

The NCI Artificial Intelligence Working Group

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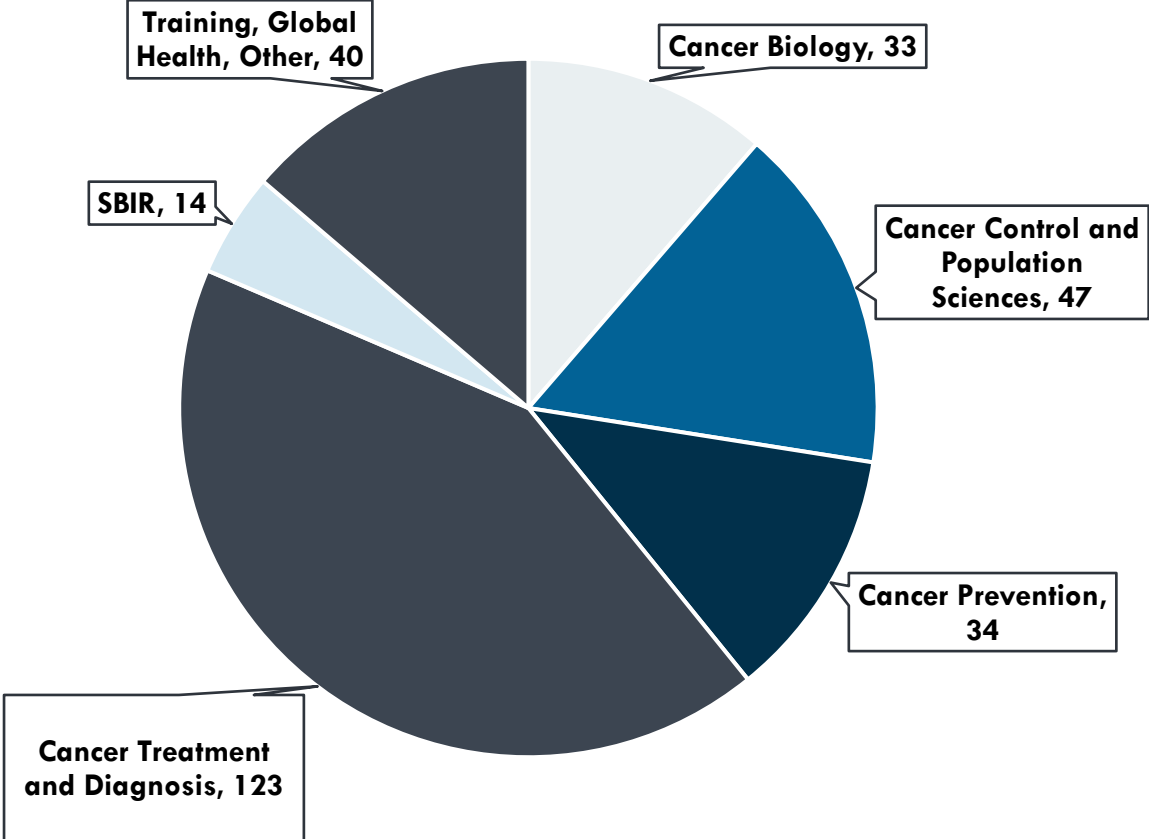
Program Director

NCI Center for Strategic Scientific Initiatives

Artificial intelligence across the cancer research continuum



FY2023 Single Component Grants with a significant AI/ML focus

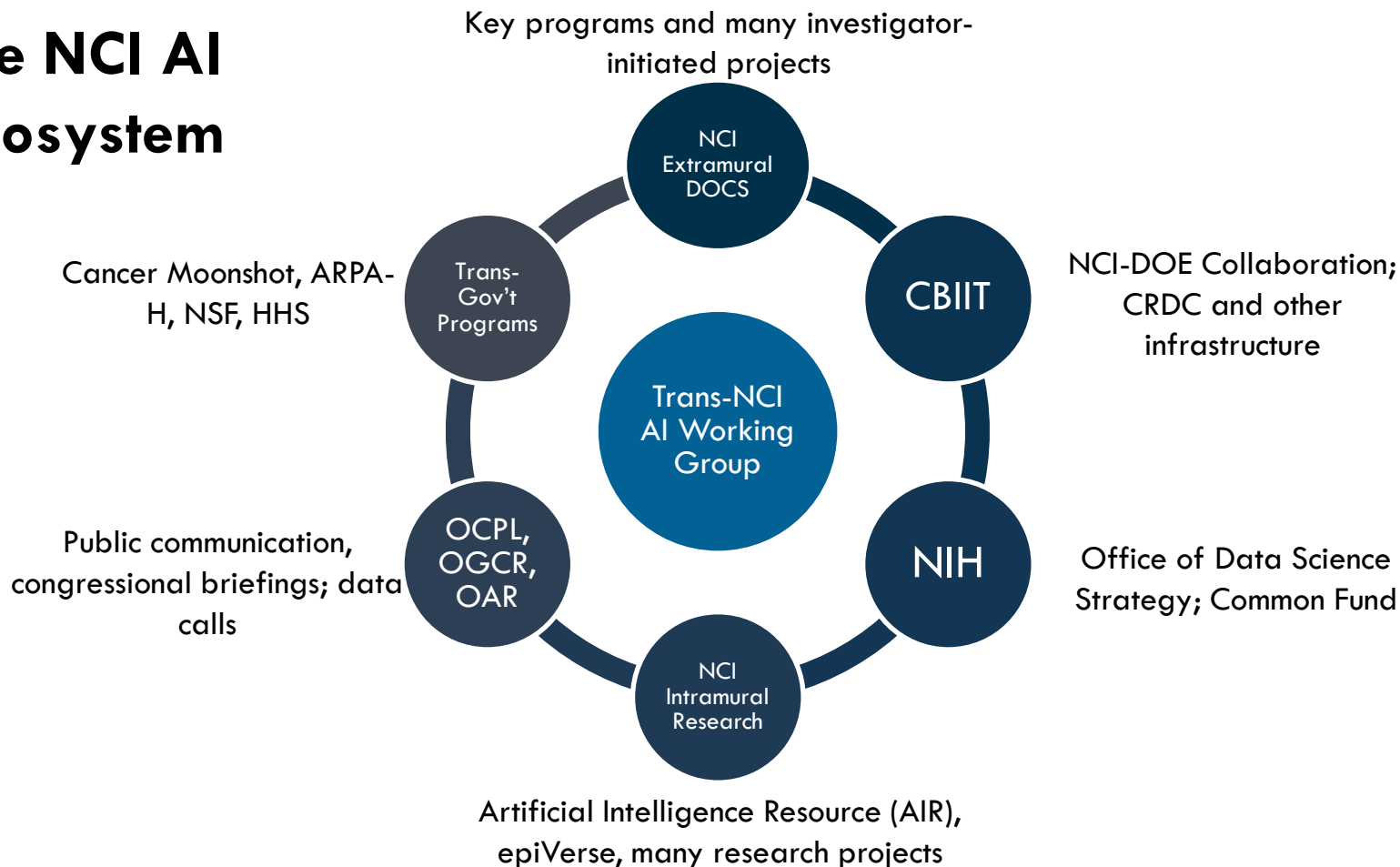


NCI Artificial Intelligence Working Group

Mission:

- Provide a hub for **communication and coordination** for AI-related scientific projects and programs across NCI
- **Identify and prioritize** trans-NCI cancer research opportunities that can most benefit from the application of AI
- **Provide connection** with activities external to NCI

The NCI AI Ecosystem

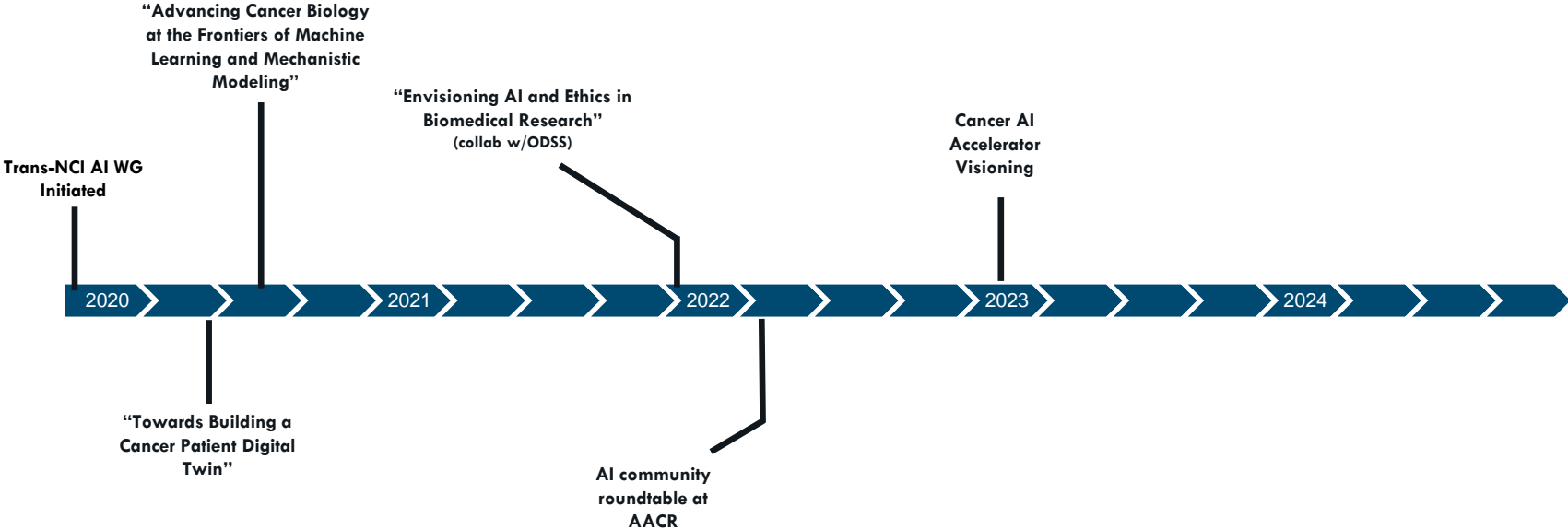


Select trans-NCI AI activities 2020 - 2024

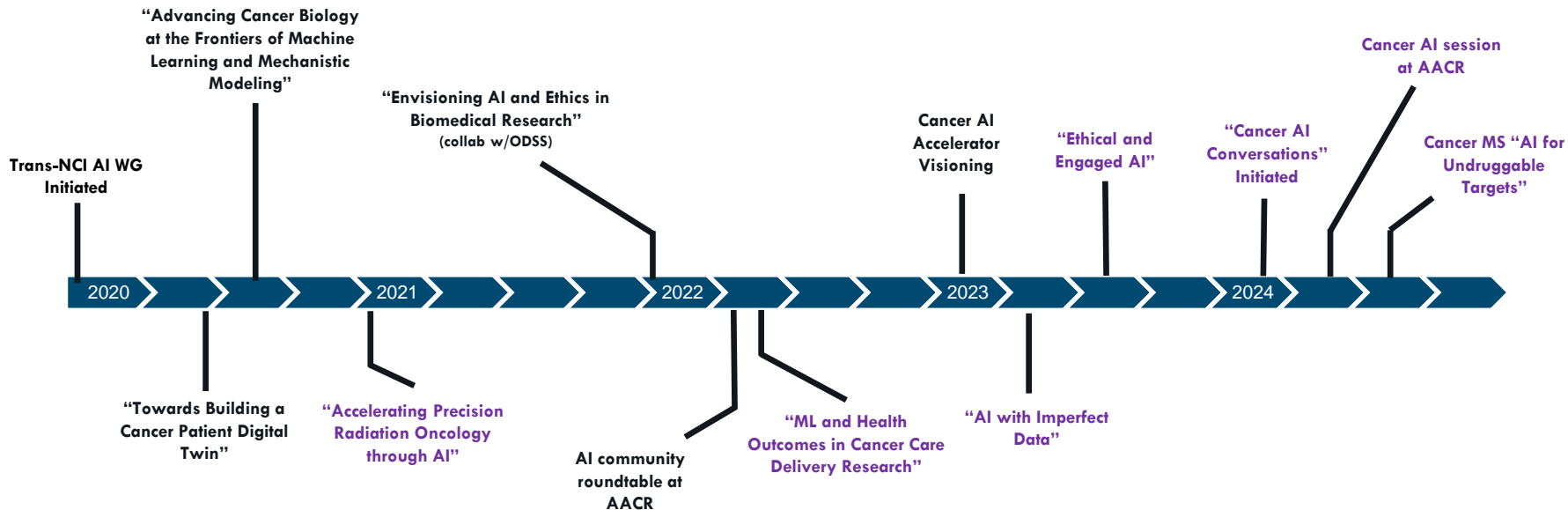
Trans-NCI AI WG
Initiated



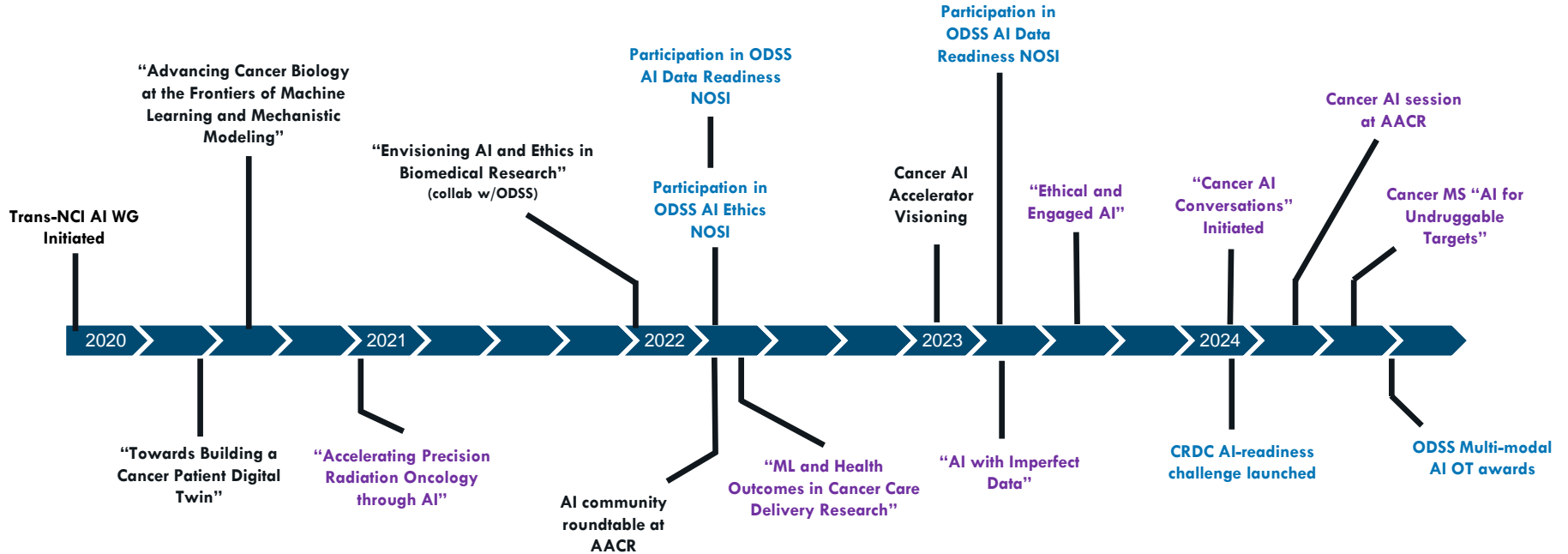
Select trans-NCI AI activities 2020 - 2024



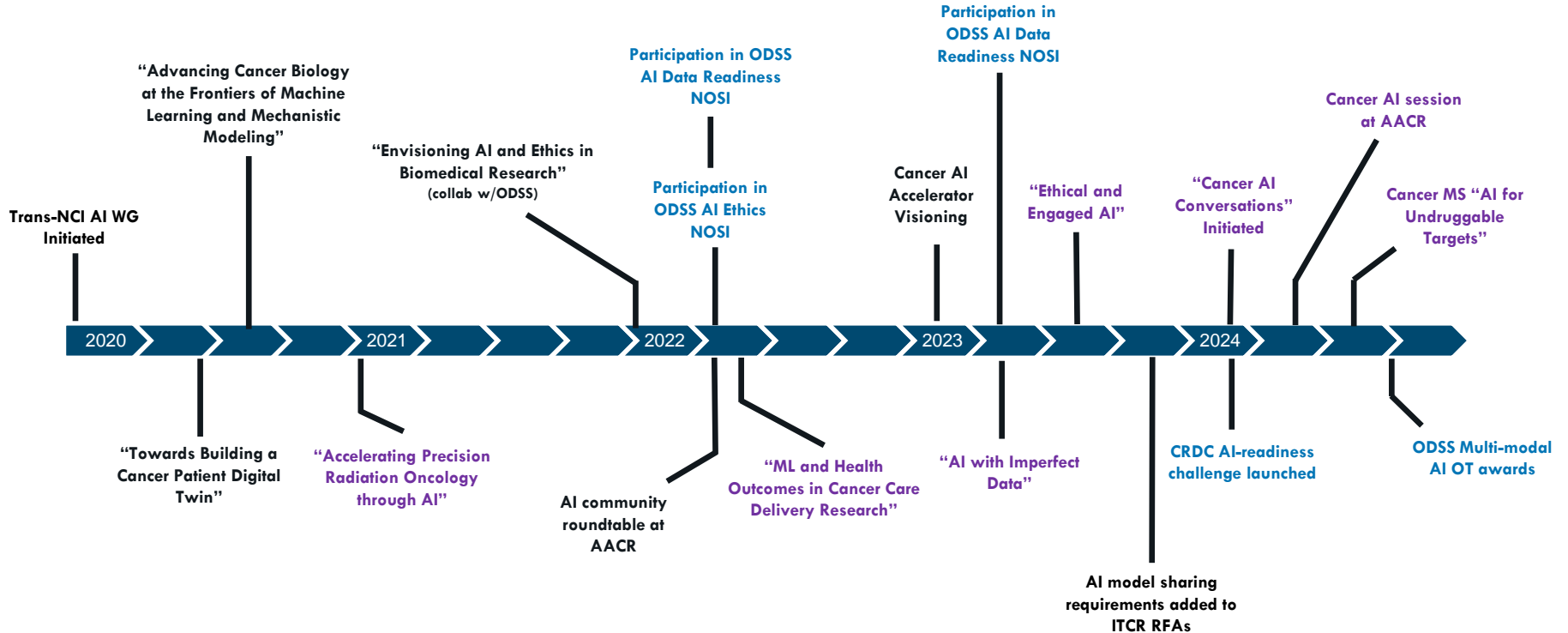
Select trans-NCI AI activities 2020 - 2024



Select trans-NCI AI activities 2020 - 2024



Select trans-NCI AI activities 2020 - 2024



New AI websites on cancer.gov

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Artificial Intelligence (AI) and Cancer

Artificial intelligence (AI) is a machine's ability to perform functions that are usually thought of as intelligent human behaviors, such as learning, reasoning, and solving problems. Computers derive this ability from algorithms that enable the use of data to make predictions or to create new content. AI algorithms can detect patterns in large amounts of data and identify relationships among pieces of data that cannot be easily perceived by the human brain.

AI presents an unprecedented opportunity to advance our understanding of cancer and improve care for people with cancer.
Credit: iStock

In recent years, advances in three areas—methods and algorithms for training AI models, computer hardware needed to train these models, and access to large volumes of cancer data such as imaging, genomics, and clinical data—have converged, leading to promising new applications of AI in cancer research.

These new applications include understanding and predicting biological mechanisms, finding and leveraging patterns in clinical data to improve patient outcomes, and disentangling complex epidemiological, behavioral, and real-world data. Implemented in an ethical and scientifically rigorous manner, these uses of AI have the potential to rapidly advance cancer research and create better health outcomes for all.

For the public

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Home ▾ [Research](#) ▾ [Resources for Researchers](#) ▾ Artificial Intelligence (AI) in Cancer Research

Resources for Researchers

- Biomedical Citizen Science
- Artificial Intelligence in Cancer Research**
- AI Funding Opportunities
- AI Events
- AI Resources & Tools
- AI Research Highlights
- Cryo-EM

Artificial Intelligence (AI) in Cancer Research

Recent advances in Artificial Intelligence (AI) have converged to rapidly accelerate activity across the cancer research spectrum. AI can create new models of care, as well as advance our knowledge of cancer biology, in an ever-expanding world of technology.

NCI supports many projects and activities, including funding opportunities and engaging the cancer research and AI communities to help realize the promise of AI in cancer research and care. Extramural researchers are encouraged to check out NCI funding opportunities and resources, as well as the latest seminars and workshops.

Funding Opportunities: AI in Cancer Research
NCI funds and supports extramural research to advance the use of AI in cancer research. Find out more about funding opportunities and other ways to engage AI for cancer research.

Events: AI in Cancer Research
Discover upcoming and past seminars and workshops organized by NCI on AI in cancer research.

Resources and Tools: AI in Cancer Research
Access a wide-ranging collection of NCI-supported resources and tools specific to artificial intelligence, machine learning, and deep learning.

Contact the NCI AI Working Group
Email the NCI Artificial Intelligence Working Group at CancerAI@mail.nih.gov.

For researchers