

Radiology Preprocessor Training Curriculum Development for Augmented Radiologist Workflows



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DISCLOSURES, DISCLAIMERS

- Susan Chow, BS
 - Nothing to disclose
- Michael Do, MD
 - Nothing to disclose
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THREE MAJOR TEACHING POINTS

- 1. RP training curriculum is suitable for researchers of all levels, ranging from college students to postdocs**
 - Train students in anatomy recognition, tool annotation (PACS), and following tumor imaging criteria (RECIST 1.1)
- 2. Implementing trained RPs in radiologist workflow improves patient care**
 - Minimizing errors and time spent on CT exams
- 3. Gamification incentivizes RPs**
 - Leaderboard to “rank” RPs based on weighted score
 - Improves RP’s accuracy and productivity

RADIOLOGY PREPROCESSOR (RP) CURRIC

A Review of all PACS Presentations

- 1 Introduction to PACS (for anyone using PACS, this ppt)
 - 2 Introduction to interactive reporting for radiologists and residents
 - 3 PACS LMA Basics (for those measuring lesions)
 - LMA = Lesion Management Application
 - 4 Radiology Preprocessor Workflow
 - Includes important CT facts and basic CT anatomy
 - 5 Exporting and managing measurement data (ENABLE)
 - 6 PACS Volumetric Segmentation
 - How to make volumetric segmentations in PACS
- Additional presentations are available on interactive reporting

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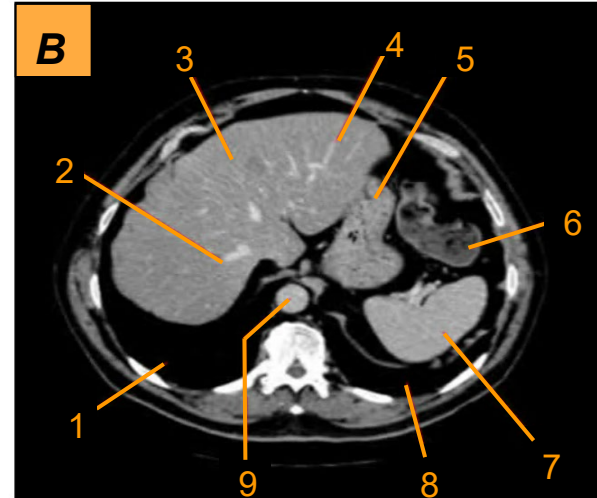
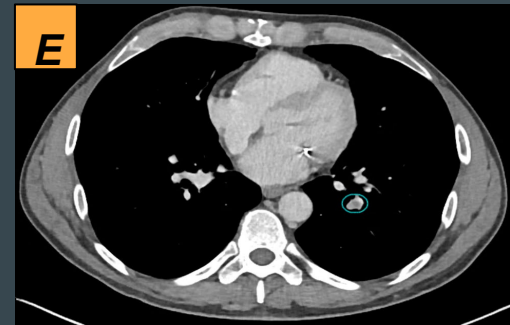
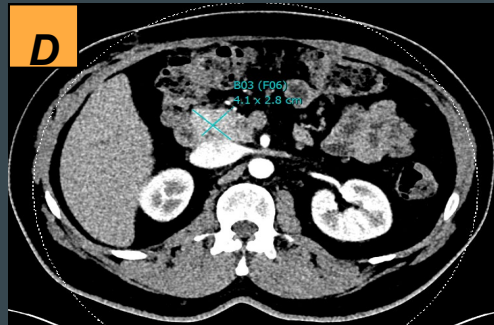
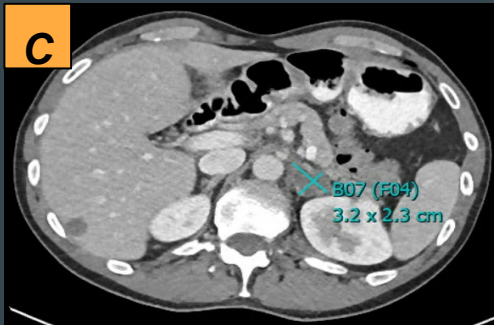
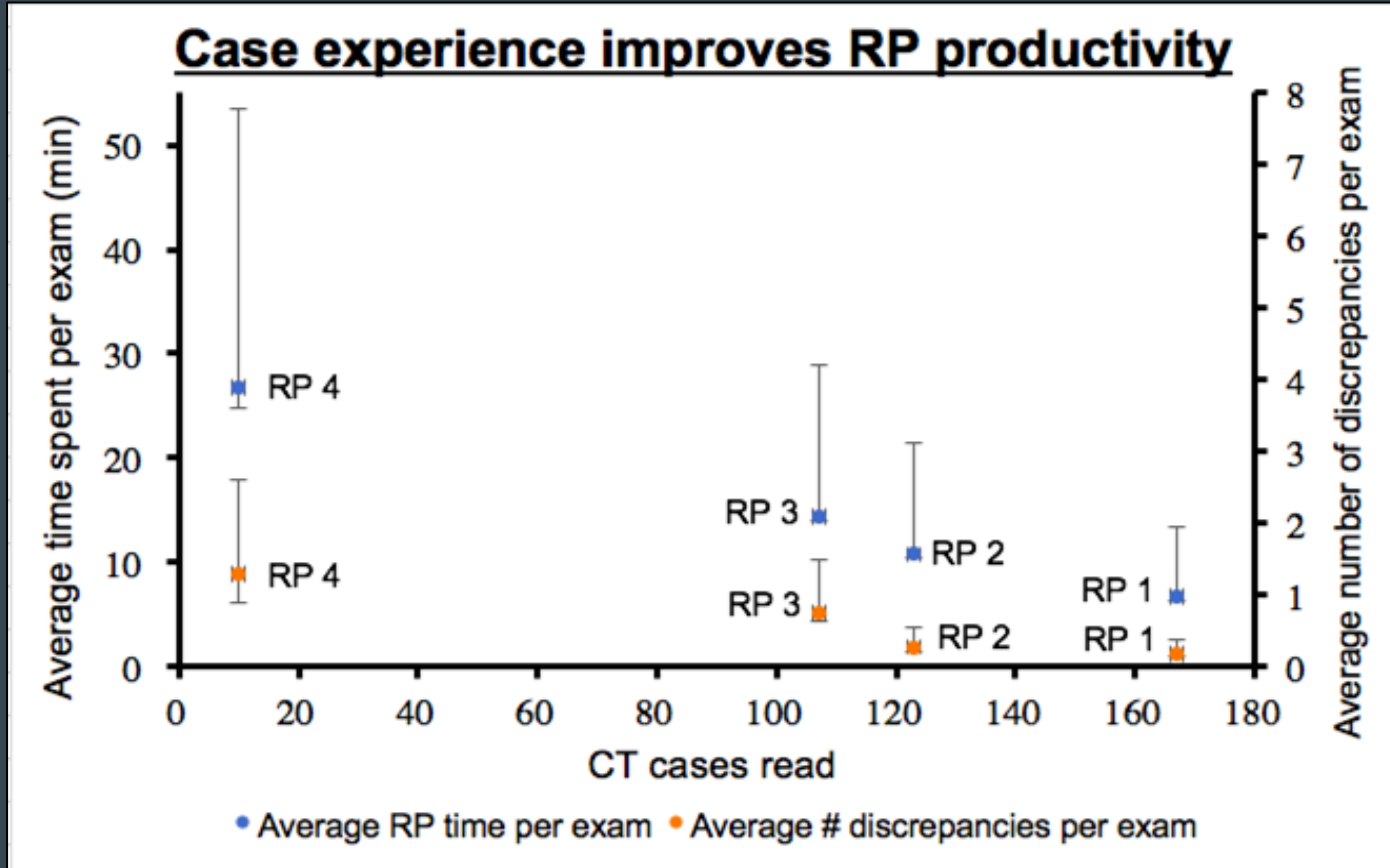


Image 1. Atlas of CT Anatomy of the Abdomen. Axial reconstruction.
1. Right lung, 2. Right hepatic vein, 3. Liver, 4. Left hepatic vein, 5. Stomach, 6. Left colic flexure/polemic flexure of the colon, 7. Spleen, 8. Left lung, 9. Aorta.



TRAINED RPs CAN IMPROVE PATIENT CARE



GAMIFICATION INCENTIVIZES RPs



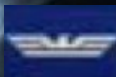

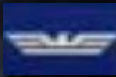


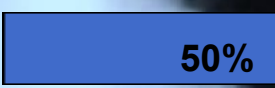
Conversion Scale

Average RP read time per exam	Average # of discrepancies per exam	Score
<5 min	0	100%
6-10 min	0.1-0.3	90%
11-16 min	0.4-0.6	80%
17-21 min	0.7-0.9	70%
22-26 min	1.0-1.2	60%
27-29 min	1.3-1.5	50%
30+ min	1.6+	40%

Leaderboard

RP Contenders

Score

1	 Speedy WINNER	 90%
2	 Eagle eye RUNNER-UP	 84%
3	 Questor RECRUIT	 76%
4	 Adventurer RECRUIT	 50%

*Last updated:
8 weeks ago*

CLINICAL SIGNIFICANCE

- **Exposing students** to the fast-paced career of radiology
 - Applies active learning, shown to be more effective than passive
- **Trained RPs improve patient care** by optimizing radiologist workflows
 - Aid radiologists in tumor quantification and detecting actionable findings
 - Complements previous findings that radiologists **with RPs** exhibit a three-fold improved target lesion measurement concordance with oncology records for CT imaging cancer patients

THANK YOU!

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