Department Launches Digital Pathology in 2012

The Department of Pathology and Genomic Medicine will implement new digital pathology technology into specific Department clinical services in 2012. “Digital pathology is one component of the next generation of pathology, and Methodist is one of the first hospital systems in the region to implement it,” said Dr. Michael Thrall, medical director of digital pathology for the Department. “This technology presents a valuable tool and will assist the Department not only in patient care, but also with teaching our residents and fellows.”

The many current uses for digital images in pathology include making primary diagnoses, consulting for second opinions, facilitating telepathology (teleconferencing with images), archiving, education, and image analysis. The Department has acquired iScan Coreo Au brightfield scanners and related Virtuoso application software. Under the direction of Dr. Thrall, whole slide imaging (WSI) technology will be implemented between January and March of this year. WSI involves the digitization of glass slides into high-resolution images. The WSI capabilities will initially be used to facilitate consultations between pathologists at our Texas Medical Center hospital and the outlying hospitals.

For more information on digital pathology at Methodist, please contact Dr. Michael Thrall at mjthrall@tmhs.org.

Have you registered yet? Spaces for the symposium and the Harlan J. Spjut Award Dinner are limited! Click here to register now.

Save the Date: Dr. Donna Hansel of The Cleveland Clinic will present at the Department of Pathology and Genomic Medicine Grand Rounds on April 3, 2012. She will speak about the molecular correlates of bladder cancer variants. For more information on Department Grand Rounds, visit methodisthealth.com/pathologygrandrounds.

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Methodist Pathology Leads Medicine with New Gene Sequencing Instrumentation

The Molecular Diagnostics Laboratory of The Methodist Hospital System has acquired three new next-generation sequencing instruments: the Ion Torrent Personal Genome Machine (PGM) from Life Technologies, the MiSeq Personal Sequencer from Illumina, and the MassARRAY Analyzer 4 from Sequenom.

“These are game-changing diagnostic instruments,” said Dr. Randall Olsen, medical director of the Molecular Diagnostics Laboratory. “This technology enables us to rapidly generate accurate diagnoses and provide crucial prognostic and therapeutic information. These instruments will significantly impact patient care in The Methodist Hospital System and other institutions served by our reference laboratory.”

The molecular diagnostics team, including our molecular genetic pathology fellow Dr. Amanda Peterson and clinical chemistry fellow Dr. Irene Shu, underwent intensive training for these instruments.

The Ion Torrent PGM brings semiconductor technology to DNA sequencing. It is the fastest benchtop sequencer available and ideally suited for rapid, whole-genome sequencing of individual strains of bacteria. In comparison, the MiSeq instrument uses sequencing by synthesis technology and is capable of sequencing the genomes of multiple strains of bacteria in a single run. Both can be used for highly multiplexed amplicon sequencing.

The MassARRAY Analyzer uses mass spectrometry for genetic analysis. It is capable of high-throughput genotyping of patient samples and will be used to develop a comprehensive tumor mutation panel.

For more information on genetic testing at Methodist, please contact Dr. Randall Olsen at rjolsen@tmhs.org.
Department and College of American Pathologists Help Women In Need

The Methodist Departments of Pathology and Genomic Medicine and Obstetrics and Gynecology partnered with the College of American Pathologists and Dia de la Mujer Latina on January 21st for the College’s See, Test, and Treat program event in Houston. The program, which provides free cervical and breast cancer screening to uninsured and underinsured women, is in its 11th year.

“See, Test, and Treat is an important program,” said Dr. Dina Mody, medical director of cytopathology for the Department. “There are thousands of women in the greater Houston area that don’t have medical insurance or access to these testing and consult services. Through this event, they get it all in one day.”

Sixteen volunteers from the Department of Pathology and Genomic Medicine, including faculty, trainees, laboratory technologists, and family members, participated in the day-long event at the Southwest Multi-Service Center in southwest Houston and the Cytopathology Laboratory at The Methodist Hospital. Patient specimens were immediately delivered to the Cytopathology Laboratory at Methodist for evaluation so that the results could be transmitted back to the community center the same day. Bilingual faculty and residents presented health information sessions to the patients in both English and Spanish as they waited for their test results. In total, the Department performed 187 Papanicolaou tests and 5 breast fine-needle aspiration biopsies.

The College of American Pathologists’ See, Test, and Treat program is unique in that it offers same-day screening, diagnoses, and follow-up care. To date, the program has screened more than 1,000 women at sponsored events across the country.

For more information on the See, Test, and Treat program, visit foundation.cap.org.

New Diagnostic Test Offerings:

**Serum Beta-Hydroxybutyrate Assay**

As of February 1, The Methodist Hospital Core Laboratory replaced the semi-quantitative serum acetone test with a quantitative enzymatic serum beta-hydroxybutyrate assay. Due to a national shortage of reagents, the acetone test will no longer be performed. Please order the beta-hydroxybutyrate (synonyms Ketone and Serum Ketone) for diagnosing or monitoring diabetic ketoacidosis.

Beta-hydroxybutyrate is the most abundant ketone body in the blood; acetoacetate acid and acetone are produced in smaller amounts. Please note that the old nitroprusside dipstick method does not react with beta-hydroxybutyrate, therefore, the results of the acetone test do not always correlate with the results of the beta-hydroxybutyrate assay. Normal beta-hydroxybutyrate levels are ≤0.3 mmol/L and are typically >2.0 mmol/L in patients with ketoacidosis. The beta-hydroxybutyrate test is available 24/7.

If you have any questions or concerns, please call Dr. Ping Wang at 713-441-3294 or Toni Emmott at 713-441-1861.

Molecular structure of beta-hydroxybutyrate.
**In Focus: The Hematopathology Team**

Hematopathology is the subspecialty of pathology that studies the diseases of hematopoietic cells. These diseases can be hereditary (bone marrow failure syndromes, primary immune deficiency syndromes) or acquired (nutritional deficiencies, infections, cancers). The Department of Pathology and Genomic Medicine has a team of four board-certified hematopathologists with a combined 94 years of professional training and experience in hematopathology. The team brings this extensive expertise to all facets of the hematopathology patient service that encompasses superior clinical care, education, and ground-breaking translational research.

Youli Zu, M.D., Ph.D.  
Co-Medical Director, Hematopathology  
Dr. Zu received his medical degree from the Jilin Medical College of Beihua University in Jilin City, China, and his Ph.D. in Immunology and Pathology from the Kyoto University School of Medicine in Kyoto, Japan. He completed his pathology residency at New York University Medical Center and a hematopathology fellowship at the National Cancer Institute in Bethesda. In addition to providing clinical services, Dr. Zu is the director of the Cancer Pathology Laboratory at The Methodist Hospital Research Institute. His research focuses on the development of novel diagnostics and treatments for hematopoietic and lymphoid disorders. His current studies, funded by the National Cancer Institute, involve development of an aptamer probe nanocomplex to diagnose and administer targeted treatment for anaplastic large cell lymphoma.

For more information on Dr. Zu, visit [methodisthealth.com/Zu](http://methodisthealth.com/Zu).

Arthur W. Zieske, M.D.  
Co-Medical Director, Hematopathology  
Dr. Zieske received his medical degree from the Louisiana State University Health Science Center (LSU-HSC) in New Orleans, where he also completed his pathology residency. He received his hematopathology fellowship training at the Yale University School of Medicine in New Haven, CT. Training the next generation of pathologists is one of Dr. Zieske’s key interests; he received several teaching awards while on the faculty at LSU-HSC.

For more information on Dr. Zieske, visit [methodisthealth.com/Zieske](http://methodisthealth.com/Zieske).

Abdus Saleem, M.D.  
Associate Medical Director, Hematopathology  
Dr. Saleem received his medical degree from the King Edward Medical School in Karachi, Pakistan. Having obtained his original subspecialty certification in 1977, he is the most experienced member of the Hematopathology Team. He has trained numerous local hematopathologists, including Dr. Jacquelin O’Hare, Dr. Munir Shahjahan, Dr. Choladda Curry, Dr. Randall Olsen, Dr. Thu Ngo, and Dr. Christine Finch. Dr. Saleem enjoys his role as the primary educator of residents and fellows in bone marrow and peripheral blood pathology.

For more information on Dr. Saleem, visit [methodisthealth.com/Saleem](http://methodisthealth.com/Saleem).

April A. Ewton, M.D.  
Associate Medical Director, Hematopathology  
Dr. Ewton obtained her medical degree and completed her residency training at the Baylor College of Medicine. She received her hematopathology fellowship training at the University of New Mexico in Albuquerque. As associate director of clinical pathology resident training, Dr. Ewton is especially involved with hematopathology education.

For more information on Dr. Ewton, visit [methodisthealth.com/Ewton](http://methodisthealth.com/Ewton).

For more information on the hematopathology service at Methodist, please contact Dr. April Ewton at aewton@tmhs.org.
**Lab Stats:** Methodist Willowbrook Hospital

**Medical Director:** Hazel L. Awalt, M.D.
Dr. Awalt received her medical degree from the Baylor College of Medicine in Houston, and held a faculty appointment there until she joined the laboratory at Willowbrook as the medical director in 2005. She is also the president-elect of the medical staff at Methodist Willowbrook Hospital.

**Faculty:** Tracie J. Koen, M.D.
Dr. Koen obtained her M.D. degree from The University of Texas Medical Branch in Galveston and is a graduate of the pathology training programs at Methodist. She has subspecialty certification in cytopathology.

Yingchao Piao, M.D., Ph.D.
Dr. Piao received a M.D. degree from the Yanbian Medical School in Yanji, China and a Ph.D. in Molecular Biology from the University of Paris VI in Paris, France. She has subspecialty certification in both hematopathology and cytopathology.

**Director:** Anita G. Farr, M.H.A.
Ms. Farr received her Master of Healthcare Administration from Texas Woman’s University. She has been laboratory director at Willowbrook since 2009.

**Manager:** Lisa Skodack-Jones, M.S.
Ms. Skodack-Jones received her Master of Science in Medical Technology Management from California State University. She recently joined the management team at Willowbrook after spending 6 years as a group manager at ARUP Laboratories in Salt Lake City, Utah.

**Staff:**
The laboratory currently employs 39 staff members that include supervisors, technologists, histologists, processors, and technicians. These employees work as a cohesive team to allow the laboratory to operate efficiently and provide the best possible care to the patients at Methodist Willowbrook Hospital.

“This is an outstanding laboratory in a superb hospital. As the north Houston communities continue to grow, our hospital and laboratory grow with them. Our relationships with our patients and their communities are very important.”
Hazel L. Awalt, M.D.

“I just love working with Drs. Awalt and Piao and the rest of the laboratory. We all work well together and really keep things moving along.”
Tracie J. Koen, M.D.

“The Willowbrook laboratory is ideal because we get to see interesting cases, in a smaller, community setting. It’s the best of both worlds.”
Yingchao Piao, M.D., Ph.D.

“It is very exciting to watch the response of the laboratory team to the challenges that new service lines bring. The team never disappoints.”
Anita G. Farr, M.H.A.

“I am delighted to be a member of the Methodist family, and look forward to the opportunity to get to know everyone.”
Lisa Skodack-Jones, M.S.

“This is a busy laboratory, and we help each other out. That’s how it works.”
Madelaine Vinueza, MT

Pictures from top: Dr. Awalt retrieving blood for a transfusion patient; Dr. Koen examining slides; Dr. Piao in the Histology Laboratory; Ms. Farr in her office at the Willowbrook Laboratory; and Ms. Skodack-Jones (right) with Medical Technology Coordinator, Madelaine Vinueza.
Department Trainees Win Awards at Texas Society of Pathologists Meeting

Dr. Haijun “Steve” Zhou and Nicole Nelles won 2nd and 3rd place, respectively, for their abstract presentations at the Texas Society of Pathologists Annual Meeting held January 13-14 in Dallas.

“We are very proud of Steve and Nicole and our other trainees who presented in Dallas,” said Dr. Suzanne Powell, vice chair of education for the Department. “Scholarly activity is an important part of our training programs and something we strongly support.”

Dr. Zhou, a PGY1 resident, presented on whether LSIL-H (low-grade squamous intraepithelial lesion-cannot exclude high-grade squamous intraepithelial lesion) should be a distinct cytology category.

His data, based on analysis of 808 SurePath specimens, found that recognizing LSIL-H as an independent diagnostic category may help in early identification of a higher risk subgroup in patients diagnosed with LSIL who may require a more aggressive course of therapy.

Dr. Nelles, a PGY2 resident, presented on IgA mesangial deposition among kidney donors. Her study found that 12% of donor kidneys were positive for IgA. Since one-third of these kidneys are procured from living donors, more aggressive screening for hypertension and proteinuria may be warranted.

Twelve department trainees are presenting their research results this month at the United States and Canadian Academy of Pathology Annual Meeting in Vancouver, British Columbia, Canada.

For more information on Department training programs, visit methodisthealth.com/pathologytraining.

Trainee Spotlight:

Haijun Zhou, M.D., Ph.D.
PGY1 Resident

Dr. Haijun “Steve” Zhou, a PGY1 resident, is the recipient of the Department’s Trainee Leadership and Innovation Award for the first quarter of 2012. Dr. Zhou received the award specifically for his academic accomplishments; he recently received a second place award for his abstract presentation, “Should LSIL-H be a Distinct Cytology Category? A Study on Frequency and Distribution of 40 HPV Genotypes in a Cohort of Underserved Women,” at the Texas Society of Pathologists Annual Meeting on January 13 and 14 in Dallas. He also received an Excellence in Urologic Pathology Award from the International Society of Urologic Pathology for his abstract entitled “1,078 Intraoperative Frozen Section Evaluations of Ureteral and Urethral Margins: Studies of 212 Consecutive Radical Cystoprostatectomies for Men with Bladder Urothelial Carcinoma.” Dr. Zhou received his medical degree and Ph.D. in Biochemistry and Molecular Biology from the Peking Union Medical College in Beijing, China.

RECENT PUBLICATIONS


**RECENT PUBLICATIONS continued**


Bohling SD, Pagano MB, Stitzel MR, Ferrell C, Yeung W, Chandler WL. Comparison of clot-based vs chromogenic factor Xa proco-


Churg A, Cagle P, Colby TV, Corson JM, Gibbs AR, Hammar S, Ordonez N, Roggli VL, Tazelaar HD, Travis WD, Wick M; US-


C, Liñares J, Low DE, Tyrrell GJ, Musser JM. Full-Genome Dissection of an Epidemic of Severe Invasive Disease Caused by a Hyper-

Fraser TN, Avellaneda AA, Graviss EA, Musher DM. Acute kidney injury associated with trimethoprim/sulfamethoxazole. J Antim-
icrob Chemother. 2012 Feb 20. [Epub ahead of print]


Olar A, Raghunathan A, Albarracin CT, Aldape KD, Cahill DP 3rd, Powell SZ, Goodman JC, Fuller GN. Absence of IDH1-R132H


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