

HOW TO REDUCE RECALL RATES

Dr Jim Steel

PLAN OF TALK

- Why would you want to?
- Proof that it is possible
- 5 methods that work

Relative risks of negative psychological consequences of false-positive assessment vs. no assessment

T1 = 1 month

T2 = 5 months

T3 = 35 months

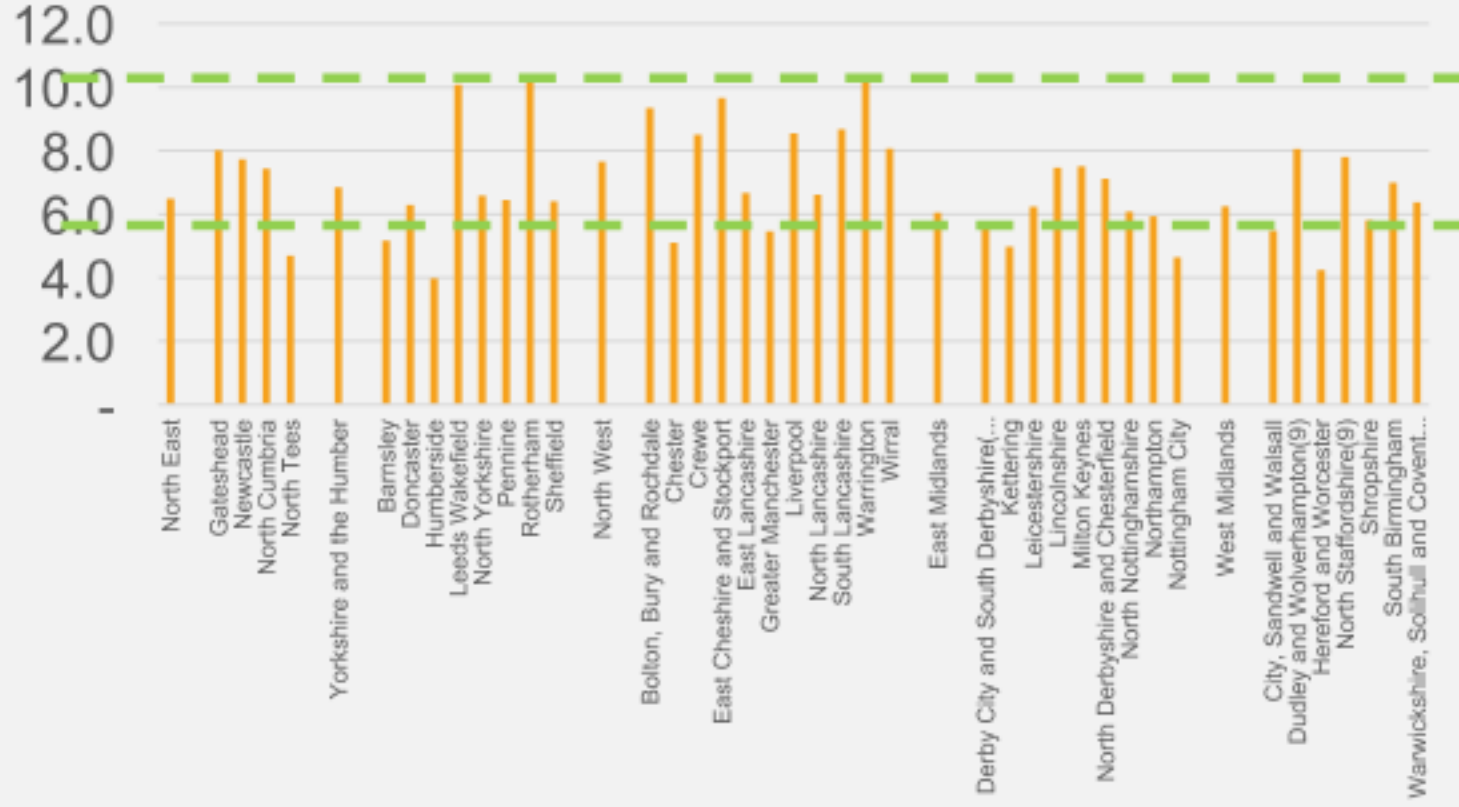
©2013 by BMJ Publishing Group Ltd

Mary Bond et al. *Evid Based Med* 2013;18:54-61

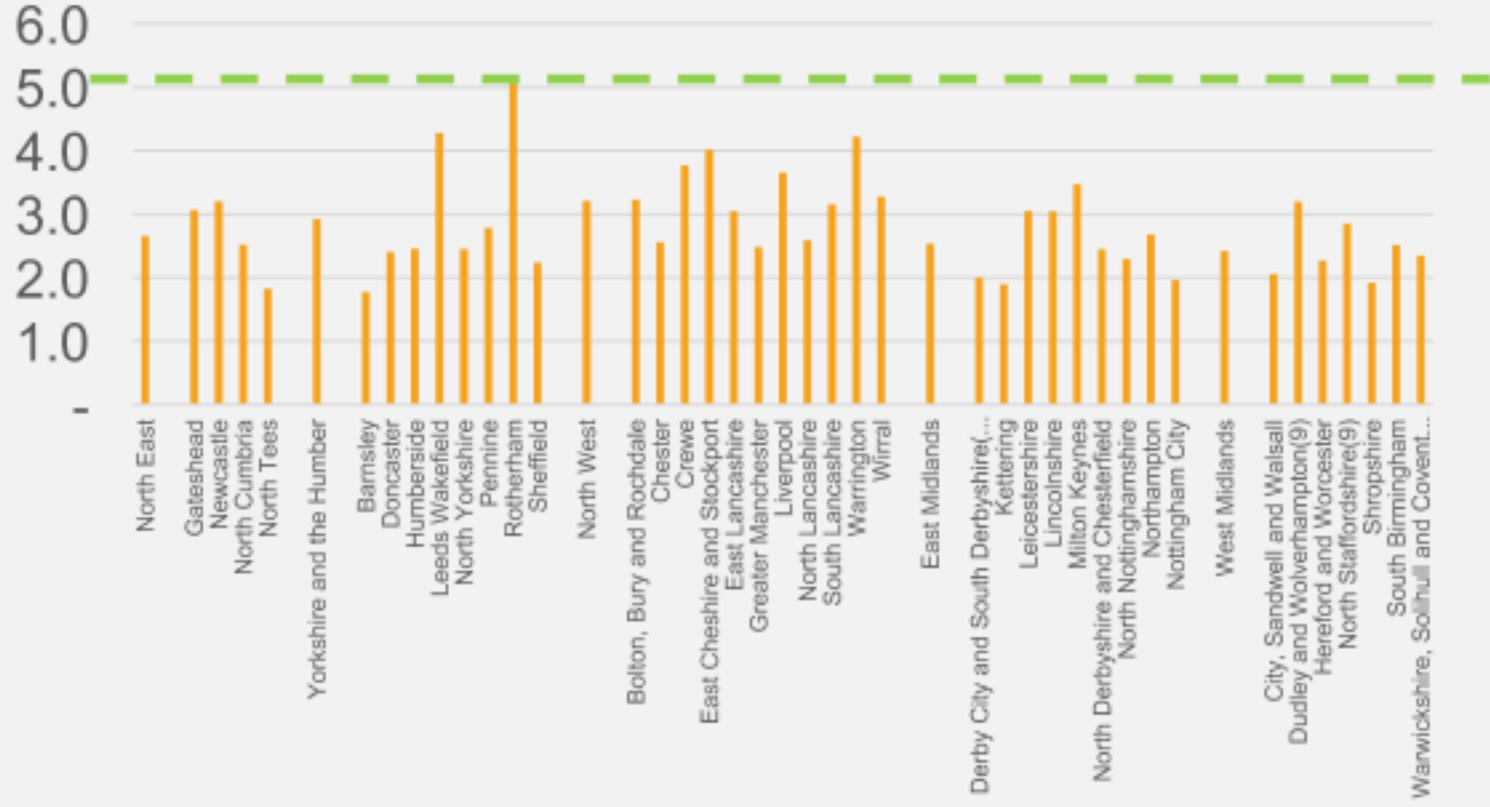
BMJ
Evidence-Based
Medicine

1. Blanks RG, Given-Wilson RM, Cohen SL, Patnick J, Alison RJ, Wallis MG. An analysis of 11.3 million screening tests examining the association between recall and cancer detection rates in the English NHS breast cancer screening programme. *Eur Radiol.* 2019 Jul;29(7):3812-9.

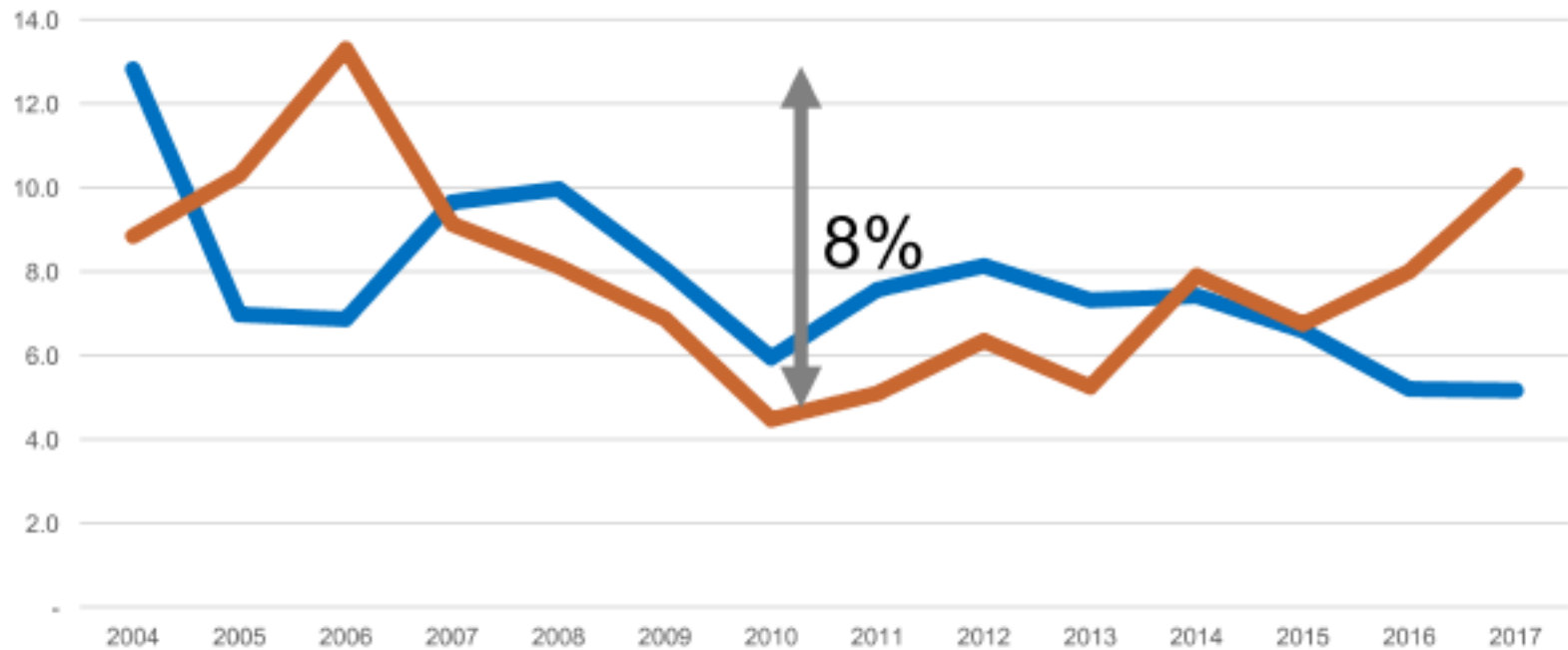
Prevalent Recall Rates Vary



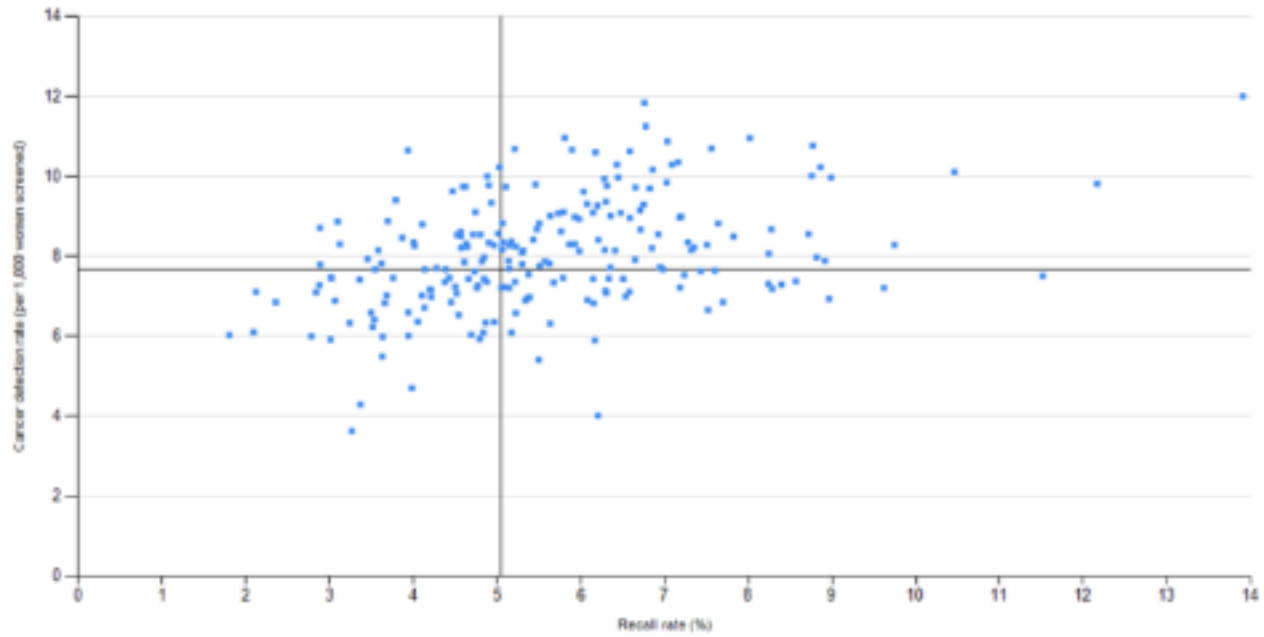
And so do Incident Rates



2 Unit Prevalent Recall Rates



South (BCSQ11)
Individual film reader performance compared to average performance (2014 - 2017)



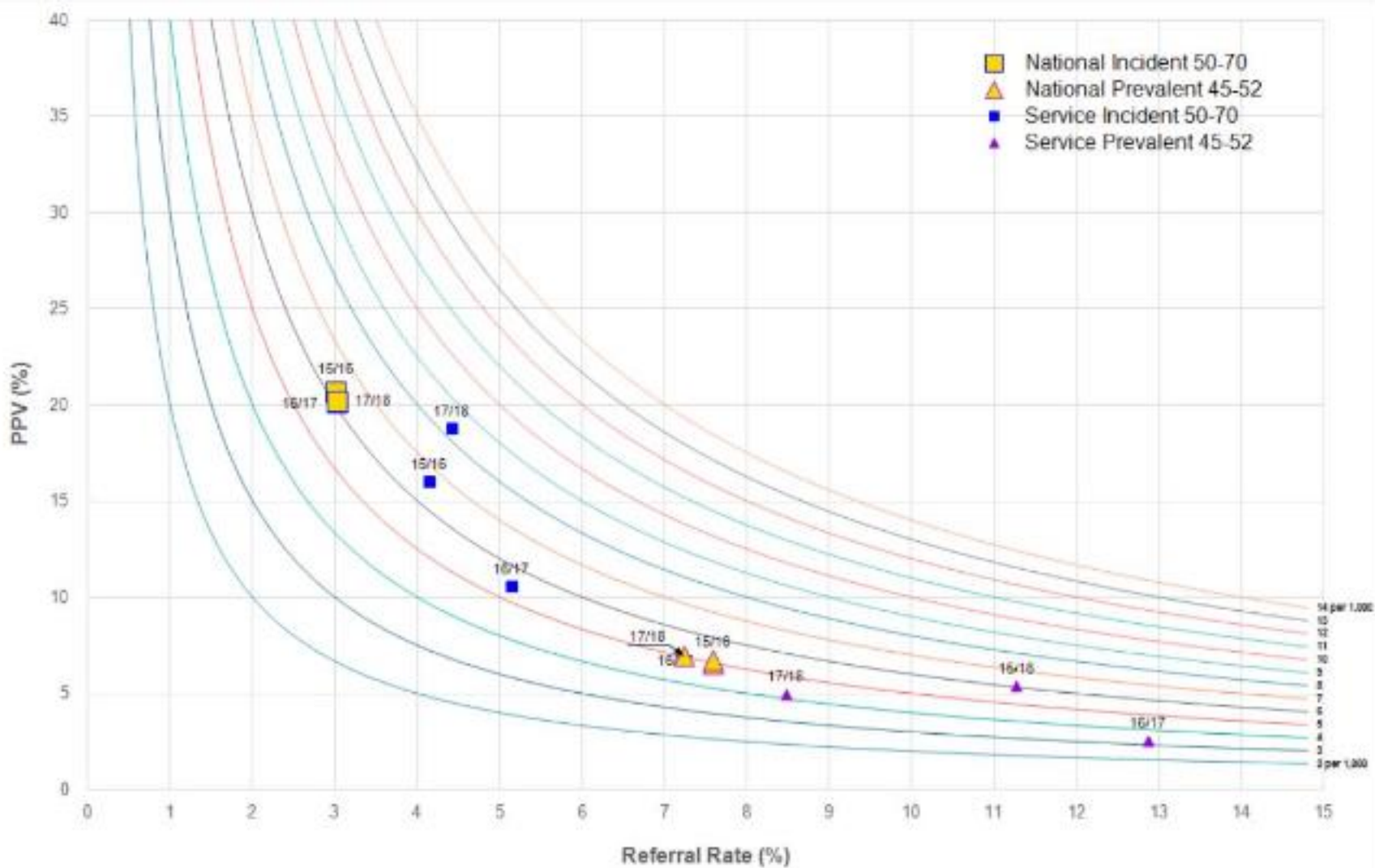
WHAT WORKS

1. Personal Audit/Endeavour Requires Knowledge

PERSONAL AUDIT

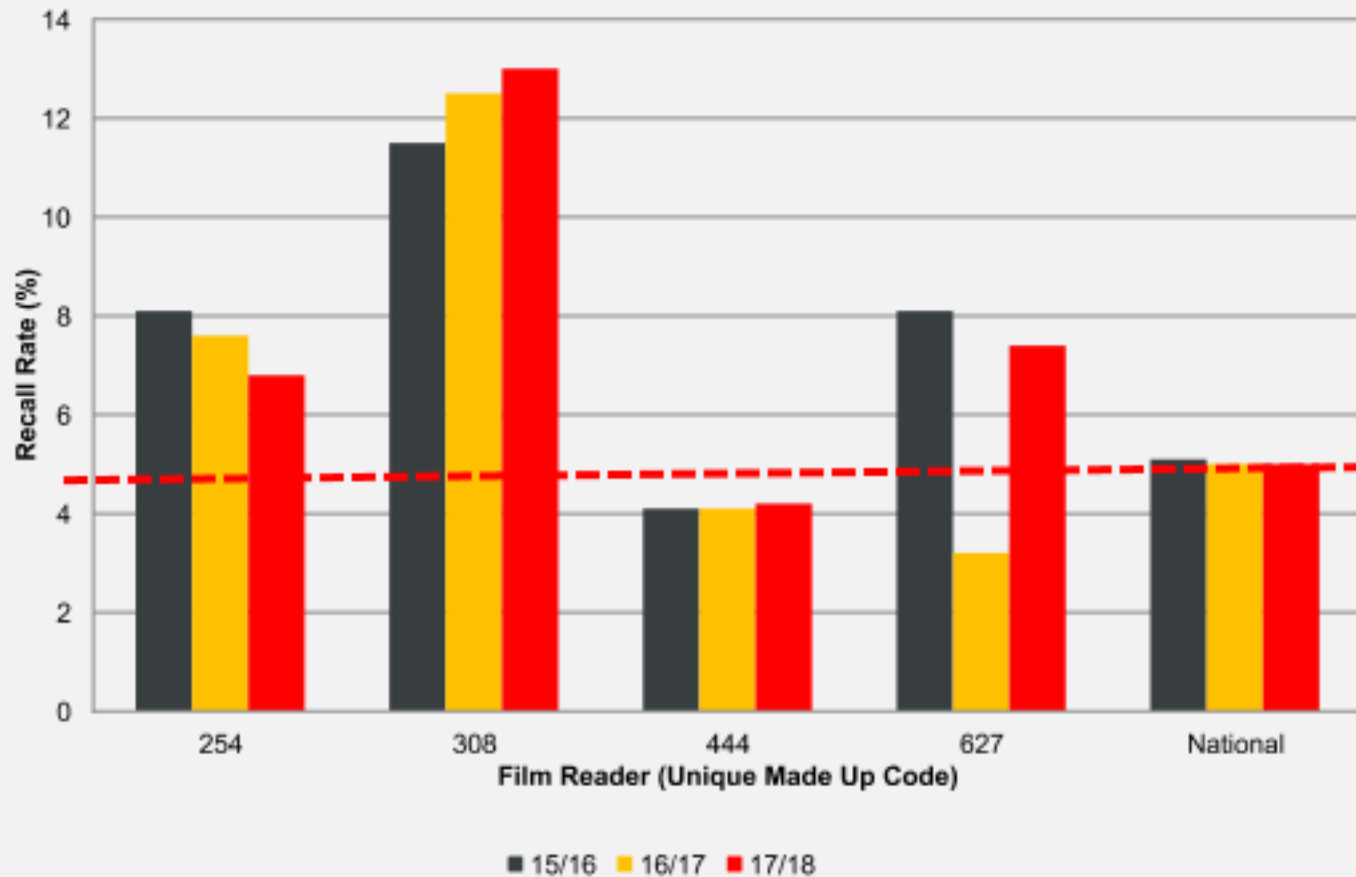
- Use BSIS and FRQA
- Understand what sort of unit you are in
- Understand what sort of reader you are
- Direct your audit accordingly

- National Incident 50-70
- ▲ National Prevalent 45-52
- Service Incident 50-70
- ▲ Service Prevalent 45-52



Recall rate per year as first reader

Hopeless heights HHL



[Home](#) > [Report List](#)

KC62

- Service Standards



Service Standards : Service level (single year)



Service Standards : Service / Region level (three year average)



Service Standards SDR Report : Service Level (single year and three year rolling)



Service Standards Trend Report : Service level (single year and three year rolling average)



Service Standards Performance Summary : Service/National level (three year and three year average)

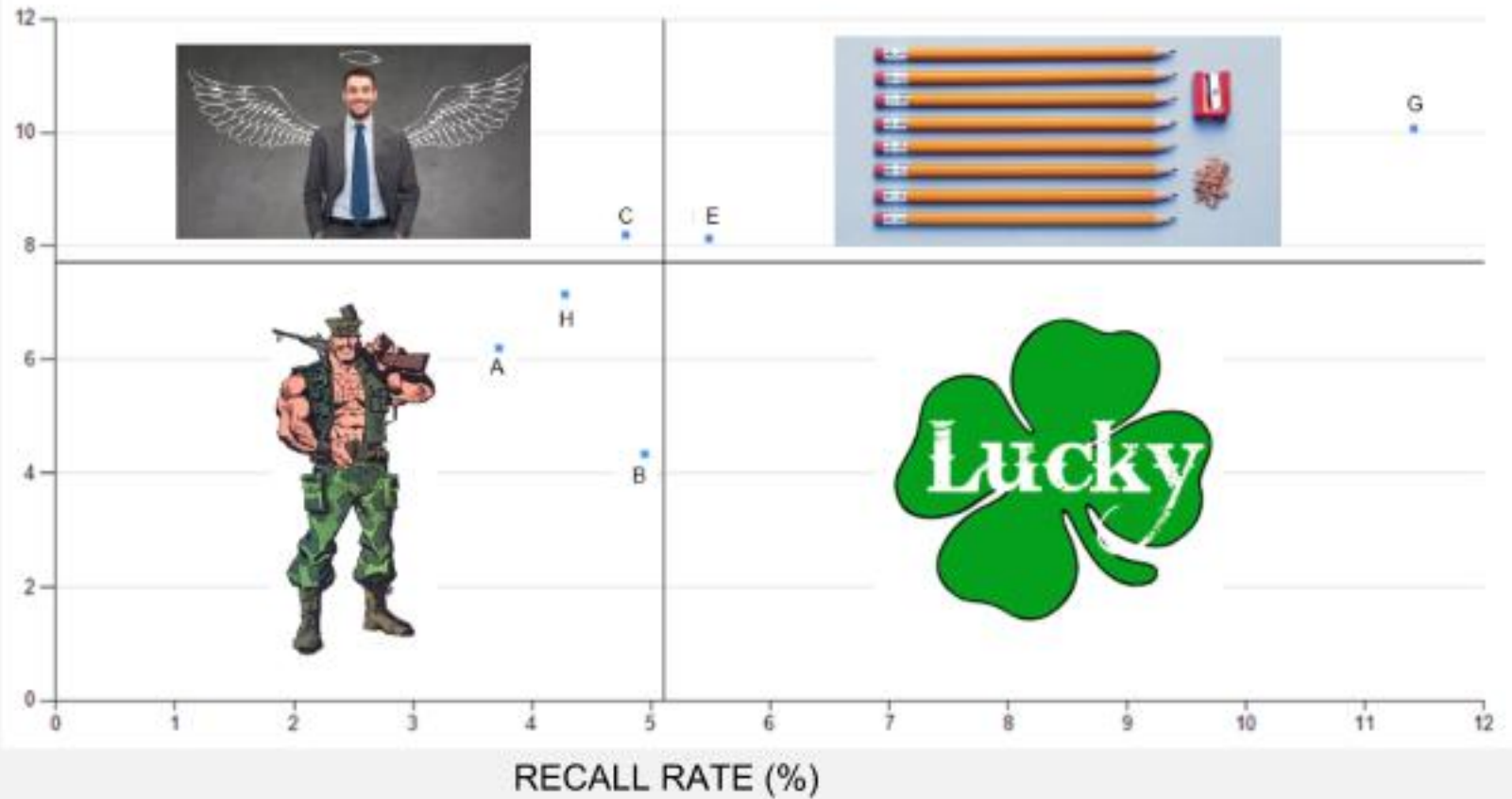


Service Standards PPV/Referral Rates : Service level (single year or three year aggregate)



Service Standards PPV/Referral Rates : Service/Region level (single year / three year)

CANCER DETECTION



PLEASE REMEMBER

- You are not a number
- Data sets not people
- Statistical instability
- Your performance is part of a team

OTHER STUFF YOU COULD TRY

- Resetting your threshold (Fixing low target prevalence)
 - Cancer Binge - Gun and Knife binge
- Just read more mammograms

Wolfe JM et al. Low target prevalence is a stubborn source of errors in visual search tasks. *Jour Exp Psych* 136:623-38
Cornford E et al. Optimal screening mammography reading volumes; evidence from real life East Midlands region of the NHS Breast Screening Programme. *Clin Rad* 66:103-7
Given-Wilson R, Blanks R. Does quantity of film reading affect quality? *Clin Rad*66:97-8
Duncan K, Scott NW. Is film reading performance related to the number of films read? The Scottish Experience. *Clin Rad* 66: 99-102

WHAT WORKS

1. Personal Audit/Endeavour Requires Knowledge
2. Changing the Protocol Requires time – wasteful - easy

CHANGE THE PROTOCOL

- Final Outcome after 2 reads or 3 if required is RECALL
- All those cases reviewed in further meeting
- 20% rejected at team meeting

WHAT WORKS

- | | |
|-----------------------------|------------------------------------|
| 1. Personal Audit/Endeavour | Requires Knowledge |
| 2. Changing the Protocol | Requires time – wasteful –
easy |
| 3. Team Paradigm Shift | Requires time and leadership |

TEAM PARADIGM SHIFT

- “Cancer Detection is all that counts”
- “High recall justified by high cancer detection”
- “Unit figures are all that count”
- “Vive la Différence”
- “Find the important cancers”

SUCCESSFUL TEAM VIEWS...

- Consensus Meetings with equality of voice
- Tight control of clinical recall by radiographers
- Discuss all RR assessments with at least one team member
- Talk about the aims of the unit – agree them
- Provide clear data to all readers and discuss supportively

WHAT WORKS

- | | |
|-----------------------------|------------------------------------|
| 1. Personal Audit/Endeavour | Requires Knowledge |
| 2. Changing the Protocol | Requires time – wasteful –
easy |
| 3. Team Paradigm Shift | |
| 4. AI | Requires time and leadership |
| 5. DBT | |

AI vs. Radiologists

Similar performance

Higher AUC than
61%
of radiologists

Rodriguez-Ruiz A et al.

JNCI: Journal of the National Cancer Institute,
Volume 111, Issue 9, September 2019, Pages
916–922.

OXFORD
UNIVERSITY PRESS

DBT TO REDUCE RECALL?

- 17 Study meta-analysis
- Increment in CDR of 1.6 per 1000
- Overall reduction in recall (-2.2%) – only USA
- Could control recall rate for same CDR

Marinovitch et al, J Natl Cancer Inst (2018) 110(9): 942-949

SUMMARY

- Recall Rates are adjustable – and you should
- Master BSIS and FRQA
- Tricks e.g. cancer bingeing
- 4th Read? Team Paradigms
- Other Stuff is in the wings

THANK YOU

CAG REQUEST: Directors of Breast Screening,
please fill in the questionnaire you've received from SQAS by
7th November - Reading and Arbitration

Acknowledgements:

Dr Roger Blanks
Dr Ros Given-Wilson & the CPG
SQAS and Olive Kearins
Team at Primrose Unit, Derriford Hospital
Dr Sarah Perrin, Dr Emma Senior