PERSONAL GENOME DIAGNOSTICS COLLABORATES ON STUDY UNCOVERING NEW ACTIONABLE MUTATIONS AND PROGNOSTIC PREDICTORS IN PANCREATIC CANCER

Study in Nature Communications Identifies New Predictors of Patient Outcome and Suggests Targeted Therapy Approaches May Benefit More Patients than Previously Thought

Study Also Demonstrates Liquid Biopsies of Cell-Free Tumor DNA in Blood Can Detect Early Stage Pancreatic Cancer and Recurrent Disease More than Six Months Earlier than CT Imaging

BALTIMORE, MD, July 8, 2015 – Personal Genome Diagnostics, Inc. (PGDx), a provider of advanced cancer genome analysis and testing services, today announced the publication of a study in *Nature Communications* that has uncovered important new genetic information relevant to the prognosis and treatment of pancreatic cancer, the deadliest of all solid tumor cancers.[1] PGDx conducted the whole exome sequencing and provided analyses of targeted cancer panels for the study in collaboration with researchers from Johns Hopkins University and other leading U.S. and international cancer centers. Lead author Mark Sausen, PhD, is Vice President of Research & Development at PGDx.

The study integrated large-scale genomic and clinical analyses of pancreatic cancer patients. Its main findings include the discovery that many more patients with pancreatic cancer have clinically actionable genetic mutations in their tumors than was previously thought – about one-third of all patients in the study. These included a number of mutations that had not previously been associated with pancreatic cancer. The presence of these mutations offers the potential for treatment with mutation-specific targeted cancer therapies that may prove more effective than current therapies. The study also showed that certain tumor mutations were associated with different patient outcomes, providing oncologists and patients with useful information to help guide treatment decisions. For example, the study identified a family of mutations in chromatin regulating genes as markers of improved prognosis, including a new biomarker that predicts how well stage 2 pancreatic cancer patients will do after surgical resection of their tumor.

Another arm of the study evaluated the utility of liquid biopsies to detect circulating cell-free DNA in the blood of pancreatic cancer patients. These analyses showed that this non-invasive methodology could both detect circulating tumor DNA in early-stage patients at the time of diagnosis, and accurately detect the presence of residual or recurrent disease just three months after treatment, which is more than six months earlier than standard imaging--the current standard of care. Earlier detection may allow physicians to implement more effective treatment options for both early-stage and relapsing patients.

Dr. Sausen commented, “PGDx was founded on the principle that integrating genomic and clinical information was essential to realizing the potential of precision medicine. This collaborative study highlights how combining large-scale genomic analyses with clinical data can yield valuable new knowledge for pancreatic cancer. Despite some limitations, the data uncovered in this study has immediate implications for the treatment of pancreatic cancer, as well as indicating the types of studies needed to validate and expand our understanding of how these mutations impact the disease. PGDx is a pioneer in the analysis of cell-free DNA shed by tumors into the circulation, so we were also pleased that the study confirmed the utility of this approach in pancreatic cancer patients. We look forward to the opportunity to incorporate these findings into our genomic products and services for cancer researchers, patients, and physicians.”

Personal Genome Diagnostics’ co-founders, Victor Velculescu, MD, PhD, and Luis A. Diaz, MD, are also co-authors of this study.

[1] Sausen, M. *et al.* Clinical implications of genomic alterations in the tumour and circulation of pancreatic cancer patients. *Nat. Communications.* 6:7686 doi: 10.1038/ncomms8686 (2015).

About PGDx Services
For physicians and patients, PGDx's Cancer*Select*™ Targeted Gene Panel analyzes tumor samples to detect all major genetic alteration types with high sensitivity and specificity, covering nearly all of the actionable cancer genes currently associated with therapies that are FDA-approved or in actively-enrolling clinical trials. The company's Lung*Select*™ liquid biopsy product identifies the most common, clinically actionable genetic alterations in the blood of non-small cell lung cancer (NSCLC) patients. Lung*Select* simultaneously identifies somatic sequence mutations and translocations that can be treated with agents already approved by the FDA or that are in clinical trials.

For researchers, PGDx is the only company offering a complete range of cancer genome analysis tools, including exome and targeted approaches for tissue specimens, targeted approaches for blood samples and a variety of custom tissue and liquid biopsy-based options designed to address the specific research needs of cancer researchers and drug developers. For information, visit http://main.personalgenome.com/research-services/.

About Personal Genome Diagnostics
Personal Genome Diagnostics (PGDx) provides advanced cancer genome analyses to oncology researchers, drug developers, clinicians and patients. The company uses advanced genomic methods and its deep expertise in cancer biology to identify and characterize the unique genomic alterations in tumors. PGDx's proprietary methods for genome sequencing and analysis are complemented by its extensive experience in cancer genomics and clinical oncology. PGDx's CLIA-certified facility provides personalized cancer genome analyses to patients and their physicians. For more information, visit personalgenome.com.

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