Yale Pathology Labs is pleased to share our 2022 calendar with you. The mission of Yale Pathology has always revolved around innovation, collaboration, and outstanding patient care, so within a few months of the pandemic, we established COVID-19 testing and offered our service to not only the entire Yale New Haven Health System, but to our local communities and other healthcare facilities in Connecticut and beyond. By August 2020, we received emergency use authorization from the FDA for an innovative COVID-19 test using saliva, SalivaDirect™, developed in our Molecular Diagnostics Lab in collaboration with scientists in the Yale School of Public Health. We have now established whole genome sequencing testing for SARS-CoV2 using either nasal swabs or saliva samples.

Our clinical practice continues to thrive with the support of our outreach services and liaison team. We introduced new molecular and genomic testing services, continue to expand our client base to more physicians in the Northeast Medical Group and beyond, and grow our international outreach. In addition to our well-established Molecular Diagnostics and Tumor Genotyping evaluations, which use next generation sequencing (NGS)-based assays to guide therapeutic decisions in many solid tumors, we have developed our NGS panel for the targeted evaluation of borderline thyroid lesions (ThyroSureNGS®). This test complements our cytologic evaluation of fine needle aspirates (FNA) and allows physicians to select the correct therapy more decisively for patients with thyroid neoplasms. Our GYN pathology team is offering molecular genotyping test for molar gestations.

On other fronts, we were the first laboratory in our region to provide FDA-approved PDL-1 testing, a key diagnostic for implementing immunotherapy for patients diagnosed with cancer, and have continued to refine and expand this capability as it is applied to a wider variety of tumors. We have also expanded our evaluation methodologies for the detection of microsatellite instability (MSI) to a wide array of tumors found well beyond those of the gastrointestinal tract. This testing allows physicians to select additional and often more effective therapies for their patients.

And along with Yale Medicine and Yale New Haven Health, we continue to refine the reporting options for pathology and laboratory results within the Epic® electronic medical record. Clients using Epic® can receive their Pathology reports through this pathway as well as through RELAY, our own web-based office-reporting tool.

These advances and a robust clinical focus on quality and patient safety continue our long Yale tradition of introducing leading technologies and scientific discoveries for the benefit of patient care. Yale Pathology has many “firsts” to its credit. Yale's exceptional diagnostic programs offer patients the most accurate, advanced, safest, and most cost-effective pathology and laboratory evaluations available. We make these easily accessible to all physicians and patients. Our pathologists continue to thrive at the intersection of basic science and clinical care. We are making exciting discoveries on cancer biology, epigenetics, computational pathology, digital pathology, and biology/pathology of aging.

As the COVID-19 pandemic’s impact continues in the scientific community and around the globe, the importance of the work being done at Yale Pathology cannot be overstated. Our consultative practices are available within the Yale New Haven Health System and at Yale Health and are available to all regardless of location through our robust outreach program that is specifically designed to serve physicians in their offices. Details of how to access the services of Yale Pathology Labs are presented herein.

Sincerely,

Chen Liu, MD, PhD
Anthony N. Brady Professor of Pathology
Chair, Department of Pathology
Yale School of Medicine
Chief of Pathology, Yale New Haven Hospital
Outreach Services

Yale Pathology Labs know that test results are integral to the daily routine of your practice. From diagnosing patients to selecting treatments, your lab service affects nearly every patient. When you choose Yale Pathology Labs as your service provider, you choose the latest technology, outstanding customer service, and a team of premier pathologists.

Outreach customer service representatives are available between 8 a.m. and 5 p.m. EST, Monday through Friday.

Our knowledgeable and efficient staff is ready to assist you with questions about ordering, billing, shipping, and reporting. Our service team will thoroughly address your needs, concerns, or questions and can be reached at 877-YALE LAB (877-925-3522) or by email at yalepathologylabs@yale.edu.

Final Reports

For most locations, patient final reports are delivered to your practice by our courier, Lab Logistics. Patient reports are also available for physicians to access immediately via the Yale New Haven Health System Epic® interface or through our secure web-based software solution, RELAY (Remote Electronic Labs at Yale). For information about access to RELAY, please contact our customer service team.

Follow-up Services Available from Our Cytology Laboratory

- Annual patient reminder letters
- 6-month no follow-up reminders
- Normal Pap result letters
- Monthly reports customized to the needs of your practice

Participation in Managed Care Plans

Yale Pathology Labs accept most health insurance plans. For a complete list of managed care health plans in which we participate, please visit Yale Medicine's website at www.yalemedicine.org/patient-tools/insurance.

Billing

Yale Pathology Labs will bill the insurance company or financially responsible party directly, per the requisition form that accompanies each specimen submitted to our lab. Please note that patients are responsible for any co-payments, deductibles, or co-insurance under their plan.

Transport for Specimens

In our primary service area, Lab Logistics is our dedicated courier service for all routine or STAT laboratory specimen pick-ups. Lab Logistics also handles supply orders and deliveries. Please contact them directly for a specimen pick-up and for supplies, at: Tel: 833-215-7628 Fax: 888-370-5356

If you are outside of our courier service area, whether in-state, nationally, or globally, your practice can submit specimens through our pre-paid FedEx service. Please contact customer service for more information.

Quality Assurance Initiative

Yale Pathology Labs are dedicated to providing quality patient care in an effective, efficient, and timely manner. We maintain extensive quality assurance and improvement programs consisting of a formal, multifaceted, and systematic approach for measuring and enhancing patient safety and improving the nature of patient care. In addition to satisfying all accreditation and licensing requirements, our quality assurance programs go well beyond the minimum as a leader in quality improvement (QI) and quality monitoring methodologies.

Consultation Services

Yale Pathology Labs strive to provide both prompt and timely diagnoses and specialized studies applicable to specific diseases. The expertise of our pathology subspecialists and the diversity of surgical specimens submitted for evaluation also provide an excellent environment for research and training. Consultations and requests for second opinions are welcome.

If you are a patient at another hospital or a physician and would like to have pathology slides sent to Yale Pathology for an upcoming appointment or for a second opinion, please send slides along with the final report to:

Yale Surgical Pathology
Medical School Receiving
200 South Frontage Road
YNHH EP2-631
New Haven, CT 06520

Please contact our service team at 877-YALE LAB (877-925-3522) for detailed information about how to send specimens and other material necessary for consultation on an individual patient's case.
Yale Pathology Labs

Bridgeport / Milford Faculty

Paul Cohen, MD, Associate Professor of Clinical Pathology
Chair, Bridgeport Hospital Pathology
Site Director, Yale Pathology Residency Program at Bridgeport Hospital

William B. Laskin, MD, Associate Professor of Clinical Pathology
Director, Bone and Soft Tissue Pathology

Christine Minerowicz, MD, Assistant Professor of Pathology
Milford Director, Blood Drive Director

Harold Sanchez, MD, Assistant Professor of Pathology
Director of Autopsy

Tong Sun, MD, PhD, Assistant Professor of Pathology

Minghao Zhong, MD, PhD, Associate Professor of Pathology

Yuanxin Liang, MD, Assistant Professor of Pathology

Hao Wu, MD, Assistant Professor of Pathology

Saint Raphael Campus Faculty

He Wang, MD, Associate Professor of Pathology

Angelique W. Levi, MD
Director, Pathology Outreach
angelique.levi@yale.edu

Kevin Schofield, BS, CT(ASCP)
Associate Director
Outreach Clinical Operations
kevin.schofield@yale.edu

Stephanie Weirsman
Director, Outreach Business Development, Department of Pathology
stephanie.weirsman@yale.edu

SERVING ALL CONNECTICUT COUNTIES
Yale Pathology Tissue Services (YPTS) is a research tissue provider service. Our mission is to provide the maximum amount and quality of human tissue for research at Yale University without impacting diagnostic quality, accuracy, and safety in anatomic pathology. Since 2007, we have become an internationally known service provider for a wide range of human and animal tissue materials and services. We provide access to Yale Pathology’s human tissue archives, as well as highly annotated human tissue microarrays and CLIA-certified advanced tissue analysis. We also have piloted some new assays prior to inclusion in our clinical labs. Some Yale investigators require fresh/frozen tissue for their research, and we facilitate the collection and delivery of that tissue. Finally, YPTS assists ongoing clinical trials at Yale by providing patient tissue to allow investigators to enroll patients on trials requiring tissue for inclusion.

**Our Services**

- **Antibody Validation**
  - Use of AQUA analysis software, which provides automated, quantitative, standardized objective results
- **Antibody Optimization and Titration**
- **Development of Index Arrays**
  - Assay development and standardization, including generation of SOPs and reproducibility/control arrays
  - Biomarker-specific index array development
- **Cohort Analysis**
  - Cohort analysis using TMAs for high-throughput discovery work
- **RNA Biomarker Analysis**
  - In-situ quantification of mRNA levels
- **Multiplexing Channels**
  - Quantification of protein expression levels in various tissue types
- **Customized Services Available**

**Our Team**

David Rimm, MD, PhD, Director, YPTS
Patricia Gaule, PhD, Director, Specialized Translational Services
Nay Nwe Nyein Chan, PhD, Associate Research Scientist
Yan Song, Research Assistant

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The Yale Pathology SARS-CoV-2 Testing Program provides exciting additions to Yale Pathology Labs’ molecular test offerings: SalivaDirect™ for COVID-19.

**The Yale Pathology SARS-CoV-2 testing program** provides a timely patient-care service for the clinical detection of the virus among individuals who may have been exposed to COVID-19. Yale Pathology Molecular Diagnostics is a CLIA-certified laboratory, accredited to perform high-complexity tests. The Lab is highly proficient, with enriched experience in developing and validating molecular diagnostic methods for clinical practice.

In response to the urgent need of enhancing testing capacity due to the COVID-19 pandemic in March 2020, the Yale Pathology SARS-CoV-2 testing program established and validated two high-throughput PCR-based testing platforms and one fast-turnaround method for the virus detection, including the FDA EUA-authorized platform TaqPath™ COVID-19 Combo Kit of the ThermoFisher™ and the SalivaDirect™ methodology (an established platform validated through a joint collaboration between Yale School of Public Health and Yale Pathology Molecular Diagnostics Service). In both COVID-19 testing platforms, SARS-CoV-2 detection primer and probe set(s) are designed to target specific RNA gene sequences of the virus in respiratory specimens (most commonly nasal swab) as recommended for testing by the FDA and public health authority guidelines. Since April 1, 2020, the Yale Pathology SARS-CoV-2 testing program has been serving the Yale Health System, the Yale-New Haven Hospital System, and numerous nursing homes in Southern Connecticut.

In addition to our COVID-19 test menu, our Molecular Diagnostics Lab has a variety of test panels that serve multiple specialties. Tests of interest include:

**Diagnostic PCR Tests**
- BRAF mutation
- T and B cell rearrangement
- FOXL2 mutation
- KRAS mutation
- Mycobacterium Tuberculosis
- Tissue DNA genotyping (gestational trophoblastic disease and tissue identity testing)
- MLH1 promoter methylation
- MSI analysis

**PCR Companion Diagnostic Tests**
- EGFR mutation
- KIT(c-kit) mutation
- MGMT promoter methylation

**Diagnostic FISH tests**
- BCL2, BCL1, BCL6 rearrangement (lymphomas)
- EWS rearrangement (soft tissue tumors)
- SYT rearrangement (synovial sarcoma)
- TFE3 rearrangement of renal tumors
- UroVysion (urothelial carcinoma)
- MYC rearrangement (lymphomas)
- MDM2 amplification (sarcomas)
- Chromosome 1p/19q deletion (oligodendroglioma)

**FISH Companion Diagnostic Tests**
- EGFR gene amplification
- HER2 amplification
- ALK rearrangement
- ROS rearrangement
- MET amplification
- FGFR1 amplification
- RET rearrangement

**Next-generation Sequencing Test**
- Yale ThyroSure NGS Analysis (thyroid FNA specimen)

**Our Team**

Pei Hui, MD, PhD, Director
Karim Finberg, MD, PhD
Joanna Gibson, MD, PhD
Zenta Walther, MD, PhD
Minghao Zhong, MD, PhD
Clinical Faculty

Rita Abi Raad, MD, Assistant Professor of Pathology. Clinical interests: cytopathology, gynecologic pathology.

Adeboulos Adegunrin, MD, Professor of Pathology; Director, Cytopathology; Director, Cytology Laboratory; Director, Anatomic Pathology Elective Program, Pathology. Clinical interests: oncologic pathology, urologic pathology, cytopathology.

Guoping Cai, MD, MS, Professor of Pathology; Associate Director of Cytopathology, Pathology. Clinical interests: fine needle aspiration (FNA), cytopathology, urologic pathology, thoracic pathology.

Jocelyn Chandler, MD, Assistant Professor of Pathology. Clinical interests: cytopathology, hematopathology.

Anjela Galan, MD, Associate Professor of Dermatology and Pathology. Associate Director, Dermatopathology Fellowship. Clinical interests: melanocytic skin neoplasms, soft tissue tumors, general neoplastic and non-neoplastic dermatopathology.

Deborah Alden, MD, Professor of Pathology; Director, Cytopathology and Anatomic Pathology, Pathology. Clinical interests: breast and gynecologic pathology, soft tissue sarcoma.

Mingkui Chen, Assistant Professor of Pathology. Clinical interests: Clinical interest: breast and gynecologic pathology, soft tissue sarcoma.

Potar Gershovich, MD, MHA, Associate Professor of Clinical Pathology, Director, Section of Pathology Informatics and Cancer Data Science, Pathology. Interests: clinical systems engineering, information visualization, DNA sequencing analysis, NLP, full-text search of clinical data.

Gopi Vrakas, MD, Director of Cytopathology, Pathology. Clinical interests: gynecologic pathology, hemato-

Jeffrey Eskendri, DMD, Associate Professor of Pathology, Director of Immunohistochemistry Lab, Pathology. Clinical interests: cytopathology, hematopathology.

Anita Huttner, MD, Associate Professor of Pathology; Director, Immunopathology, Pathology. Clinical interests: immunopathology.

Malini Harigopal, MD, PhD, Professor of Dermatology and Pathology; Associate Professor of Pathology; Director, Anatomical Pathology and Laboratory Medicine, Pathology. Clinical interests: cytopathology, head and neck pathology.

Dhanpat Jain, MD, Professor of Pathology and of Medicine (Digestive Diseases). Clinical interests: gastrointestinal and liver pathology including liver tumors, gastrointestinal stromal tumors, prostate cancer risk and mortality, motility disorders of the bowel.

Anjela Galan, MD, Associate Professor of Dermatology and Pathology. Clinical interest: oral and maxillofacial pathology.

Adebowale Adeniran, MD, Professor of Pathology; Director, Anatomic Pathology Elective Program, Pathology. Clinical interests: oncologic pathology, urologic pathology, hematopathology, disorders of iron metabolism.

Marcello DiStasio Jr, MD, PhD, Professor of Pathology. Clinical interests: cutaneous and adnexal neoplasms.

Diane Kowalski, MMSc, Associate Professor of Pathology; Director, Anatomic Pathology and Laboratory Medicine, Pathology. Clinical interests: cytopathology, head and neck pathology.

Robert Homer, MD, PhD, Professor of Pathology, Director, Thoracic Pathology; Director of Medical Student Course Module. Clinical interests: thoracic pathology, immunopathology.

Robert Homer, MD, PhD, Professor of Pathology. Clinical interests: gynecologic pathology, general surgical pathology, molecular diagnostics.

Syed Gilani, MBBS, Assistant Professor of Pathology. Clinical interests: cytopathology, endocrine, head and neck pathology.

Pallavi Gopal, MD, PhD, Assistant Professor of Pathology. Clinical interests: melanocytic skin neoplasms, soft tissue tumors, general neoplastic and non-neoplastic dermatopathology.

Pei Hui, MD, PhD, Professor of Pathology and of Obstetrics, Gynecology and Reproductive Sciences; Director, Gynecologic Pathology, Clinical Director, Molecular Diagnostics Laboratories. Clinical interests: gynecologic pathology, general surgical pathology, molecular diagnostics.

Uma Krishnamurti, MD, PhD, Associate Professor of Pathology. Clinical interests: Breast pathology, cytopathology, gynecologic pathology.

Robert Homer, MD, PhD, Professor of Pathology. Clinical interests: melanocytic skin neoplasms, soft tissue tumors, general neoplastic and non-neoplastic dermatopathology.

Anita Huttner, MD, Associate Professor of Pathology; Director, Immunopathology, Pathology. Clinical interests: immunopathology.

Syed Gilani, MBBS, Assistant Professor of Pathology. Clinical interests: cytopathology, endocrine, head and neck pathology.

Adebowale Adeniran, MD, Professor of Pathology; Director, Anatomic Pathology Elective Program, Pathology. Clinical interests: oncologic pathology, urologic pathology, hematopathology, disorders of iron metabolism.

Marcus W. Rosenberg, MD, PhD, Professor of Dermatology, Pathology, and Immunobiology; Co-Leader, Genetics, Genomics and Epigenetics, Yale Cancer Center; Director, Yale Center for Immuno-Oncology; Director, Yale SPORE in Skin Cancer. Clinical interests: melanocytic neoplasms, soft tissue tumors, general neoplastic and non-neoplastic dermatopathology.

Adebowale Adeniran, MD, Professor of Pathology; Director, Anatomic Pathology Elective Program, Pathology. Clinical interests: oncologic pathology, urologic pathology, hematopathology, disorders of iron metabolism.

Rita Abi Raad, MD, Assistant Professor of Pathology. Clinical interests: cytopathology, gynecologic pathology.

Karin Finberg, MD, PhD, Associate Professor of Pathology. Clinical interests: molecular diagnosis of inherited and acquired clinical disorders, disorders of iron metabolism.

Armine Darbinyan, MD, Assistant Professor of Pathology. Clinical interests: cytopathology, neuropathology, pathology of tumors of the central nervous system, neurobiology, biology of neural progenitor cells, DNA damage responses and mechanisms of tumor resistance to treatment.

Demetrios T. Braddock, MD, PhD, Associate Professor of Pathology. Clinical interests: urologic pathology, hematopathology, disorders of bone metabolism.

Natalia Buza, MD, Professor of Pathology; Associate Director of Gynecologic Pathology. Clinical interest: gynecologic pathology.

Guoping Cai, MD, MS, Professor of Pathology; Associate Director of Cytopathology, Pathology. Clinical interests: fine needle aspiration (FNA), cytopathology, urologic pathology, thoracic pathology.


Malini Harigopal, MD, Professor of Pathology; Director, Anatomic Pathology and Laboratory Medicine, Pathology. Clinical interests: cytopathology, breast pathology.

Avik Das, MD, PhD, Assistant Professor of Pathology. Clinical interest: hematopathology.

Karin Finberg, MD, PhD, Associate Professor of Pathology. Clinical interests: molecular diagnosis of inherited and acquired clinical disorders, disorders of iron metabolism.
Clinical Faculty

William Bradlyn Laskin, MD, Associate Professor of Pathology. Clinical interests: soft tissue and bone tumors.

Angelique W. Levi, MD, Associate Professor of Pathology, Vice Chair and Director of Pathology Outreach Services, Pathology. Clinical interests: gynecologic cytopathology, HPV-associated uterine cervical disease, urologic pathology, MRI-targeted prostate cancer.

Joseph Misdraji, MD, PhD, FASTP, Professor of Pathology; Director of Monitoring Program, Pathology; Director, Renal, Cardiac and Transplant Pathology and Electron Microscopy Laboratory, Pathology; Director, Renal and Gastrointestinal Fellowship Program, Pathology. Clinical interests: renal pathology, progression of interstitial fibrosis, acute kidney cell injury, renal cell carcinoma microenvironment.

Chen Liu, MD, PhD, Anthony N. Brady Professor of Pathology, Chair, Pathology; Chief of Pathology, YNHH, Pathology. Clinical interests: liver pathology.

Jon S. Morrow, MD, PhD, Raymond Yasser Professor of Pathology. Clinical interests: hematologic and renal disorders.

ILKe Nalbantoglu, MD, Associate Professor of Pathology. Clinical interests: gastrointestinal and liver pathology, pediatric pathology.

ILKe Nalbantoglu, MD, Associate Professor of Dermatology and of Pathology. Clinical interests: dermatopathology, clinical dermatology.

Maria Roberts, MD, Professor of Pathology and of Medicine (Digestive Diseases). Director, Program in Gastrointestinal and Liver Pathology, Pathology. Clinical interests: cellular disease, pancreas cancer, immune therapy related gastroenteritis and colitis, fatty liver disease, hepatocellular carcinoma.

Harry Sanchez, MD, Assistant Professor of Pathology; Director of Autopsy Services, Pathology. Clinical interests: autopsy pathology, quality management, microbiology, medical education, medical history.

He Wang, MD, PhD, Associate Professor of Pathology, Director of Anatomic Pathology and Cytopathology, Pathology and Cytopathology. Clinical interests: cytopathology, head and neck pathology, immunohistochemistry.

Minhau Wong, MD, PhD, MS, Assistant Professor of Pathology. Clinical interests: cytology, cytopathology.

Xuchen Zhang, MD, PhD, Associate Professor of Pathology; Associate Director, Gastrointestinal and Liver Pathology Fellowship Program. Clinical interests: gastrointestinal and liver pathology, thoracic pathology.

Minghao Zhong, MD, PhD, Associate Professor of Pathology. Clinical interests: morphology and molecular pathology of solid tumors mainly focusing on genitourinary malignancies.
JANUARY
Cytopathology

The Cytopathology Service and Cytology Laboratory is staffed by nine cytopathologists, fourteen cytotechnologists, nine clinical/preparatory technologists and five administrative staff members. The laboratory provides comprehensive services to the hospital and its clinicians and to several clinicians in the community as part of our outreach mission. All types of cytologic specimens are routinely received and processed, including gynecologic and non-gynecologic cytology, fine needle aspiration biopsy, and specimens from consultation services. The Cytopathology personnel participate fully in the teaching programs of the hospital and medical school. An active clinical research program is distributed among the members of the team.

OUR SERVICES

• World-recognized expertise in Cytopathology consultation and education
• Maintenance of excellent patient care activities, using the newest and most cost-effective technology available. In addition, new modes of ancillary testing for neoplasia detection, prognosis, and classification are being tested and added as appropriate.
• Use of upgraded computerized-automated ThinPrep slide imaging system.
• Performance and provision of rapid on-site interpretation of fine-needle aspirations of palpable and non-palpable masses obtained under radiologic guidance
• Development and incorporation of new and advanced diagnostic techniques in cytology specimen procurement and processing, and the fostering of an environment in which clinical, translational, and basic research can be successfully performed.

OUR TEAM

Adebowale Adeniran, MD, Director
Guoping Cai, MD, MS, Associate Director
Rita Abi Raad, MD
Syed Gilani, MBBS
Malini Harigopal, MD
Diane Kowalski, MD, MMSc
Angélique W. Levi, MD
Minhua Wang, MD, PhD, MS
He Wang, MD, PhD

JANUARY 2022

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Renal Pathology and Electron Microscopy

The Renal Pathology and Electron Microscopy Laboratory at Yale is world-renowned for accurate, timely, and personalized kidney biopsy and electron microscopy diagnostic services. The Lab offers light microscopy, immunofluorescence, and electron microscopy analysis on all kidney biopsy specimens and specialized testing for rare diseases such as Alport’s syndrome, collagen III nephropathy, amyloidosis, and monoclonal light chain-mediated diseases. We bring advanced technology (confocal IF, immune EM) to the practice of renal pathology in order to enhance diagnostic accuracy. We also provide electron microscopy analysis for viral diseases (Corona virus, CMV, Polyoma virus), ciliary disease, tumors of unknown origin, and parasitic diseases. We provide clients within the United States and abroad with timely, accurate, and personalized diagnostic services. Our reports are accessible to international clients through the Yale RELAY online reporting system 24 hours a day. Dr. Moeckel has been the director of the Renal & EM Laboratory since 2008 and has expanded the Lab’s national and international reputation as one of the leading diagnostic renal and EM pathology labs in the world.

OUR TEAM

Gilbert Moeckel, MD, PhD, FASN, Director
Sudhir Perincheri, MD, PhD, MBBS
Genitourinary Pathology

The Yale Program in Genitourinary Pathology provides nationally leading pathologic diagnostic expertise in genitourinary (GU) diseases, particularly prostate, kidney, bladder, and testis cancer. The GU Pathology director is co-author of national GU pathology practice guidelines and several GU pathology textbooks. Our group of dedicated GU pathology subspecialists offers expert, in-depth histopathologic slide interpretations, state-of-the-art immunophenotyping, and access to Yale Pathology molecular genetic GU tumor profiling. We are engaged in GU cancer research that will be translated into practice in the near future, such as use of machine learning and artificial intelligence in prostate cancer diagnosis, grading, and prognostication, using H&E-stained slides. Yale Genitourinary Pathology Services in Yale Pathology Labs thus will continue to lead in providing the best diagnosis, enhanced by cutting-edge technological tools, for patients with diseases of the genitourinary system.

OUR TEAM

Peter A. Humphrey, MD, PhD, Director
Adebowale Adeniran, MD
Guoping Cai, MD, MS
Robert Homer, MD, PhD
Angelique W. Levi, MD
Sudhir Perincheri, MD, PhD, MBBS
Minghao Zhong, MD, PhD
Hematopathology

The Yale Hematopathology Program specializes in the evaluation of lymph nodes, bone marrow, blood, spleen, and hematolymphoid tissues in all organs. The strength of the Service lies in the expertise of our hematopathology board-certified faculty. Our group receives external slide consultations from across the nation as well as from international sites for both primary diagnoses and second opinions. Challenging cases are discussed at weekly consensus conferences. Yale hematopathologists are advancing the field with their research into predictive biomarkers, pathways of cell death, and novel tools that lead to precision diagnostics. Their strong collaboration with immunology, genetics, hematology, and oncology allows for promising new discoveries. The faculty regularly teach other subspecialists at national and international conferences.

Our average turnaround time for rush biopsies is less than 24 hours. Urgent results incorporating aspirate morphology, histology, flow cytometry, immunohistochemistry, FISH/cytogenetic, and state-of-the-art molecular studies, as necessary, are reported immediately to submitting physicians.

OUR TEAM

Mina Xu, MD, Director
Demetrios Braddock, MD, PhD
Samuel Katz, MD, PhD
Zenggang Pan, MD, PhD
Sudhir Perincheri, MD, PhD, MBBS
Alexa Siddon, MD
The Yale Thoracic Pathology Program offers comprehensive diagnostic services on biopsies and resections from the lung, mediastinum, and chest wall. Results of comprehensive examinations are rendered with an emphasis on prognosis and prediction of the response to therapy. Our Thoracic Pathology Program director has 25 years of experience in all aspects of thoracic pathology, especially medical lung disease. We are engaged in thoracic cancer research looking at genomic and other predictors of response to cancer therapy. The team’s expertise includes lung transplantation, lung cancer, interstitial lung disease, vaping associated injury, lung fibrosis, occupational lung disease, chronic extrinsic hypersensitivity pneumonitis, early lung cancer, screening detected cancers, small cell carcinoma, neuroendocrine carcinoma, adenocarcinoma, bronchial biopsies, thoracoscopic biopsies, mesothelioma, thymoma, sarcoidosis, emphysema, asthma, and airways diseases.

OUR TEAM

Robert Homer, MD, PhD, Director
Guoping Cai, MD, MS
William Bradlyn Laskin, MD
Christine Minerowicz, MD, BA
Xuchen Zhang, MD, PhD
Endocrine, Head & Neck Pathology

The only one of its kind in Connecticut and one of just a few in the world, the Yale Endocrine, Head & Neck Pathology Program specializes in tumors of the head and neck and of the major endocrine glands (thyroid, parathyroid and adrenal). The subspecialty practice has five board-certified pathologists including an oral and ophthalmic pathologist and an ACGME-approved fellowship. The team supports the Smilow Cancer Hospital, a tertiary referral center that treats a vast number of complex and rare cancers of the head, neck, and endocrine organs. We offer comprehensive diagnostic services on oral biopsy and cytology, including jaw tumors and cysts, for the Yale Oral and Maxillofacial Surgery Program and several dental practices in Connecticut. Our well-appointed immunohistochemistry and molecular laboratories help disease management through routinely offering p16 and PD-L1 testing by immunohistochemistry and high-risk HPV testing by PCR on formalin-fixed paraffin-embedded head and neck cancers. The Program is led by an experienced, fellowship-trained pathologist of national and international repute who is available and readily accessible for second opinions and consultations.

OUR TEAM

Manju Prasad, MD, MBBS, Director
Andrea Barbieri, MD
Jeffrey Eskendri, DMD
Syed Gilani, MBBS
John Sinard, MD, PhD

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Neuropathology

The Yale Neuropathology Service specializes in the evaluation of disorders involving brain, spinal cord, skeletal muscle, and peripheral nerve for adult and pediatric patients. All faculty members are subspecialty trained and board-certified in neuropathology. Aside from acute, intraoperative frozen section coverage, which is exclusively provided by board-certified neuropathologists, faculty members are also expert consultants for the postmortem assessment of neurological disorders. The Neuropathology Service aims to provide excellent clinical care while incorporating cutting-edge molecular technologies into daily practice for primary and consultation cases. Complex cases are discussed in detail among expert neuropathologists at weekly consensus conferences and ad hoc. All faculty members are involved nationally and internationally in professional societies and actively contribute to advancements in the field. The Program also offers a highly competitive ACGME-accredited two-year fellowship in neuropathology, which prepares for board certification in neuropathology and academic practice.

SERVICES AND EXPERTISE

The Yale Neuropathology Service provides diagnostic services to Yale New Haven Hospital and Smilow Cancer Hospital. In addition, the Yale Neuropathology Team provides expert diagnostic care for surrounding hospitals, including Yale New Haven’s Saint Raphael Campus in New Haven, Bridgeport Hospital, Greenwich Hospital, Milford Hospital, and Griffin Hospital.

OUR TEAM

Anita Huttner, MD, Director
Armine Darbinyan, MD
Marcello DiStasio, MD, PhD
Pallavi Gopal, MD, PhD
Declan McGuone, FRCPath Neuro, MBCh

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Ophthalmic Pathology

The eye and its surrounding structures (eyelids, conjunctiva, cornea, orbit, globe) represent a unique portion of the human anatomy. Many of the diseases that affect this area are unique to the peri-ocular region or use a different terminology. Yale Pathology has responded to the unique needs of ophthalmologists by developing a subspecialty service in Ophthalmic Pathology. The Service receives specimens from the Yale Ophthalmology Clinic as well as from private ophthalmology offices throughout Connecticut. The Yale Ophthalmic Pathology Program is also responsible for educating both the pathology residents and the ophthalmology residents in ophthalmic pathology at Yale School of Medicine.

John Sinard, MD, PhD, Director
Marcello DiStasio Jr, MD, PhD

Immunohistochemistry Laboratory

The Yale Immunohistochemistry (IHC) Laboratory provides CAP/CLIA-certified high-quality, state-of-the-art specialized revolutionary technologic services in immunohistochemistry, immunofluorescence, and in-situ hybridization. Immunohistochemistry plays a key role in diagnosis, prognosis, and therapeutics. We offer over 300 antibodies for the diagnostic work-up of various malignancies and infectious diseases. Our rigorous built-in quality control system addresses technical issues related to staining and instrumentation to enhance laboratory-based quality of care to our patients. We use robust positive and negative controls on slide and batch controls, significantly reducing false negative and false positive results. Multiplexed technologies are available that will allow two or more antibodies to be investigated simultaneously at different subcellular localizations for some cancers. This has the added advantage of conserving critical tissue for potential molecular testing essential to patient care.

Malini Harigopal, MD, Director
SEPTEMBER
Bone and Soft Tissue Pathology

The Yale Bone and Soft Tissue Pathology team is composed of surgical pathologists from the Yale New Haven campus who have experience and interest in neoplastic and non-neoplastic diseases of the musculoskeletal system. We work in close alliance with the Yale musculoskeletal radiology group to provide the best diagnostic service for all clinicians. We examine all biopsy and resection specimens using gross evaluation and light microscopic and immunohistochemical techniques. We also employ advanced methods to probe protein expression and genetic alterations harbored in the patient's pathologic tissues. The data resulting from examination of the specimens are interpreted in the context of the clinical presentation and the results of diagnostic imaging studies. For complex tumor cases, a weekly multidisciplinary Tumor Board is held to make informed decisions on treatment and follow-up of the patient. We also provide a yearly series of bone and soft tissue lectures to educate residents and fellows. Research efforts primarily involve retrospective clinicopathological correlations compiling and evaluating the experience at our institution.

**OUR TEAM**

William Bradlyn Laskin, MD, Director  
Robert Homer, MD, PhD  
Gauri Panse, MD  
Manju Prasad, MD, MBBS  
John Sinard, MD, PhD  
Hao Wu, MD, PhD

Pediatric and Perinatal Pathology

The Yale Pediatric Pathology Service provides diagnostic expertise for diseases occurring in the pediatric age range (0-21 years). In addition, the service covers perinatal pathology, with inclusion of evaluation for fetal malformations, complex congenital malformations, perinatal and pediatric autopsies, and placental pathology. Specific areas of interest include also pediatric liver diseases, pediatric gastrointestinal pathology, and tumors of pediatric age.

**OUR TEAM**

Raffaella Morotti, MD, Director  
Hao Wu, MD, PhD

### September 2022

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Breast Pathology

The Yale Breast Pathology Service at Yale School of Medicine is highly focused on precise diagnosis and providing reliable results. Board-certified pathologists with expertise in breast subspecialty interpret challenging breast cases daily. We provide standardized high-quality assays that reduce the likelihood of false positive or negative results. In addition to performing comprehensive studies and attention to detail to ensure accuracy, we review difficult diagnoses at consensus conference where challenging cases are presented and discussed. These meetings serve as a sort of “second opinion” to provide accurate results for each individual patient. Additionally, we facilitate necessary ancillary biomarker and molecular testing to aid in patient management. Pathology team members are vital contributors to The Breast Center at Smilow Cancer Hospital, which is accredited by the National Accreditation Program for Breast Centers and was the first National Cancer Institute Comprehensive Cancer Center in the Northeast to hold this designation.

OUR TEAM

John Sinard, MD, PhD, Interim Director
Malini Harigopal, MD, Breast Fellowship Director
Uma Krishnamurti, MD, PhD, Associate Director
Natalia Buza, MD
Marcello DiStasio Jr, MD, PhD
William Bradlyn Laskin, MD
Yuanxin Liang, MD
Haiying Zhan, MD, PhD

OCTOBER 2022

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Gastrointestinal and Liver Pathology

Gastrointestinal disorders comprise diseases ranging from common ailments such as acid reflux, colon polyps, and gallstones to cancers of the colon, liver, and pancreas. The Gastrointestinal Pathology Service at Yale is a team of nationally recognized specialists who are devoted to the accurate and timely diagnosis of diseases of the intestinal tract, liver, pancreas, gallbladder, and biliary system. We provide expert diagnostic services for biopsy and resection specimens, with an emphasis on complete, accurate, and rapid reporting. More than 90% of diagnostic biopsies are finalized within 24 hours. We analyze more than 15,000 specimens annually, with a high proportion of medically complex cases and oncologic diseases. We also provide consultation to clinical care providers, fostering integrated management of patients. Our pathologists are actively engaged in cutting-edge clinical and translational research and have a firm commitment to clinical and academic excellence and quality patient-centered care. We also serve as a referral center for consultations from other institutions regionally, nationally, and internationally. Our division is supported by the state-of-the-art molecular diagnostics and immunohistochemistry laboratories, including molecular profiling of tumors and genomic analysis, furthering the pursuit of personalized medicine.

OUR TEAM

Marie Robert, MD, Director
Xuchen Zhang, MD, PhD, Associate Director
Andrea Barbieri, MD
Joanna Gibson, MD, PhD
Won Jae Huh, MD, PhD
Dhanpat Jain, MD
Chen Liu, MD, PhD
Joseph Misdraji, MD
ILKe Nalbantoglu, MD

NOVEMBER 2022

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**Gynecologic Pathology**

The Yale Gynecologic (GYN) Pathology Service enjoys a dynamic, high-volume subspecialty service with rigorous engagements in clinical service, translational research, and teaching. The Service benefits from the outstanding clinical material afforded by Yale New Haven Hospital’s world-class gynecologic oncology service. The in-house case material is supplemented by the unique and rare consult cases from all over the U.S. and around the world. This setting generates approximately 15,000 gynecological specimens annually. One of the long-term academic goals is to build an outstanding gynecological pathology program with emphasis on diagnostic tissue evaluation, oncological biomarker identification and clinical applications, and understanding the pathogenesis of various gynecological cancers. The academic environment of the GYN pathology program is highly dynamic and exciting. The faculty members are experienced and enjoy world-class reputations in the diagnostic and investigative work in all aspects of gynecological pathology. They have expertise in the intraoperative frozen section consultation for gynecological tumors and the diagnostic work-up of gestational trophoblastic disease. Program faculty are responsible editors/authors for the 4th and 5th editions of The WHO Classifications of Tumors of Female Reproductive Organs in 2014 and 2020, respectively.

**OUR TEAM**

Pei Hui, MD, PhD, Director  
Natalia Buza, MD, Associate Director  
Rita Abi Raad, MD  
Peter A. Humphrey, MD, PhD  
Vinita Parkash, MBBS, MPH  
Tong Sun, MD, PhD  
Minhua Wang, MD, PhD, MS

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