

Can Artificial Intelligence Transform Cancer Care Safely and Fairly?

An at NCCN policy summit, cancer experts weighed in on whether medical technology is ready for its next big leap.

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The National Comprehensive Cancer Network (NCCN)—an alliance of leading cancer centers devoted to patient care, research, and education—hosted a [Policy Summit](#) on September 9 exploring where artificial intelligence (AI) currently stands as a tool for improving cancer care, and where it may be going in the future. Subject matter experts, including patients and advocates, clinicians and policymakers, weighed in on where they saw emerging success and also reasons for concern.

Travis Osterman, DO, MS, FAMIA, FASCO, Director of Cancer Clinical Informatics, Vanderbilt-Ingram Cancer Center—a member of the NCCN Digital Oncology Forum—delivered a keynote address, stating: “Because of AI, we are at an inflection point in how technology supports the delivery of care to our patients with cancer. Thoughtful regulation can help us integrate these tools into everyday practice in ways that improve care delivery and support oncology practices. The decisions we make now will determine how AI innovations serve our patients and impact clinicians for years to come.”

Many speakers took a cautiously optimistic tone on AI, rooted in pragmatism.

“AI isn’t the future of cancer care... it’s already here, helping detect disease earlier, guide personalized treatment, and reduce clinical burdens,” said William Walders, Executive Vice President, Chief Digital and Information Officer, The Joint Commission. “To fully realize the promise of AI in oncology, we must implement thoughtful guardrails that not only build trust but actively safeguard patient safety and uphold the highest standards of care. At Joint Commission, our mission is to shape policy and guidance that ensures AI complements, never compromises, the human touch. These guardrails are essential to prevent unintended consequences and to ensure equitable, high-quality outcomes for all.”

Panelists noted the speed at which AI models are evolving. Some compared its potential to previous advances in care, such as the leap from paper to electronic medical records. Many expressed excitement over the possibilities it represents for improving efficiency and helping to support an overburdened oncology workforce and accelerate the pursuit of new cures.

“Artificial intelligence is transforming every industry, and oncology is no exception,” stated Jorge Reis-Filho, MD, PhD, FRCPath, Chief AI and Data Scientist, Oncology R&D, AstraZeneca. “With the advent of multimodal foundation models and agentic AI, there are unique opportunities to propel clinical development, empowering researchers and clinicians with the ability to generate a more holistic understanding of disease biology and develop the next generation of biomarkers to guide decision making.”

“AI has enormous potential to optimize cancer outcomes by making clinical trials accessible to patients regardless of their location and by simplifying complex trial processes for patients and research teams alike. I am looking forward to new approaches for safe evaluation and implementation so that we can effectively and responsibly use AI to gain maximum insight from every piece of patient data and drive progress,” commented Danielle Bitterman, MD, Clinical Lead for Data Science/AI, Mass General Brigham.

She continued: “As AI becomes integrated into clinical practice, stronger collaborations between oncologists and computer scientists will catalyze advances and will be key to directly addressing the most urgent challenges in cancer care.”

Regina Barzilay, PhD, School of Engineering Distinguished Professor for AI and Health, MIT, expressed her concern that adoption may not be moving quickly enough: “AI-driven diagnostics and treatment has potential to transform cancer outcomes. Unfortunately, today, these tools are not utilized enough in patient care. Guidelines could play a critical role in changing this status quo.”

She illustrated some specific AI technologies that she believes are ready to be implemented into patient care and asserted her wishes for keeping up with rapidly progressing technology.

Some of the panel participants raised issues about the potential challenges from AI adoption, including:

- How to implement quality control, accreditation, and fact-checking in a way that is fair and not burdensome
- How to determine appropriate governmental oversight
- How medical and technology organizations can work together to best leverage the expertise of both
- How to integrate functionality across various platforms

- How to avoid increasing disparities and technology gaps
- How to account for human error and bias while maintaining the human touch

“Many similar problems have been solved in different application environments,” concluded Allen Rush, PhD, MS, Co-Founder and Board Chairman, Jacqueline Rush Lynch Syndrome Cancer Foundation. “This will take teaming up with non-medical industry experts to find the best tools, fine-tune them, and apply ongoing learning. We need to ask the right questions and match them with the right AI platforms to unlock new possibilities for cancer detection and treatment.”

The topic of AI and cancer care was also featured in a plenary session during the NCCN 2025 Annual Conference. Visit [NCCN.org/conference](https://nccn.org/conference) to view that session and others via the NCCN Continuing Education Portal.

Next up, on Tuesday, December 9, 2025, NCCN is hosting a Patient Advocacy Summit on addressing the unique cancer care needs of veterans and first responders. Visit [NCCN.org/summits](https://nccn.org/summits) to learn more and register.

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