Civil collaboration to advance data analysis

Genetic analysis offers unprecedented power to diagnose tumors and target therapies, but it also brings the challenge of managing many gigabytes of data. Now, a French collaboration has formed to develop advanced scientific software that will help make sense of all this information.

The Interpretation of Clinical Exome, or ICE, project includes French cancer center Gustave Roussy; the French National Health and Medical Research Institute, known as Inserm, which is providing nearly $3 million; and two companies: the genomics services firm IntegraGen and an engineering and technology consulting firm, Sogeti High Tech. The four collaborators bring expertise in genomic sequencing, data management, software development, and clinical practice.

Bernard Courtieu, chairman and CEO of IntegraGen, says sequencing a single patient takes 20 gigabytes of data, and matching that with the dozens of targeted drugs expected to be approved in the next few years will be a major choke point in care. The main goal, he says, will be to match the patient’s genomic profile with available drugs, something that will soon be too complex for doctors to do on their own.

The ICE Program also intends to provide what a U.S. oncologist describes as “genomic profiling for dummies,” so that doctors who have a limited amount of time to spend with a patient will be able to derive and share meaningful information about that person’s profile.

The collaborators expect to complete an early version of the software in 2016, at which point the market for new genomic interpretation tools will be valued at around $5.4 billion, Courtieu estimates.

Other companies and collaborators are trying to solve the same data problems. What will set ICE’s technology apart, Courtieu says, will be the focus on the doctor and patient, rather than maximizing the technology for its own sake. Doctors, he says, are “looking for meaningful actionable pieces of information.”

For more news on cancer research, visit Cancer Discovery online at http://CDnews.aacrjournals.org.

NOTED

• The FDA granted traditional approval to idelalisib (Zydelig; Gilead) for use with rituximab (Rituxan; Genentech) for the treatment of relapsed chronic lymphocytic leukemia. The agency also granted accelerated approval to the drug for the treatment of relapsed follicular B-cell non-Hodgkin lymphoma and relapsed small lymphocytic lymphoma.

• Roche announced that a phase III study of the MEK inhibitor cobimetinib met its primary endpoint. Used in combination with Roche’s BRAF inhibitor vemurafenib (Zelboraf), cobimetinib helped patients with previously untreated BRAF V600 mutation-positive advanced melanoma live significantly longer without their disease worsening compared with vemurafenib alone.

• GliaxoSmithKline halted a phase III trial of its MEK inhibitor trametinib (Mekinist) in combination with its BRAF inhibitor dabrafenib (Tafinlar) based on an interim analysis showing an overall survival benefit. The trial was comparing the combination to vemurafenib in patients with BRAF V600E or V600K mutation-positive advanced melanoma.

• New York’s Cold Spring Harbor Laboratory received a $50 million gift from the Jim and Marilyn Simons Foundation to establish a center focused on using quantitative biology to interpret genomic research data from a variety of diseases.

• Los Angeles, CA-based Puma Biotechnology announced that women with early-stage HER2-positive breast cancer who took neratinib (PB272) for adjuvant treatment of their disease as part of a phase III clinical trial experienced 33% improvement in disease-free survival compared with those who took a placebo. Based on the study’s findings, Puma plans to file for FDA approval of neratinib in 2015.

• The American Thoracic Society, American College of Chest Physicians, and other organizations in the Forum of International Respiratory Societies issued a position statement taking a dim view of electronic cigarettes. “As a precaution,” the statement reads, “electronic nicotine-delivery devices should be restricted or banned until more information about their safety is available. If they are allowed, they should be closely regulated as medicines or tobacco products.”