

IBM, Quest Diagnostics launch Watson-powered genomic sequencing service

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IBM Watson Health and Quest Diagnostics has announced the launch of IBM Watson Genomics from Quest Diagnostics, a new service that helps advance precision medicine by combining cognitive computing with genomic tumor sequencing. Memorial Sloan Kettering Cancer Center (MSK) will supplement Watson's corpus of scientific data with OncoKB, a precision oncology knowledge base to help inform precision treatment options for cancer patients.

The launch marks the first time that Watson for Genomics has been made widely available to patients and physicians across the country. Quest Diagnostics, a leader in genomic sequencing and oncology diagnostics that serves half the nation's physicians and hospitals, extends these advanced capabilities to thousands of the country's community oncologists, who provide an estimated 70 percent of cancer care in the United States. The Broad Institute of MIT and Harvard will provide additional genome sequencing capabilities as part of the collaboration.

The new service involves laboratory sequencing and analysis of a tumor's genomic makeup to help reveal mutations that can be associated with targeted therapies and clinical trials. Watson then compares those mutations against relevant medical literature, clinical studies, pharmacopeia and carefully annotated rules created by leading oncologists, including those from MSK. Watson for Genomics ingests approximately 10,000 scientific articles and 100 new clinical trials every month.

"The beauty of Watson is that it can be used to dramatically scale access to knowledge and scientific insight, whether a patient is being treated in an urban academic medical center or a rural community clinic," said John Kelly III, PhD, senior vice president, IBM Research and Cognitive Solutions. "Through this collaboration with the cancer community's leading clinical and pathology experts, thousands of more patients can potentially benefit from the world's growing body of knowledge about this disease."

Bolstering the corpus of data Watson uses, MSK will provide OncoKB, a database of clinical evidence that will help Watson uncover treatment options that could target the specific genetic abnormalities that are causing the growth of the cancer.

Comparison of literature that may take medical experts weeks to prepare can now be completed in significantly less time.

"Precision medicine is changing the way we treat cancer and giving new hope to people living with the disease," said Jay G. Wohlgemuth, M.D., chief medical officer and senior vice president of research, development and medical, Quest Diagnostics. "However, access to genomic sequencing and tumor analysis required to determine appropriate precision medicine treatments for a patient can be a challenge. This service combines Quest's state-of-the-art tumor analysis and national access with the cognitive computing of IBM's Watson and the deep cancer treatment expertise of MSK. This is a powerful combination that we believe it will leap frog conventional genomic services as a better approach for identifying targeted oncology treatments."