Peer Learning Practices in Different Environments – Current Best Practices and Lessons Learned on the Journey for Large Academic Group

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My department

- 101 Faculty
  - Almost 100% sub-specialized
  - Dedicated ED radiology division with 27/4/365 attending coverage
- 29 Fellows
  - Breast, Body, MSK, Neuro, IR, Nucs, ED
- 57 residents

Yale Peer-Review program- in place since 2011

Rad-Peer "scoring" system

- 1=Concur with interpretation
- 2=Difficult diagnosis, not ordinarily expected to be made
- 3=Diagnosis should be made most of the time
- 4=Diagnosis should be made almost every time

Enter 1 case/day- Told to pick 1st case we read and most recent comparison. Not random, not blinded.
Great call category created in 2014

Yale IRIS

IMPROVED RADIOLOGY INTERPRETATION SYSTEM

- Quarterly dept. wide 1 hour conference during lunch hour started in April 2013
  - Broadcasted online
  - Abdominal, US, Peds, MSK, Chest, and Neuro participation for many years
    - ED division added in last year
  - Each sections QA lead
    - All great call cases and all score 3 or 4 cases reviewed
      - Error analysis and pt outcome analysis completed for each case by section peer review champion

Yale IRIS

IMPROVED RADIOLOGY INTERPRETATION SYSTEM

- 2 best cases that offer learning opportunities shown per section
  - Usually one “discrepancy” and one “great call”
  - Cases stripped of all pt identifier data
  - Audience response system (Poll Everywhere) used to allow engagement
  - Teaching points emphasized

Where should be going next?

October 2018

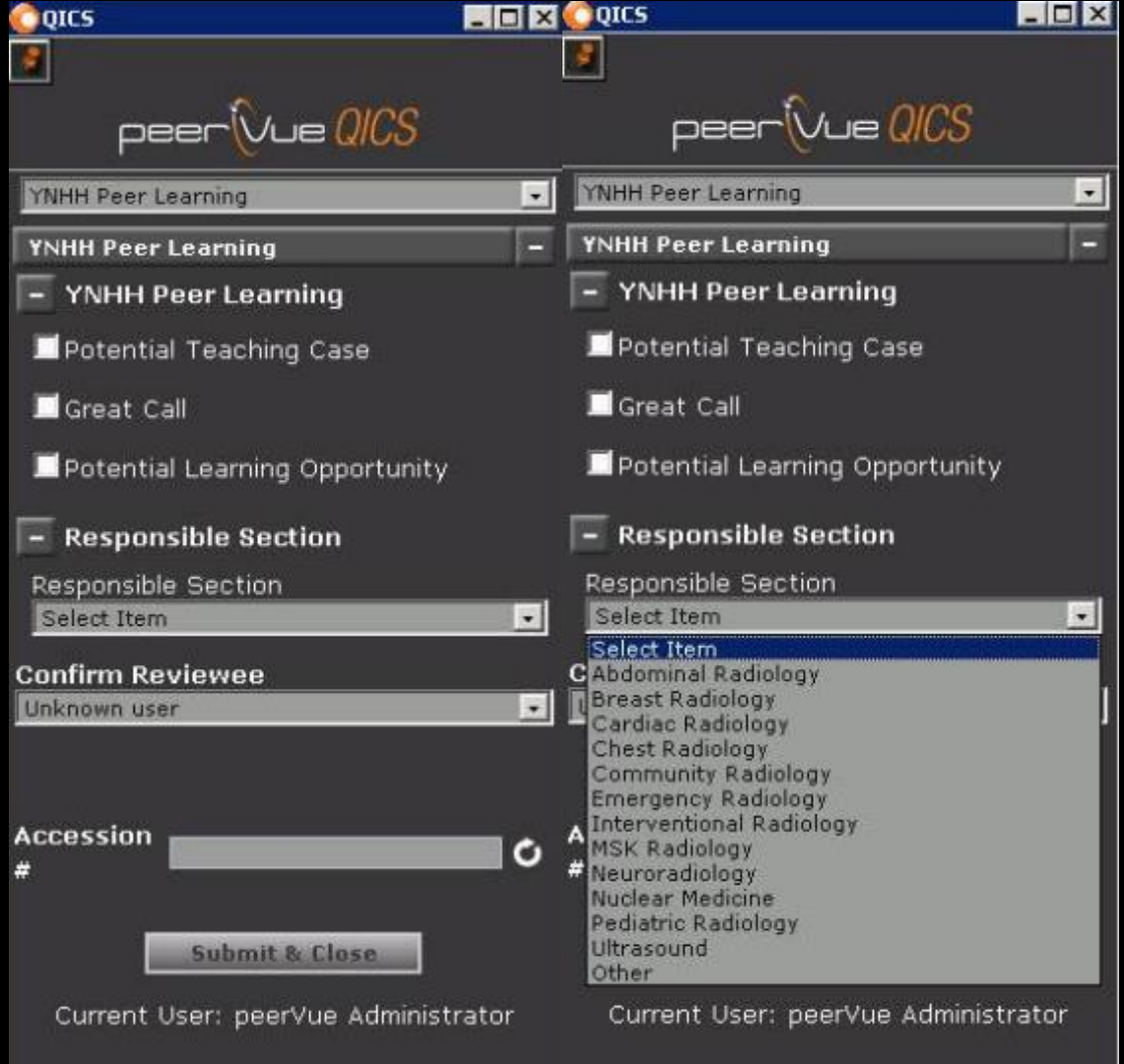
- Transitioned to a peer learning entry system

- 2 cases per month/radiologist
  - Not random, but radiologist driven by impact for learning
  - Competency assessment now in hands of section chief for OPPE
    - We used to report score 4 data per radiologist to administration
    - We now report participation in program, not “scores”
  - Section specific quarterly conferences to share cases not shown in IRIS
  - Breast and ED Division added into program

Attributes of a good peer learning system

- Fair and transparent system run by a physician's peers to identify opportunities for additional education, error reduction, and self-improvement
- Non-punitive with focus on learning
- Some form of sharing in divisions/departmental

Mahgerefteh S. et al. Peer Review in Diagnostic Radiology: Current State and a Vision for the Future. Radiographics 2009
Kaewlai R. et al. Peer Review in Clinical Radiology Practice. AJR 2012


QICS
peerVue QICS
YNHH Peer Learning
YNHH Peer Learning
YNHH Peer Learning
Potential Teaching Case
Great Call
Potential Learning Opportunity
Responsible Section
Responsible Section
Select Item
Confirm Reviewee
Unknown user
Accession #
Submit & Close
Current User: peerVue Administrator
QICS
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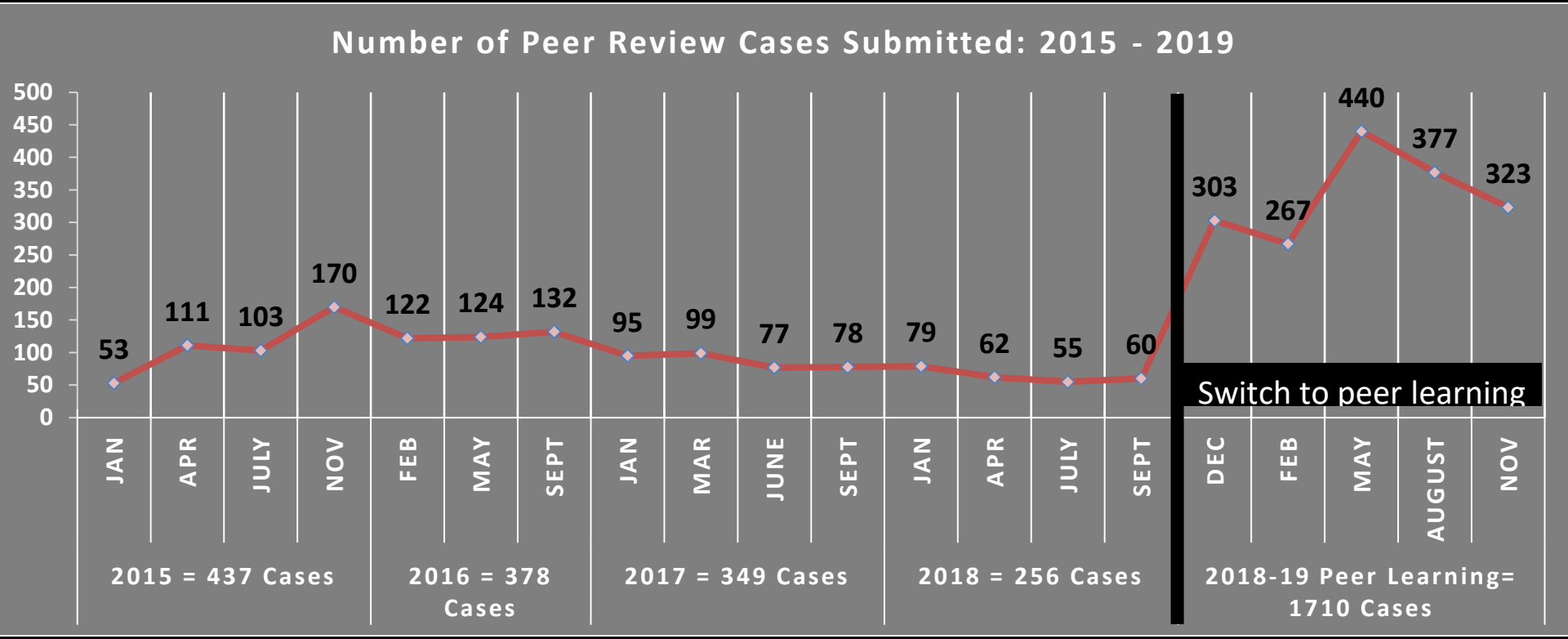
Responsible Section
Responsible Section
Select Item
Select Item
Abdominal Radiology
Breast Radiology
Cardiac Radiology
Chest Radiology
Community Radiology
Emergency Radiology
Interventional Radiology
MSK Radiology
Neuroradiology
Nuclear Medicine
Pediatric Radiology
Ultrasound
Other
Current User: peerVue Administrator

Case counts that offer learning opportunity



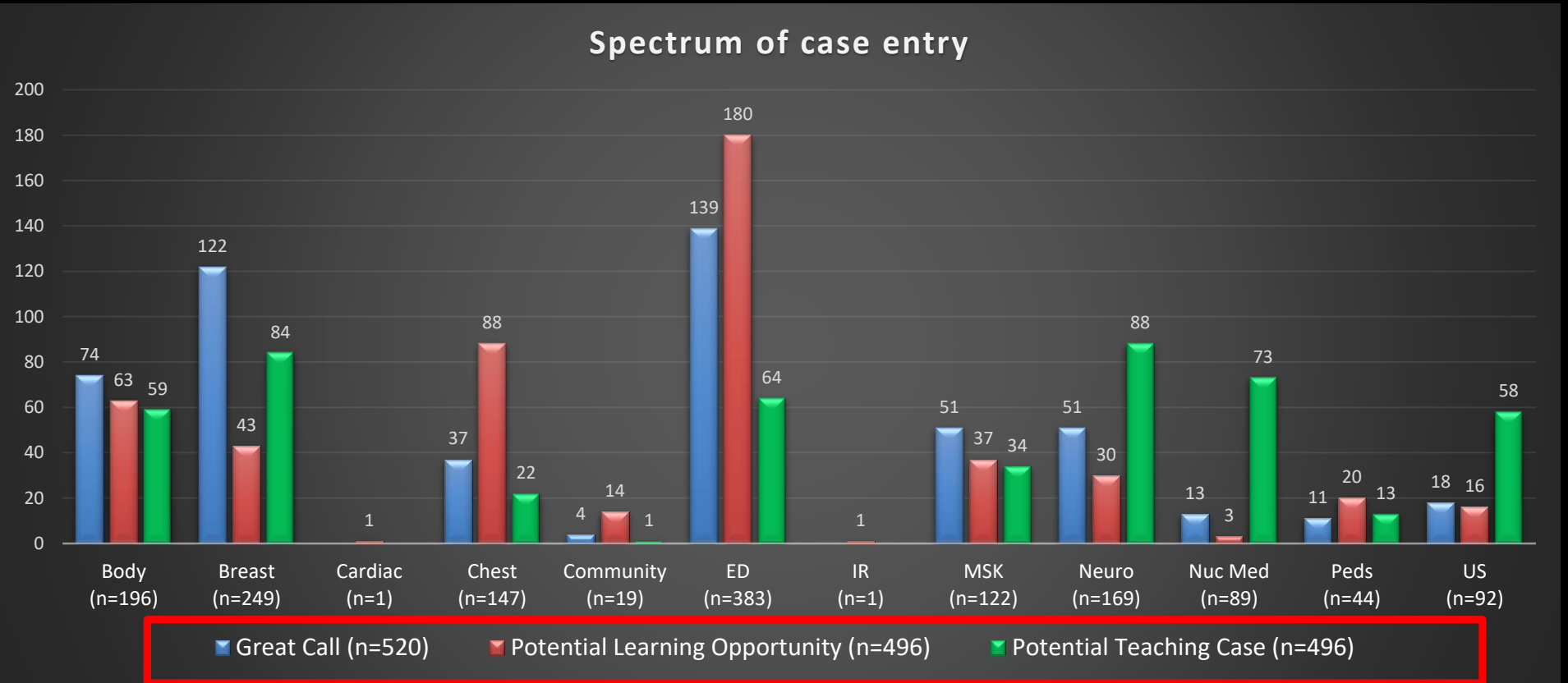
2015-18: Score 3/4 and great calls

2018-19- PLO, great call, great teaching case

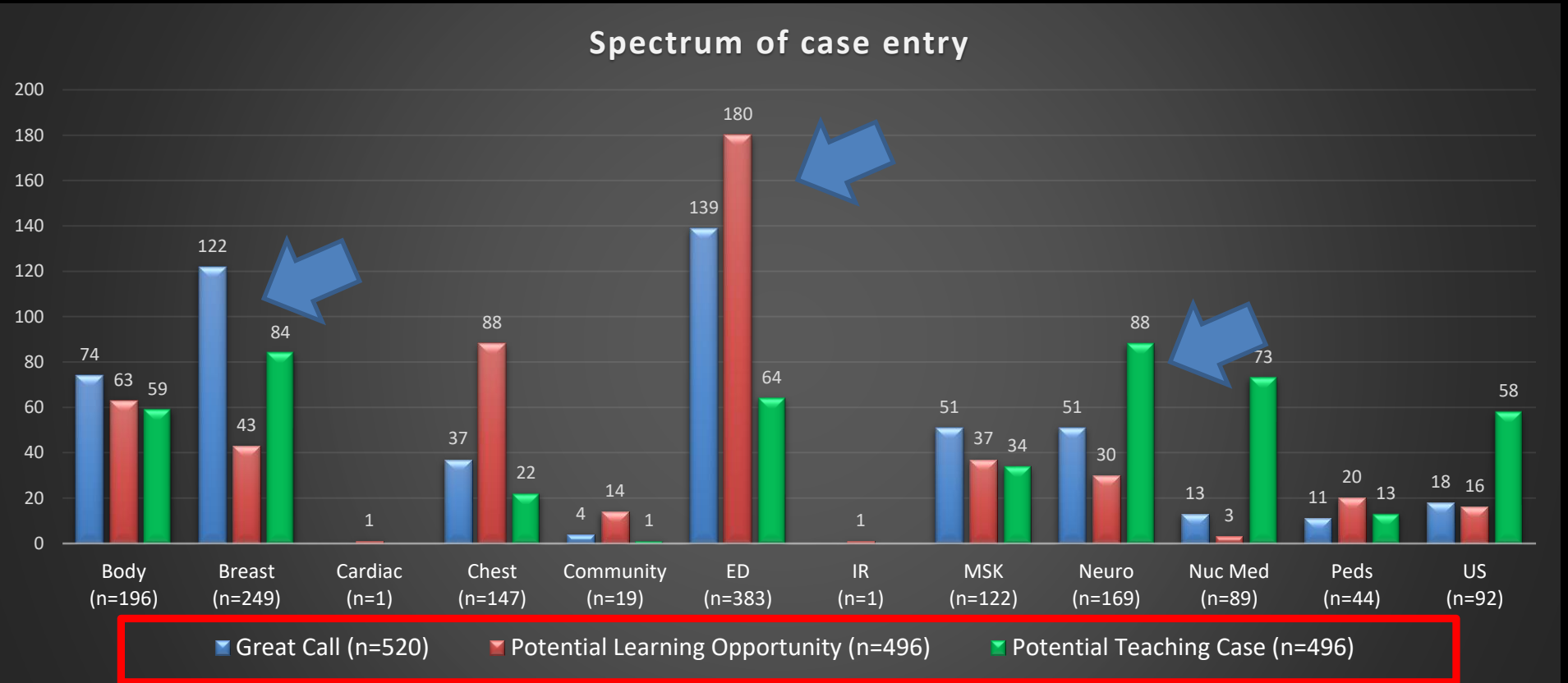
Number of meaningful cases entered

- Average per year over last 4 years (w/ RAD-PEER like system)= 355
- One year peer learning= 1603 (Oct to Oct)
- Our prior YEARLY case count of cases that may offer learning potential now seen QUARTERLY
  - 450% rise!

How is the program being used?



“Outliers”?

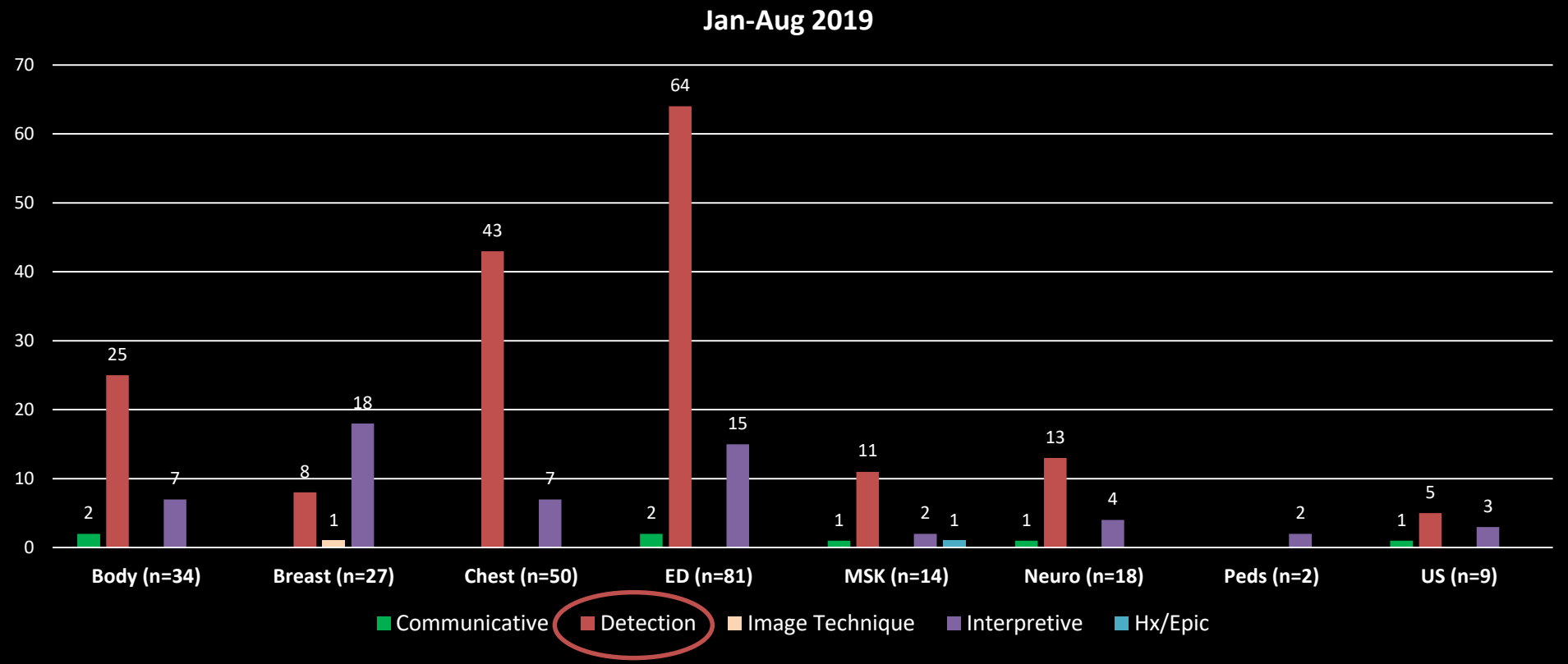

Spectrum of case entry
200
180
160
140
120
100
80
60
40
20
0
74
63
59
122
43
84
1
37
88
22
4
14
1
139
180
64
1
51
37
34
51
30
88
13
3
73
11
20
13
18
16
58
Body (n=196)
Breast (n=249)
Cardiac (n=1)
Chest (n=147)
Community (n=19)
ED (n=383)
IR (n=1)
MSK (n=122)
Neuro (n=169)
Nuc Med (n=89)
Peds (n=44)
US (n=92)
Great Call (n=520)
Potential Learning Opportunity (n=496)
Potential Teaching Case (n=496)

Differences in use by section

- 3/10- Great calls most common
- 4/10- Potential Learning Opportunity most common
- 3/10- Teaching case most common

- If your dept. has a dedicated ED/community group it warrants some special attention
  - Challenging for ED radiologists as they read across multiple divisions
    - Follow ups done by sub-specialists, but exams read by “generalists”
    - Hard to apply same standards as the sub-specialists tend to think all findings they would see ED Radiologist should see too……
    - Sub-speciality staff don’t know the ED section members as well
      - Often not at dept. grand rounds etc due to shift work

“Error” Classification



What gets reported for PLOs?

- 70/30 split for detection and interpretive
  - We tend to enter detection (not seen) issues much more commonly than mis-interpretion (seen but wrong conclusion)

- Challenging to get system based issues entered

Where we continue to struggle

- Case submission
  - Some individuals submit a lot, some enough to hit “requirements”
  - Some still prefer to not enter any PLO cases
- Work Environment
  - Hard to get 100% anonymous- people often guess who entered case based on follow-up
  - Too emotional
    - Colleagues still feel upset when they get a case
    - Colleagues tend to focus more on whether they agree with comments (and less on learning potential)
      - Teaching comfort with disagreement
    - Still possible for faculty to “target” individuals
- Value
  - Current systems are not outcome measures
  - Would need to review many more cases than 1x/day to have enough power to detect meaningful differences in radiologist performance

-Davenport, M and Larson, D. Measuring Diagnostic Radiologists: What measurements should we use? JACR 2019
-Larson et al. Peer feedback, learning, and improvement: answering the call of the Institute of Medicine report on diagnostic error. Radiology 2017

Tips for launching a program in large academic practice

- Form a team
  - Sectional leads
  - Overall program lead/leads
    - Some “policing” is needed to eliminate fluff and edit cases comments
    - Picking your lead is important
      - Needs to respected, needs to be clinically excellent
      - It is a hard program to run/lead
- Ensure system embedded into PACS/Work-flow manager
  - It has to be easy and quick for case entry…. or expect poor participation
  - Participation should be mandatory- if you have to report anything, report this

Tips for launching a program in large academic practice

- IR should have separate M and M/Learning Conference
- Must share cases in some fashion
  - One bigger conf. is great for generalists/ED and trainees
    - Our residents and fellows find this conf. extremely valuable
  - Smaller sectional conf. allow more nuanced teaching points
    - This also allows review of all other cases not shown in our IRIS conf.
- Recognize great calls
  - Learn from successes & failures

Smile if you like peer learning!

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