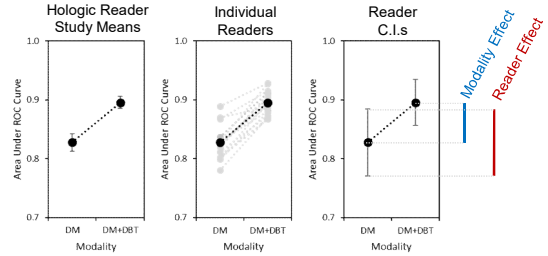


## The Case for Sequential Reading Effects in Batch Reading

Craig K. Abbey

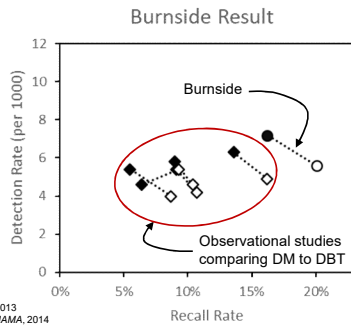


## Reader Effects In Observer Performance Studies



\*Rafferty et al., *Radiology*, 2013

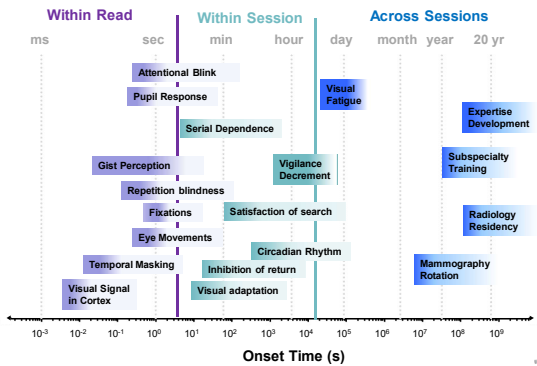
## Effect of Batch Reading in Mammography



Rosse et al., *AJR*, 2013  
 Friedewald et al., *JAMA*, 2014  
 Greenberg et al., *AJR*, 2014  
 Laurenco et al., *Radiology*, 2014  
 McDonald et al., *Radiology*, 2016

Burnside et al., *AJR*, 2005

## Time Scale of Sequential Effects



## Visual Adaptation

- The visual system recalibrates itself in response to its environment
- Prediction: Visual performance should improve with exposure to a specific class of images

## Summary

- Observer variability is substantial
- The reading environment is important
- There are many potential sequential effects going on during image reading