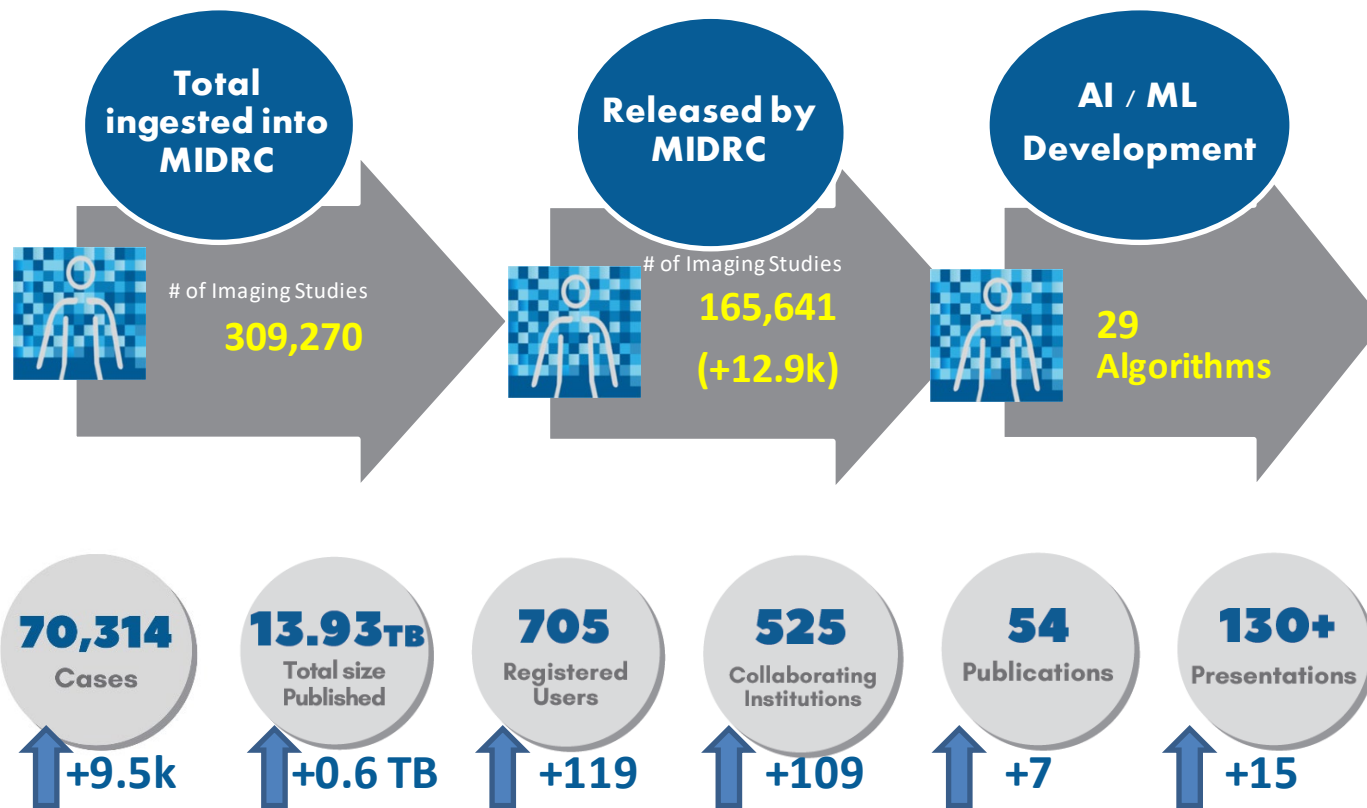# Medical Imaging and Data Resource Center

ACCELERATING DATA RELEASE & UTILIZATION

Real world assessment of AI performance towards accelerating development and clinical deployment

January 2024 v. September 2023

Total ingested into MIDRC

# of Imaging Studies
309,270

Released by MIDRC

# of Imaging Studies
165,641 (+12.9k)

AI / ML Development

29 Algorithms

70,314 Cases — +9.5k

13.93 TB Total size Published — +0.6 TB

705 Registered Users — +119

525 Collaborating Institutions — +109

54 Publications — +7

130+ Presentations — +15

MIDRC

- **Expanding Impact** through Social Media Outreach

Linkedin	X	YouTube	MIDRC
Followers	Followers	Videos	Newsletter Subscribers
1701 (+733)	228 (+47)	40 (+2)	1603 (+204)

- **MIDRC momentum growing** across national AI ecosystem projects including ARPA-H BDF and NAIRR

National Institute of Biomedical Imaging and Bioengineering

https://www.midrc.org

Medical Imaging and Data Resource Center

- ARPA-H Biomedical Data Fabric (BDF) Toolbox is a national infrastructure for data ingestion, curation, data discovery, and visualization to support trustworthy AI in healthcare
- MIDRC funded by ARPA-H as 1 of 5 Phase I BDF Performers
- Extending MIDRC from COVID into cancer
- NIBIB facilitating ARPA-H funding and contributing Deputy Program Manager

https://arpa-h.gov/research-and-funding/programs/arpa-h-bdf-toolbox
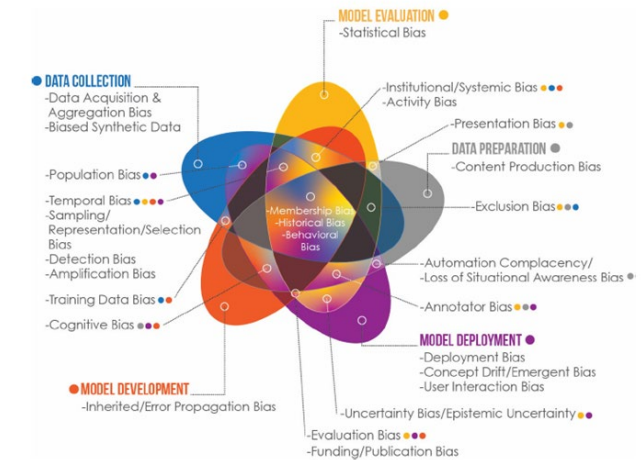
Medical Imaging and Data Resource Center

MIDRC AI/ML Bias Tool

- MIDRC activities span BDF Technical Areas (TAs) including
  - Data intake methods and dashboard to support bias and equity measurements and trustworthy AI (TA1)
  - Data harmonization and indexing across repositories (meta-index) TA2
  - Data quality assurance metrics and methods (TA2)
  - Data sequestration (FDA) and task-based sampling (TA2)
  - Knowledge integration between imaging and other data in BDF (TA3)
  - Health disparities and bias metrics (TA3)
- ***MIDRC tools will be an integral part of the Biomedical Data Fabric Toolbox***

https://www.midrc.org/bias-awareness-tool-1

National Institute of Biomedical Imaging and Bioengineering

- Executive Order to build national research infrastructure to broaden access to resources essential to AI research and development
- The National AI Research Resource (NAIRR) is estimated to be a $2.6B / 6-year investment in national infrastructure for AI
- NIH participating in NAIRR Pilot Program in 2024 to deploy resources to early NAIRR users
- ***NIBIB / MIDRC selected as a Pilot Program resource for NAIRR***

https://www.whitehouse.gov/ostp/news-updates/2023/01/24/national-artificial-intelligence-research-resource-task-force-releases-final-report/

https://www.ai.gov/wp-content/uploads/2023/01/NAIRR-TF-Final-Report-2023.pdf

Strengthening and Democratizing the U.S. Artificial Intelligence Innovation Ecosystem

An Implementation Plan for a National Artificial Intelligence Research Resource

January 2023

NIH NAIRR Pilot Programs

- NIH-NAIRR Pilot Programs
  - HPC allocations for NAIRR users
  - Data and model resources from multiple agencies
  - Training and education materials on AI
  - Demonstration programs to highlight interoperability (e.g., MIDRC and N3C)
  - NIBIB involved in early coordination of NAIRR pilots as part of NAIRR interagency working group
  - MIDRC listed as data resource for NAIRR users
- ***NAIRR Landing page coming soon!***