IBM Watson Health Presents New Data Demonstrating Real-World Progress of AI in Oncology at 2019 ASCO Annual Meeting

- Watson for Oncology trained by Memorial Sloan Kettering shown to inform clinical decision changes in 13.6% of cases at a hospital in India

- Watson for Genomics found to identify clinically actionable genomic variants that had not been identified in manual interpretation in 33% of patients at a hospital in South Korea

- 22 new studies featuring IBM Watson Health's AI technology to be presented at ASCO

CHICAGO, May 31, 2019 /PRNewswire/ -- IBM Watson Health and its partners today unveiled 22 new scientific studies that demonstrate progress in providing clinical decision support for cancer care globally at the American Society for Clinical Oncology 2019 annual meeting.

"Artificial intelligence technology is helping to enhance the way clinicians treat cancer today, in the real world," said Nathan Levitan, MD, MBA, Chief Medical Officer for Oncology and Genomics at IBM Watson Health. "AI is helping multidisciplinary tumor boards make more informed decisions based on curated scientific evidence; it is surfacing critical insights and information that is not identified manually; and it is helping to improve patient satisfaction by delivering a comprehensive view of treatment options."

Watson Health's studies show how Watson AI provides value in supporting evidence-informed treatment decisions, improving patient confidence in treatment plans, and annotating genomic variants and identifying clinical interventions. In total, more than 70 peer-reviewed studies, posters and abstracts support Watson Health offerings in oncology and genomics.

"In this early era of AI use in healthcare decision-making, the studies presented at ASCO this year offer compelling evidence of the important role this technology will play in helping oncologists improve cancer treatment for each individual patient," Levitan continued.

Following are among the key study findings being presented at ASCO:

- **Watson for Oncology Informs Clinical Decision Changes in 13.6% of Cases Reviewed by Multidisciplinary Tumor Board:** In a blinded evaluation of 1000 breast, lung and colorectal cancer patients in India, the multidisciplinary tumor board at Manipal Hospitals changed their treatment decisions in 13.6% of cases based on information provided by Watson for Oncology. Investigators reported that in these cases, decisions changed because Watson provided recent evidence for a newer treatment (55%), a more personalized alternative (30%), or new insights from genotypic and phenotypic data and evolving clinical experiences (15%). [Abstract link]

    "Building on previous studies, this evidence suggests that AI decision support holds substantial promise to reduce the cognitive burden on oncologists, which is a significant problem impacting physician burnout today," said lead investigator SP Somashekhar, Chairman of Surgical Oncology, Manipal Hospitals. "We consider Watson for Oncology to be an important tool to support decision making, and this study suggests

that AI could help reduce variability of care."

- **Watson for Genomics Surfaces New Insights for Oncologists Treating Patients with Hematological Malignancies:** In a study of 54 patients with hematological malignancies at Hallym University College of Medicine, Watson for Genomics annotations of sequencing results correlated well with manually curated expert opinion (90% in randomized subset), and identified clinically actionable insights that were not identified by manual interpretation in 33% of cases. This helps suggest that the labor-intensive manual curation of such results could be augmented with tools like Watson for Genomics. [Abstract link]

- **Watson for Oncology Improves Cancer Patient Confidence:** Physicians from the Oncology Department at Beijing Chaoyang Integrative Medicine Emergency Medical Center report that incorporating Watson for Oncology into a 7-step patient engagement and consultation process helped patients to better understand their disease and treatment options. This resulted in stronger patient confidence in their care plans. [Abstract link]

IBM Watson Health Continues to Enhance Products

IBM Watson Health continuously seeks to enhance capabilities in its offerings to help physicians improve the efficacy and efficiency of cancer treatment. During ASCO, IBM Watson Health reported data on a new method to automatically identify clinically relevant, high-quality scientific publications by training machine learning on the text from abstracts of papers cited in three expert resources: NCCN, NCI-PDQ, and Hemonc.org. The model classified papers in the test set with 93% accuracy, 95% sensitivity, and 91% specificity, which suggests that machine learning can be used to automatically identify relevant clinical publications and may reduce the time clinicians spend finding pertinent evidence for their patients.

Additionally, IBM Watson Health is strategically focused on tailoring offerings to support the workflow experience of oncologists in key markets based on feedback from physicians and insight from scientific data. Watson Health oncology and genomics offerings are currently being used to support physicians and patients in their cancer care journeys in more than 15 markets around the world.

"With 18 million diagnoses globally each year, cancer is a devastating disease that has a heavy human toll, as well as a high health system cost," said Dr. Levitan. "Patients often face grueling and confusing treatment regimens, while oncologists sift through reams of medical literature and genomic data to identify the best care plan for each individual patient. All the while, researchers are hamstrung by trials that too often fail due to low patient recruitment. IBM Watson Health was created to help address pressing health challenges through data, analytics and AI, and this is our focus in oncology."

About IBM Watson Health:
Watson Health is a business unit of IBM that is dedicated to the development and implementation of cognitive and data-driven technologies to advance health. Watson Health technologies are tackling a wide range of the world's biggest health care challenges, including cancer, diabetes, drug development and more. Learn more.

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