







Patient Name: [REDACTED] Exam no: 1744
Accession Number: [REDACTED]
Patient ID: [REDACTED] Discovery CT750 HD
Exam Description: CT HALS/THORAX/ABDOMEN

Dose Report

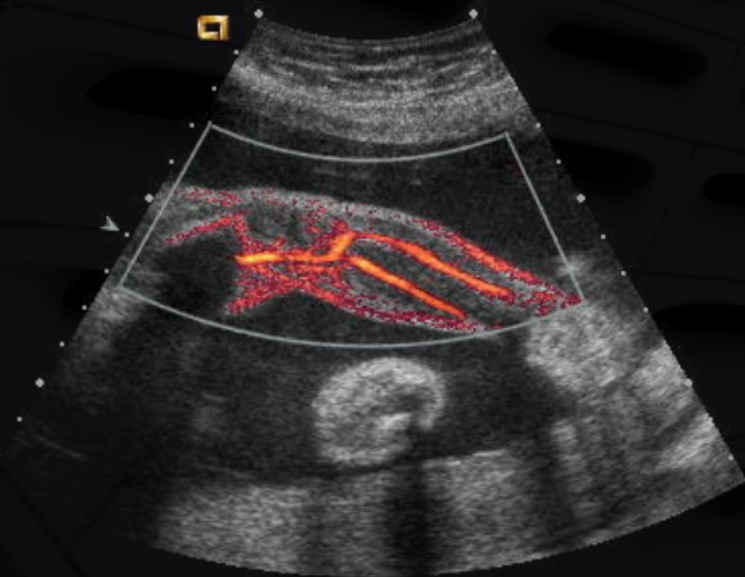
Series	Type	Scan Range (mm)	CTDIvol (mGy)	DLP (mGy-cm)	Phantom cm
1	Scout	-	-	-	-
2	Helical	S15.750-I650.250	5.10	373.00	Body 32
5	Helical	S188.000-I105.000	5.10	182.72	Body 32
Total Exam DLP:				555.72	



SEQUOIA



.089

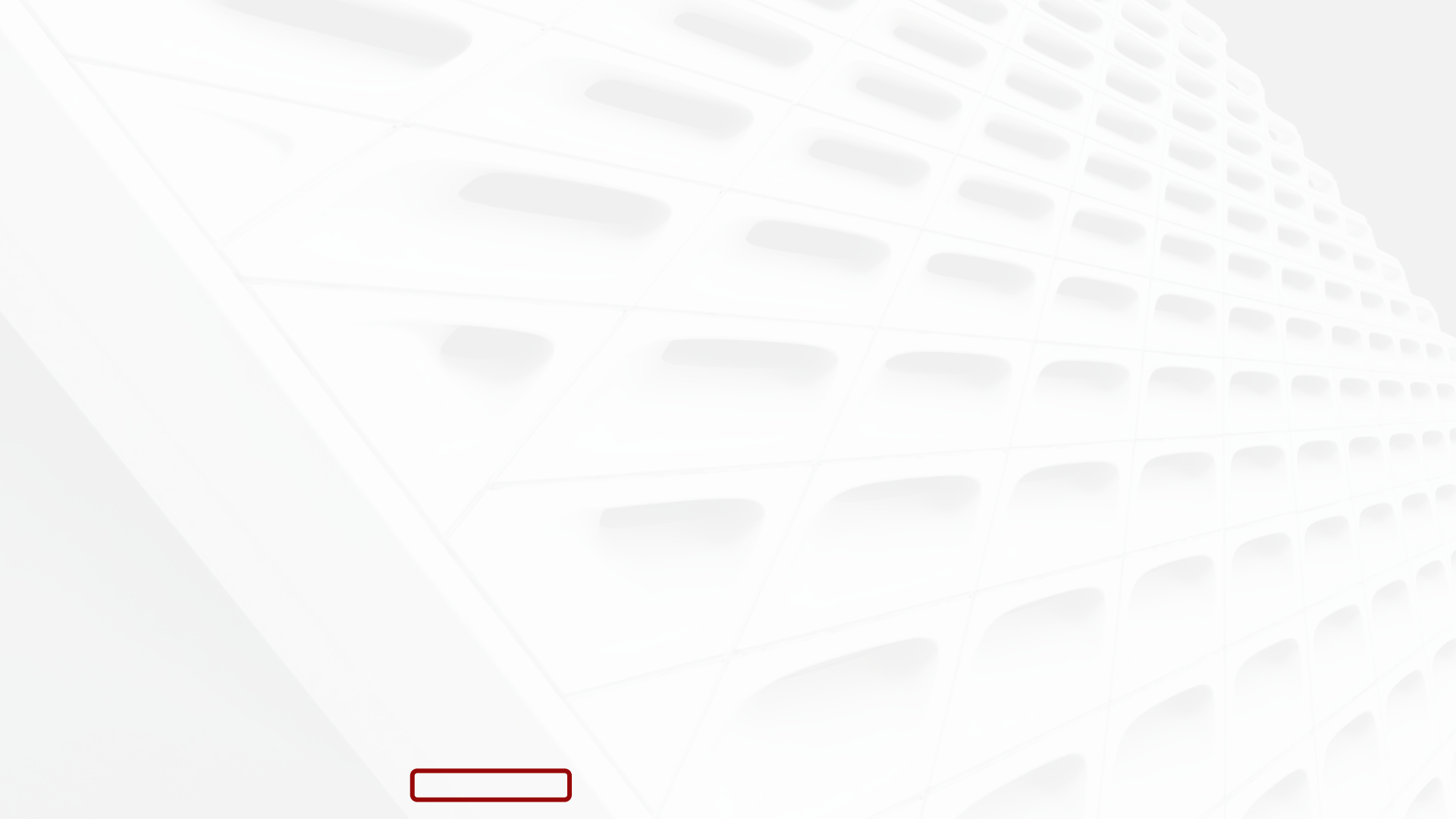


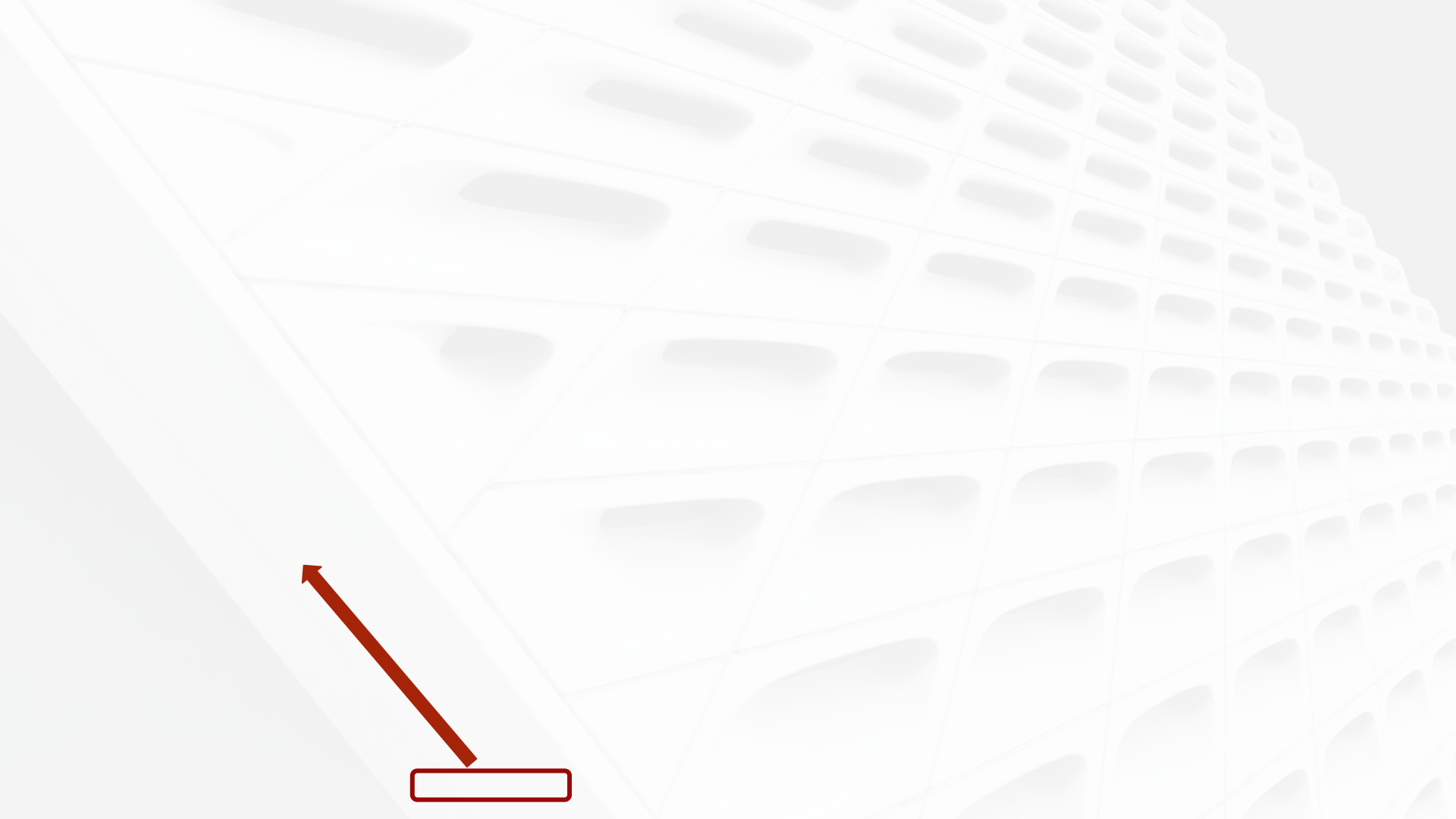
6C2 4Hz
H5.0MHz 30mm

OB
General

S2/ 0/ 3/E:1+1
1/1 CD:5MHz
CD Gain = 43
CDE 15dB

Store in progress





Leveraging AI



Pixel DeID Workflow



PHI Detection and Classification



Optical Character Recognition (OCR) + GPT-4

- Detected bounding boxes are passed through a robust OCR



Project Labels Navigation

Workspace

Dataset: PHI Dataset
 Data View: Default Hierarchical

Columns: 1
 Filter Label Group

1/16
 2/2
 1/1

INACTIVE
Pixel De-ID
 Model for detecting burnt in patient health information and markers on DICOM images with an emphasis on detecting dates/digits.

OWNER: M_KlnqyN | SCOPE: Image | CREATED: 4 months ago | UPDATED: 4 months ago | PRIVACY: | AUTORUN:

LABELS WITH CLASS INDEX

VERSIONS

#	ID	Docker Image:Tag	Created	Build Status	Hardware
✓ 3	660	staging/model-244.v3	4 months ago	Success	GPU

TASKS

ID	Created	Type	Status	Progress
1306	4 months ago	Inference	Succeeded	100%

Run model version 3 on the active:
 Image ▾ for: Inference ▾

SAVED

DAVIDSON DOUGLAS [M] 01.09.2012
DOB: 06.16.1976

Semi-Upright
Portable
L

MODEL OUTPUT [ID: 0_1t420e]
 Created 5 months ago

Model: Pixel De-ID [v3] | Task ID: 1306

Class Name: Digits | Class Probability: 0.7078903416211609

Explanations: cmicsoadddugaasm11122222

DAVIDSON DOUGLAS [M] 01.09.2012

Redaction





1. RSNA



2. Human V



3. Pixel DeID

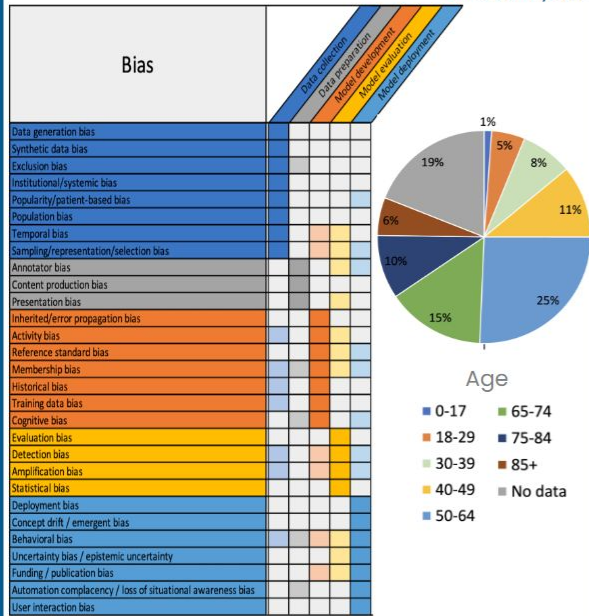


3. Pixel DeID



Bias & Diversity Working Group

A diverse data collection and curation strategy, as well as the mitigation of bias in data analysis within the MIDRC commons, are critically important to yield ethical AI algorithms that produce trustworthy results for all groups. MIDRC strives to mitigate bias in its study population, data collection, curation and analysis.



BDWG Members:
 AAPM - Weijie Chen, Karen Drukker, Kyle Myers, Berkman Sahiner, Emily Townley
 ACR - Jayashree Kalpathy-Cramer, Judy Wawira-Gichoya
 NIH - Rui de Sá
 RSNA - Sanmi Koyejo, Zi Jill Zhang
UChicago-MIDRC Central - Maryellen Giger, Nick Gruszkas, Heather Whitney



Grand Challenges Working

- Performs oversight of all MIDRC Grand Challenge processes, protocols, and guidelines
- Maintains MIDRC Portfolio of Grand Challenges
- Planning several upcoming Challenges using pre-published MIDRC data with expert annotations, including:



- COVID-19 severity
- Patient outcome prediction using both clinical and imaging data
- Longitudinal assessments, disease progression
- Risk assessment for long-term sequelae (e.g., neuro, cardiovascular)
- COVID segmentation on CT data

MIDRC COVIDx CHALLENGE



A COVID classification Grand Challenge on pre-published portable chest radiographs from MIDRC

Top-ranked finishers will be acknowledged during our session at the Innovation Theater, Booth 3316, South Hall Tuesday, November 29, 4:00 PM - 5:00 PM

Cash awards generously sponsored by the International Society for Photonics and Optics (SPIE)

MIDRC-GCWG Members:
 AAPM - Sam Armato, Karen Drukker, Lubomir Hadjijski, Emily Townley
 ACR - Jayashree Kalpathy-Cramer, Chris Tremel
 NIH - Rui de Sá
 RSNA - Robyn Ball, Adam Flanders, Tim Stearns, Carol Wu
UChicago-MIDRC Central - Maryellen Giger, Ravi Madduri



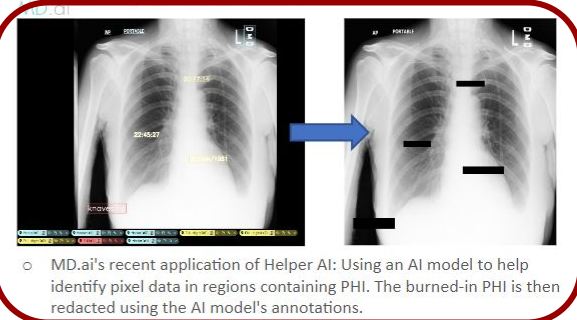
Annotations Working Group

Crowd-Sourced Annotations

- To create standard methods for labeling and annotation of COVID-19 radiographic and CT images.
- To develop best-practices for image labeling by crowds of imaging experts, including:
 - Recruitment and training of experts
 - Image label adjudication
 - Methods to assess accuracy of experts
 - Data cleaning methods for labels.
- To deploy these tools and processes to conduct 3 data science challenges to develop computer vision algorithms for COVID-19.

Helper AI & the Annotation Process:

- High quality, well-curated annotations are an essential supplement to the MIDRC effort and AI research
- Annotations can be created by human experts or automatically created by tools like AI models.



- MD.ai's recent application of Helper AI: Using an AI model to help identify pixel data in regions containing PHI. The burned-in PHI is then redacted using the AI model's annotations.

Annotation Members:

RSNA - Adam Flanders, Bhavik Patel, Carol Wu, Chris Carr, George Shih, Maryam Vazirabad, Jason Sho, Thomas OSullivan
 ACR - Brian Bialecki
 AAPM - Andrey Federov, Paul Kinahan, Sam Armato
 Gen3 - Bob Grossman,
UChicago-MIDRC Central - Nick Gruszkas
MD.ai team: Chinmay Singhal, Zhihao Wang

