

Using Artificial Intelligence to Improve Radiology Workflow

July 25, 2024

Jason Poff, MD

Director of Innovation Deployment

Radiology Partners

Disclosures

- Partner (equity owner) at Radiology Partners (RP)
- RP has a minority interest in aidoc
- RP has an indirect minority interest in Rad AI

Optimize Rad + AI



Radiologist + AI

Integrating disparate data

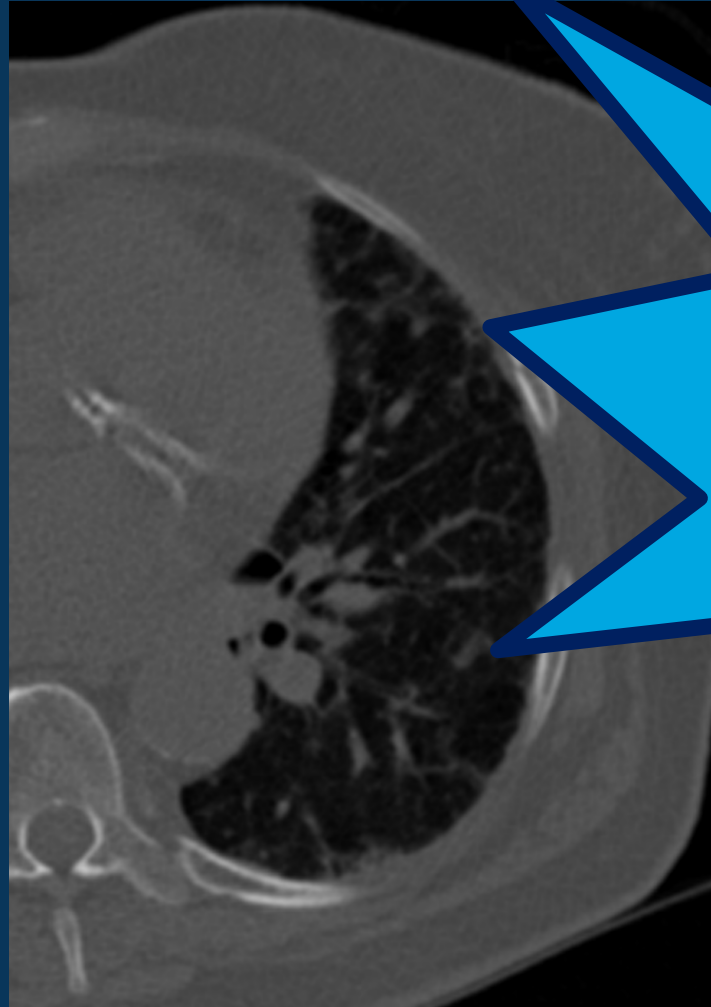


Radiologist + AI



HOW WILL AI MAKE ME A BETTER RADIOLOGIST?

Presentation: 56F with left chest pain, no history of trauma



61%
**Enhanced Rib
Fracture
Detection**

Clinical Lesson Learned

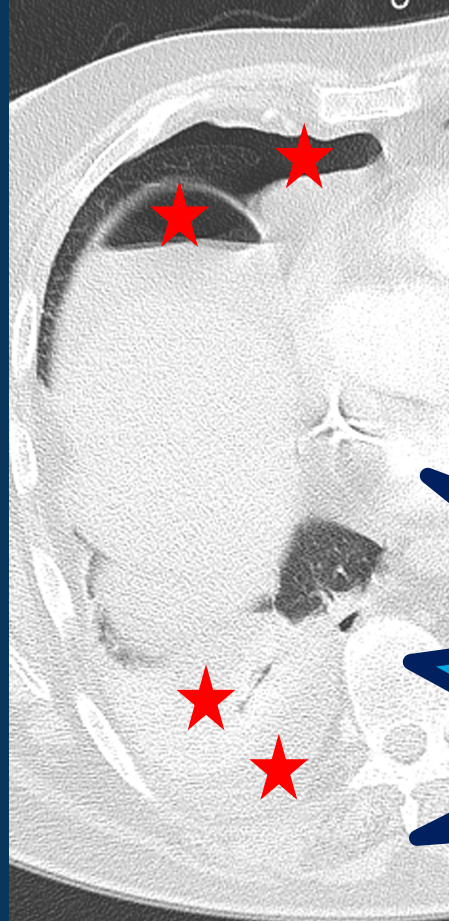
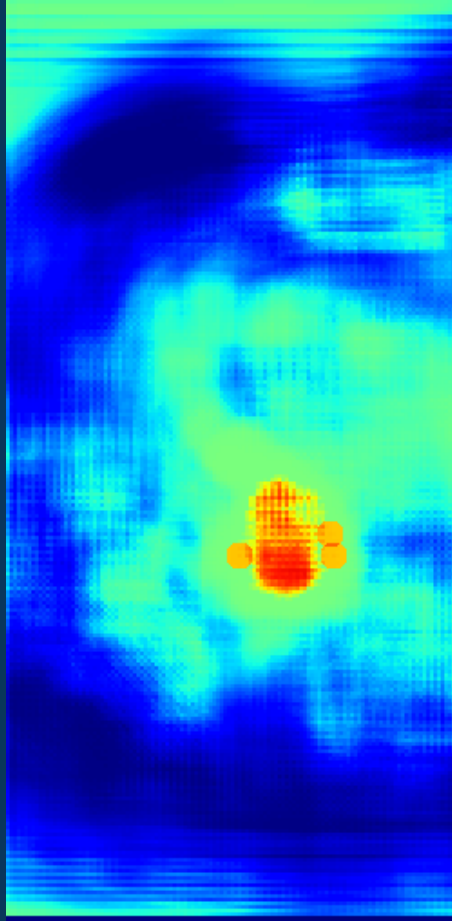
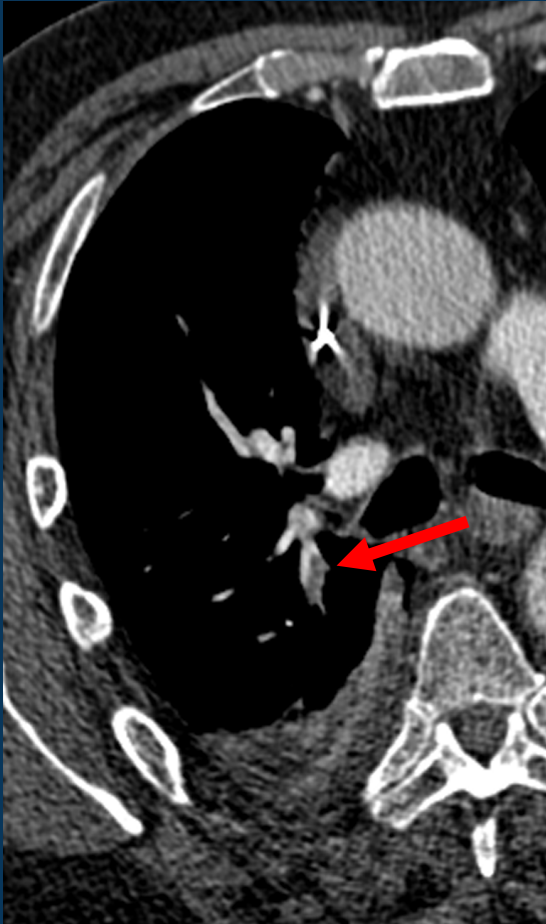
AI can help find pathology
in **Unexpected Clinical
Circumstances**

Downstream Impact

Prevent unnecessary
hospital admission for "r/o
acute coronary syndrome"

HOW WILL AI MAKE ME A BETTER RADIOLOGIST?

Presentation: 63M inpatient, postop day 2 s/p nephrectomy



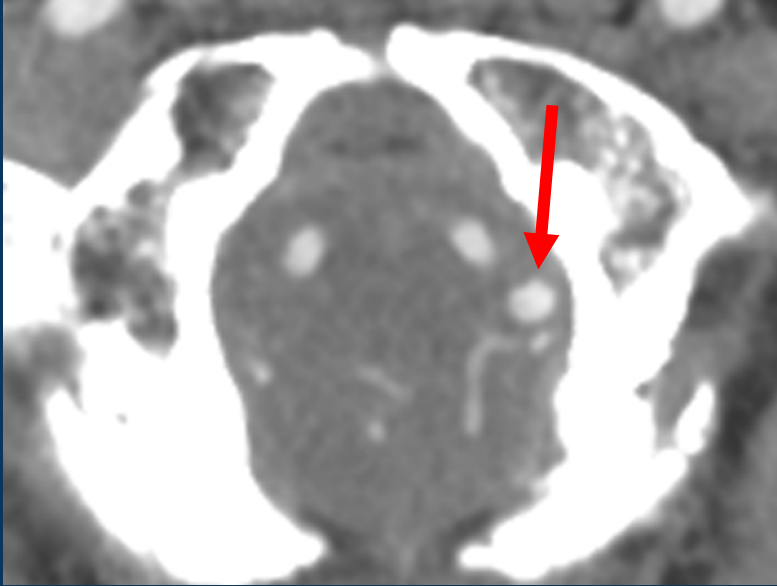
Clinical Lesson Learned

AI can help find pathology
on **Complex Scans with
Distracting Pathology**

12%

**Enhanced
Detection of PE**

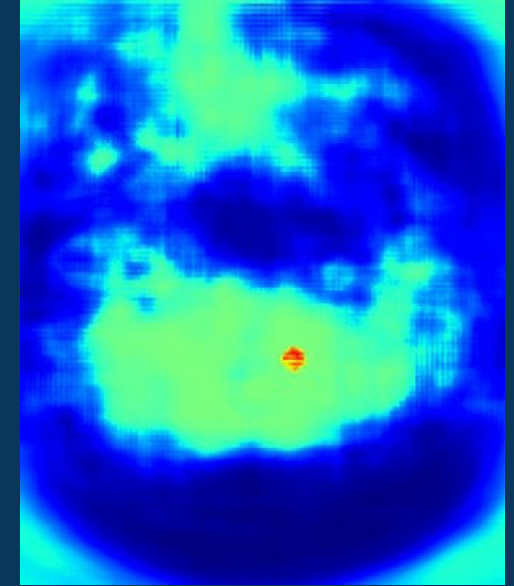
HOW WILL AI MAKE ME A BETTER RADIOLOGIST?



Axial



Coronal



Case 2: left PICA 5.0 mm saccular aneurysm

How Will AI Make Me A Better Radiologist?

Clinical Lessons Learned

AI can help with:

Unexpected Clinical Circumstances

- limited / misleading history
- anatomy not focus of attention

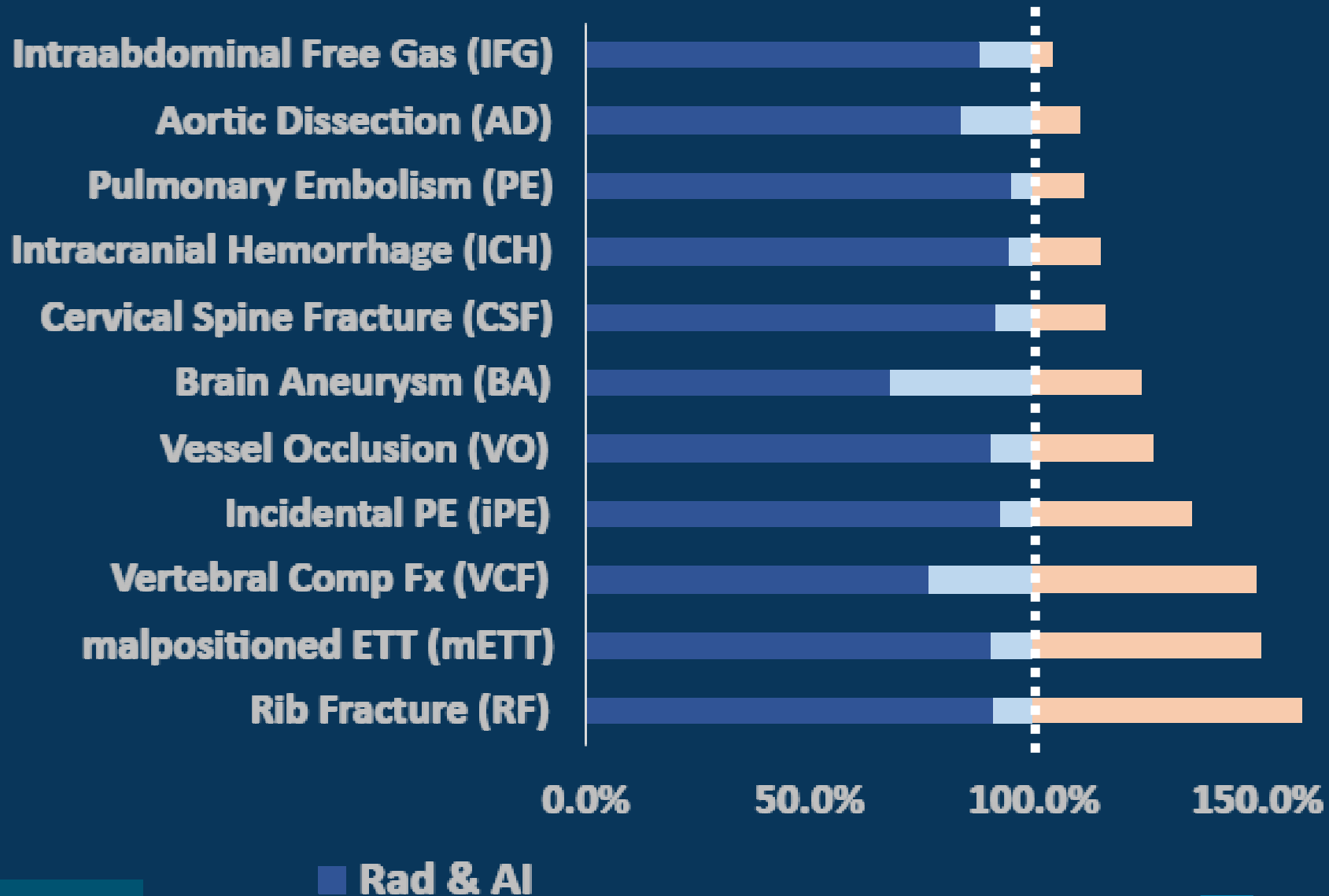
Complex Scans with Distracting Pathology

- satisfaction of search
- elephant in the room

Subtle Pathology

- eagle-eye cases
- blind spots
- thin-sections

Rads & AI Can Benefit Each Other



Retrospective Analysis

Radiologist + AI

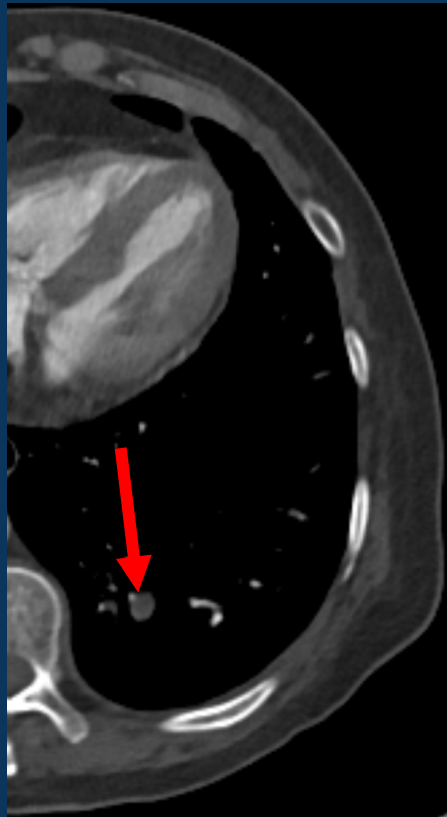
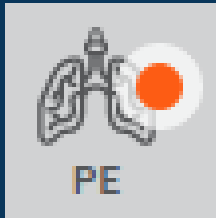




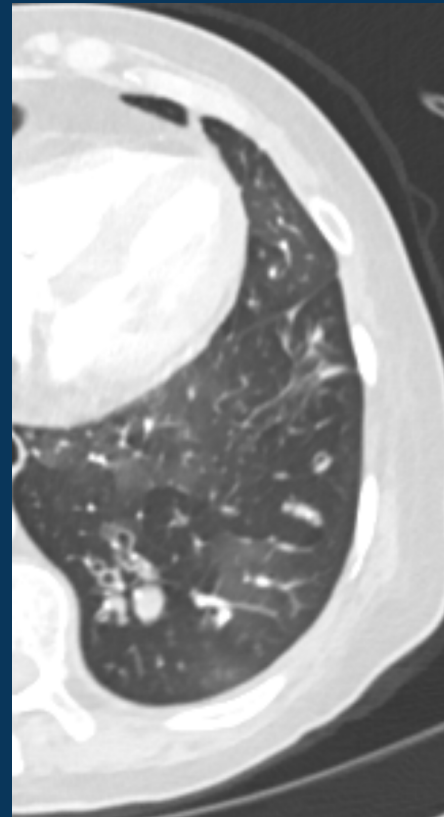
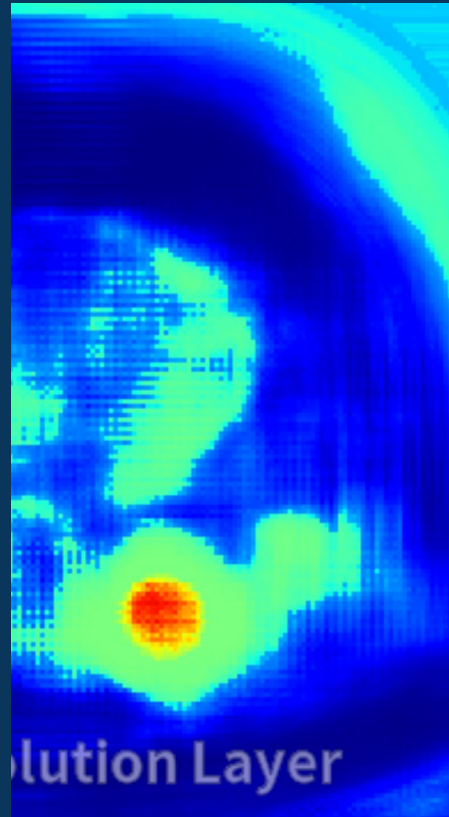
IS NOT PERFECT!

AI will make overcalls (False Positives)

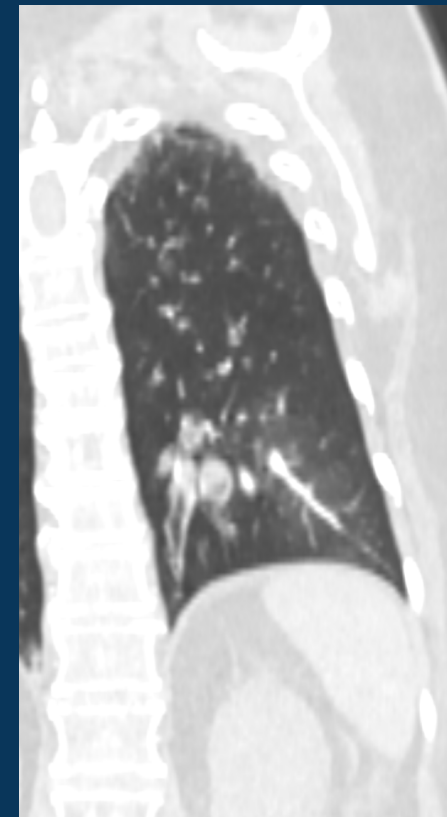
Mucoid Impaction



Axial



Axial

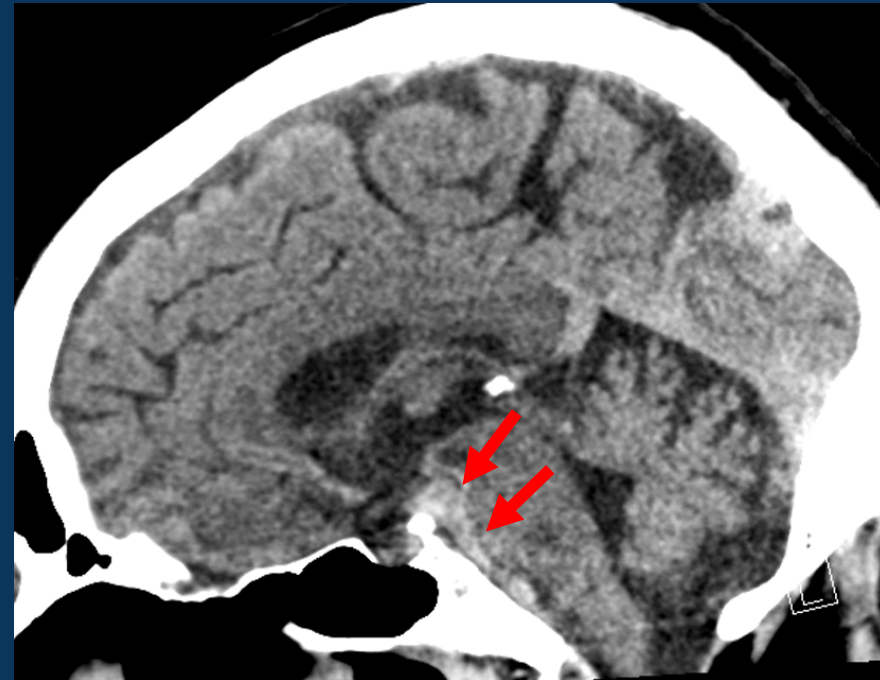
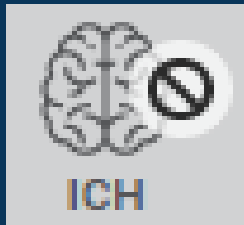


Coronal

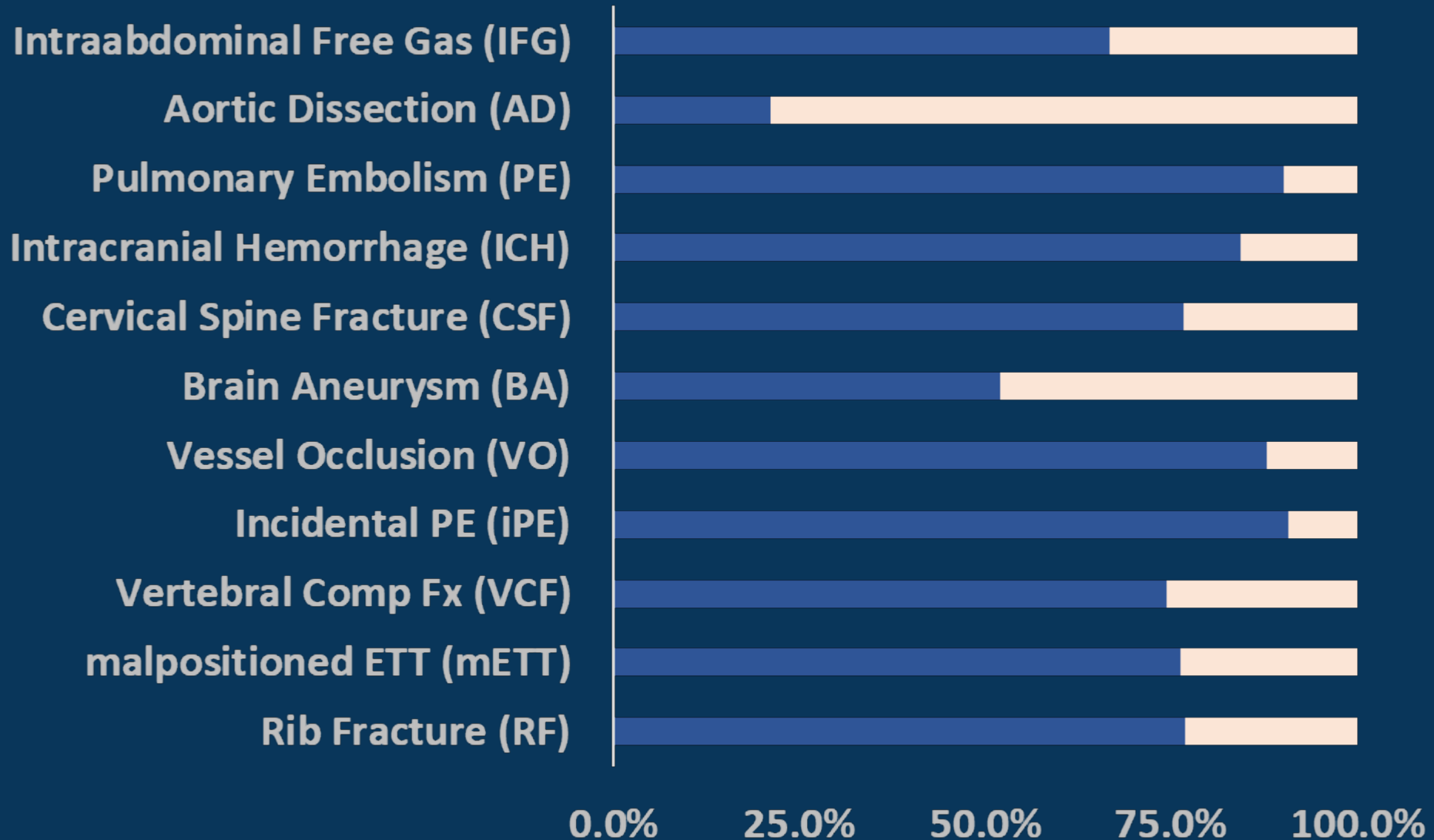


IS NOT PERFECT!

AI will miss pathology (False Negatives)



Rads & AI Can Benefit Each Other



Retrospective Analysis

■ AI PPV

Optimize Rad + AI

