PHILADELPHIA INTERNATIONAL MEDICINE® NEWS BUREAU

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For immediate release:

Editor's note: Research, new techniques and improved facilities by Philadelphia International Medicine® hospitals and physicians may lead to new ways to treat some of our most challenging diseases. Below are just some examples from our hospitals.

1. **Temple Lung Center Announces Major Expansion; New Department is First in the Nation to Include Thoracic Medical and Surgical Care in a Consolidated, Multidisciplinary Academic Department**
2. **Sidney Kimmel Cancer Center and Rothman Institute at Jefferson Launch Multidisciplinary Sarcoma and Bone Tumor Center**
3. **Next Generation Sequencing-Based Tumor Genomic Profiling Aids in Detecting Hereditary Variants in Cancer Risk Genes: Fox Chase Study**

Temple Lung Center Announces Major Expansion; New Department is First in the Nation to Include Thoracic Medical and Surgical Care in a Consolidated, Multidisciplinary Academic Department

Philadelphia – Temple University Health System (TUHS) today announced a dramatic expansion of the Temple Lung Center that includes the creation of a new Department of Thoracic Medicine and Surgery. The new department combines the Lung Center's many activities into four integrated sections: Thoracic Surgery; Lung Transplant; Pulmonary, Critical Care and Sleep Medicine; and the Center for Inflammation and Lung Research. More than 100 full-time faculty and non-faculty positions are expected to be created as part of the expansion.

"This newly-created department is the first in the nation to include thoracic medical and surgical care in a consolidated, multidisciplinary academic department and will provide the platform to significantly improve patient care, increase patient volume, and attract additional world-class faculty," said Larry R. Kaiser, MD, FACS, dean of Temple University School of Medicine, president and CEO of Temple University Health System, and senior executive vice president for Health Affairs at Temple University.

"Temple is already a leader in the Eastern United States for lung transplantation services, acute and chronic care of pulmonary diseases and critical care medicine, clinical and scientific research, and medical education. This expansion will enable us to build upon the Temple Lung Center's current strengths to develop one of the premier national centers for the care of lung and critical medical illnesses," Dr. Kaiser added.

Gerard J. Criner, MD, FACP, FACCP, has been appointed Founding Chair of Temple's new Department of Thoracic Medicine and Surgery. Dr. Criner, who was been at Temple Health for more than 25 years, currently serves as a professor of Medicine and co-director of the Center for Inflammation, Translational and Clinical Lung Research. "This new department is truly multidisciplinary, co-locating basic science and clinical faculty from various disciplines to facilitate collaboration and opportunities for improved patient care, teaching and research," said Dr. Criner. "As a result, patients will receive focused care from a team of pulmonologists, thoracic and transplant surgeons, radiologists, anesthesiologists, pathologists, nurses, respiratory and rehabilitative therapists, nutritionists, case management and social work."

The integration and alignment of clinical and basic science research efforts within the new department will also advance Temple Health's leadership in personalized medicine by creating a more comprehensive understanding of genetic and environmental causes of advanced lung disorders, facilitating discovery of novel therapies and providing individualized patient care.

Sidney Kimmel Cancer Center and Rothman Institute at Jefferson
Launch Multidisciplinary Sarcoma and Bone Tumor Center

Sidney Kimmel Cancer Center at Thomas Jefferson University and Rothman Institute at Jefferson launched the multidisciplinary Sarcoma and Bone Tumor Center to treat patients diagnosed with some of the rarest and most difficult-to-treat cancers.

This unique clinical setting conveniently enables patients to see each specialist involved in their cancer care in one place, during one visit. All necessary tests, such as pathology and imaging, can also be completed in a single day.

"Our Center provides our patients with convenient, seamless access," said John A. Abraham, MD, director of the Jefferson Sarcoma and Bone Tumor Center. "In addition, this unique collaboration draws upon the expertise of the Rothman Institute at Jefferson and the NCI-designated Sidney Kimmel Cancer Center at Thomas Jefferson University."

Orthopedic Oncologist Dr. Abraham will collaborate with Mark D. Hurwitz, MD, radiation oncologist and Atrayee Basu Mallick, MD, medical oncologist. Patients with a primary bone, soft tissue sarcoma or metastatic skeletal disease require a multi-modality approach to treatment. Working together, the Center's team will develop a personalized treatment plan that is carefully coordinated and can evolve with that patient's individual needs.

Jillian Brown, patient navigator at the Sidney Kimmel Cancer Center, will help patients and their families throughout the treatment process. The patient navigator serves as the bridge between the clinical team and the patient and family. In addition, the navigator can coordinate access to clinical trials of

promising new therapies for which certain patients may qualify.

"Cancer diagnosis and treatment can be difficult on patients and their families," said Brown. "I'll be there to guide patients through their appointments and coordinate communication between Jefferson's team and their referring physician. It is extremely rewarding when I can help make this process go as smoothly as possible since a cancer diagnosis can be very complex."

Next Generation Sequencing-Based Tumor Genomic Profiling Aids in Detecting Hereditary Variants in Cancer Risk Genes: Fox Chase Study

Cancer patients are increasingly having their tumors tested using comprehensive genomic profiling (CGP) to identify genetic mutations that can be targeted by precision therapies. A new study from investigators at Fox Chase Cancer Center in collaboration with Foundation Medicine has shown that 3-7 percent of patients receiving CGP could have a genetic mutation that they inherited from a parent that can also be identified using results from next generation sequencing (NGS)-based CGP.

NGS, also known as high-throughput sequencing, is the catch-all term used to describe a number of different modern sequencing technologies. These technologies have allowed the sequencing of DNA and RNA much more quickly and cheaply than previous sequencing techniques.

"NGS is an open-market, evolving field," said Michael J. Hall, MD, MS, director of gastrointestinal risk assessment and associate professor of medicine at Fox Chase Cancer Center. "In the clinic, it is improving speed, access, and lowering the cost of genomics." Dr. Hall will present the study results on May 31 at the 2015 American Society of Clinical Oncology Annual Meeting in Chicago.

In the study, germline, or hereditary variants, were predicted in data from 15,060 tumor samples that were analyzed by Foundation Medicine, a molecular information company based in Cambridge, MA. Analyses of variants focused on 20 hereditary cancer risk genes, determined by the American College of Medical Genetics and Genomics as "high priority for disclosure to patients if discovered by genomic testing."

The researchers assessed the pathogenicity of each variant and association with tumor histology via expert review of clinical evidence from multiple publically available variant annotation databases. Among the tumors tested by the researchers, 30.8 percent had at least one germline variant in a cancer risk gene, with 521 total unique variants. A likely pathogenic variant was found in about 3.1 percent of tumors, and an additional 3.9 percent had a suspicious variant but conflicting pathogenicity data.

Early-onset cancer was most strongly associated with pathogenic variants in BRCA1, a gene mostly associated with breast and ovarian cancers. Tumors for bladder cancer, squamous cell lung cancer, and kidney cancer had the most unexpected pathogenic variants, meaning these tumors were outside of the usual spectrum of cancers known to be associated with the particular gene and variant. However, data were insufficient to determine the pathogenicity for most of the variants identified.

The researchers noted some study limitations, which included the lack of data on race, family history, and controls, among others. Future short-term goals of the researchers include expanding the study to all hereditary cancer risk genes and to incorporate family history and healthy population variant rates. “More research is also needed to understand the impact that CGP has on patient behaviors,” Dr. Hall noted. “Our new genomic counseling pilot study is beginning to explore this in community-based colorectal cancer patients.”

Philadelphia International Medicine provides medical and patient support services to international patients. It also provides continuing medical education and health care training and education to international physicians, administrators and other practitioners. As the international department of several Philadelphia-area hospitals, international patients gain access to physicians and hospitals rated among the best in the world through one telephone call to PIM. You can reach PIM by calling 1-215-563-4733; fax, 1-215-563-2777; or e-mail, physicians@philadelphiamedicine.com. You can find out more about PIM through its Website at www.philadelphiamedicine.com.