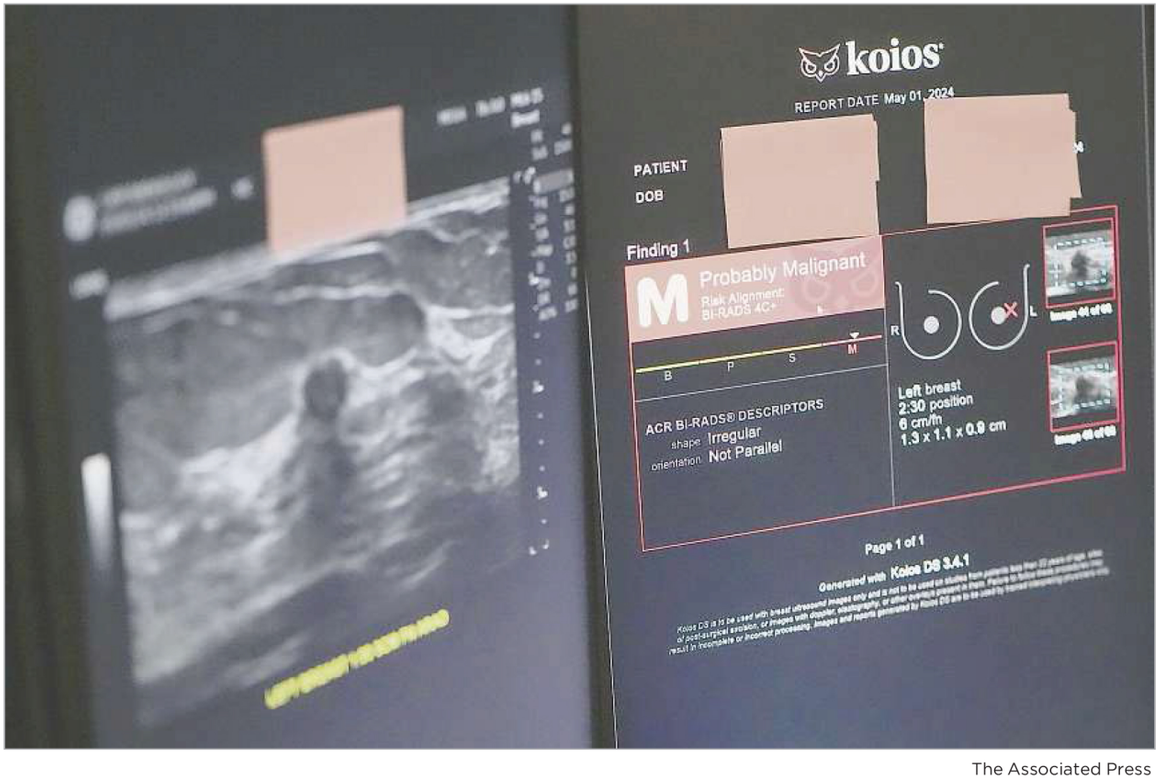
OPINION

How AI is enhancing health care

Dallas symposium will address promise, concerns of emerging technology

By JAMES B. MILLIKEN and DANIEL K. PODOLSKY



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AI's power lies in analyzing vast amounts of data to find patterns beyond the capacity of the human mind to recognize. This is also a source of anxiety about its use. UT Southwestern is collaborating with other academic medical centers and Microsoft to set standards for AI deployment in health care, write James B. Milliken and Daniel K. Podolsky. Pictured is software used for second opinions on mammography images.

Artificial intelligence is rapidly reshaping the landscape of health care, revolutionizing scientific discovery, drug development, diagnosis and treatment, as well as health care delivery operations. As with any emerging technology, its success lies in its implementation, and the University of Texas System is committed to harnessing AI's potential for the ultimate benefit of patients while ensuring its ethical and responsible use.

For all of AI's promise, concerns exist about shifting medical decision-making from doctors to machines, accentuating biases in care and reducing jobs. To address these issues, experts from the UT System's health care enterprise, the nation's eighth-largest based on number of physicians, will convene at UT Southwestern Medical Center on Thursday and Friday for the inaugural UT System AI Symposium in Health Care. This gathering will bring together AI experts from eight of UT's institutions to foster collaboration and promote the responsible integration of AI into health care.

While AI is not new, recent advances in deep learning and generative AI models, such as ChatGPT, have expanded its visibility and potential applicability across academia and industry, especially health and medicine. In a survey of more than 1,000 physicians conducted by the American Medical Association last year, 65% of respondents said there are benefits to implementing AI tools in clinical settings. It is notable that more than half said the biggest area of opportunity for AI is in addressing administrative burdens rather than in directly advancing diagnosis or treatment. The transformational potential of AI in health care extends beyond care itself with the ability to enhance the quality of education and training.

AI is already proving its utility in health and medicine. It assists with clinical notes, administrative tasks, cancer detection and treatment planning. For example, AI helps detect gene mutations in cancer cells, interpret imaging results and decide the best course for cataract surgery.

Within the UT System, M.D. Anderson Cancer Center uses AI to characterize tumors for precision treatment and improve prognostic models for cancer patients. At UT Southwestern, AI helps identify features from brain scans to predict effective medications for major depressive disorders. At UT Health Houston, researchers are developing an AI system to understand Alzheimer's disease's genetic architecture through brain imaging.

As algorithms and computer programs created at individual hospitals or health systems start to look promising, it's important to make sure that they are universal, with comparable effectiveness elsewhere. By leveraging the UT System's vast health care network, UT health institutions can collaborate to check if these programs run effectively at multiple sites before they're used more widely.

The UT System is also integrating AI into degree programs across its seven medical schools, equipping future health care professionals with emerging skills and knowledge. For example, UT Health San Antonio and the University of Texas at San Antonio have partnered to create what is believed to be the nation's first dual-degree program combining medicine and artificial intelligence. The program is designed to train new physicians to develop expertise in AI that can be leveraged to improve diagnostics and treatment.

AI's power lies in analyzing vast data to find patterns beyond the capacity of the human mind to recognize. This is also a source of anxiety about its use. Recognizing the need for guardrails, UT Southwestern is collaborating with other leading academic medical centers and Microsoft to set standards for AI deployment in health care. The Trustworthy & Responsible AI Network aims to ensure the safety, reliability and monitoring of AI algorithms; enable AI tool registration through a secure portal; and provide tools to measure outcomes.

State legislators are also focused on AI's responsible deployment. In the 2023 legislative session, Rep. Giovanni Capriglione (R-Southlake) and Sen. Tan Parker (R-Flower Mound) authored a bill establishing the State Artificial Intelligence Advisory Council, which they now co-chair, to study and monitor AI systems used by state agencies. Additionally, the Texas Senate recently prioritized AI in its 2024 interim legislative charges.

As the UT System and UT Southwestern Medical Center prepare to host the upcoming AI Symposium in Health Care, it is with the commitment to unlock the potential of AI to advance the health of our communities. From driving new treatments for chronic diseases to supporting the development of regulatory frameworks, we are determined to be at the forefront of this transformative journey.

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