Lu J, Selvin E, and Halushka MK. Glomerular protein levels of matrix metalloproteinase-1 and tissue inhibitor of metalloproteinase-1 are lower in diabetic subjects. *J Histochem Cytochem*. 2009; 57(11):995-1001. doi: [10.1369/jhc.2009.954107](https://doi.org/10.1369/jhc.2009.954107). PMID: [19506087](https://pubmed.ncbi.nlm.nih.gov/19506087/); PMCID: [PMC2762888](https://pubmed.ncbi.nlm.nih.gov/PMC2762888/).
  8. **Cornish TC** and Halushka MK. Color Deconvolution for the Analysis of Tissue Microarrays. *Anal Quant Cytol and Histol*. 2009; 31:304-312. PMID: [20701098](https://pubmed.ncbi.nlm.nih.gov/20701098/).
  9. Halushka MK, **Cornish TC**, Lu J, Selvin S, and Selvin E. Creation, Validation, and Quantitative Analysis of Protein Expression in Vascular Tissue Microarrays. *Cardiovasc Pathol*. 2010; 19(3):136-46. doi: [10.1016/j.carpath.2008.12.007](https://doi.org/10.1016/j.carpath.2008.12.007). Epub 2009 Feb 11. PMID: [19211265](https://pubmed.ncbi.nlm.nih.gov/19211265/); PMCID: [PMC2866781](https://pubmed.ncbi.nlm.nih.gov/PMC2866781/).
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  11. Selvin E, Najjar SS, **Cornish TC**, and Halushka MK. A comprehensive histopathological evaluation of vascular medial fibrosis: Insights into the pathophysiology of arterial stiffening. *Atherosclerosis*. 2010; 208(1):69-74. doi: [10.1016/j.atherosclerosis.2009.06.025](https://doi.org/10.1016/j.atherosclerosis.2009.06.025). Epub 2009 Jun 26. PMID: [19632677](https://pubmed.ncbi.nlm.nih.gov/19632677/); PMCID: [PMC2813392](https://pubmed.ncbi.nlm.nih.gov/PMC2813392/).
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