



Memorial Sloan-Kettering Cancer Center

IBM Watson helps fight cancer with evidence-based diagnosis and treatment suggestions

Overview

Memorial Sloan-Kettering Cancer Center
New York, NY
www.mskcc.org

Solution components

- IBM Watson™ Oncology Diagnosis and Treatment Advisor
- IBM® POWER7® systems

“Watson’s capability to analyze huge volumes of data and reduce it down to critical decision points is absolutely essential to improve our ability to deliver effective therapies and disseminate them to the world.”

—Dr. Craig Thompson, President and CEO,
Memorial Sloan-Kettering Cancer Center

Memorial Sloan-Kettering Cancer Center (MSKCC), the world’s oldest and largest private cancer center, is battling an insidious disease that strikes one in three women and one in two men during their lifetimes. Indeed, it is nearly impossible to find anyone who has not been affected by cancer.

The need

Medical information doubles in volume every five years, and physicians practicing in the rapidly changing field of oncology are challenged to remain current with medical literature, research, guidelines and best practices. Research centers such as MSKCC publish innovative findings in peer-reviewed journals, which are the most common medium doctors use to gather new medical information. Nevertheless, keeping up with the medical literature can take as many as 160 hours a week. It’s not surprising that only about 20 percent of the knowledge that clinicians use today is evidence-based.

MSKCC began looking for a way to expand the accessibility and usability of medical evidence to improve patient outcomes across the field of oncology. It wanted to find a technology solution that could provide personalized diagnosis and treatment suggestions for individual patients.

The solution

MSKCC joined forces with IBM® to put IBM Watson™ to work. Beginning with breast and lung cancers, the organizations are consolidating clinical expertise, molecular and genomic data, and a vast repository of cancer case histories into an evidence-based solution. “Watson’s capability to analyze huge volumes of data and reduce it down to critical decision points is absolutely essential to improve our ability to deliver effective therapies and disseminate them to the world,” says Dr. Craig Thompson, president and CEO of MSKCC.



The cancer center's world-renowned oncologists are training Watson to compare a patient's medical information against a vast array of treatment guidelines, published research and other insights to provide individualized, confidence-scored recommendations to physicians.

Watson's natural language processing capabilities will enable the system to leverage unstructured data such as journal articles, physicians' notes, and guidelines and best practices from the National Comprehensive Cancer Network (NCCN).

The solution will include supporting evidence with every suggestion, both to provide transparency and to aid in the doctor's decision-making process. Watson will also point out areas in which more information is needed and will update its suggestions as new data is added.

Ultimately, Watson is expected to facilitate access to the best of oncology's collective wisdom. "What Watson is going to enable us to do is take that wisdom and put it in a way that people who don't have that much experience in any individual disease can have a wise counselor at their side at all times and use the intelligence and wisdom of the most experienced people to help guide decisions," says Dr. Larry Norton, deputy physician-in-chief for breast cancer programs and medical director for MSKCC.

The benefit

- Provides evidence-based suggestions to support oncologists' decisions
- Combines patient data with massive volumes of medical literature, including journal articles, physicians' notes, and NCCN guidelines and best practices
- Continues to evolve as new oncology techniques, treatments and evidence are developed

For more information

To learn more about IBM Watson, please contact your IBM representative or IBM Business Partner, or visit the following website:

ibm.com/watson



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