Data Sharing in Digital Age: Harnessing the Power of AI for Cancer Research

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NIH NATIONAL CANCER INSTITUTE

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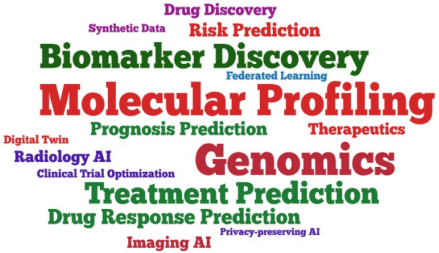
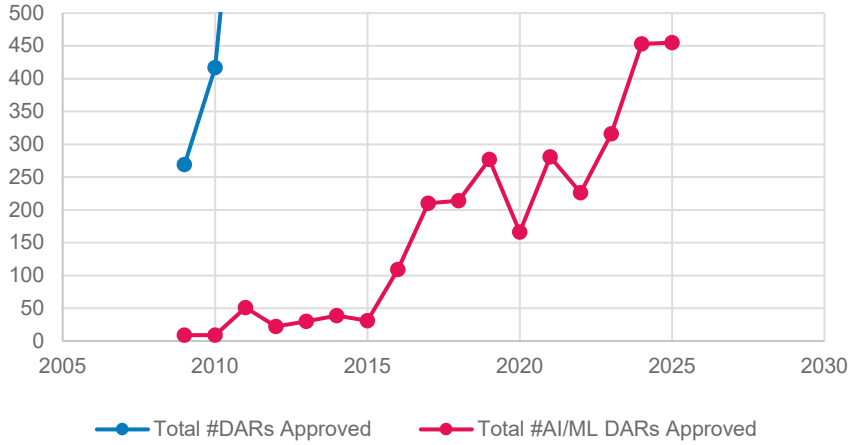
Sharing the Right Data for the Right Model

AI in Research: Policy Considerations and Guidance (NIH Office of Science Policy)

How to Request Controlled-Access Data

GenAI Models Trained on Controlled-Access Genomic Data (pre-decisional)





NIH Robust Process to Protect Controlled Access Data

Protecting Human Genomic Data when Developing Generative Artificial Intelligence Tools and Applications

Notice Number:
NOT-OD-25-081

Key Dates

GenAI models including model parameters, SNPs & imputed data trained on controlled access data from NIH-designated repositories constitute Data Derivatives (DUC).

- Approved users may ***not*** share the model, including model parameters, except with collaborators who are also Approved Users.
- May ***not*** retain GenAI models & model parameters upon closeout of the project.
- Sharing controlled-access data (GDS Policy) with public generative AI tools via prompts or other user interfaces is ***not*** allowed.

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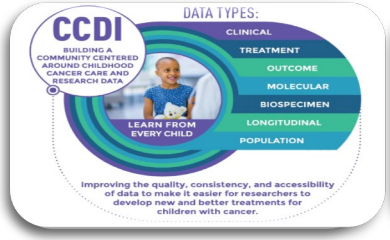
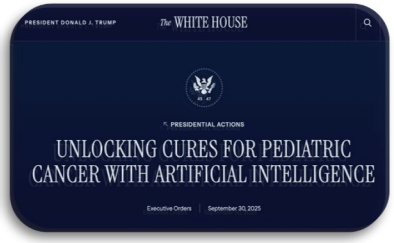
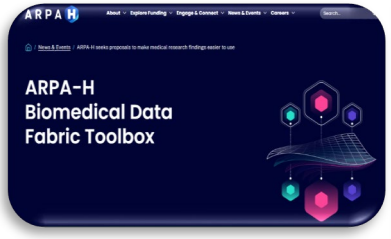
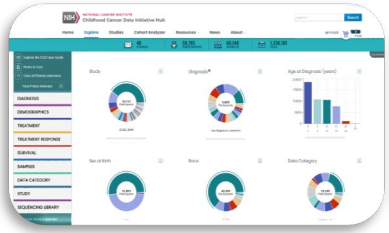
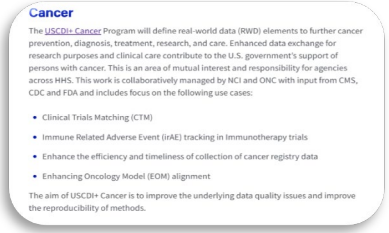
Enhancing Data Utility for AI Applications in Oncology

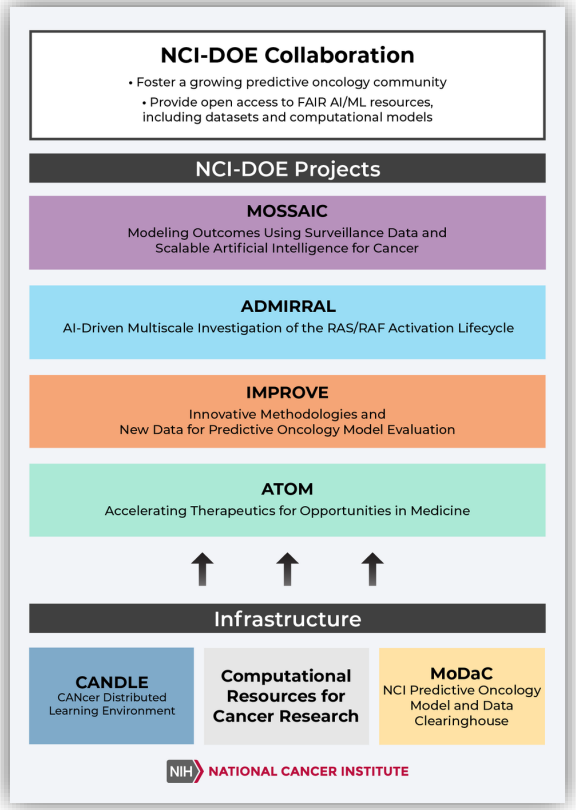












How to Unlock AI Potential for Effective & Ethical Use?

Engage with us:
https://datasharing.cancer.gov/
nciofficeofdatasharing@mail.nih.gov

- Other data modalities (e.g., imaging, EHR)?
- Risk assessment of multi-modal data?
- Benchmarks and reference datasets?
- Scalable governance framework for data access and downstream research (e.g., federated learning, data linkage)?
- AI-specific attributes to consider:
  - Sample size bias
  - Label noise
  - Performance drift monitoring
- Develop strategies for AI/ML-related training and workforce development?
- Cancer research specific applications?
- How to align AI application types with sensitive data: Biomedical Impact vs. Risks?

Thank You

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