



PATHFOCUS

Department of Pathology, Molecular & Cell-Based Medicine



DEPARTMENT OF
PATHOLOGY 2022
NEWSLETTER

FEATURES

Awards and Honors

Spotlight On: Molecular
Microbiology Laboratory

Grants

Publications

HIGHLIGHTING IMPORTANT RESEARCH

COVID-19 Publications



A Robust, Highly Multiplexed Mass Spectrometry Assay to Identify SARS-CoV-2 Variants

Matthew M. Hernandez¹, Radhika Banu², Paras Shrestha³, Ana S. Gonzalez-Reiche⁴, Adriana van de Gucht⁵, Keith Farrugia⁶, Robert Sebra^{7,8,9,10}, Mount Sinai PSP Study Group^{11,12,13}, Melissa R. Gitman¹⁴, Michael D. Nowak¹⁵, Carlos Cordon-Cardo¹⁶, Viviana Simon^{17,18}, Harm van Bake¹⁹, Emilia Mia Sordillo²⁰, Nicolas Lons²¹, Angie Ramirez²², Sergio Andres Castañeda²³, Luz Helena Patiño²⁴, Nathalia Ballesteros²⁵, Marina Muñoz²⁶, Juan David Ramirez^{27,28}, Alberto E. Paniz-Mondolli²⁹

Received: 4 February 2022 | Accepted: 2 March 2022
DOI: 10.1002/path.23195

COMMENTARY

Hotspots for SARS-CoV-2 Omicron variant spread: Lessons from New York City

Juan D. Ramirez¹ | Sergio Castañeda² | Nathalia Ballesteros³ | Marina Muñoz⁴ | Matthew Hernandez⁵ | Radhika Banu⁶ | Paras Shrestha⁷ | Feng Chen⁸ | Huanzhi Shi⁹ | PSP Study Group | Harm van Bake¹⁰ | Viviana Simon^{11,12} | Carlos Cordon-Cardo¹³ | Emilia M. Sordillo¹⁴ | Alberto E. Paniz-Mondolli¹⁵

RESEARCH ARTICLE
September/October 2022 Volume 10 Issue 5 401736-22
<https://doi.org/10.1111/mis.12756>



Received: 10 April 2022 | Revised: 6 May 2022 | Accepted: 7 May 2022
DOI: 10.1002/miv.2760

RESEARCH ARTICLE

RT-PCR/MALDI-TOF mass spectrometry-based detection of SARS-CoV-2 in saliva specimens

Matthew M. Hernandez¹ | Radhika Banu² | Paras Shrestha³ | Armi Patel⁴ | Feng Chen⁵ | Lijong Cao⁶ | Shellee Fabre⁷ | Jessica Yao^{8,9} | Heidi Lopez¹⁰ | Namthip Chiu¹¹ | Biana Shifrin¹² | Inessa Zapolskaya¹³ | Vanessa Flores¹⁴ | Pui Yiu Lee¹⁵ | Sergio Castañeda¹⁶ | Juan David Ramirez^{17,18} | Jeffrey Jhang¹⁹ | Giuliana Osorio²⁰ | Melissa R. Gitman²¹ | Michael D. Nowak^{22,23} | David L. Reich²⁴ | Carlos Cordon-Cardo²⁵ | Emilia Mia Sordillo²⁶ | Alberto E. Paniz-Mondolli²⁷





MESSAGE FROM THE CHAIR

Pathology is a bridging discipline involving basic and clinical biomedical sciences. This context includes both descriptive and mechanistic approaches, with the goals of understanding the anatomical changes and underlying molecular events involved in disease-related processes. The main objectives of pathology are to define disease causation, and categorize disease states to render clinical diagnostic services. During the past three decades, we have witnessed the transition from descriptive analysis of tissue histology and analytes variables that categorized patients and broad disease stages, to more objective and quantitative multidimensional studies aimed at defining individual patient signatures. Traditional population and cohort-based classifications are turning into patient-specific profiles that optimize treatment efficacy and outcome: from diagnostic and prognostic approaches that group patients into disease categories to the development of a more precise, predictive, and individualized patient assessment. Such an integrated care model drives selection of evidence-based treatment protocols to optimize clinical outcome, engendering a cost-effective and personalized healthcare.

Disease classification and assistance in selection of therapy is the focus of this “patient-centric” pathology approach, the pathologist at the center of disease management, expanding into monitoring of therapy, and assisting in handling high-risk patients through early diagnosis of their disease condition. The ultimate goals are to move from treating symptomatology to treating disease causation, once origin of the disease is better understood; and the switching from a fee-for-service to population-based accountable capitation healthcare management.

The journey we initiated some ten years ago has taken Mount Sinai Medical Center to become The Mount Sinai Health System, upon completion of the merging with Continuum Health Partners, becoming New York City’s largest academic medical provider, encompassing 8 hospitals, 2 affiliated public hospitals, and over 400 ambulatory practices throughout the five boroughs of NYC, Westchester, and Long Island. The Lillian and Henry M. Stratton-Hans Popper Department of Pathology, Molecular and Cell-Based Medicine of the Icahn School of Medicine at Mount Sinai is one of the country’s largest providers of pathology services, with over 80 million clinical laboratory tests; 387,413 surgical pathology and 31,196 cytology evaluations; assisted in 435 transplant cases, and performed 396 autopsies in 2022. Of note, 118 of the 396 autopsies performed during 2022 related to patients affected by COVID-19 and/or the new post-acute COVID syndrome (PACS). To accommodate this service volume and fulfill its academic mission, our Department of Pathology employs over 80 full-time faculty, 400 managerial and clerical posts, and over 900 laboratory technicians.

Some years ago, the Mount Sinai Boards of Trustees approved the renaming of our department to better reflect implementation of new technologies and advances in data analytics, as detailed above, to become The Lillian and Henry M. Stratton-Hans Popper Department of Pathology, Molecular and Cell-Based Medicine. Expansion and reorganization of our department during the past years has engendered an original model of academic pathology, incorporating new divisions and services that in turn develop and validate innovative assays and AI-based algorithms. It all started with the founding of the Division of Molecular Pathology and recruitment of Jane Houldsworth, PhD, as its leader and Vice-Chair. This has been followed by other decisive initiatives, including a unique Division of Artificial Intelligence in Pathology, under the leadership of Thomas Fuchs, PhD; and the Division of Transplant Pathology and Cell-Based Medicine, directed by Philip Ruiz, MD, PhD. Briefly, this new division is developing a service vertically integrated into clinical transplantation; creating a national platform for donor organ/tissue procurement support, histocompatibility, and centralization of established and experimental cell-based therapies for efficient distribution of provisions. A significant new Division is that of Wellness, Diversity and Equity, under the capable guidance of Maria Isabel Fiel, MD. Our Department continues to create bridges between basic and translational biomedical disciplines linked to clinical services, such as the new Division of Clinical Research and Trial Design under Alexi Polydorides, MD, PhD. Recruitment of Barbara Sampson, MD, PhD, to lead the restructuring of the Division of Education and Strategic Initiatives, among implementation of other academic activities and clinical initiatives. Last but not least is the invigorating momentum brought by Judy Cho, MD, as the Vice Chair of the Division of Experimental Pathology and the success of our faculty in securing additional funding, growing our portfolio since 2020 to present by +42%. Includes both innovative NIH Grants and Contracts; such as those assigned to Drs. John Crary, Jose Silva, Nadia Tsankova, and Carlos Cordon-Cardo. Our shared vision continues to be that of providing each patient a better chance of cure by defining their disease and optimizing treatment, while offering a superior quality of life, and preserving their moral and personal integrity.

In the following pages and into future publications, we will continue to update all of you, and our community of pathology at large, of new developments, recruitment, clinical and academic achievements. We will also encourage you to actively participate, portraying for example a Division or a Program in each upcoming newsletter, as well as professional and personal accounts that will certainly enrich us all. I would like to thank each and all of you for your continued efforts and support; especially in this occasion to the Editorial Committee that made this timely and essential publication a reality. To all “laboratorians” of our healthcare system, without whom none of this could have been possible; as neither a hint of the fostering of the future would be founded.

SPOTLIGHT ON: MOLECULAR MICROBIOLOGY LABORATORY



Since it was first established in 2020 at the very start of the SARS-CoV-2 pandemic, the Molecular Microbiology Laboratory at Mount Sinai has shown extraordinary commitment in providing a comprehensive roster of tests, ranging from routine microbiology to the most advanced infectious diseases molecular testing. Mount Sinai is one of the largest healthcare systems in New York State, encompassing eight hospital campuses in the New York City metropolitan area as well as a broad regional ambulatory footprint.

Our state-of-the-art molecular diagnostic laboratory employed a number of qRT-PCR assays (considered the gold standard for the identification and diagnosis of SARS-CoV-2) to accurately detect the presence of the virus. In addition, our high throughput capacity for testing allowed to identify early on and throughout the pandemic asymptomatic COVID-19 patients with no reported exposure to SARS-CoV-2, thus helping to halt community transmission and hospital-acquired SARS-CoV-2, through prompt detection and isolation of patients.

Furthermore, our team developed a highly sensitive saliva based SARS-CoV-2 test, which was granted Emergency Use Authorization by the US Food and Drug Administration (FDA).

Implementation of this test allowed further expansion of the Mount Sinai saliva-based COVID-19 testing program which was instrumental in the reopening of NYC public schools, business and other leisure activities as featured in the New York Times (<https://www.nytimes.com/2021/05/25/health/coronavirus-mount-sinai-kipp-schools.html>). In addition, our laboratory was one among the first on the East Coast to develop and implement specific Monkeypox testing during the Monkeypox virus multi-country outbreak, which significantly affected New York in 2022. In the process, the testing played a major role in public health surveillance, outbreak investigation and infection prevention as well as control strategies for both of these emerging viruses.

Our state-of-the-art, CLIA-certified and CAP accredited laboratory, offers a comprehensive list of molecular microbiology services. Our innovative automated high-throughput processes coupled with the latest technical advances and custom-designed laboratories, include separate pathogen-dedicated handling (nucleic acid extraction), reagent preparation, and amplification/detection areas, thus minimizing the risk for cross-contamination and optimizing accurate diagnosis.

Through our wide-ranging repertoire of instrumentation and commercial diagnostic platforms, we currently provide diagnostic services ranging from routine molecular testing for bacteria, viruses, parasites, and fungi (directly from clinical samples), to next-generation sequencing microbiology diagnostics and metagenomics. Also, as part of our strategic partnership with the Serological Science Center of Excellence, we run operations for the Infectious Diseases Serology Unit, which, coupled with molecular diagnostics, offers a comprehensive approach by combining direct pathogen detection with assessment on the presence of pathogen-specific antibodies, thus providing an integrative view to the infectious disease landscape.

In addition, the Molecular Microbiology Laboratory through its Infectious Disease Pathology Unit conducts tissue-based broad-scope investigations into infectious disease etiology by combining routine histology, electron microscopy, immunofluorescence, immunohistochemistry, in-situ hybridization, and molecular testing following a case-based integrated diagnostic approach in order to assist anatomic pathologists in the diagnosis of complex and / or emerging infectious diseases.



The Molecular Microbiology Laboratory is directed by internationally recognized faculty members of the Department of Pathology, Molecular and Cell-Based Medicine: Alberto Paniz Mondolfi MD, PhD (Director), Juan David Ramirez PhD (Assistant Director), Radhika Banu (Administrative Director), and Emilia Mia Sordillo MD, PhD (System Director for Microbiology).

The vision of our Laboratory is truly unique in that it fully embraces the nature of translational research in infectious diseases, leveraging new developments for immediate clinical application while promoting faster approval of new molecular tools to regulatory agencies.

Our interdisciplinary portfolio, rich learning environment and research interests in the disciplines of molecular virology and pathogenesis, molecular genetic bacteriology, molecular mycology, molecular and cellular parasitology, molecular genetics, immunology, sequencing and computational biology, create a unique working atmosphere.

We leverage scientific collaborations, and have established a number of partnerships with other academic centers both at a national and global scale in order to enhance the multi-disciplinary research being performed as well as to increase our scientific and clinical service productivity.

Since 2020, our contributions are embodied in close to one hundred scientific publications in prestigious journals such as *Lancet Regional Health*, *Journal of Molecular Diagnostics*, *Genes Genomes and Genetics (G3)*, *Journal of Medical Virology*, *International Journal of Infectious Diseases*, *Microbiology Spectrum*, *Microbial Genomics*, *Clinical Microbiology and Infection*, *One Health and Travel Medicine Infectious Diseases*.

IN PHOTOS: 2022 Well-being and Lab events



Diwali Celebration / October



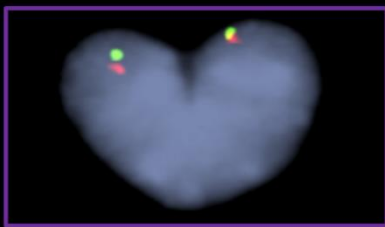
Lab (Fashion) Week / Summer



Fumiko Dekio, MD
Respecting each other, 2022
Embroidery



Swati Bhargwaj, MD
The Mighty and the Meek: Immune Attack, 2022
Water color on paper



Vesna Najfeld, PhD
The lab with a heart II, 2022
Digital art



Tyler Wong, (Dr. Q. Liu's 11yo son)
Macrophage is eating bacteria, 2022
Acrylic on canvas

Pathology Art Exhibit / April



Pumpkin carving with the residents / November

IN PHOTOS: 2022 Well-being and Lab events



Met Museum / July



Frick Museum / October



Resident Summer BBQ / July



Push-Up Challenge / September



Awards and Honors



Dr. Carlos Cordon-Cardo

- **2022 Jacobi Medallion Awardee** - The Jacobi Medallion is one of the highest honors that the Mount Sinai Health System bestows upon current or former colleagues. The recipients have made exceptional contributions to Icahn Mount Sinai, the Health System, The Mount Sinai Alumni Association, or the fields of medicine or biomedicine.
- **National Academy of Inventors, 2022 Fellow** The NAI Fellows Program was established to highlight academic inventors who have demonstrated a prolific spirit of innovation in creating or facilitating outstanding inventions that have made a tangible impact on quality of life, economic development and the welfare of society. Election to NAI Fellow status is the highest professional distinction accorded solely to academic inventors.
- **Premio Internacional Ramiro Carregal de Investigacion Oncologicas, Spain** - The award is given in recognition of key work in the area of oncology research which involve the creation, development and/or application of new biological and clinical knowledge of cancer.

Physician of the Year Interdisciplinary Team Award

- Dr. Suzanne Arinsburg
- Dr. Ian Baine
- Dr. Yoon. Choo
- Dr. Marilyn Nedumcheril



2022 Kaneko Recipients (Resident or Fellow / Faculty Mentor)

- **Drs. X. Wen / N. Harpaz and Q. Liu:** *Molecular and clinical characteristics of unconventional IBD-associated dysplasia*
- **Drs. Y. Wang / N. Harpaz and Q. Liu:** *Gene expression profiling of collagenous gastritis*
- **Drs. E. Pujadas / C. Cardon-Cardo, W. Westra:** *Mechanisms of HLA loss in HPV-related Head and Neck Squamous Cell Carcinomas*
- **Drs. Z. Zhao / N. Harpaz and S. Thung:** *Characterizing the Immunopathogenesis of Pancreatobiliary IgG4-related Disease Using Spatial Transcriptomics*
- **Drs. N. Albayrak / N. Harpaz and S. Ward:** *Clinicopathologic and Genetic Analysis of Colorectal Carcinomas with Neuroendocrine Differentiation*
- **Drs. J. Ding / T. Kalir:** *Behavior of Mixed-Component Endometrial Cancers Versus Their Pure Counterparts: Do They Differ and Does it Matter? A Comparative Clinico-Pathologic and Genomic Study.*

Dr. Mamoru Kaneko (1927-2005) was a surgical pathologist who completed his training and thereafter remained on faculty in the Mount Sinai Department of Pathology for his entire career. His skills as a surgical pathologist were without par. He was a teacher and a role model, and his legacy lives on in the dozens of pathologists that he had trained. In order to recognize excellence in clinical training and research in pathology, the Kaneko Award was posthumously started through the very kind donation of Dr. Kaneko and his wife, Mrs. Ranko Kaneko.

Dr. Swan N. Thung

**Lifetime Achievement Award, Hans Popper Hepatopathology Society
United States and Canadian Academy of Pathology Annual Meeting, March 2022**

The Lifetime Achievement Award given by the HPHS is in recognition of the contributions in the advancement of knowledge in liver pathology. This honor is even more impactful due to Dr. Thung having been one of Dr. Popper's prized mentees.



2022 Outstanding Teacher Awards, Department of Pathology

- **Dr. William Westra** - Most Outstanding Teacher in Anatomic Pathology
- **Dr. Ian Bane** - Most Outstanding Teacher in Clinical Pathology

Grants awarded in 2022

Faculty	Agency	Title
Kurt Farrell, PhD	NIH / KO1	Novel artificial intelligence-based approaches to understand the pathological and genetic drivers of primary tauopathies
Kristen Whitney, PhD	NIH / F32	The role of astrocytes in the pathogenesis of sporadic tauopathy”
Jamie Walker MD PhD and Timothy Richard, DO PhD	National Institute on Aging (NIA)	Digital spatial profiling of hippocampal subregions in Alzheimer’s disease, primary age-related tauopathy, and chronic traumatic encephalopathy.
	Texas Alzheimer’s Research and Care Consortium	Spatial proteomic analyses of neuropathologic changes in TARCC participants and correlation with plasma biomarkers.
	Texas Alzheimer’s Research and Care Consortium	Digital spatial profiling of hippocampal subregions in tauopathies
Camelia Iancu-Rubin, PhD	ISMMS	Distribution of Cellular Therapy Products for Research
Nadejda M. Tsankova, MD PhD	NIH	The Role of Myeloid Cells in Pediatric-high Grade Gliomas
	NIH	Tumor-associated Macrophages in Vasogenic Cerebral Edema in Brain Tumors
Yuxin Liu, MD, PhD	NCI/NIH	The effectiveness of screening women with lower genital tract neoplasia or cancers for anal cancer precursors (SWAN study)
Noam Harpaz, MD PhD	Foundation for the National Institutes of Health	Mucosal healing in ulcerative colitis
	Sanford J. Grossman Center for Integrative Studies in IBD	Probing the tissue composition and microarchitecture of small bowel strictures in Crohn’s disease
Qingqing Liu, MD	The Foundation for the National Institutes of Health	Mucosal healing for ulcerative colitis
Margaret Brandwein, MD	Mount Sinai Innovation Partners	3-D Representation of Intraoperative Margin Mapping – An Interactive Enhanced Communication Tool
Maria Isabel Fiel, MD	NIH/DDK	Investigating biomarkers of DILI susceptibility
John Crary, MD PhD	NIH/NINDS	Clinical & biological signatures of post-traumatic neurodegeneration: Leveraging the TBI Model Systems of Care to accelerate in vivo diagnosis of the late effects of TBI (LETBI)
	DOD	IEveraging Nationwide Research Infrastructure to EnriCH Brain Health after TBI: the ENRICH Brain Health study
	Parkinson’s Disease Foundation	Profiling and Elucidating Molecular Mechanism of Neurodegeneration in Parkinson’s Disease
	NIH/NINDS	Mechanisms of Age-related Tauopathy
	US Department of Veteran Affairs	CANPARK-TBI Brain Analysis
	Mac Parkman Foundation	White Matter Injury and Neuropsychiatric Symptoms in Young Contact Sport Athletes: Using Machine Learning to Characterize Neuropathology After Repetitive Head Impacts.
	Rainwater Charitable Foundation	Deep Learning Enabled Histological Mapping of the Integrated Stress Response in Tauopathy Using Pathway-based Polygenic Risk
Carlos Cordon-Cardo, MD PhD	NIGMS/NIH	Characterization of Molecular Mechanisms of Adult Mammary Stem Cell Expansion and Early Lineage Specification.

Active grants

Faculty	Agency	Title
Nadejda M. Tsankova, MD PhD	NIH	Chromatin Plasticity, Transcriptional Activity and Kinetics in Developing and Adult Human Astrocyte and Oligodendroglial Lineages
	NIH	Crosstalk between EGFR and TEAD Activity Directs Migration in Human Glioblastoma
	NIH	Resolving SARS-Cov-2 tropism and COVID19 pathology in the brain
	MSSM	Characterizing the functional and molecular phenotype in human neural progenitors and glioma stem cells
	NIH	Motor Dysfunction in cART-era HIV: Neural Circuitry and Pathogenesis
	NIH	Cell- and Circuit-Specific Exploration of HIV Neurogenomics in Context of Opiate and Cocaine Abuse
	NIH	Cellular mechanisms of antidepressant drug actions in neuropathic pain models
	NIH	Plexin-B2 Function in Glioma Invasion
	NIH	Tracing hypoxic state and hypoxia memory in glioblastoma progression
Maria Isabel Fiel, MD	NIOSH/CDC	Evidence of Toxicant-associated Fatty Liver Disease in WTC Responders
Carlos Cordon-Cardo, MD PhD	NIH/DHHS	A Chemical Genetic Approach to Exploring Novel Therapeutic Space for Colorectal Cancer
	NIH	The SARS-CoV-2 Autopsy Cohort Post Acute Sequelae of COVID (PASC) Study
	NCI	Serological Sciences Network Capacity Building Centers
John Crary, MD PhD	NINDS/NIA	CONNECT-TBI
	NIH / NINDS	Clinical & biological signatures of post-traumatic neurodegeneration: Toward in vivo diagnosis of the late effects of TBI
	NIA/NIH	Age-related Tauopathy in HIV-associated Neurocognitive Disorders
	Neuroacanthocytosis Advocacy USA, Inc	Neuropathology of Neuroacanthocytosis Syndromes
	NINDS/NIA	Mount Sinai ADRC Years 36-40 (Core D - Neuropathology Core)
	NIA/NIH	Mechanisms of Susceptibility of Excitatory Neurons to Tau Pathology and Neurodegeneration in Alzheimer's Disease
	NINDS/NIH	The Role of Myeloid Cells in Parkinson's Disease
	Rainwater Charitable Foundation	The Unfolded Protein Response in Progressive Supranuclear Palsy
	NIH	The SARS-CoV-2 Autopsy Cohort Post Acute Sequelae of COVID (PASC) Study
	(NIMH/NIH	Cell Type atlasing of whole human brains using HOLiS: An Optimized Pipeline For Staining, Clearing, Imaging and Analysis
	NIH	Traumatic Brain Injury and Repetitive Head Impacts: Contributions to AD/ADRD and CTE Neuropathology and Resulting Clinical Syndromes
	NIH	Clinical Pathological Study of Cognitive Impairment in Essential Tremor
	NIH	The Contribution of Age-related Tauopathies to Alzheimer's Disease

2022 Publications from the Department of Pathology

1. [Augmentation of humoral and cellular immune responses after third-dose SARS-CoV-2 vaccination and viral neutralization in myeloma patients.](#) Aleman A, Van Oekelen O, Upadhyaya B, Beach K, Kogan Zajdman A, Alshammery H, Serebryakova K, Agte S, Kappes K, Gleason CR, Srivastava K, Almo S, **Cordon-Cardo C**, Krammer F, Merad M, Jagannath S, Wajnberg A, Simon V, Parekh S. *Cancer Cell*; 40:441-3, 2022
2. [Association between incidental pelvic inflammation and aggressive prostate cancer.](#) Chakravarty D, Ratnani P, Huang L, Dovey Z, Sobotka S, Berryhill R, Merisaari H, Al Shaarani M, Rai R, Jambor I, Yadav KK, Mittan S, Parekh S, Kodysh J, Wagaskar V, Brody R, **Cordon-Cardo C**, Rykunov D, Reva B, Davicioni E, Wiklund P, Bhardwaj N, Nair SS, Tewari AK. *Cancers (Basel)*; 14(11), 2022
3. [Creating Surveillance Data Infrastructure Using Laboratory Analytics: Leveraging Visiun and Epic Systems to Support COVID-19 Pandemic Response.](#) Haghghi M, Adhimooolam D, Kwan R, Gitman M, McGuire M, Mendu DR, Firpo-Betancourt A, McBride RB, Cordon-Cardo C, Craven CK. *J Pathol Inform*; 13:2, 2022
4. [MicroRNA-21 deficiency suppresses prostate cancer progression through downregulation of the IRS1-SREBP-1 signaling pathway.](#) Kanagasabai T, Li G, Shen TH, Gladoun N, **Castillo-Martin M**, Celada SI, Xie Y, Brown LK, Mark ZA, Ochieng J, Ballard BR, **Cordon-Cardo C**, Adunyah SE, Jin R, Matusik RJ, Chen Z. *Cancer Lett*; 525:46-54, 2022
5. [Subtlety of granulomatous mycosis fungoides: a retrospective case series study and proposal of helpful multimodal diagnostic approach with literature review.](#) Lenskaya V, de Moll EH, Hussein S, Phelps RG. *Am J Dermatopathol*; 44(8):559-567, 2022
6. [Development of a LAG-3 immunohistochemistry assay for melanoma.](#) Johnson L, McCune B, Locke D, Hedvat C, Wojcik J, Schroyer C, Yan J, Johnson K, Sanders-Cliette A, Samala S, Dillon L, Anderson S, Shuster J. *J Clin Path*; (online) May 9, 2022
7. [Single-cell spatial analysis of tumor immune architecture in diffuse large B-cell lymphoma.](#) Colombo AR, Hav M, Singh M, Xu A, Gamboa A, Lemos T, Gerdtsen E, Chen D, **Houldsworth J**, Shaknovich R, Aoki T, Chong L, Takata K, Chavez EA, Steidl C, Hicks J, Kuhn P, Siddiqi I, Merchant A. *Blood Adv*; 6:4675-4690, 2022
8. [Characteristics associated with disparities among older adults in coronavirus disease 2019: outcomes in an academic health care system.](#) Gelfman LP, Moreno J, Frydman JL, Singer J, **Houldsworth J**, **Cordon-Cardo C**, Mehrotra M, Chai E, Aldridge M, Morrison RS. *MedCare*; 60(5):332-341, 2022
9. [Anti-invasive efficacy and survival benefit of the YAP-TEAD inhibitor verteporfin in preclinical glioblastoma models.](#) Barrette AM, Ronk H, Joshi T, Mussa Z, **Mehrotra M**, Bouras A, Nudelman G, Jesu Raj JG, Bozec D, Lam W, **Houldsworth J**, Yong R, Zaslavsky E, Hadjipanayis CG, Birtwistle MR, **Tsankova NM**. *Neuro Oncol*; 24(5):694-707, 2022
10. [Chromosomal instability in adult-type diffuse gliomas.](#) **Richardson TE**, **Walker JM**, Abdullah KG, McBrayer SK, Viapiano MS, Mussa ZM, **Tsankova NM**, Snuderl M, Kimmo J, Hatanpaa. *Acta Neuropathol Commun*; 10(1):115, 2022
11. [Interpretable deep learning of myelin histopathology in age-related cognitive impairment.](#) McKenzie AT, Marx G, Koenigsberg D, Sawyer M, Iida MA, **Walker JM**, **Richardson TE**, Campanella G, Attems J, McKee AC, Stein TD, Fuchs TJ, White CL, The PART working group, Farrell K, **Crary JF**. *Acta Neuropathol Commun*; 10(1):131, 2022
12. [Differential vulnerability of hippocampal subfields in primary age-related tauopathy and chronic traumatic encephalopathy.](#) Farrell K, Iida MA, Cherry JD, Casella A, Stein TD, Bieniek KF, **Walker JM**, **Richardson TE**, White CL, Alvarez VE, Huber BR, Dickson DW, Insausti R, Dams O'Connor K, The PART working group, **Crary JF**, McKee AC. *J Neuropathol Exp*; 81(10):781-789, 2022
13. [Global DNA methylation profiling reveals chromosomal instability in IDH-mutant astrocytomas.](#) Liu Y, Sathé AA, Abdullah KG, McBrayer SK, Adams SH, Brenner AJ, Hatanpaa KJ, Viapiano MS, Xing C, **Walker JM**, **Richardson TE**. *Acta Neuropathol Commun*; 10(1):32, 2022
14. [Differential protein expression in the hippocampi of resilient individuals identified by digital spatial profiling.](#) **Walker JM**, Kazempour S, Fracassi A, **Richardson TE**, Zare H, Orr M. *Acta Neuropathol Commun*; 10(23):1-14, 2022
15. [The frequency of cerebral amyloid angiopathy in primary age-related tauopathy.](#) **Walker JM**, **Richardson TE**, Farrell K, White CL, **Crary JF**. *J Neuropathol Exp*; 81(3):246-248, 2022
16. [Genome-wide association study and functional validation implicates JADE1 in tauopathy.](#) Farrell K, Kim S, Han N, Iida MA, Gonzalez E, Otero-Garcia M, **Walker JM**, **Richardson TE**, Renton AE, Andrews SJ, Fulton-Howard B, Humphrey J, Vialle RA, Bowles KR, Lopes KP, Whitney K, Dangoor DK, Walsh H, Marcora E, Hefti MM, Casella A, Sissoko CT, Kapoor M, Novikova G, Udine E, Wong G, Tang W, Bhargale T, Hunkapiller J, Ayalon G, Graham RR, Cherry JD, Cortes EP, Borukov VY, McKee AC, Stein TD, Vonsattel JP, Teich AF, Gearing M, Glass J, Troncoso JC, Frosch MP, Hyman BT, Dickson DW, Murray ME, Attems J, Flanagan ME, Mao Q, Mesulam MM, Weintraub S, Woltjer R, Pham T, Kofler J, Schneider JA, Yu L, Purohit DP, Haroutunian V, Hof PR, Gandy S, Sano M, Beach TG, Poon W, Kawas C, Corrada M, Rissman R, Metcalf J, Shuldberg S, Salehi B, Nelson PT, Trojanowski JQ, Rissman RA, Metcalf J, Shuldberg S, Salehi B, Nelson PT, Trojanowski JQ, Lee EB, Wolk DA, McMillan CT, Keene CD, Latimer CS, Montine TJ, Kovacs GG, Lutz MI, Fischer P, Perrin RJ, Cairns NJ, Franklin EE, Cohen HT, Raj T, Cobos I, Frost B, Goate A, White CL, **Crary JF**. *Acta Neuropathol*; 143(1):33-53, 2022
17. [Neocortical neurofibrillary degeneration in primary age-related tauopathy.](#) **Walker JM**, White CL, Farrell K, **Crary JF**, **Richardson TE**. *J Neuropathol Exp*; 81(2):146-148, 2022
18. [Establishment and propagation of patient-derived organoid models of lower-grade glioma.](#) Abdullah KG, Buehler JD, Bird CE, Savani MR, Sternisha AC, Levitt MM, Li W, Ramirez DMO, Patel T, Garzon-Muvdi T, Barnett S, Zhang G, Ashley DM, Hatanpaa KJ, **Richardson TE**, McBrayer SK. *Neuro-Oncol*; 24(4):612-623, 2022
19. [Computational assessment of cancer organoid viability using rapid live-cell microscopy.](#) Buehler JD, Bird CE, Savani MR, Gattie LC, Hicks WH, Levitt MM, El Shami M, Hatanpaa KJ, **Richardson TE**, McBrayer SK, Abdullah KG. *Cancer Informatics*; 21(1): 11769351221100754, 2022
20. [Mediastinal metastases from a primary immature teratoma of the CNS.](#) Zain SM, Mirchia K, Galbraith K, Galgano MA, Lee M, **Richardson TE**, Mirchia K. *Radiol Case Rep*; 17:3339-3344, 2022
21. [The cell scaffolding protein DLG5 promotes glioblastoma growth by controlling Sonic Hedgehog signaling in tumor stem cells.](#) Kundu S, Nandhu MS, Longo SL, Longo JA, Rai S, Chin LS, **Richardson TE**, Viapiano MS. *Neuro-Oncol*; 24(8):1230-1242, 2022
22. [De novo pyrimidine synthesis is a targetable vulnerability in IDH-mutant glioma.](#) Shi DD, Savani MR, Levitt MM, Wang AC, Endress JE, Bird CE, Buehler J, Stopka S, Regan MS, Lin YF, Puliappadamba VT, Gao W, Khanal J, Evans L, Lee JH, Guo L, Xiao Y, Xu M, Huang B, Jennings RB, Bonal DM, Martin-Sandoval MS, Dang T, Gattie LC, Cameron AB, Lee S, Asara JM, Kornblum HI, Mak TW, Looper RE, Nguyen QD, Signoretti S, Gradl S, Sutter A, Jeffers M, Janzer A, Lehrman MA, Zacharias LG, Mathews TP, Losman JA, **Richardson TE**, Cahill DP, DeBerardinis RJ, Ligon KL, Xu L, Ly P, Agar NYR, Abdullah KG, Harris IS, Kaelin WG, McBrayer SK. *Cancer Cell*; 40(9):939-956, 2022
23. [Comprehensive profiling of myxopapillary ependymomas identifies a distinct molecular subtype with relapsing disease.](#) Bockmayr M, Harnisch K, Pohl LC, Schweizer L, Mohme T, Körner M, Suwala A, Dorostkar MM, Monoranu CM, Hasselblat M, Wefers AK, Capper D, Hench J, Frank S, **Richardson TE**, Tran I, Liu E, Snuderl M, Engertsberger L, Benesch M, von Deimling A, Obrecht D, Mynarek M, Rutkowski S, Glatzel M, Neumann JE, Schüller. *Neuro-Oncol*; 24(10):1689-1699, 2022
24. [Artificial intelligence-derived neurofibrillary tangle burden is associated with antemortem cognitive impairment.](#) Marx GA, Koenigsberg DG, McKenzie AT, Kauffman J, Hanson RW, Whitney K, Signaevsky M, Prastawa M, Lida MA, White CL, **Walker JM**, **Richardson TE**, Koll J, Fernandez G, Zeineh J, **Cordon-Cardo C**, The PART working group, **Crary JF**, Farrell K. *Acta Neuropathol Commun*; 10:157, 2022
25. [Mesenchymal stromal cell therapy for acute respiratory distress syndrome due to COVID-19.](#) Whittaker-Brown SA, **Iancu-Rubin C**, Aboelela A, Abrahams A, Burke E, Drummond T, Grossman F, Itescu F, Lagdameo J, Lin J-Y, Mark A, Levine JE, Osman K. *Cytotherapy*; 24(8):835-40, 2022

26. Characterization of disease-propagating stem cells responsible for myeloproliferative neoplasm-blast phase. Wang X, Rampal R, Hu CS, Tripodi J, Farnoud N, Petersen B, Rossi M, Patel M, McGovern E, Najfeld V, Iancu-Rubin C, Lu M, Kremyanskaya M, Weinberg R, Mascarenhas J, Hoffman R. *JCI Insight*; 7(8), 2022
27. Relieving Dyrk1a repression of MKL1 corrects developmental blockade in human infantile megakaryocytes. Elagib KE, Brock A, Clementelli C, Mosoyan G, Delehanty LL, Sahu RK, Pacheco-Benichou A, Fruit A, Besson T, Morris SW, Eto K, Jobaliya C, French DL, Gadue P, Singh S, Shi S, Qin F, Cornelison R, Li H, Iancu-Rubin C, and Goldfarb AN. *JCI*; 132(19), 2022
28. An atlas of late prenatal human neurodevelopment resolved by single-nucleus transcriptomics. Ramos SI, Mussa ZM, Falk EN, Pai B, Giotti B, Allette K, Cai P, Dekio F, Sebra R, Beaumont KG, Tsankov AM, Tsankova NM. *Nat Commun*; 13(1):7671, 2022
29. High-resolution transcriptomics informs glial pathology in human temporal lobe epilepsy. Pai B, Tome-Garcia J, Cheng W, Nudelman G, Beaumont KG, Ghatan S, Panov F, Caballero E, Sarpong K, Marcuse L, Yoo J, Jiang Y, Schaefer A, Akbarian S, Sebra R, Pinto D, Zaslavsky E, Tsankova NM. *Acta Neuropathol Commun*; 10, 149, 2022
30. IDH-mutant astrocytoma with EGFR amplification-Genomic profiling in four cases and review of literature. Umphlett M, Bilal KH, Martini ML, Suwala AK, Ahuja S, Rashidipour O, Germano I, Snuderl M, Morgenstern P, Tsankova NM. *Neuro-oncol Adv*; 4(1), 2022
31. A complete temporal transcription factor series in the fly visual system. Konstantinides N, Holguera I, Rossi AM, Escobar A, Dudragne L, Chen YC, Tran TN, Martínez Jaimes AM, Özel MN, Simon F, Shao Z, Tsankova NM, Fullard JF, Walldorf U, Roussos P, Desplan C. *Nature*; 604(7905):316-322, 2022
32. Pathology and prognosis of colonic adenocarcinomas with intermediate primary tumor stage between pT2 and pT3. Paulsen JD, Polydorides AD. *Arch Pathol Lab Med*; 146(5):591-602, 2022
33. The similarities and differences of anal high-risk HPV infection in HIV-positive women and men: a mini-review. Zhang XF, Si Q. *J Infect Dis Ther*; 10 (5), 2022
34. Primary renal glomus tumor with concurrent papillary renal cell carcinoma and multiple papillary adenomas in a patient with end stage renal disease: a case report and clinicopathologic analysis of reported cases. Bhardwaj S, Haines GK III, Si Q. *Int J Clin Exp Pathol*; 15(11):459-466, 2022
35. Primary hemangioblastoma of the kidney with molecular analyses by next generation sequencing: a case report and review of the literature. Wang X, Haines GK III, Mehrotra M, Houldsworth J, Si Q. *Diagn Pathol*; 17(1):34, 2022
36. A comparative study of the genotype profiles of high-risk human papillomavirus infection in male and female HIV-positive patients and their correlation with anal cytology and biopsy. Zhang XF, Lu D, Szporn AH, Zakowski MF, Si Q. *J Am Soc Cytopathol*; 11:21-30, 2022
37. Post renal transplant de novo urothelial carcinoma in graft kidneys: a mini review. Lam H, Si Q. *J Clin Exp Pathol*; Vol 11(6); 2022
38. Melanotic medullary thyroid carcinoma: A case report with review of the literature. Brzezinska K, Bhardwaj S, Teng M, Si Q, Sun J, Westra W, Zakowski M, Szporn A. *Diagn Cytopathol*; 1-7, 2022
39. Oncogenic role of the SOX9-DHCR24-cholesterol biosynthesis axis in IGH-BCL2+ diffuse large B-cell lymphomas. Shen Y, Zhou J, Nie K, Cheng S, Chen Z, Wang W, Wei W, Jiang D, Peng Z, Ren Y, Zhang Y, Fan Q, Richards KL, Qi Y, Cheng J, Tam W, Ma J. *Blood*; 139(1):73-86, 2022
40. An accessible, efficient, and accurate natural language processing method for extracting diagnostic data from pathology reports. Lam H, Nguyen F, Wang X, Stock A, Lenskaya V, Kooshesh M, Li P, Qazi M, Wang S, Dehghan M, Qian X, Si Q, Polydorides AD. *J Pathol Inform*; 2022
41. Clinicopathologic parameters and outcomes of mucinous neoplasms confined to the appendix: a benign entity with excellent prognosis. Polydorides AD, Wen X. *Mod Pathol*; 35(11):1732-1739, 2022
42. Surgery for pouch Inflow limb related complications: Crohn's disease or something else? Plietz MC, Mui A, Kayal M, Gross BD, Hao Y, Rubin P, Polydorides AD, Bauer J. *Int J Colorectal Dis*; 37(4):879-885, 2022
43. Characteristics and outcomes of left-sided ulcerative colitis with a cecal/periappendiceal patch of inflammation. Albayrak NE, Polydorides AD. *Am J Surg Pathol*; 46(8):1116-1125, 2022
44. Gastrointestinal cancer diagnosis and resection: an observational study. Grinspan LT, Rustgi SD, Itzkowitz SH, Polydorides AD, Lucas AL. *Impact of COVID-19 Pandemic on Clin Res Hepatol Gastroenterol*; 46(3):101839, 2022
45. Evaluation of pathologic prognostic factors in neuroendocrine tumors of the small intestine. Polydorides AD, Liu Q. *Am J Surg Pathol*; 46(4):547-556, 2022
46. Clinicopathologic characteristics and neoplasia risk of colorectal inflammatory polyposis in inflammatory bowel disease. Ma YR, Polydorides AD. *Arch Pathol Lab Med*; 146:172-181, 2022
47. Primary anal cancer screening results from 381 women living with human immunodeficiency virus. Liu Y, Weiss K, Ramírez Zamudio A, Prasad Hayes M, Saleh M, Gaisa M, Sigel K. *J Infect Dis*; Oct 5, 2022. **Epub ahead of print.**
48. International consensus classification of acute lymphoblastic leukemia/lymphoma. Duffield AS, Mullighan CG, Borowitz MJ. *Virchows Arch*; 2022
49. Limited sinonasal Rosai-Dorfman disease presenting as chronic sinusitis. Rooper LM, White MJ, Duffield AS, Gagan J, London N, Montgomery EA, Bishop JA. *Histopathology*; 81(1):99-107, 2022
50. Radical shift in the communication paradigm in head and neck frozen section analysis: intraoperative 3D specimen scanning. Brandwein-Weber M, Urken M, Topf M, Lewis Jr. J, Kang S, Curry J, Chai R, Khan M, Modica I, Chung D, Rosenthal E. *Head Neck*; HED-22-1319, 2022
51. Genetic screening of relatives of decedents experiencing sudden unexpected death: medical examiner's office referrals to a multi-disciplinary cardiogenetics program. Siskind T, Williams N, Sebastin M, Marion R, McDonald TV, Walsh C, Sampson B, Tang Y, Clark BC. *J Community Genet*; 13(6):629-639, 2022
52. A case report of mixed acinar-neuroendocrine carcinoma of the pancreas misdiagnosed as well-differentiated neuroendocrine tumor on biopsy. Paulsen JD, Liu Q. *Am J Digest Dis* 2022;8(2):10-14.
53. Cuneiform (cuniculatum) variant of oral squamous cell carcinoma revisited: presentation of two cases and literature review of a rare entity. Beute J, Seo G, Greenberg L, Mundi N, Dowling E, Matloob A, Khorsandi A, Brandwein-Weber M, Urken M. *Head Neck*; Apr;44(4):E16-E24, 2022
54. Oncocytoid Variant of High-Grade Salivary Duct Carcinoma: A Potential Diagnostic Pitfall. A Report on Two Patients. Matloob A, Beute JE, Gidumal S, Rabie M, Khorsandi AS, Urken ML, Chai RL, Brandwein-Weber M. *Head Neck Pathol*; Mar 7, 2022
55. Automatic flagging of AI segmentation errors in computation pathology. Choudhary R, Balanchandran D, Folmsbee J, Rahman J, Brandwein M, Doyle S. *Proc. SPIE* 12039, Medical Imaging 2022: Digital and Computational Pathology; 1203907 April 4 2022
56. Tall Cell Variant Papillary Thyroid Carcinoma Impacts Disease-free Survival at the 10% Cut-point. Samarkan S, Militello L, Seo G, Li X, Everest S, O'Malley, Spaulding S, Xing M, Matloob A, Beute J, Chai R, Doyle S, Urken ML, Brandwein-Weber M. *Pathology Practice Research*; Jul 2; 236:154012, 2022
57. Rearrangements, expression, and clinical significance of MYB and MYBL-1 in adenoid cystic carcinoma: a multi-institutional study. Persson M, Andersson MK, Mitani Y, Brandwein-Weber M, Frierson HF, Moskaluk C, Fonseca I, Ferrarotto R, Boecker W, Loening T, El-Nagggar AK, Stenman G; *Cancers*; 14(15), 3691 2022
58. Histology segmentation using active learning on worst pattern of invasion in oral cavity squamous cell carcinoma. Folmsbee J, Zhang L, Lu X, Rahman J, Gentry J, Conn B, Vered M, Roy P, Gupta R, Lin D, Samarkan S, Dhorajiva P, Peter A, Wang M, Israel A, Brandwein-Weber M, Doyle S. *J Pathol Inform*; 13: 100146, 2022
59. Utilizing 3D head and neck specimen scanning for intraoperative margin discussions: Proof of concept of our novel approach. Saturno MP, Brandwein-Weber M, Greenberg L, Silberzweig A, Buchbinder D, Dowling EM, Khan MN, Chai R, Urken ML. *Head Neck*; Epub September 6, 2022
60. Radical shift in the communication paradigm in head and neck frozen section analysis: Intraoperative three-dimensional specimen scanning. Brandwein-Weber M, Urken ML, Topf MC, Lewis JS Jr, Kang SY, Curry JM, Chai R, Khan M, Modica I, Chung D, Rosenthal EL. *Head Neck*; Epub November 15, 2022
61. Association of improved survival in patients with gallbladder neoplasms arising from intracholecystic papillary neoplasms: a single institution 10-year experience. Berger Y, Sullivan BJ, Leigh NL, Bekhor EY, Dhorajiva P, Mani M,

- Magge DR, Cha DE, Sarpel U, Hiotis SP, Labow DM, Ward SC, Golas B, Cohen N; Ann Surg Oncol; 29:5167-5175, 2022
62. [Characterization and prediction of signal changes in normal liver parenchyma on gadoxetic acid enhanced magnetic resonance imaging after liver directed radiation therapy.](#) Nehlsen AD, Sindhu KK, Wolken T, Khan F, Kyriakos CK, Ward SC, Moshier E, Taouli B, Buckstein M. Radiol Imaging Cancer; 4:e210100 2022
 63. [Neoadjuvant cemiplimab for resectable hepatocellular carcinoma: a single-arm, open-label, phase 2 trial.](#) Marron TU, Fiel MI, Hamon P, Fiaschi N, Kim E, Ward SC, Zhao Z, Kim J, Kennedy P, Gunasekaran G, Tabrizian P, Doroshov D, Legg M, Hammad A, Magen A, Kamphorst AO, Shareef M, Gupta NT, Deering R, Wang W, Wang F, Thanigaimani P, Mani J, Troncoso L, Tabachnikova A, Chang C, Akturk G, Backup M, Hamel S, Ioannou G, Hennequin C, Jamal H, Brown H, Bonaccorso A, Labow D, Sarpel U, Rosenbloom T, Sung MW, Kou B, Li S, Jankovic V, James N, Hamon SC, Cheung HK, Sims JS, Miller E, Bhardwaj N, Thurston G, Lowy I, Gnjatic S, Taouli B, Schwartz ME, Merad M. Lancet Gastroenterol Hepatol; 7:219-229, 2022
 64. [Solitary Peutz-Jeghers type polyp of jejunum with gastric fundic and antral gland lining mucosa: A case report and review of literature.](#) Liu L, Zhou H, Risech M, Ky A, Houldsworth J, Ward S. Int J Surg Pathol; 30:539-542, 2022
 65. [Acute kidney injury in a patient with a kidney transplant & post-transplant lymphoproliferative disorder: a quiz.](#) Rajagopal M, Sikri H, Ward SC, Sparks MA, Farouk SF. Am J Kidney Dis; 80: A20-A22, 2022
 66. [Rare case of Schwann cell hamartoma in the duodenum.](#) Oguntuyo K, Donnangelo LL, Zhu G, Ward S, Bhattacharaya A. ACG Case Reports J; 9(11), 2022
 67. [Building human experimental platforms: helping patients while maximizing drug development efforts.](#) Marron TU, Galsky MD, Taouli B, Fiel MI, Ward S, Kim E, Yankelevitz D, Doroshov D, Guttman E, Ungar B, Mehandru S, Golas BJ, Labow D, Sfakianos J, Nair S, Tewari A, Buckstein M, Song X, Kenigsberg E, Gnjatic S, Brown B, members of the TARGET and INTERACT research programs, Schwartz M, Bhardwaj N, Merad M. Nat Med; 28:626-629, 2022
 68. [Defining morphologic features of invasion in pulmonary non-mucinous adenocarcinoma with lepidic growth - A proposal by the IASLC Pathology Committee.](#) Invasion working group, Thunnissen E, Beasley MB, Borczuk A, Dacic S, Kerr KM, Minami Y, Nicholson AG, Sholl L, Tsao MS, Noguchi M, Lissenberg-Witte B, Le Quesne J, Roden AC, Chung JH, Yoshida A, Moreira AL, Lantuejoul S, Pelosi G, Poleri C, Hwang D, Jain D, Travis WD, Brambilla E, Chen G, Botling J, Bubendorf L, Mino-Kenudson M, Motoi N, Chou TY, Papotti M, Yatabe Y, Cooper W. J Thorac Oncol; Dec 8: S1556, 2022
 69. [Pathology Committee. Predictive biomarkers for immunotherapy in lung cancer: perspective from the IASLC Pathology Committee.](#) Mino-Kenudson M, Schalper K, Cooper W, Dacic S, Hirsch FR, Jain D, Lopez-Rios F, Tsao MS, Yatabe Y, Beasley MB, Yu H, Sholl LM, Brambilla E, Chou TY, Connolly C, Wistuba I, Kerr KM, Lantuejoul S; IASLC J Thorac Oncol; 17(12):1335-1354, 2022
 70. [A 44-year-old stone worker with progressive dyspnea: lessons from a new twist on an old foe.](#) Manglani R, Akbar S, Beasley M, Epelbaum O. Monaldi Arch Chest Dis; Sept 13, 2022 Epub ahead of print
 71. [Spatial positioning and matrix programs of cancer-associated fibroblasts promote T cell exclusion in human lung tumors.](#) Grout JA, Sirven P, Leader AM, Maskey S, Hector E, Puisieux I, Steffan F, Cheng E, Tung N, Maurin M, Vaineau R, Karpf L, Plaud M, Begue AL, Ganesh K, Mesple J, Casanova-Acebes M, Tabachnikova A, Keerthivasan S, Lansky A, Le Berichel J, Walker L, Rahman AH, Gnjatic S, Girard N, Lefevre M, Damotte D, Adam J, Martin JC, Wolf A, Flores RM, Beasley MB, Pradhan R, Muller S, Marron TU, Turley SJ, Merad M, Kenigsberg E, Salmon. H Cancer Discov; 12(11):2606-2625, 2022
 72. [Measuring the margin distance in pulmonary wedge resection.](#) Wolf A, Laskey D, Yip R, Beasley MB, Yankelevitz DF, Henschke CI; IELCART Investigators; J Surg Oncol, August 17, 2022
 73. [Transcriptional Circuitry of NKX2-1 and SOX1 defines an unrecognized lineage subtype of small cell lung cancer.](#) Kong R, Patel AS, Sato T, Jiang F, Yoo S, Bao L, Sinha A, Tian Y, Fridrikh M, Liu S, Feng J, He X, Jiang J, Ma Y, Grullon K, Yang D, Powell CA, Beasley MB, Zhu J, Snyder EL, Li S, Watanabe H. Am J Respir Crit Care Med; 206(12):1480-1494, 2022
 74. [A 51-year-old woman with interstitial lung disease and subsequent COVID-19 presenting with worsening dyspnea.](#) Ng N, Zatakia J, Beasley MB, Chung M, Balwani M, Stauffer C, Schuchman EH, Dua S. Chest; 162(1):e19-e25, 2022
 75. [Integration and application of clinical practice guidelines for the diagnosis of idiopathic pulmonary fibrosis and fibrotic hypersensitivity pneumonitis.](#) Marinescu DC, Raghu G, Remy-Jardin M, Travis WD, Adegunsoye A, Beasley MB, Chung JH, Churg A, Cottin V, Egashira R, Fernández Pérez ER, Inoue Y, Johannson KA, Kazerooni EA, Khor YH, Lynch DA, Müller NL, Myers JL, Nicholson AG, Rajan S, Saito-Koyama R, Troy L, Walsh SLF, Wells AU, Wijnsbeek MS, Wright JL, Ryerson CJ. Chest; 162(3):614-629, 2022
 76. [Invited editorial: Optimal pathologic staging of lung cancer depends on more than the pathologist.](#) Beasley, MB. IASLC Lung Cancer News, April 26, 2022
 77. [NSCLC subtyping in conventional cytology: results of the International Association for the Study of Lung Cancer Cytology Working Group Survey to determine specific cytomorphologic criteria for adenocarcinoma and squamous cell carcinoma.](#) Jain D, Nambirajan A, Chen G, Geisinger K, Hiroshima K, Layfield L, Minami Y, Moreira AL, Motoi N, Papotti M, Rekhtman N, Russell PA, Prince SS, Schmitt F, Yatabe Y, Eppenberger-Castori S, Bubendorf L, Beasley MB, Berezowska S, Borczuk A, Brambilla E, Chou, T-Y, Chung J-H, Cooper W, Dacic, S, Chan Y, Hirsch FR, Hwang D, Joubert P, Kerr, K, Lantuejoul S, Lin D, Lopez-Rios F, Matsubara D, Mino-Kenudson M, Nicholson A, Poleri C, Roden A, Schlaper K, Sholl L, Thunnissen E, Travis WD, Tsao M, Wistuba I, Chen G; IASLC Pathology Committee. J Thorac Oncol; 17(6):793-805, 2022
 78. [Editorial: Chronic airway disease and vaping—a first step.](#) Beasley, MB. NEJM Evid; 1(6), 2022
 79. [The 2021 WHO Classification of Lung Tumors: Impact of advances since 2015.](#) Nicholson AG, Tsao MS, Beasley MB, Borczuk AC, Brambilla E, Cooper WA, Dacic S, Jain D, Kerr KM, Lantuejoul S, Noguchi M, Papotti M, Rekhtman N, Scagliotti G, van Schil P, Sholl L, Yatabe Y, Yoshida A, Travis WD. J Thorac Oncol; 17(3):362-387, 2022
 80. [Diagnosis of hypersensitivity pneumonitis: review and summary of American College of Chest Physicians Statement.](#) Yang SR, Beasley MB, Churg A, Colby TV, Fernández Pérez ER, Lynch D, Müller NL, Travis WD. Am J Surg Pathol; 46(4), 2022
 81. [Acute lung injury-from cannabis to COVID.](#) Beasley MB. Mod Pathol; 35 (suppl 1) 1-7, 2022
 82. [Pneumonectomy for idiopathic fibrosing mediastinitis mimicking neoplasm in a child.](#) Sengupta A, Williams EE, Dekio F, Beasley MB, Murthy RA. Ann Thorac Surg; 113(6), 2022
 83. [Impaired central tolerance induces changes in the gut microbiota that exacerbate autoimmune hepatitis.](#) Centa M, Weinstein EG, Clemente JC, Faith JJ, Fiel MI, Lyallpuri R, Herbin O, Alexandropoulos K. Autoimmun; 128:102808, 2022
 84. [The portrait of liver cancer is shaped by mitochondrial genetics.](#) Chattopadhyay M, Jenkins EC, Lechuga-Vieco AV, Nie K, Fiel MI, Rialdi A, Guccione E, Enriquez JA, Sia D, Lujambio A, Germain D. Cell Rep; 38(3):110254, 2022
 85. [AASLD practice guidance on drug, herbal, and dietary supplement-induced liver injury.](#) Fontana RJ, Liou I, Reuben A, Suzuki A, Fiel MI, Lee W, Navarro V. Hepatology; 00:1-29, 2022
 86. [Molecular signatures of long-term hepatocellular carcinoma risk in nonalcoholic fatty liver disease.](#) Fujiwara N, Kubota N, Crouchet E, Koneru B, Marquez CA, Jajoriya AK, Panda G, Qian T, Zhu S, Goossens N, Wang X, Liang S, Zhong Z, Lewis S, Taouli B, Schwartz ME, Fiel MI, Singal AG, Marrero JA, Fobar AJ, Parikh ND, Raman I, Li QZ, Taguri M, Ono A, Aikata H, Nakahara T, Nakagawa H, Matsushita Y, Tateishi R, Koike K, Kobayashi M, Higashi T, Nakagawa S, Yamashita YI, Beppu T, Baba H, Kumada H, Chayama K, Baumert TF, Hoshida Y. Sci Transl Med; 14(650):eabo4474, 2022
 87. [Development of a scoring system to differentiate amiodarone-induced liver injury from alcoholic steatohepatitis.](#) González IA, Fuller LD, Zhang X, Papke DJ, Zhao L, Zhang D, Liao X, Liu X, Fiel MI, Zhang X. Am J Clin Pathol; 157(3):434-42, 2022
 88. [Heterogeneity of hepatic steatosis definitions and reporting of donor liver frozen sections among pathologists: A multicenter survey.](#) Ho S, Kuo E, Allende D, Wang HL, Westerhoff M, Graham RP, Saxena R, Gonzalez RS, Fiel MI, Yang Z, Zhang X, Liu X. Liver Transpl; 28:1540-2, 2022

89. [The use of transient elastography in identifying sub-clinical chronic ductopenic rejection in adult liver transplant recipients: A case series.](#) Lee BT, Fiel MI, Schiano TD. *Transpl Immunol*; 73:2022
90. [Recurrent liver allograft Injury in Patients with donor-derived malignancy treated with immunosuppression cessation and retransplantation.](#) Lee BT, Ganjoo N, Fiel MI, Hechtman JF, Sarkar SA, Kim-Schluger L, Florman SS, Schiano TD. *Am J Clin Pathol* 158(2):199-205, 2022
91. [Neoadjuvant clinical trials provide a window of opportunity for cancer drug discovery.](#) Marron TU, Galsky MD, Taouli B, Fiel MI, Ward SC, Kim E, Yankelevitz D, Doroshow D, Guttman-Yassky E, Ungar B, Mehandru S, Golas BJ, Labow D, Sfakianos J, Nair SS, Chakravarty D, Buckstein M, Song X, Kenigsberg E, Gnjjatic S, Brown BD, Sparano J, Tewari A, Schwartz M, Bhardwaj N, Merad M. *Nat Med* 28(4):626-9, 2022
92. [Neoadjuvant clinical trials provide a window of opportunity for cancer drug discovery.](#) Marron TU, Galsky MD, Taouli B, Fiel MI, Ward SC, Kim E, Yankelevitz D, Doroshow D, Guttman-Yassky E, Ungar B, Mehandru S, Golas BJ, Labow D, Sfakianos J, Nair SS, Chakravarty D, Buckstein M, Song X, Kenigsberg E, Gnjjatic S, Brown BD, Sparano J, Tewari A, Schwartz M, Bhardwaj N, Merad M. *Author Nat Med*; 28(8):1723, 2022 **Correction**
93. [Evaluation of the fibrosis-4 index for detection of advanced fibrosis among individuals at risk for intestinal failure-associated liver disease.](#) Micic D, Huard G, Lee SM, Fiel MI, Moon J, Schiano TD, Iyer K. *JPEN J Parenter Enteral Nutr*; 46(3):678-84, 2022
94. [Identification and clinical significance of nodular regenerative hyperplasia in primary sclerosing cholangitis.](#) Ozturk NB, Fiel MI, Schiano TD. *JGH Open*; 6(9):607-11, 2022
95. [The quantification and significance of extramedullary hematopoiesis seen on liver biopsy specimens.](#) Tremblay D, Saberi S, Mascarenhas J, Schiano TD, Fiel MI. *Am J Clin Pathol*; 158(2):277-82, 2022
96. [Assessment of HCC response to Yttrium-90 radioembolization with gadoxetate disodium MRI: correlation with histopathology.](#) Vietti Violi N, Gnerre J, Law A, Hectors S, Bane O, Doucette J, Abboud G, Kim E, Schwartz M, Fiel MI, Taouli B. *Eur Radiol*; 32(9):6493-503, 2022
97. [Tumor size, not small vessel invasion, predicts survival in patients with hepatocellular carcinoma.](#) Zhang D, Love T, Hao Y, Liu BL, Thung S, Fiel MI, Whitney-Miller C, Liao X. *Am J Clin Pathol*; 158:70-80, 2022
98. [Ethnic/racial disparities in longitudinal neurocognitive decline in people with HIV.](#) Watson CW-M, Kamalyan L, Tang B, Hussain MA, Cherner M, Byrd DA, Franklin DR, Collier AC, Clifford DB, Gelman B, Morgello S, McCutchan A, Ellis RJ, Grant I, Heaton RK, Marquine MJ for the CHARTER group. *J Acquir Immune Defic Syndr*; 90:97-105, 2022
99. [Preliminary findings from telephone-based cognitive screening during the COVID-19 pandemic in longitudinal adult HIV research.](#) Gonzalez JA, Clark US, Byrd D, Clarke Y, Greenwood K, Tell E, Carrion-Park C, Pizzirusso M, Burgess R, Morgello S. *Arch Clin Neuropsychol*; Jul2022; 37:405-415, 2022
100. [Age, cognitive status, and accuracy of ADL self-reports in adults living with HIV.](#) Clarke Y, Morgello S, Byrd D. *AIDS Care*; 1-7, 2022.
101. [HIV integration in the human brain is linked to microglial activation and 3D genome remodeling.](#) Plaza-Jennings A, Valada A, O'Shea C, Iskhakova M, Hu B, Javidfar B, Ben Hutta G, Lambert TY, Murray J, Kassim B, Chandrasekaran S, Chen BK, Morgello S, Won H. *Mol Cell*; 82(24):4647-4663, 2022
102. [Higher buccal mitochondrial DNA and mitochondrial common deletion number are associated with markers of neurodegeneration and inflammation in cerebrospinal fluid.](#) Solanky D, Fields JA, Iudicello JE, Ellis RJ, Franklin D, Clifford DB, Gelman BB, Marra CM, Morgello S, Rubin LH, Grant I, Heaton RK, Letendre SL, Mehta SR. *J Neurovirol*; 28(2):281-290, 2022
103. [HIV, pathology, and epigenetic age acceleration in different human tissues.](#) Horvath S, Lin DTS, Kober MS, Zoller JA, Said JW, Morgello S, Singer E, Yong WH, Jamieson BD, Levine AJ. *GeroScience*; 44(3):1609-1620, 2022
104. [Frontal lobe microglia, neurodegenerative protein accumulation, and cognitive function in people with HIV.](#) Murray J, Meloni G, Cortes EP, Kim Silva A, Jacobs M, Ramkissoon A, Crary JF, Morgello S. *Acta Neuropathol Commun*; 10:69, 2022
105. [Peripheral inflammation and depressed mood independently predict neurocognitive worsening over 12 years.](#) Ellis RJ, Heaton RK, Tang B, Collier AC, Marra CM, Gelman BB, Morgello S, Clifford DB, Sacktor N, Cookson D, Letendre S. *Brain Behav Immun*; 2022
106. [HIV integration in the human brain is linked to microglial activation and 3D genome remodeling.](#) Plaza-Jennings A, Valada A, O'Shea C, Iskhakova M, Hu B, Javidfar B, Hutta GB, Lambert T, Murray J, Kassim B, Chandrasekaran S, Chen BK, Morgello S, Won H, Akbarian S. *Mol Cell*; 82:4647-4663, 2022
107. [Neuropathologic findings in a young woman 4 years following declaration of brain death: case analysis and literature review.](#) Folkherth RD, Crary JF, Shewmon DA. *J Neuropathol Exp Neurol*; 82(1):6-20, 2022
108. [Neuroimmune proteins can differentiate between tauopathies.](#) Cherry JD, Baucom ZH, Eppich KG, Kirsch D, Dixon ER, Tripodis Y, Bieniek KF, Farrell K, Whitney K, Uretsky K, Crary JF, Dickson D, McKee AC. *J Neuroinflammation*; 19(1):278, 2022
109. [Transcriptome deregulation of peripheral monocytes and whole blood in GBA-related Parkinson's disease.](#) Riboldi GM, Vialle RA, Navarro E, Udine E, de Paiva Lopes K, Humphrey J, Allan A, Parks M, Henderson B, Astudillo K, Argyrou C, Zhuang M, Sikder T, Oriol Narcis J, Kumar SD, Janssen W, Sowa A, Comi GP, Di Fonzo A, Crary JF, Frucht SJ, Raj T. *Mol Neurodegener*; 17(1):52, 2022
110. [Rainwater Charitable Foundation criteria for the neuropathologic diagnosis of progressive supranuclear palsy.](#) Roemer SF, Grinberg LT, Crary JF, Seeley WW, McKee AC, Kovacs GG, Beach TG, Duyckaerts C, Ferrer IA, Gelpi E, Lee EB, Revesz T, White CL, Yoshida M, Pereira FL, Whitney K, Ghayal NB, Dickson DW. *Acta Neuropathol*; 144(4):603-614, 2022
111. [17q21.31 sub-haplotypes underlying H1-associated risk for Parkinson's disease are associated with LRRCC37A/2 expression in astrocytes.](#) Bowles KR, Pugh DA, Liu Y, Patel T, Renton AE, Bandres-Ciga S, Gan-Or Z, Heutink P, Siitonen A, Bertelsen S, Cherry JD, Karch CM, Frucht SJ, Kopell BH, Peter I, Park YJ. *International Parkinson's Disease Genomics, Charney A, Raj T, Crary JF, Goate AM. Mol Neurodegener*; 17(1):48, 2022
112. [Association of APOE genotypes and chronic traumatic encephalopathy.](#) Atherton K, Han X, Chung J, Cherry JD, Baucom Z, Saltiel N, Nair E, Abdolmohammadi B, Uretsky M, Khan MM, Shea C, Durape S, Martin BM, Palmisano JN, Farrell K, Nowinski CJ, Alvarez VE, Dwyer B, Daneshvar DH, Katz DI, Goldstein LE, Cantu RC, Kowall NW, Alosco ML, Huber BR, Tripodis Y, Crary JF, Farrer L, Stern RA, Stein TD, McKee AC, Mez J. *JAMA Neurol*; 79(8):787-796, 2022
113. [Neuropathology of pediatric SARS-CoV-2 infection in the forensic setting: novel application of ex vivo imaging in analysis of brain microvasculature.](#) Stram M, Seifert A, Cortes E, Akyatan A, Woodoff-Leith E, Borukhov V, Tetlow A, Greenberg M, Gupta A, Krausert A, Mecca L, Rodriguez S, Stahl-Herz J, Guzman M, Delman B, Crary JF, Dams-O'Connor K, Folkherth R. *Front Neurol*; 13:894565, 2022
114. [Divergent magnetic resonance imaging atrophy patterns in Alzheimer's disease and primary age-related tauopathy.](#) Quintas-Neves M, Teylan MA, Morais-Ribeiro R, Almeida F, Mock CN, Kukull WA, Crary JF, Oliveira TG. *Neurobiol Aging*; 117:1-11, 2022
115. [Integrating whole-genome sequencing with multi-omic data reveals the impact of structural variants on gene regulation in the human brain.](#) Vialle RA, de Paiva Lopes K, Bennett DA, Crary JF, Raj T. *Nat Neurosci*; 25(4):504-514, 2022
116. [Antemortem detection of Parkinson's disease pathology in peripheral biopsies using artificial intelligence.](#) Signaevsky M, Marami B, Prastawa M, Tabish N, Lida MA, Zhang XF, Sawyer M, Duran I, Koenigsberg DG, Bryce CH, Chahine LM, Mollenhauer B, Mosovsky S, Riley L, Dave KD, Eberling J, Coffey CS, Adler CH, Serrano GE, White CL, 3rd, Koll J, Fernandez G, Zeineh J, Cordon-Cardo C, Beach TG, Crary JF. *Acta Neuropathol Commun*; 10(1):21, 2022
117. [Identification of HnRNPC as a novel Tau exon 10 splicing factor using RNA antisense purification mass spectrometry.](#) Xing S, Wang J, W Ru, Hefti M, Crary JF, Lu Y. *RNA Biol*; 19(1):104-116, 2022
118. [Dysregulated coordination of MAPT exon 2 and exon 10 splicing underlies different tau pathologies in PSP and AD.](#) Bowles KR, Pugh DA, Oja LM, Jadov BM, Farrell K, Whitney K, Sharma A, Cherry JD, Raj T, Pereira AC, Crary JF, Goate A. *Acta Neuropathol*; 143:225-243, 2022
119. [Chronic intermittent hypoxia enhances pathological Tau seeding, propagation, and accumulation and exacerbates Alzheimer-like memory and synaptic plasticity deficits and molecular signatures.](#) Kazim SF, Sharma A, Saroja SR, Seo

- JH, Larson CS, Ramakrishnan A, Wang M, Blitzer RD, Shen L, Pena CJ, **Crary** JF, Shimoda LA, Zhang B, Nestler EJ, Pereira AC. *Biol Psychiatry*; 91(4):346-358, 2022
120. **NKG2A and HLA-E define an alternative immune checkpoint axis in bladder cancer.** Salomé B, Sfakianos JP, Ranti D, Daza J, Bieber C, Charap A, Hammer C, Banchereau R, Farkas AM, Ruan DF, Izadmehr S, Geanon D, Kelly G, de Real RM, Lee B, Beaumont KG, Shroff S, Wang YA, Wang YC, **Thin TH**, Garcia-Barros M, Hegewisch-Solloa E, Mace EM, Wang L, O'Donnell T, Chowell D, Fernandez-Rodriguez R, Skobe M, Taylor N, Kim-Schulze S, Sebra RP, Palmer D, Clancy-Thompson E, Hammond S, Kamphorst AO, Malmberg KJ, Marcenaro E, Romero P, Brody R, Viard M, Yuki Y, Martin M, Carrington M, Mehrazin R, Wiklund P, Mellman I, Mariathasan S, Zhu J, Galsky MD, Bhardwaj N, Horowitz A. *Cancer Cell*; 40(9):1027-1043.e9, 2022
 121. **NOX1 is essential for TNF α -induced intestinal epithelial ROS secretion and inhibits M cell signatures.** Hsu NY, Nayar S, Gettler K, Talware S, Giri M, Alter I, Argmann C, Sabic K, Thin TH, Ko HM, Werner R, Tastad C, Stappenbeck T, Azabdaftari A, Uhlig HH, Chuang LS, Cho JH. *Gut*. Oct 3, 2022
 122. **Association between tumor mutations and meningioma recurrence in Grade I/II disease.** Dullea JT, Vasani V, Rutland JW, Gill CM, Chaluts D, Ranti D, Ellis E, Subramaniam V, Arrighi-Allisan A, **Kinoshita Y**, **McBride RB**, Bederson J, **Donovan M**, Sebra R, **Umphlett M**, Shrivastava RK. *Oncoscience*; 9:70-81, 2022
 123. **ARID1A mutation associated with recurrence and shorter progression-free survival in atypical meningiomas.** Chaluts D, Dullea JT, Ali M, Vasani V, Devarajan A, Rutland JW, Gill CM, Ellis E, **Kinoshita Y**, **McBride RB**, Bederson J, **Donovan M**, Sebra R, **Umphlett M**, Shrivastava RK. *J Cancer Res Clin Oncol*; 2022
 124. **NF2 mutations are associated with resistance to radiation therapy for grade 2 and grade 3 recurrent meningiomas.** Vasani V, Dullea JT, Devarajan A, Ali M, Rutland JW, Gill CM, **Kinoshita Y**, **McBride RB**, Gliedman P, Bederson J, **Donovan M**, Sebra R, **Umphlett M**, Shrivastava RK. *J Neurooncol*; 2022
 125. **Association of mutations in DNA polymerase epsilon with increased CD8+ cell infiltration and prolonged progression-free survival in patients with meningiomas.** Rutland JW, Dullea JT, Gill CM, Chaluts D, Ranti D, Ellis E, Arrighi-Allisan A, **Kinoshita Y**, **McBride RB**, Bederson J, **Donovan M**, Sebra R, **Fowkes M**, **Umphlett M**, Shrivastava RK. *Neurosurg Focus*; 52(2):E7, 2022
 126. **Colorectal strictures in patients with inflammatory bowel disease do not independently predict colorectal neoplasia.** Axelrad JE, Faye A, Slaughter JC, **Harpaz N**, Itzkowitz SH, Shah SC. *Inflamm Bowel Dis*; 28(6):855-861, 2022
 127. **International consensus to standardize histopathological scoring for small bowel strictures in Crohn's disease.** Gordon IO, Bettenworth D, Bokemeyer A, Srivastava A, Rosty C, de Hertogh G, Robert ME, Valase MA, Mao KR, Li J, **Harpaz N**, Borralho P, Pai RK, Odze R, Feakins R, Parker CE, Guizzetti L, Nguyen T, Shackelton LM, Sandborn WJ, Jairath V, Baker M, Bruining D, Fletcher JG, Feagan BG, Pai RK, Rieder F. *Anti-Fibrotic Research Gut*; 71(3):479-486, 2022
 128. **Baseline histological findings do not predict the risk of subsequent extension in patients with limited ulcerative colitis.** Hao Y, Yzet C, **McBride RB**, Stock A, Tiraterra E, D'Errico A, Belluzzi A, Scaioli E, Gionchetti P, Roda G, Ungaro R, Colombel JF, **Harpaz N**, Ko HM. *Dig Dis Sci*; 67(4):1311-1319, 2022
 129. **The association between pre-colectomy thiopurine use and risk of neoplasia after ileal pouch anal anastomosis in patients with ulcerative colitis or indeterminate colitis: a propensity score analysis.** Kayal M, Riggs A, Plietz M, Khaitov S, Sylla P, Greenstein AJ, **Harpaz N**, Itzkowitz SH, Shah SC. *Int J Colorectal Dis*; 37(1):123-130, 2022
 130. **Constrictive and hypertrophic strictures in Ileal Crohn's disease.** Li Q, Zhang X, Ko HM, Stocker D, Ellman J, Chen J, Hao Y, **Bhardwaj S**, Liang Y, Cho J, Colombel JF, Taouli B, **Harpaz N**. *Clin Gastroenterol Hepatol*; 20(6):e1292-e1304, 2022
 131. **Development and validation of an AI-enabled digital breast cancer assay to predict early-stage breast cancer recurrence within 6 years.** Fernandez G, Prastawa M, Madduri AS, Scott R, Marami B, Shpalensky N, Cascetta K, Sawyer M, Chan M, Koll G, Shtabsky A, Feliz A, **Hansen T**, **Veremis B**, **Cordon-Cardo C**, Zeineh J, **Donovan MJ**. *Breast Cancer Res*; 24:93, 2022
 132. **Novel microenvironment-based classification of intrahepatic cholangiocarcinoma with therapeutic implications.** Martin-Serrano M, Kepecs B, Torres-Martin M, Bramel E, Haber P, Merritt E, Rialdi A, Param N, Maeda M, Lindblad K, Carter J, Barcena-Varela M, Mazzaferro V, Schwartz M, Affo S, Schwabe F, Villanueva A, Guccione E, Friedman S, Lujambio A, Tocheva A, Llovet J, **Thung S**, Tsankov A, Sia D. *Gut*; gutjnl-2021-326514, 2022.
 133. **Inflamed and non-inflamed classes of HCC: a revised immunogenomic classification.** Montironi C, Castet F, Haber P, Pinyol R, Torres-Martin M, Torrens L, Mesropian A, Wang H, Puigvehí M, Maeda M, Leow WQ, Harrod E, Taik P, Chinburen J, Taivanbaatar E, Chinbold E, Arqués MS, **Donovan M**, **Thung S**, Neely J, Mazzaferro V, Anderson J, Roayaie S, Schwartz M, Villanueva A, Friedman S, Uzilov A, Sia D, Llovet J. *Gut*; 72:129-140, 2022
 134. **Molecular Markers of Response to Anti-PD1 Therapy in Advanced Hepatocellular Carcinoma.** Haber PK, Castet F, Torres-Martin M, Andreu-Oller C, Puigvehí M, Miho M, Radu P, Dufour JF, Verslype C, Zimpel C, Marquardt JU, Galle PR, Vogel A, Bathon M, Meyer T, Labgaa I, Digkila A, Roberts LR, Mohamed Ali MA, Mínguez B, Citterio D, Mazzaferro V, Finkelmeier F, Trojan J, Özdirik B, Müller T, Schmelzle M, Bejjani A, Sung MW, Schwartz ME, Finn RS, **Thung S**, Villanueva A, Sia D, Llovet JM. *Gastroenterology*; Epub 2022
 135. **Systematic review of squamous cell carcinoma of the gallbladder.** Takahashi H, **Irri A**, Fenig Y, Byale A, **Thung S**, Gunasekaran G. *Am J Surg*; 224(3):863-868, 2022
 136. **Lymphoepithelioma-like neoplasm of the biliary tract with 'probable low malignant potential.** **Khandakar B**, Liu JR, **Thung S**, Li Y, Rhee H, Kagen AC, Tong T, Park YN, Theise N, Ng I. *Histopathology*; 80:720-728, 2022
 137. **MR elastography outperforms shear wave elastography for the diagnosis of clinically significant portal hypertension.** Kennedy P, Stocker D, Carbonell G, Said D, Bane O, Hectors S, Abboud G, Cuevas J, Bolster Jr. B, Friedman S, Lewis S, Schiano T, Bhattacharya D, Fischman A, **Thung S**, Taouli B. *Eur Radiol*; 32:8339-8349, 2022
 138. **Hepatocellular carcinoma in Mongolia delineates unique molecular traits and a mutational signature associated with environmental agents.** Torrens L, Puigvehí M, Torres-Martin M, Wang H, Maeda M, Haber P, Leonel T, García-López M, Esteban-Fabrá R, Leow WQ, Montironi C, Torrecilla S, Varadarajan AR, Taik P, Campreciós G, Enkhbold C, Taivanbaatar E, Yerbolat A, Villanueva A, Pérez-Del-Pulgar S, **Thung S**, Chinburen J, Letouzé E, Zucman-Rossi J, Uzilov A, Neely J, Forns X, Roayaie S, Sia D, Llovet J. *Clin Cancer Res*; 28(20):4509-4520, 2022
 139. **4D flow MRI in abdominal vessels: prospective comparison of k-t accelerated free breathing acquisition to standard respiratory navigator gated acquisition.** Bane O, Stocker D, Kennedy P, Hectors SJ, Bollache E, Schnell S, Schiano T, **Thung S**, Fischman A, Markl M, Taouli B. *Sci Rep*; 12:19886, 2022
 140. **Performance of native and gadoxetate-enhanced liver and spleen T1 mapping for noninvasive diagnosis of clinically significant portal hypertension: preliminary results.** Altinmakas E, Bane O, Hectors SJ, Issa R, Carbonell G, Abboud G, Schiano T, **Thung S**, Fischman A, Kelly MD, Friedman S, Kennedy P, Taouli B. *Abdom Radiol*; 47:3758-3769, 2022
 141. **Recurrent PTBP1-MAML2 fusions in composite hemangioendothelioma with neuroendocrine differentiation: a report of 2 cases involving neck lymph nodes.** Dermawan JK, **Westra WH**, Antonescu CR. *Genes Chromosomes Cancer*; 61:187-193, 2022
 142. **Prevalence of human papillomavirus in head and neck cancers at tertiary care centers in the United States over time.** Scott-Wittenborn N, D'Souza G, Tewari S, Rooper L, Troy T, Drake V, Bigelow EO, Windon MJ, Ryan WR, Ha PK, Kiess AP, Miles B, **Westra WH**, Mydlarz WK, Eisele DE, Fakhry C. *Cancer*; 1;128:1767-1774, 2022
 143. **Sinonasal Tumors with neuroepithelial differentiation (olfactory carcinoma): delineation of their pathologic and clinical features with insights into their relationship to olfactory neuroblastoma and sinonasal carcinoma.** Rooper LM, Bishop JA, Faquin WC, Foss RD, Gallia GL, Jo VY, Lewis JS, Nishino M, Stelow EB, Thompson LDR, Wenig BM, **Westra WH**. *Am J Surg Pathol*; 46:1025-1035, 2022
 144. **MacroH2A impedes metastatic growth by enforcing a discrete dormancy program in disseminated cancer cells.** Sun D, Filipescu D, Hasson D, Singh DK, Carcamo S, Khalil B, Miles BA, **Westra WH**, Sproll KC, Bernstein E, Aguirre-Ghiso JA. *Sci Adv*; 8(48), 2022
 145. **High-risk HPV infection-associated hypermethylated genes in oropharyngeal squamous cell carcinomas.** Inokawa Y, Hayashi M, Begum S, Noordhuis MG,

- Sidransky D, Califano J, Koch W, Brait M, Westra WH, Hoque MO. *BMC Cancer*; 22:1146-1155, 2022
146. **Human anti-neuraminidase antibodies reduce airborne transmission of clinical influenza virus Isolates in the guinea pig model.** Tan J, O'Dell G, Hernandez MM, Sordillo EM, Kahn Z, Kriti D, van Bakel H, Ellebedy AH, Wilson PC, Simon V, Krammer F, McMahon M. *J Virol*; 96(2), 2022
 147. **Utility of liquid biopsy in diagnosing isolated cerebral phaeohyphomycosis: illustrative case.** Arrighi-Allisan AE, Vidaurrazaga MM, De Chavez VB, Bryce CH, Rutland JW, Paniz-Mondolfi AE, Sordillo EM, Nowak MD, Gitman MR, Fuller R, Baneman E, Yong RL. *J Neurosurg Case Lessons*; 3(5), 2022
 148. **Activity of convalescent and vaccine serum against SARS-CoV-2 Omicron.** Carreño JM, Alshammary H, Tcheou J, Singh G, Raskin AJ, Kawabata H, Sominsky LA, Clark JJ, Adelsberg DC, Bielak DA, Gonzalez-Reiche AS, Dambrauskas N, Vigdorovich V; PSP-PARIS Study Group; Srivastava K, Sather DN, Sordillo EM, Bajic G, van Bakel H, Simon V, Krammer F. *Nature*; 602(7898):682-688, 2022
 149. **Remitting neuropsychiatric symptoms in COVID-19 patients: Viral cause or drug effect?** Forero-Peña DA, Hernandez MM, Mozo Herrera IP, Collado Espinal IB, Páez Paz J, Ferro C, Flora-Noda DM, Maricuto AL, Velásquez VL, Camejo-Avila NA, Sordillo EM, Delgado-Noguera LA, Perez-García LA, Morantes Rodríguez CG, Landaeta ME, Paniz-Mondolfi AE. *J Med Virol*; 94(3):1154-1161, 2022
 150. **SARS-CoV-2 Omicron virus causes attenuated disease in mice and hamsters.** Halfmann PJ, Iida S, Iwatsuki-Horimoto K, Maemura T, Kiso M, Scheaffer SM, Darling TL, Joshi A, Loeber S, Singh G, Foster SL, Ying B, Case JB, Chong Z, Whitener B, Moliva J, Floyd K, Ujie M, Nakajima N, Ito M, Wright R, Uraki R, Warang P, Gagne M, Li R, Sakai-Tagawa Y, Liu Y, Larson D, Osorio JE, Hernandez-Ortiz JP, Henry AR, Ciuderis K, Florek KR, Patel M, Odle A, Wong LR, Bateman AC, Wang Z, Edara VV, Chong Z, Franks J, Jeevan T, Fabrizio T, DeBeauchamp J, Kercher L, Seiler P, Gonzalez-Reiche AS, Sordillo EM, Chang LA, van Bakel H, Simon V; Consortium Mount Sinai Pathogen Surveillance (PSP) study group; Douek DC, Sullivan NJ, Thackray LB, Ueki H, Yamayoshi S, Imai M, Perlman S, Webby RJ, Seder RA, Suthar MS, García-Sastre A, Schotsaert M, Suzuki T, Boon ACM, Diamond MS, Kawaoka Y. *Nature*; 603(7902):687-692, 2022
 151. **Mutations in SARS-CoV-2 variants of concern link to increased spike cleavage and virus transmission.** Escalera A, Gonzalez-Reiche AS, Aslam S, Mena I, Laporte M, Pearl RL, Fossati A, Rathnasinghe R, Alshammary H, van de Guchte A, Farrugia K, Qin Y, Bouhaddou M, Kehrer T, Zuliani-Alvarez L, Meekins DA, Balaraman V, McDowell C, Richt JA, Bajic G, Sordillo EM, DeJosef M, Zwaka TP, Krogan NJ, Simon V, Albrecht RA, van Bakel H, García-Sastre A, Aydilto T. *Cell Host Microbe*; 30(3):373-387.e7, 2022
 152. **Robust clinical detection of SARS-CoV-2 variants by RT-PCR/MALDI-TOF multitarget approach.** Hernandez MM, Banu R, Gonzalez-Reiche AS, van de Guchte A, Khan Z, Shrestha P, Cao L, Chen F, Shi H, Hanna A, Alshammary H, Fabre S, Amoako A, Obla A, Alburquerque B, Patiño LH, Ramírez JD, Sebra R, Gitman MR, Nowak MD, Cordon-Cardo C, Schutzbank TE, Simon V, van Bakel H, Sordillo EM, Paniz-Mondolfi AE. *J Med Virol*; 94(4):1606-1616, 2022
 153. **Correlation between Identification of β -lactamase resistance genes and antimicrobial susceptibility profiles in gram-negative bacteria: a laboratory data analysis.** Mushtaq A, Chasan R, Nowak MD, Rana M, Ilyas S, Paniz-Mondolfi AE, Sordillo EM, Patel G, Gitman MR. *Microbiol Spectr*; 10(2), 2022
 154. **Food for thought: eating before saliva collection and interference with SARS-CoV-2 detection.** Hernandez MM, Riollano-Cruz M, Boyle MC, Banu R, Shrestha P, Gray B, Cao L, Chen F, Shi H, Paniz-Perez DE, Paniz-Perez PA, Rishi AL, Dubinsky J, Dubinsky D, Dubinsky O, Baine S, Baine L, Arinsburg S, Baine I, Ramirez JD, Cordon-Cardo C, Sordillo EM, Paniz-Mondolfi AE. *J Med Virol*; 94:2471-2478, 2022
 155. **Longitudinal COVID-19-vaccination-induced antibody responses and Omicron neutralization in patients with lung cancer.** Mack PC, Gomez JE, Rodilla AM, Carreño JM, Hsu CY, Rolfo C, Meshulam N, Moore A, Brody RI, King JC, Treatman J, Lee S, Raskin A, Srivastava K, Gleason CR, de Miguel-Perez D; PARIS/PSP study group; Tcheou J, Bielak D, Acharya R, Gerber DE, Rohs N, Henschke CI, Yankelevitz DF, Simon V, Minna JD, Bunn PA Jr, García-Sastre A, Krammer F, Shyr Y, Hirsch FR. *Cancer Cell*; 40(6):575-577, 2022
 156. **Hotspots for SARS-CoV-2 Omicron variant spread: lessons from New York City.** Ramírez JD, Castañeda S, Ballesteros N, Muñoz M, Hernández M, Banu R, Shrestha P, Chen F, Shi H; PSP Study Group; van Bakel H, Simon V, Cordon-Cardo C, Sordillo EM, Paniz-Mondolfi AE. *J Med Virol*; 94(7):2911-2914, 2022
 157. **RT-PCR/MALDI-TOF diagnostic target performance reflects circulating SARS-CoV-2 variant diversity in New York City.** Hernandez MM, Banu R, Gonzalez-Reiche AS, Gray B, Shrestha P, Cao L, Chen F, Shi H, Hanna A, Ramírez JD, van de Guchte A, Sebra R, Gitman MR, Nowak MD, Cordon-Cardo C, Schutzbank TE, Simon V, van Bakel H, Sordillo EM, Paniz-Mondolfi AE; Mount Sinai PSP Study Group. *J Mol Diagn*; 24(7):738-749, 2022
 158. **Efficacy of antibodies and antiviral drugs against Omicron BA.2.12.1, BA.4, and BA.5 subvariants.** Takashita E, Yamayoshi S, Simon V, van Bakel H, Sordillo EM, Pekosz A, Fukushi S, Suzuki T, Maeda K, Halfmann P, Sakai-Tagawa Y, Ito M, Watanabe S, Imai M, Hasegawa H, Kawaoka Y. *N Engl J Med*; 387(5):468-470, 2022
 159. **Pan-stage real-time PCR for quantitation of Trypanosoma cruzi parasitic loads in blood samples.** Ramírez JD, Cao L, Cruz-Saavedra L, Hernandez C, Castañeda S, Muñoz M, Ballesteros N, Banu R, Shrestha P, Cordon-Cardo C, Sordillo EM, Paniz-Mondolfi AE. *Int J Infect Dis*; 122:310-312, 2022
 160. **Cutaneous leishmaniasis due to Leishmania mexicana in a cat treated with cryotherapy.** Mendoza Y, Colmenares A, Hernández-Pereira CE, Shaban M, Mogollón A, Morales-Panza R, Suarez-Alvarado MJ, Sordillo EM, Kato H, Paniz-Mondolfi AE. *Vet Dermatol*; 33:450-453, 2022
 161. **Discovery and intranasal administration of a SARS-CoV-2 broadly acting neutralizing antibody with activity against multiple Omicron subvariants.** Duty JA, Kraus T, Zhou H, Zhang Y, Shaabani N, Yildiz S, Du N, Singh A, Miorin L, Li D, Stegman K, Ophir S, Cao X, Atanasoff K, Lim R, Mena I, Bouvier NM, Kowdle S, Carreño JM, Rivero-Nava L, Raskin A, Moreno E, Johnson S, Rathnasinghe R, Pai CI, Kehrer T, Cabral EP, Jangra S, Healy L, Singh G, Warang P, Simon V, Sordillo EM, van Bakel H, Liu Y, Sun W, Kerwin L, Teijaro J, Schotsaert M, Krammer F, Bresson D, García-Sastre A, Fu Y, Lee B, Powers C, Moran T, Ji H, Tortorella D, Allen R. *Med (NY)*; 3(10):705-721.e11, 2022
 162. **Murine broadly reactive antineuraminidase monoclonal antibodies protect mice from recent Influenza B virus isolates and partially inhibit virus transmission in the guinea pig model.** Tan J, Chromikova V, O'Dell G, Sordillo EM, Simon V, van Bakel H, Krammer F, McMahon M. *MSphere*; 7(5), 2022
 163. **A robust, highly multiplexed mass spectrometry assay to identify SARS-CoV-2 variants.** Hernandez MM, Banu R, Shrestha P, Gonzalez-Reiche AS, van de Guchte A, Farrugia K, Sebra R; Mount Sinai PSP Study Group; Gitman MR, Nowak MD, Cordon-Cardo C, Simon V, van Bakel H, Sordillo EM, Luna N, Ramirez A, Castañeda SA, Patiño LH, Ballesteros N, Muñoz M, Ramírez JD, Paniz-Mondolfi AE. *Microbiol Spectr*; 10(5), 2022
 164. **Tele-entomology and tele-parasitology: A citizen science-based approach for surveillance and control of Chagas disease in Venezuela.** Delgado-Noguera LA, Hernández-Pereira CE, Ramírez JD, Hernández C, Velásquez-Ortiz N, Clavijo J, Ayala JM, Forero-Peña D, Marquez M, Suarez MJ, Traviezo-Valles L, Escalona MA, Perez-García L, Carpio IM, Sordillo EM, Grillet ME, Llewellyn MS, Gabaldón JC, Paniz Mondolfi AE. *Parasite Epidemiol Control*; 19: e00273, 2022
 165. **tRNA abundance, modification and fragmentation in nasopharyngeal swabs as biomarkers for COVID-19 severity.** Katanski CD, Alshammary H, Watkins CP, Huang S, Gonzales-Reiche A, Sordillo EM, van Bakel H; Mount Sinai PSP study group; Lolans K, Simon V, Pan T. *Front Cell Dev Biol*; 10:999351, 2022
 166. **Impact of SARS-CoV-2 ORF6 and its variant polymorphisms on host responses and viral pathogenesis.** Kehrer T, Cupic A, Ye C, Yildiz S, Bouhaddou M, Crossland NA, Barrall E, Cohen P, Tseng A, Çağatay T, Rathnasinghe R, Flores D, Jangra S, Alam F, Mena N, Aslam S, Saqi A, Marin A, Rutkowska M, Ummadi MR, Pisanelli G, Richardson RB, Veit EC, Fabius JM, Soucheray M, Polacco BJ, Evans MJ, Swaney DL, Gonzalez-Reiche AS, Sordillo EM, van Bakel H, Simon V, Zuliani-Alvarez L, Fontoura BMA, Rosenberg BR, Krogan NJ, Martinez-Sobrido L, García-Sastre A, Miorin L. *bioRxiv*; Nov 30, 2022
 167. **Development and characterization of a new monoclonal antibody against SARS-CoV-2 NSP12 (RdRp).** Meng W, Guo S, Cao S, Shuda M, Robinson-McCarthy LR, McCarthy KR, Shuda Y, Paniz Mondolfi AE, Bryce C, Grimes Z, Sordillo EM, Cordon-Cardo C, Li P, Zhang H, Perlman S, Guo H, Gao SJ, Chang Y, Moore PS. *Epub 2022 Nov 2, 2022*

168. [Evaluation and validation of an RT-PCR assay for specific detection of monkeypox virus \(MPXV\)](#). **Paniz-Mondolfi A**, Guerra S, Muñoz M, Luna N, **Hernandez MM**, Patino LH, Reidy J, Banu R, Shrestha P, Liggayy B, Umeaku A, Chen F, Cao L, Patel A, Hanna A, Li S, Look A, Pagani N, Albrecht R, Pearl R, Garcia-Sastre A, Bogunovic D, Palacios G, Bonnier L, Cera F, Lopez H, Calderon Y, Eiting E, Mullen K, Shin SJ, Lugo LA, Urbina AE, Starks C, Koo T, Uychiat P, Look A, van Bakel H, Gonzalez-Reiche A, **Betancourt AF**, Reich D, **Cordon-Cardo C**, **Simon V**, **Sordillo EM**, **Ramirez JD**. Epub Nov 1, 2022
169. **Polydorides AD**, **Paulsen JD**. Multiple post-publication recommendations for Faculty Opinions: Gastroenterology & Hepatology, IBD section.
170. **Paulsen JD**, **Polydorides AD**. **Ulcerative proctitis**. PathologyOutlines.com website. July 18, 2022.

Book Chapters:

1. **Iancu-Rubin C**, Cantor A. Thrombocytopoiesis, Chapter 29 in “Hematology, Basic Principles and Practice”, Eighth Edition, 2022. Elsevier; Editors: Hoffman, Benz, Silberstein, Heslop, Weitz, Dalama & Abutalib.
2. Marcelino BK, Mascarenhas J, **Iancu-Rubin C**, Kremyanskaya M, **Najfeld V**, Hoffman R. Essential Thrombocythemia, Chapter 71 in “Hematology, Basic Principles and Practice”, Eighth Edition, 2022. Elsevier; Editors: Hoffman, Benz, Silberstein, Heslop, Weitz, Dalama & Abutalib.

Media Resources:

Baskovich B. Interactive Unknowns Website with IHC/molecular ordering <https://www.drdoubleb.com/crowdunknowns/>

Invited Talks – External

Nadejda M. Tsankova, MD, PhD

-Cutting Edge Pathology: Emerging Disease and Advancement of Molecular Research in Autopsy Investigation” (invited talk, senior co-organizer and presenter), CAP October 2022

-Developmental programs coopted in glioblastoma pathogenesis - in search for new therapeutic vulnerabilities” (invited talk, UTSW Neuroscience Seminar Series / Diversity Ambassador Series), October 4th, 2022

-Brain Institute Cell Atlas Workshop, High Throughput Imaging Characterization of Brain Cell Types and Connectivity (invited panelist / moderator), December 14-15, 2022

-High-Resolution Transcriptomics Informs Glial Pathology in Human Temporal Lobe Epilepsy” (senior author, selected for presentation), AANP June 2022

-Multi-omic analysis of the glioblastoma epigenome and transcriptome informs of migratory interneuron-like developmental regulators” (senior author, selected for presentation), SNO November 2022

-An atlas of late prenatal human neurodevelopment resolved through single-nucleus transcriptomics” (presenter), BICAN UM1 workshop, Zuckerman Institute, Dec 1, 2022

Jane Houldsworth, PhD

- The 5 Year Evolution in Clinical Molecular Diagnostic Testing of Monoclonal Gammopathies at the Mount Sinai Health System: May 2022, Quest Diagnostics (Virtual-Chantilly, VA)

- Incidental Findings from Molecular Profiling of Malignancies: I Need a Genetic Counsellor! Cancer Genetics: July 2022, BGC-India Annual Conference 2022 (Board of Genetic Counseling-India) (Virtual-Hyderabad, India)

Jamie Walker, MD, PhD

- “Spatial protein expression changes identified in the hippocampi of resistant and resilient individuals”, Alzheimer’s Association International Conference (AAIC), San Diego, July 2022

- “A comparison of the opposing metabolic signatures of AD and glioblastoma”, Alzheimer’s Disease and Parkinson’s Disease (AD/PD) Conference, Barcelona, March 2022

Yuxin Liu, MD, PhD

- “Everything you wanted to know about High Resolution Anoscopy” Patient Seminar, July 2022 (Online).

- “Primary Anal Cancer Screening Results from Women Living with Human Immunodeficiency Virus”, International Anal Neoplasia Society Annual Scientific Meeting, New York City, June, 2022

- “Reading between the lines – Helpful hints in understanding pathology reports”, International Anal Neoplasia Society WebRounds, Feb, 2022 (online).

Amy Duffield, MD, PhD

- “Can’t-Miss Diagnoses: Using Flow Cytometry to Identify Hematolymphoid Neoplasms with Genetic Abnormalities and Prognostic Significance,” Short Course with Dr. Laura Wake; College of American Pathologists Annual Meeting, New Orleans, LA, October 9, 2022

- “Non-canonical FLT3 mutations in Acute Myeloid Leukemia: Implications for Therapy and Prognosis,” Pathology Grand Rounds, Virginia Commonwealth University, September 19, 2022.

William Westra, MD

- “Squamous cell carcinomas of the head and neck”. Update Course in Diagnostic Pathology, 13th Annual Midwestern Conference, Medical College of Wisconsin, Milwaukee, WI, September 23, 2022

Swan Thung, MD

- “The changing face of Liver Pathology” and Visiting Professor, Department of Pathology, Albany Med, Albany, NY, April 4 and 5, 2022

- “Mimickers of Hepatocellular Carcinoma” for Liver Tumors of Unidentified Primary: are all HCC or HCC-CCA? Hepatoma Research Webinar, April 22, 2022.

- “NUT Carcinoma” and “COVID-19 Liver Diseases”, International Liver Pathology Study Group, Lausanne, Switzerland, September 7-10, 2022.

- “Molecular Pathology of HCC”, Liver Cancer: Up-dated Review of Clinical Management and Translational Science, Icahn School of Medicine at Mount Sinai, New York, December 16, 2022.

Brandon Veremis, DDS

- Using the Power of Teams to Drive Learning. Center for Research on Learning and Teaching, University of Michigan. Ann Arbor, MI, October 26, 2022.

- Artificial Intelligence: Current State in Medicine and Implications for Dentistry. Ninth District Dental Association (NYSDA), May 25, 2022.

Margaret Brandwein, MD

- “Intraoperative Resection Margins”, Miami Cancer Institute, Baptist Health South Florida, Head and Neck Cancer, October 2022.

“Hot Topics: Early Oral Cavity Cancer”, ASTRO: Multidisciplinary Head and Neck Cancers Symposium Mount Pelion Intensive Courses in Pathology, Hellenic Division IAP: Intensive Course Head and Neck Pathology.

“Risk Stratification in Oral Cancer”

“Updates in HPV-Mediated Oropharyngeal Cancer”

“Laryngeal Cancer”

“ATA-ROR for Well-differentiated Thyroid Cancers”

Mary Beth Beasley, MD

- “MET testing in NSCLC”. Industry Symposium invited speaker, European Congress of Pathology, Basel, Switzerland September 5, 2022.

- “Interstitial Lung Abnormalities”, Pulmonary Pathology Society Meeting, Cork, Ireland June 26, 2022.

Stephen Ward, MD, PhD

- Histopathological Diversity, Novel Molecular Biomarkers and Role of Tissue Sampling for Immunotherapy of HCC. Immuno-Oncology (IO) meets Interventional Oncology (IO) – Tumor Microenvironment as the Organizing Principle of HCC Diagnosis and Therapy Research Consensus Panel. AstraZeneca and the Society of Interventional Oncology, May 22, 2022 (online)

- Digital Image Analysis in Prediction of Midgut and Pancreatic NET Outcomes. NETRF Research Symposium, Boston, MA, Nov 18, 2022.

M. Isabel Fiel, MD

- Prevalence, Histopathological Features, and Reporting of Acquired Chronic Allograft Injury. 2022 Banff-CST Joint Meeting, Banff, Alberta, Canada, September 20, 2022

- Approach to Antibody-Mediated Rejection: The Point of View from the United States. International Liver Transplantation Society, Istanbul, Turkey, May 4, 2022.

- Phenotyping Rejection: Pathology and Beyond. Cutting Edge of Transplantation, American Society of Transplantation, Virtual Meeting, April 7, 2022

MEET THE NEW FACULTY

If there's one constant in life, it is change. This truism is definitely true for the Department of Pathology at Mount Sinai, which has seen an influx of new faculty joining the department on a regular basis. Here follows some brief introductions to the new attendings who have joined the department over the last couple of years.



Brett Baskovich, MD

Dr. Baskovich is a new faculty member based in Molecular Pathology, with the titles of Associate Professor of Pathology and Assistant Director of

Molecular Pathology. Dr. Baskovich earned his MD at the University of Florida and then stayed on at University of Florida for his Residency training before getting his Fellowship in Molecular Genetic Pathology at Montefiore/Albert Einstein College of Medicine. Dr. Baskovich is interested in studying genomics and personalized medicine and in exploring creative ways to teach the next generation of pathologists. Outside of work, Dr. Baskovich really enjoys motorcycling, video production, and music. Those interested in seeing examples of his creative education can find them at both the Pathology Unknowns website he maintains <https://www.drdoubleb.com/unknowns/> and his YouTube page <https://www.youtube.com/@DRdoubleB>.



Victoria Collins, MD

Dr. Collins is a new faculty member who splits her time between the GYN and Breast divisions, with the title of Assistant Professor of Pathology. Dr. Collins

earned her MD at University of Colorado. Dr. Collins then went down to New Orleans and Tulane University for her Residency training, before coming up to New York City and then trained here as our GYN Pathology Fellow from 2020-2021. When at work, Dr. Collins is interested in studying HER2 expression in endometrial cancer. Outside of work, Dr. Collins is a fan of tennis, hiking, and camping. Growing up in rural South Dakota, Dr. Collins had never actually come to New York before until she came here to interview for fellowship. Yet since coming here, Dr. Collins has fit right in at New York City and at Mount Sinai.



Lisa Brailey, MD

Dr. Brailey is a new member of the Tumor Cytogenomics division, where she is Assistant Professor and Associate Director of Tumor Cytogenomics. Dr. Brailey got her

MD at University of Connecticut. She then got her residency at the University of North Carolina and a Fellowship in Genetics at Yale. Dr. Brailey's research interests lie in cancer cytogenetics and medical genetics. She's also interested in improving housestaff education. Outside of work, Dr. Brailey has a wide variety of interests: gardening, town planning, origami, violin, and Catan. She is also not afraid to dig deep when needed; when there was a flood under Dr. Brailey's garage, she personally jackhammered the floor out herself!



Timothy Richardson, DO, PhD

Originally born and raised in Saudi Arabia, Dr. Richardson has come a long way from the Middle East. Dr. Richardson is now here at Mount Sinai as an Associate

Professor in our Neuropathology division. Dr. Richardson went to medical school at the University of North Texas Health Science Center. Dr. Richardson stayed in Texas for awhile, doing both his residency training and his Neuropathology Fellowship training at the University of Texas Southwestern Medical Center before eventually being tempted up north. While at Mount Sinai, Dr. Richardson is interested in understanding the molecular basis of glial neoplasms as well as neurodegenerative disorders, as well as doing research in both hippocampal pathology and neuromuscular pathology. Outside of Mount Sinai, Dr. Richardson enjoys biking, running, rock climbing, and going on adventures with his wife, a fellow new faculty member Dr. Jamie Walker, and their dog Yogi.



Jamie Walker, MD, PhD

Dr. Walker is a new Associate Professor in the division of Neuropathology. She earned her MD at UT Southwestern, where she also completed her Residency

training. Dr. Walker went north to Northwestern to complete her Neuropathology Fellowship. Dr. Walker's research focuses on understanding the mechanisms by which some people resist the development Alzheimer diseases neuropathologic change (including those with primary age-related tauopathy, PART) or are cognitively resilient in the face of Alzheimer-type changes. She is also interested in the differing spatial distribution of p-tau in various neurodegenerative disorders and what drives these differences in distribution. Beyond her research interests, Dr. Walker is an avid tennis player, having played NCAA tennis at UC San Diego, and also enjoys running, rock climbing, anything brain related, and is also a fan of adventures with her husband Dr. Timothy Richardson and their dog Yogi.



Matthew Shapiro, MD

Dr. Shapiro is the newest attending in the division of Hematology & Coagulation Core Laboratories, where he is Assistant Professor. Dr. Shapiro earned his

MD at St. George's University School of Medicine and completed his residency in Clinical Pathology at Mount Sinai. Dr. Shapiro is interested in laboratory management, QI/QA initiatives, and financial management, in line with his former business background. When he's not in the lab, Dr.

Shapiro can either be found on the basketball court, where he is a major enthusiast, or traveling the world! He is also a very proud and loving uncle to three adorable nieces!



Hemant Joshi, PhD

Dr. Joshi is originally from Nepal and always lived in places of high altitude and surrounded by mountains. For Dr. Joshi, it feels interesting to be in New York City

and be near the ocean now. Dr. Joshi is a new Assistant Professor in Hematology / Hematopathology. Dr. Joshi earned his PhD at the University of Utah. After graduating, he then pursued a post-doctoral fellowship in Clinical Immunology from ARUP Laboratories and University of Utah Department of Pathology. He is interested in primary immunodeficiency and developing new assays. Outside of the lab, Dr. Joshi enjoys both playing and watching soccer.



Cyrus Hedvat, MD, PhD

Dr. Hedvat, Associate Professor of Pathology, is our new Associate Director of the Center for Computational and Systems Pathology, in the division of

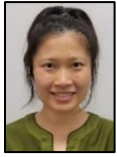
Digital and Computational Pathology. Dr. Hedvat received his MD from Georgetown University Medical School. His AP only residency training was done at Brigham and Women's Hospital and his Oncologic Surgical Pathology Fellowship was done at Memorial Sloan Kettering Cancer Center. At Mount Sinai, Dr. Hedvat is doing research involving digital/computational pathology, cancer biomarkers, and immune-oncology. When he's not involved with digital pathology, Dr. Hedvat enjoys reading, cooking and travel. A particular favorite destination for traveling are the Disney theme parks; in one year, Dr. Hedvat visited Disney theme parks in three countries!



Guangjing "John" Zhu, MD, PhD, Our newest attending based at Mount Sinai West is Dr. Guangjing "John" Zhu, who joins after completing his Gastrointestinal Pathology

Fellowship at Mount Sinai as Assistant Professor of Pathology. Prior to his fellowship and attending position, Dr. Zhu completed his MD at Xi'an Jiaotong University School of Medicine in Shaanxi, China in 2006 and, after also completing his PhD there, moved to the United States, where he completed his residency at University of Maryland. Dr. Zhu has research interests in neuroendocrine neoplasms, gastrointestinal and genitourinary neoplasms, cancer markers development, and next generation sequencing. Outside of work, Dr. Zhu

has a broad range of interests: sports, including, among others, soccer, tennis, and volleyball, travel, calligraphy, music. Part of why Dr. Zhu has so many interests is that he likes to learn one new thing a year, with 2023 being the year he learns piano along with his daughter, Nina.



Jennifer Zeng, MD

Dr. Zeng is the newest attending in the Breast Pathology division, joining as Assistant Professor, Pathology and as the new Breast Pathology Fellowship Director.

Dr. Zeng received her MD from SUNY Upstate Medical University. She then did her AP/CP residency at NYU Langone Medical Center and then went on to do both an Oncologic Surgical Pathology Fellowship and a Breast Pathology Fellowship at Memorial Sloan Kettering Cancer Center. Dr. Zeng is interested in studying both breast cancer and how artificial intelligence can enhance the pathologists' role in clinical care management. Outside of work, Dr. Zeng likes to spend her time outside, spending her time raising egg-laying chickens, growing 14 fruit trees, and currently learning how to bonsai a tree. She's also the mother a 2.5 year old precocious little boy who currently likes to take apart the house and an adorable 1 year old girl who is Dr. Zeng's sunshine.



Aryeh Stock, MD

Dr. Stock joins us from completing his AP/CP residency training here at Mount Sinai to currently being an Instructor for the Autopsy division. Dr. Stock

got his MD at Icahn School of Medicine at Mount Sinai and, for the 2023-2024 academic year, he will actually go back to being a Fellow at Mount Sinai and complete a Gastrointestinal Pathology Fellowship here. Dr. Stock has his research interests in the RECOVER autopsy cohort, as well as in Bioinformatics and Natural Language Processing. This interest in Bioinformatics was seen early on in Dr. Stock's residency training, where, as a first year resident, he designed computer programs to automate the process of parsing narrative pathology reports and extracting data. When not working academically, Dr. Stock loves biking, reading, and playing guitar.



Folagbayi Arowolo, PhD

Born and raised in New York City, Dr. Arowolo has settled back into New York City here at Mount Sinai, where he is the new Assistant

Director of Clinical Chemistry and Assistant Professor of Pathology. Dr. Arowolo earned his PhD at the University of Wisconsin-Madison and then did his Postdoctoral Clinical Chemistry Fellowship at the University of California-San Francisco. As Assistant Director of Clinical Chemistry, Dr. Arowolo is interested in studying clinical mass spectrometry and clinical informatics. Outside of the lab, Dr. Arowolo love woodworking,

basketball, gardening, and playing FIFA video games.



Wei Cai, MD, PhD

Dr. Wei Cai joined the faculty in the Department of Pathology on September 1, 2022. Dr. Cai is the Director of the Clinical Flow Cytometry laboratory. She holds a

NYS Certificate of Qualification covering the category of Cellular Immunology malignant and non-malignant leukocyte immunophenotyping. Dr. Cai received her MD from Shenyang Medical College and PhD in Cell Biology in 2001 from China Medical University, followed by postdoctoral training in Japan and US. Her research field of biomedical science including ovarian cancer, colorectal and gynecologic tumor, orthopedics, hematology and organ transplantation. With 16 years of clinical laboratory experience, 11 years laboratory management experience, Dr. Cai has acquired a wealth of knowledge on all aspects of clinical flow cytometry laboratory, from the technical aspects of various tests, to data analysis, reporting, quality assurance, regulatory compliance, personnel and equipment management. Outside of Mount Sinai, Dr. Cai loves traveling, cooking or gardening.



Shuhua Cheng, PhD, DABCC.

Dr. Cheng comes to Mount Sinai as Assistant Professor of Pathology and Assistant Director of Molecular Pathology. Before joining Mount Sinai, Dr. Cheng

had more than 12 years of clinical experience in molecular pathology, including academic studies and training/educating other clinical or laboratory professionals at Weill Cornell Medicine. Over the years, Dr. Cheng has developed, validated and implemented a variety of complex molecular assays in clinical settings, including several New York State approved NGS panels for cancer patients. One of them is ultrasensitive, detecting one tumor cell out of one million normal leukocytes, enabling the identification of a valuable window of time to optimize care for patients with B cell malignancies before overt relapse. Dr. Cheng's research interests include molecular biomarkers in oncology. He is active in He is active in publishing his work in leading professional journals, including publications in *New England Journal of Medicine*, *Blood*, *eLife* and *Leukemia*, and is also a co-inventor on three patents. Access and citation to his publications have been reached more than 140,000 and 1550 (per Google Scholar), respectively. Outside of work, Dr. Cheng enjoys activities like walking, playing basketball/tennis ball and cooking.



Amy Duffield, MD, PhD

Dr. Duffield joins Mount Sinai as Professor Pathology and as the new Director of Hematopathology. Dr. Duffield earned both her MD and PhD from Yale University and

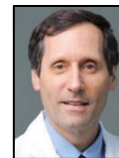
then went to Johns Hopkins University for both her AP/CP Residency and for her Hematopathology Fellowship. Dr. Duffield is interested in studying acute leukemia/flow cytometry. Dr. Duffield loves to travel and both her and her husband walk their cats on leashes, which her husband wrote about in a 2018 NY Times op-ed (<https://www.nytimes.com/2018/12/05/opinion/walk-cat-leash.html>)



Barbara Sampson, MD

Dr. Sampson wears many titles at Mount Sinai: Professor of Pathology, Vice Chair for Strategic Laboratory Initiatives and Academic Affairs, and since July 1,

2022, Program Director for the Mount Sinai Hospital Residency Program. Dr. Sampson got her MD from Weill Cornell. She then went to Boston and did her AP/CP Residency at Brigham and Women's Hospital before coming back to New York City for fellowships in Forensic Pathology and Forensic Neuropathology at the Office of the Chief Medical Examiner of the City of New York, where she later became the Chief Medical Examiner. Dr. Sampson's academic interests are in autopsy and cardiovascular pathology. When she's not at Mount Sinai, Dr. Sampson enjoys running, yoga, meditation, art, and going to see live theater. She is also certified in SCUBA.



Mark Lifshitz, MD

Over 20 years ago, when Dr. Lifshitz was at NYU, he had occasion to work closely with colleagues at MSH during the creation of Mount Sinai- NYU

Health. Today, he's happy to be at Mount Sinai working with some of the same people, this time in the roles of Clinical Professor of Pathology and Director of Clinical Chemistry at Mount Sinai Morningside, Mount Sinai West, and Mount Sinai Beth Israel. Dr. Lifshitz earned his MD at Albert Einstein College of Medicine. He then went on to do his AP/CP Resident at NYU Medical Center, followed by a Blood Banking/Immunohematology Fellowship at New York Blood Center. Dr. Lifshitz is passionate about work relating to clinical laboratory management and automation and instrumentation. When he's not in the Mount Sinai lab, Dr. Lifshitz loves hiking, biking, and, along with his wife, trying to keep pace with his grandchildren and energetic labradoodle.

Amanda Krausert, MD

Dr. Krausert is the new director of the autopsy service. She got her MD from University of Wisconsin School of Medicine and Public Health, completed her AP/CP residency at NYU, and then went on to do fellowships in Forensic and Pediatric Pathology. She formerly worked at the Office of Chief Medical Examiner of the City of New York. When she is not working she leans into her status as a cat lady (but unlike dog people, she likes all animals)



Kurt Farrell, PhD

After completing his Post Doctoral training here at the Icahn School of Medicine, Dr. Farrell is staying on as Assistant Professor of Pathology in the

Neuropathology division. Dr. Farrell earned his PhD from Cleveland State University and The Cleveland Clinic Foundation. Dr. Farrell is interested in using machine learning and computer vision models on whole slide digitized images to generate quantitative features of neurodegeneration to be leveraged in large genomic and transcriptomic studies. When not in the lab, Dr. Farrell is a member of the national ski patrol and has been an avid skier since he was four years old, despite growing up in northeastern Ohio, an area lacking in proper mountains. In addition to skiing, Dr. Farrell enjoys running in Central Park and watching various Cleveland sports teams compete, as well as Ohio State Buckeye's athletics. Dr. Farrell is not the only decorated member of his family: growing up, he had a pet rabbit which won both a blue ribbon and the county fair.

Editorial Team

- Dr. M. Isabel Fiel
- Dr. Shafinaz Hussein
- Dr. Ippolito Modica
- Dr. Camelia Iancu-Rubin
- Dr. Fran Dembitzer
- Dr. Matthew Shapiro
- Scott Goldfarb
- Allan Esperida

FACULTY PROMOTIONS 2022

FACULTY NAME	PROMOTION RANK
Dr. Ling-Shiang (Felix) Chuang	Assistant Profesor
Dr. Kurt Farrell	Assistant Professor
Dr. Jane Houldsworth	Professor
Dr. Camelia Iancu-Rubin	Professor
Dr. Alberto Paniz-Mondolfi	Associate Professor



Department of Pathology, Molecular and Cell-Based Medicine

1468 Madison Avenue, Annenberg Building, 15th floor, New York, NY 10029

Website <https://icahn.mssm.edu/about/departments/pathology>

Twitter/[@MountSinai_Path](https://twitter.com/MountSinai_Path)

YouTube/[@NYCPathology](https://www.youtube.com/@NYCPathology)

Facebook/[MountSinaiPathology](https://www.facebook.com/MountSinaiPathology)

Department of Pathology



MOUNT SINAI HEALTH SYSTEM – ORGANIZATIONAL CHART (January 2023)

DEPARTMENT OF PATHOLOGY, MOLECULAR AND CELL-BASED MEDICINE

ISMMS

MSHS

