

Medical Imaging and Data Resource Center



ACCELERATING DATA RELEASE & UTILIZATION

Real world assessment of algorithmic performance, accelerating development and clinical deployment

Accelerating Pipeline *December 2022 v. June 2022*

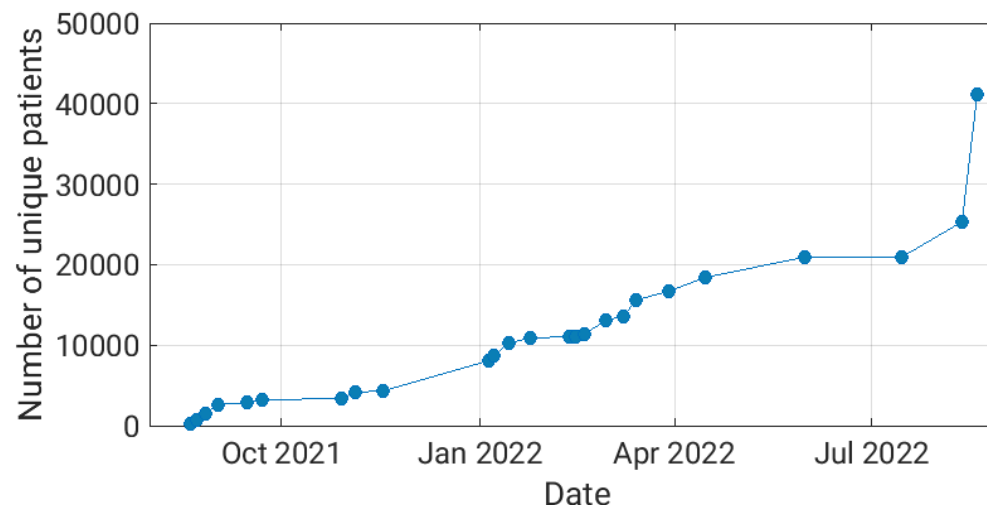
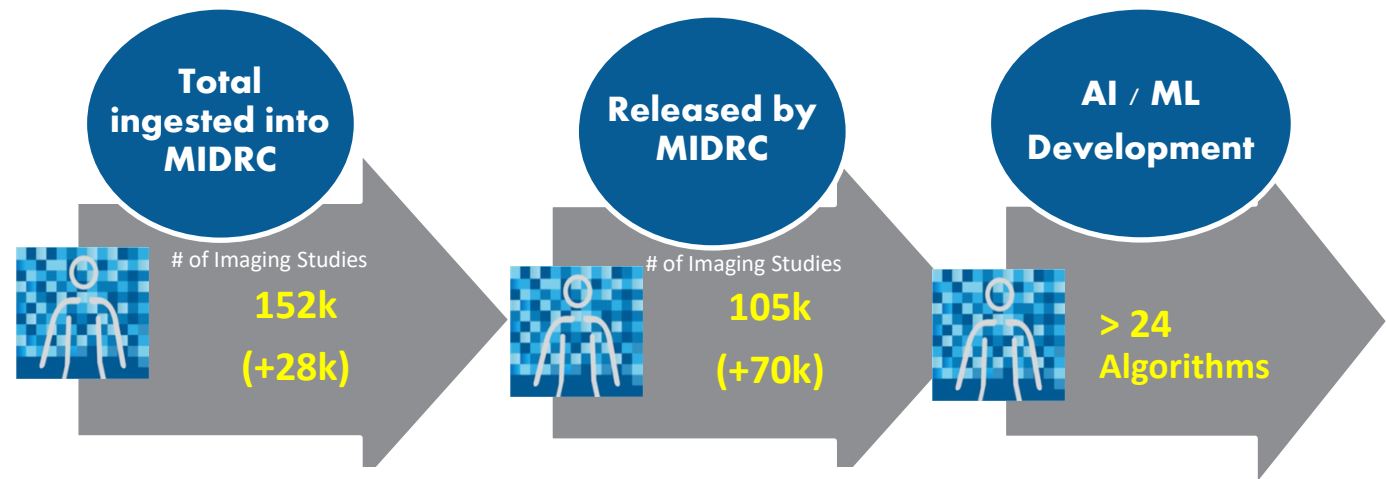
- Open commons, released: ~105k imaging studies (+70k)
- 13.8 TB (+8.25 TB) of imaging data
- 97% mapped to LOINC-RadLex playbook for harmonization enabling cohort building

Growing Momentum for Adoption

- 40 contributing sites, spanning 23 US states
- 350 users (+166) from 252 institutions (+123)
- 32 publications (+3), ~1k newsletter subscribers

FDA Sequestered for Product Validation

- ~20k imaging studies (+13k)



Novel data ingestion model with ACR, RSNA, and AAPM means **rapid ingestion and curation of new subjects**

The First International MIDRC COVID Grand Challenge

- Well-curated, challenge-ready data ***promotes FAIR principles, equity, and accessibility*** in data science
- COVID +/- from frontal-view portable chest radiographs (CXR's)
- ***Algorithm AUC better than expert reviewer on the validation data***
- Winners announced at RSNA 2022
- Winning code to be posted to public MIDRC github

FIRST PLACE

RAN ZHANG, PHD

DALTON GRINER, MS

GUANG-HONG CHEN, PHD

(University of Wisconsin)

Score - Area under the ROC curve, or AUC, of 0.703

Model architecture – EfficientNetV2 Convolutional Neural Network (CNN) and Swin Transformer implemented in PyTorch

