
Fundus Photography in the ED

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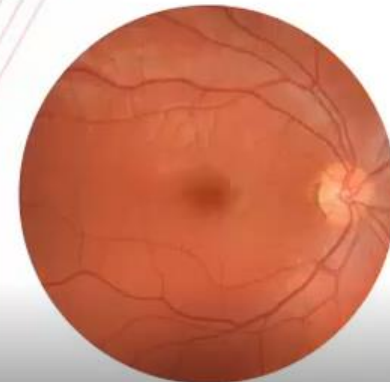
Mr Samuel Browning

UNSW Medical Student (Hons)
(Presenter)

Dr. Will Yates, Prof Lisa Keay, Prof Peter McCluskey, Clin/A Prof Andrew H White, Clin/A Prof Clare L. Fraser



UNSW
SYDNEY



MEET 'JANE'



This is 'Jane':

- ▶ 6 years old
- ▶ Presents with several vomits in past few weeks
- ▶ Foster child, known to paedcs for congenital heart condition

Exam:

- ▶ Alert, appears well
- ▶ Normal neurological examination, no DO

THE PROBLEM

Direct Ophthalmoscopy is
gravely underutilised (0-14% of
appropriate patients)



The impact on patient management of non-mydriatic fundus photography

Dunn et al, 2018; Muiesan et al, 2017; Bruce B et al, 2011; Roberts et al, 1999

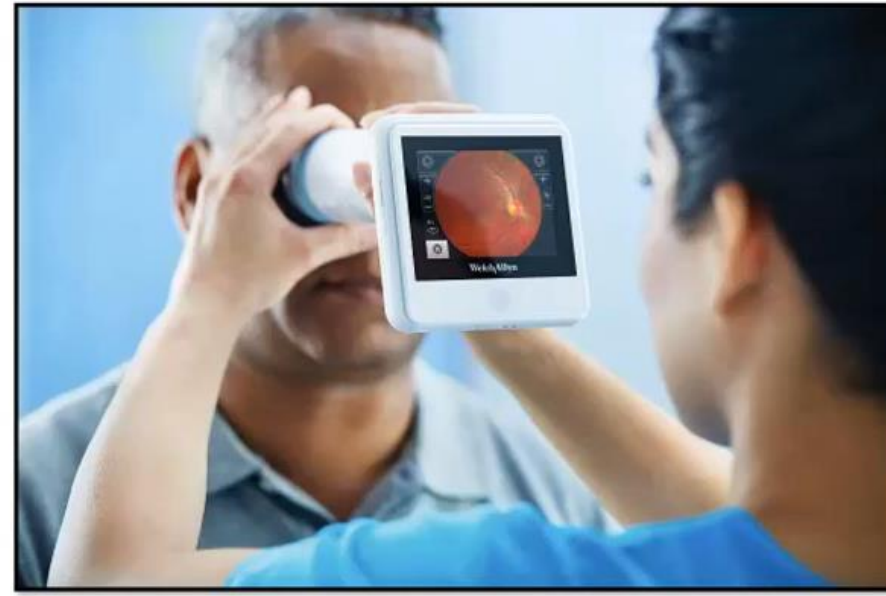
THE PROBLEM

Direct Ophthalmoscopy is gravely underutilised (0-14% of appropriate patients)



A SOLUTION

Non-mydriatic fundus photography (NMFP) is a superior alternative



MEET 'JANE'



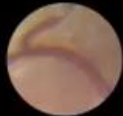
'Jane's' second visit to ED:

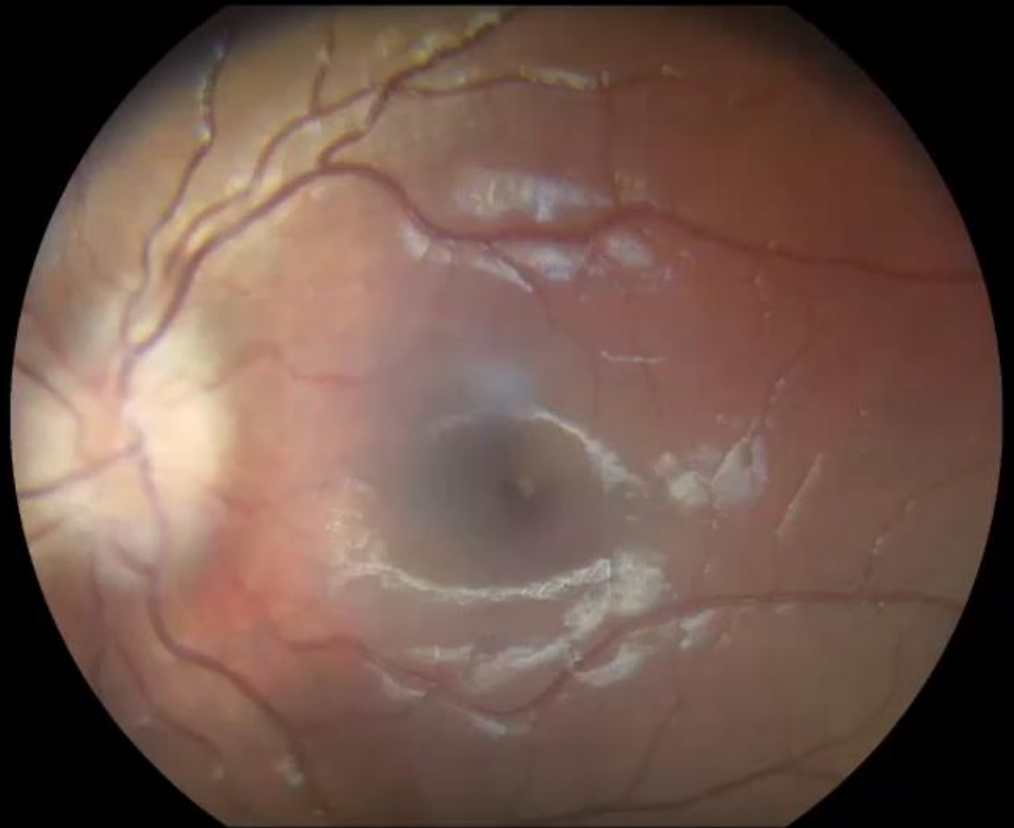
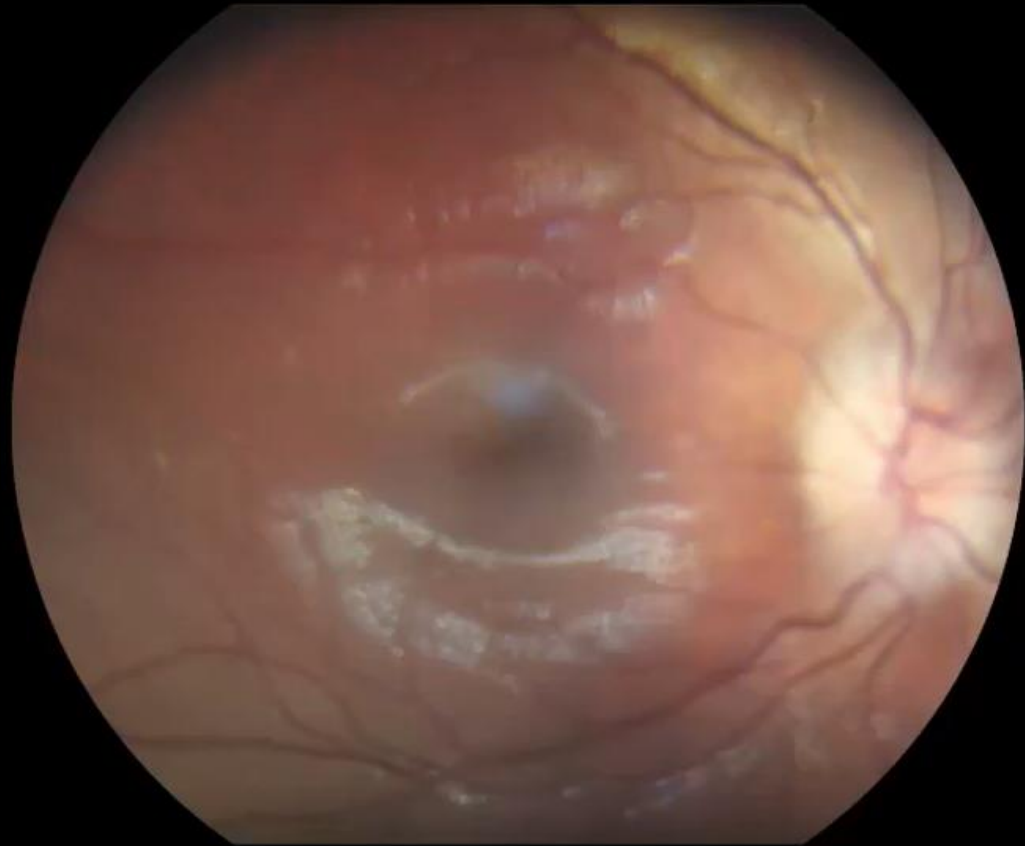
- ▶ Now 3 months of intermittent vomits
- ▶ 'Blurry' vision in one eye

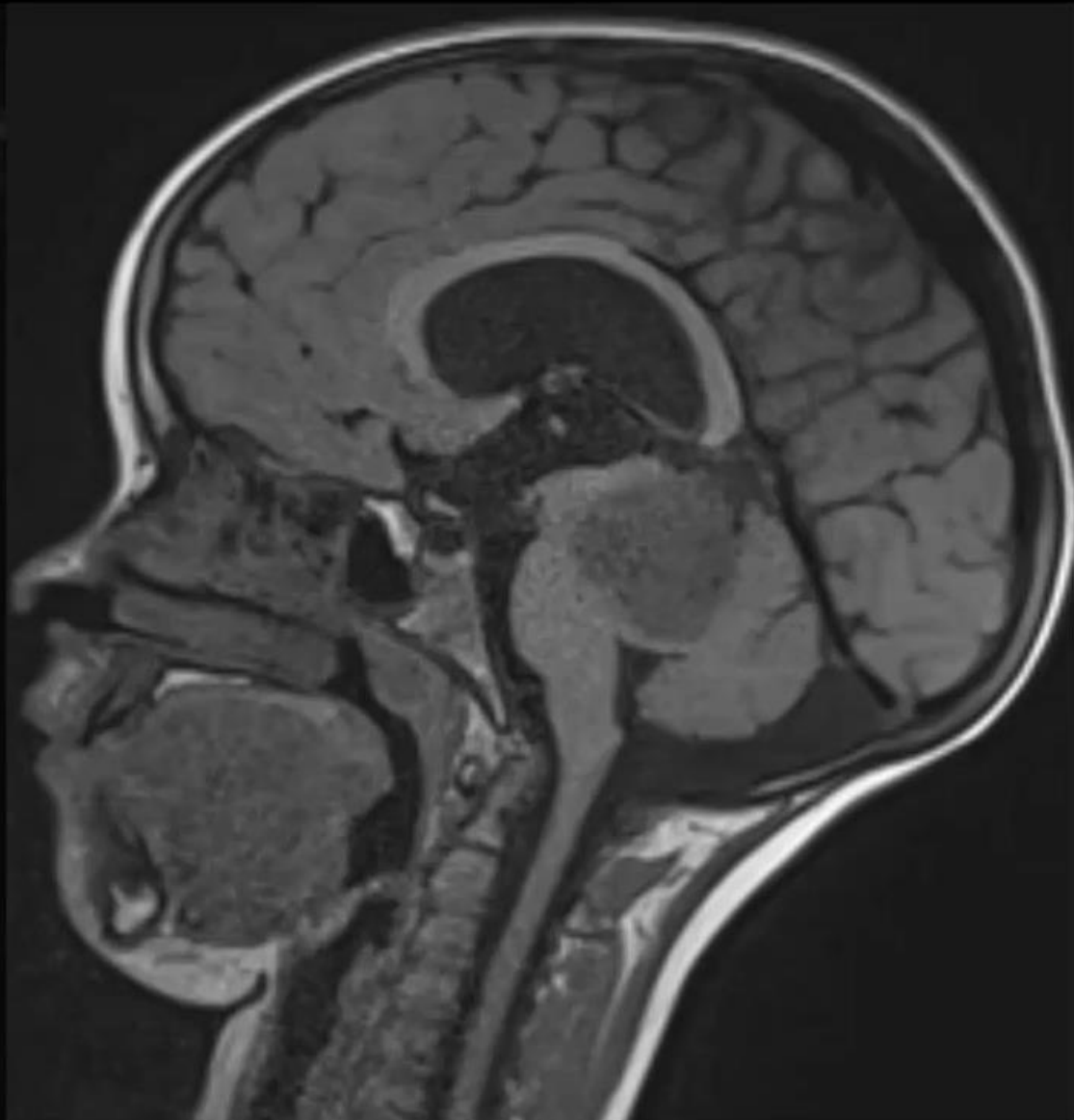
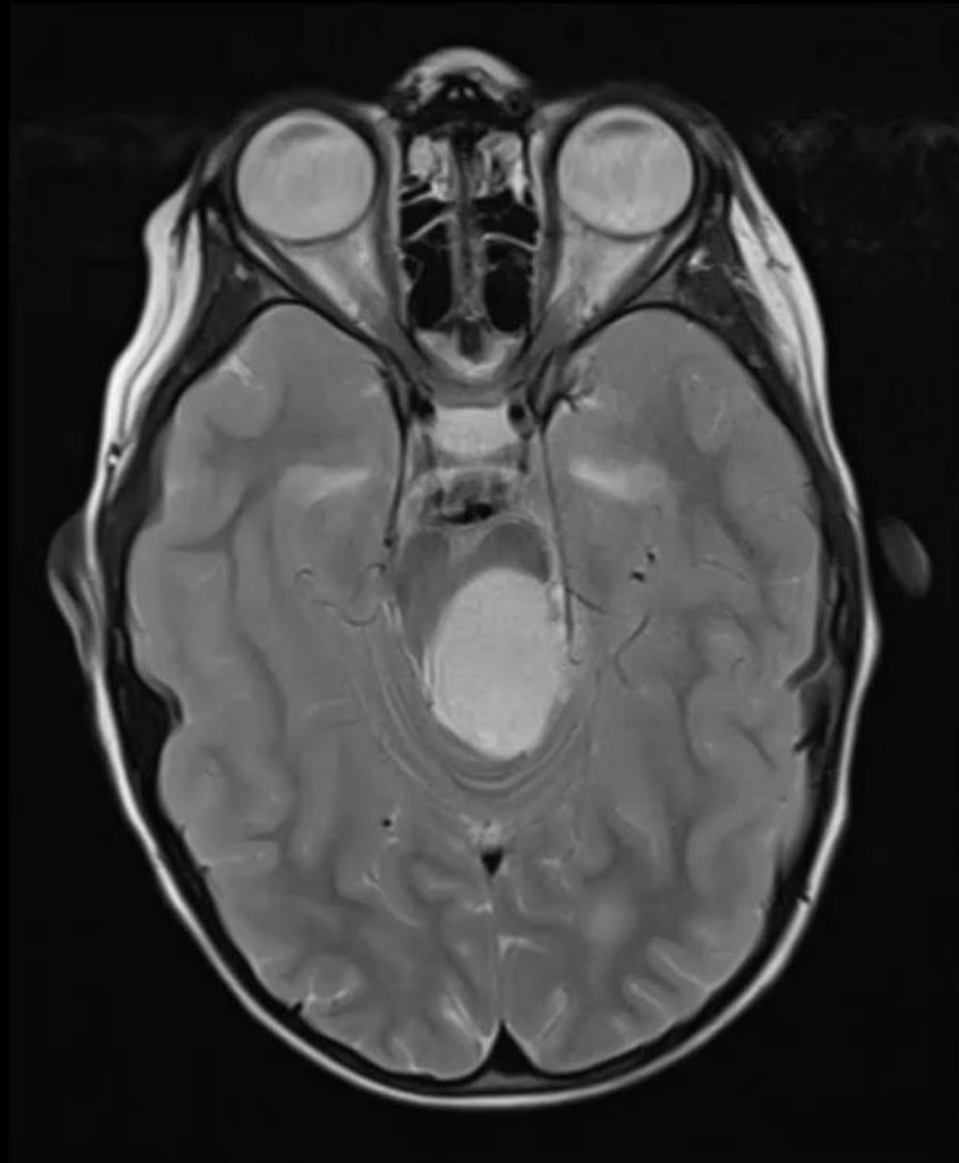
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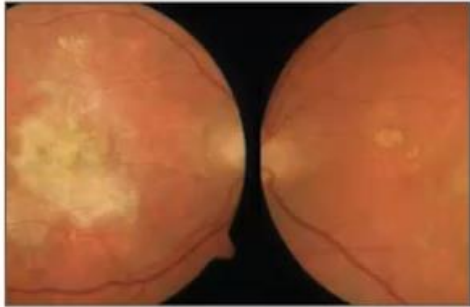






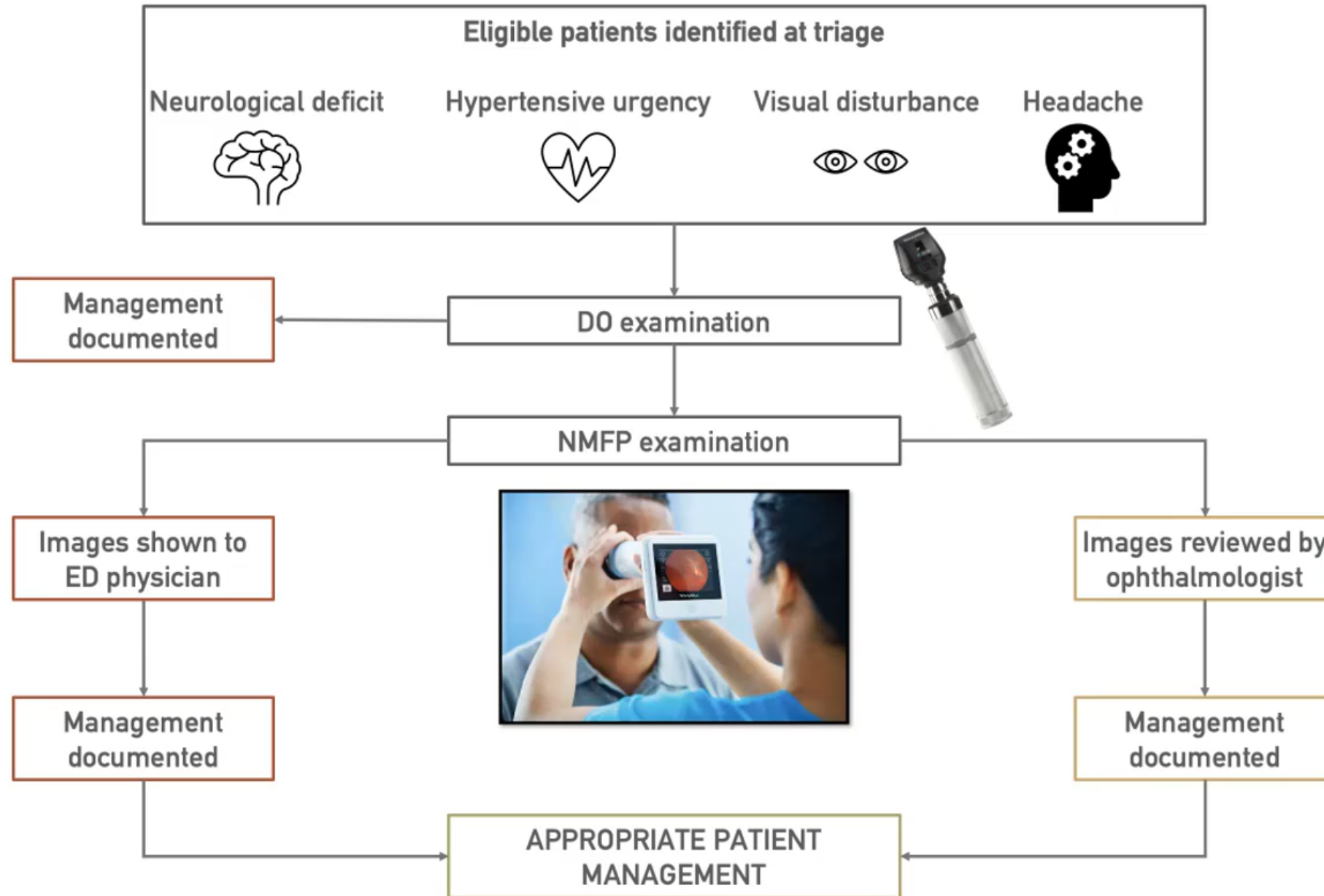


STUDY AIMS

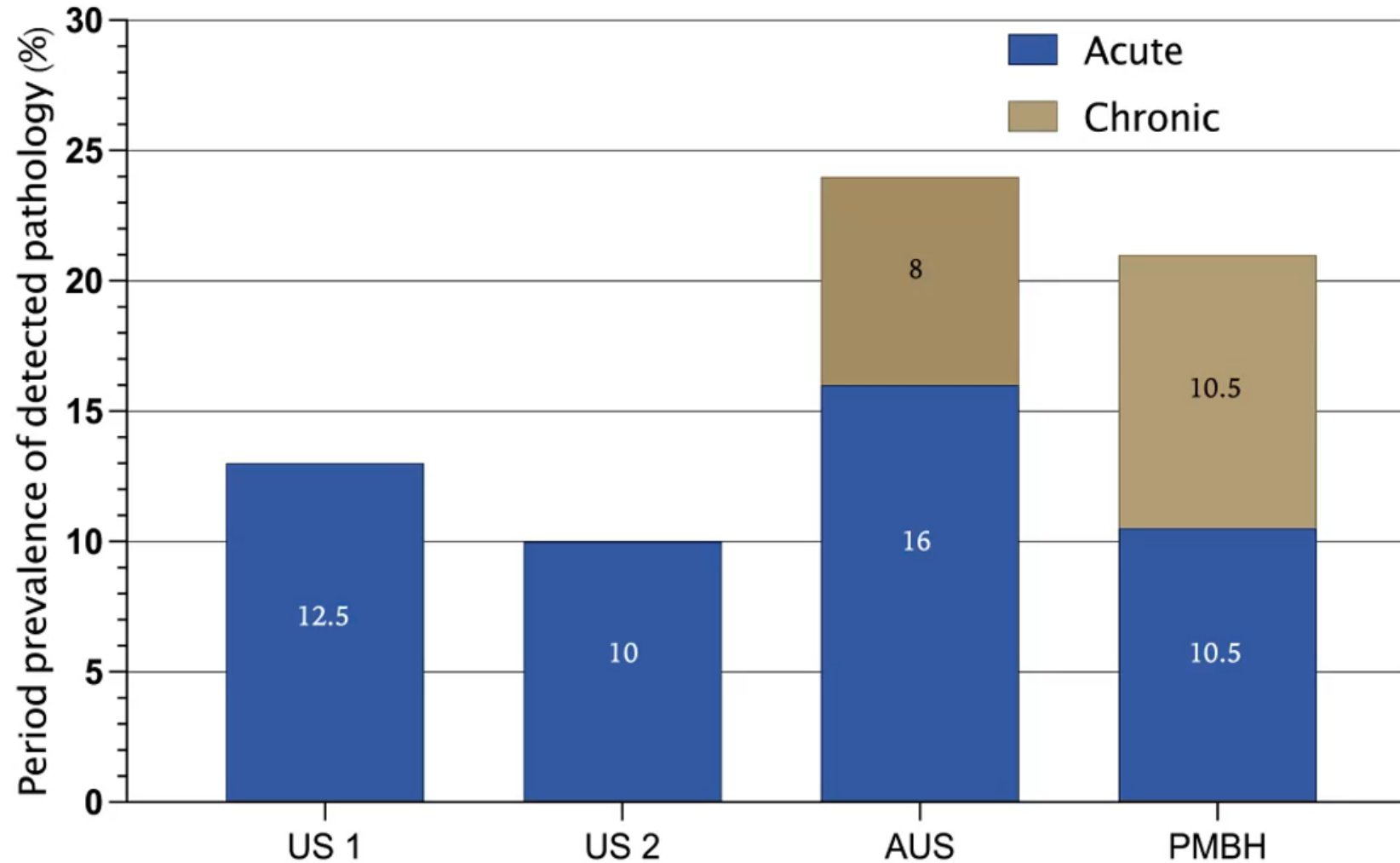


1. Assess the extent to which NMFP changes ED patient management
2. Compare the diagnostic accuracy of DO vs NMFP
3. Measure the period prevalence of fundus pathology

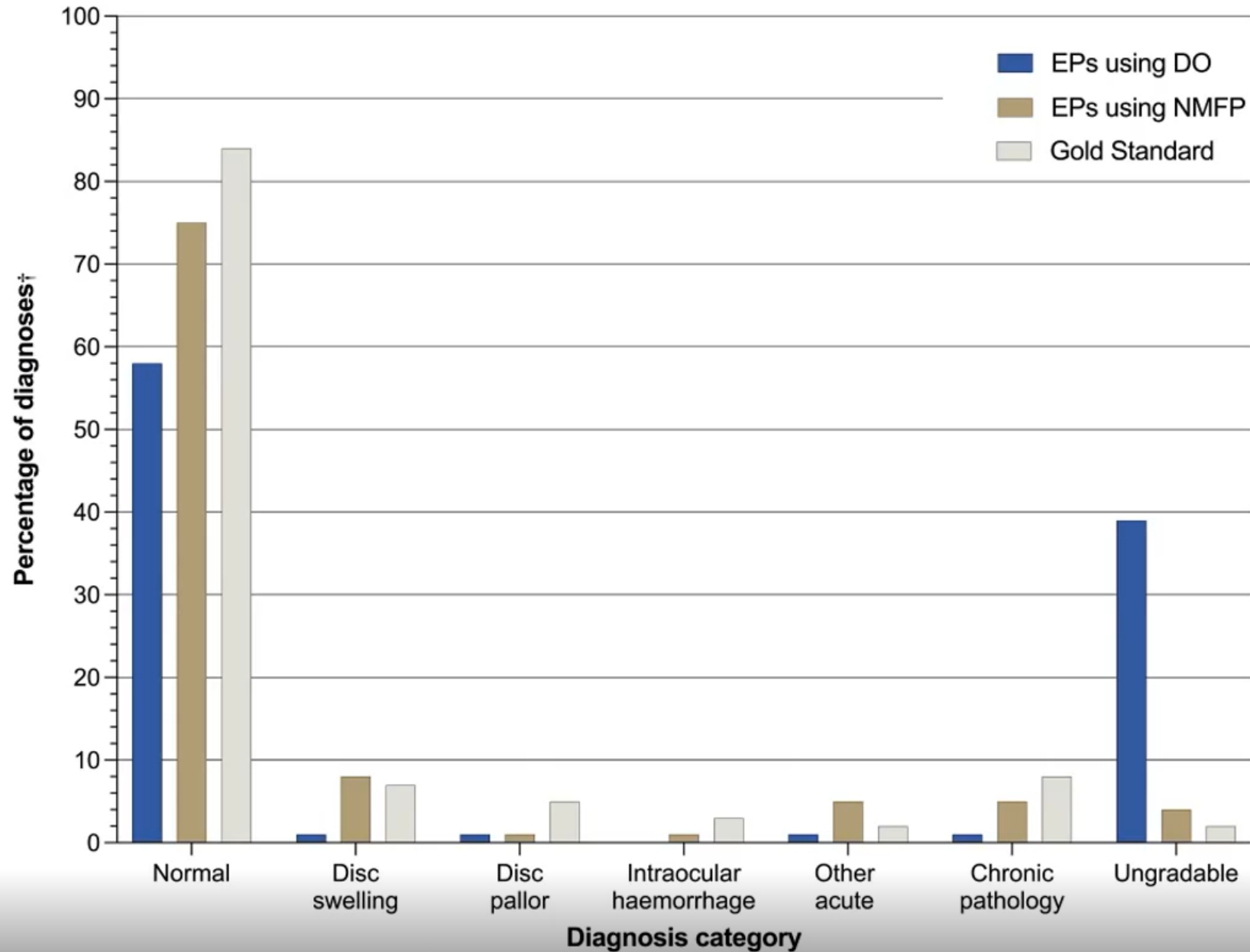
STUDY DESIGN



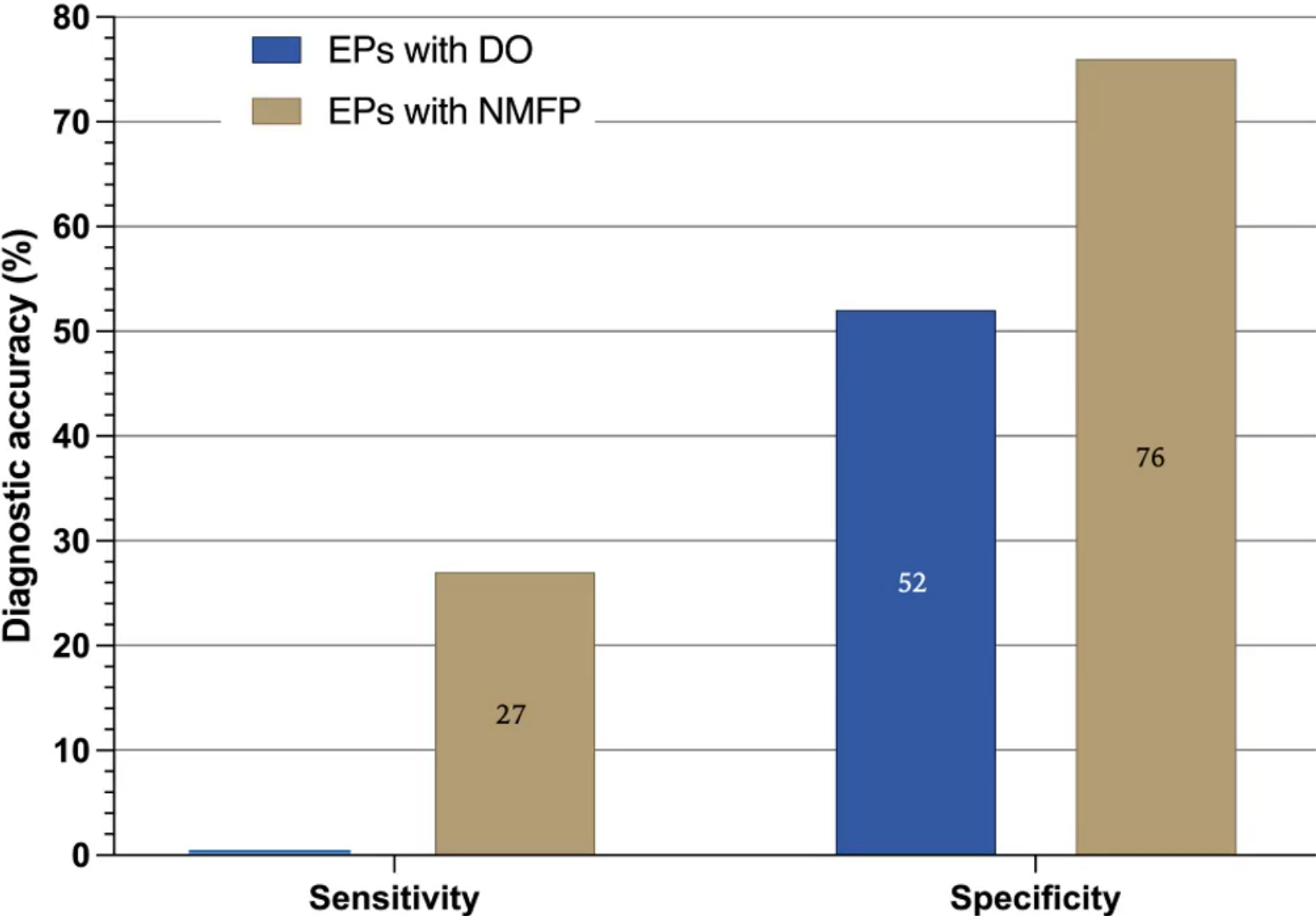
3. PERIOD PREVALENCE OF FUNDUS PATHOLOGY



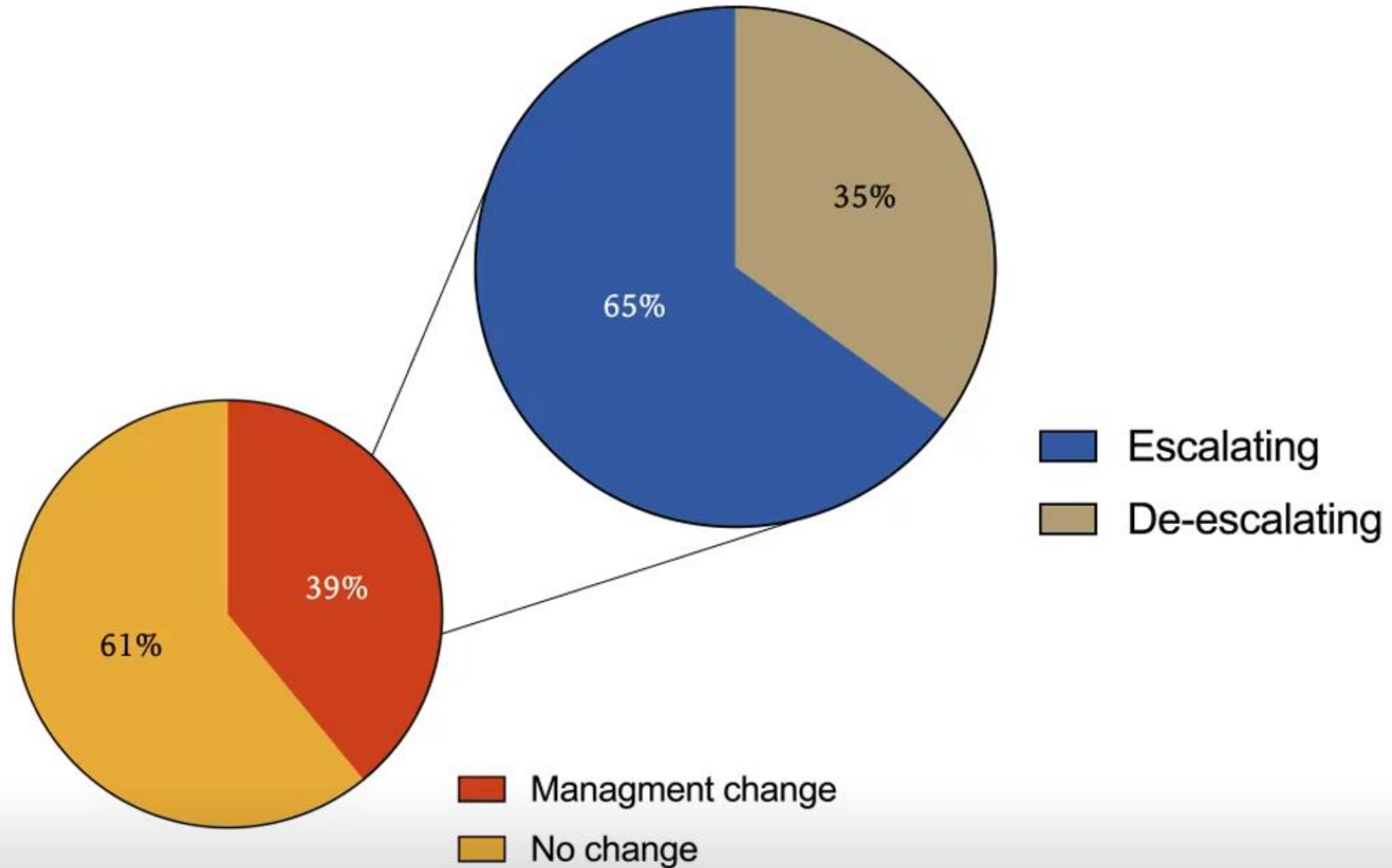
3. PERIOD PREVALENCE OF FUNDUS PATHOLOGY



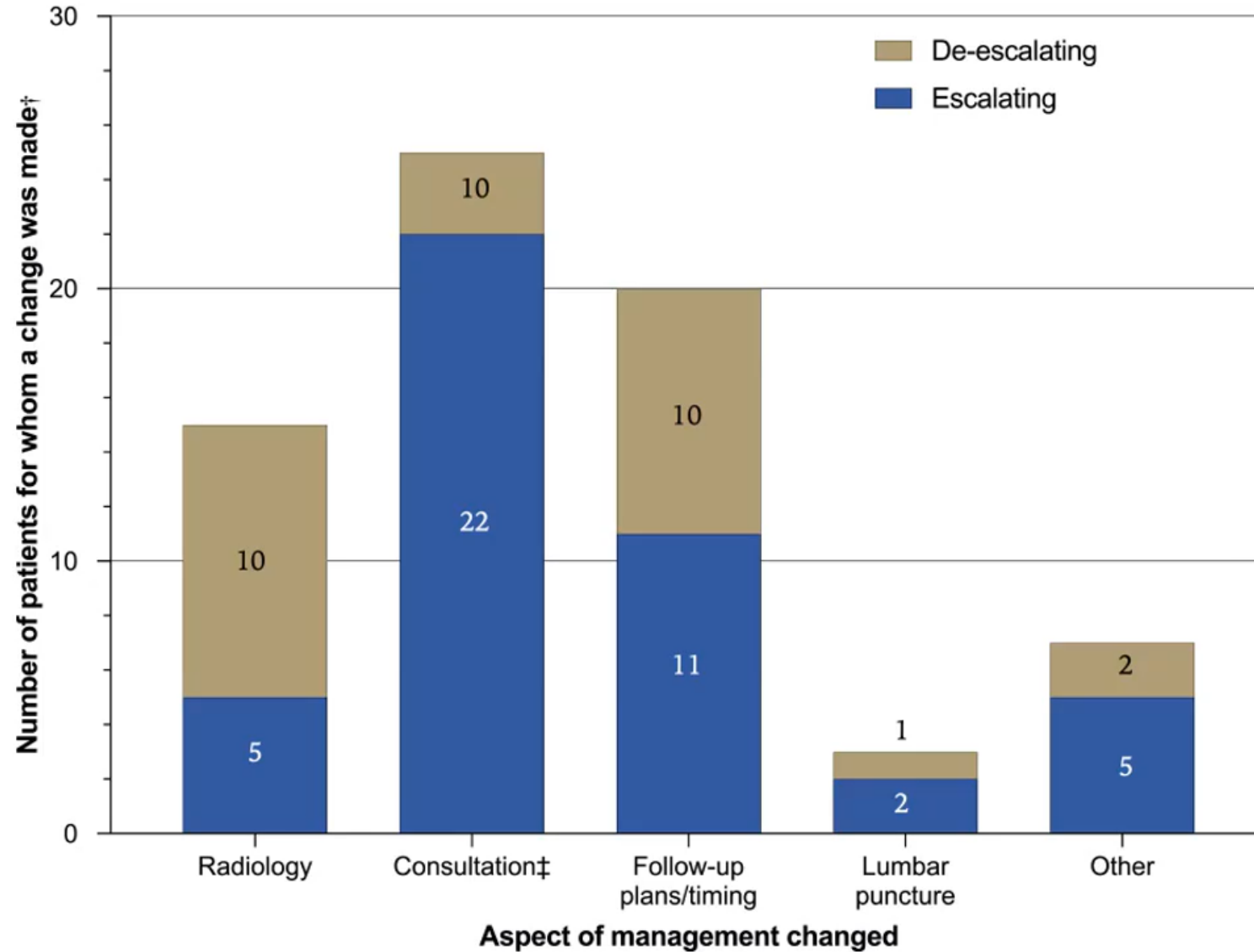
2. SUPERIOR DIAGNOSTIC ACCURACY



1. MANAGEMENT IMPACT OF NMFP



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CONCLUSIONS

- ▶ Direct ophthalmoscopy is rarely done, and misses all patients with acute and chronic pathology
- ▶ NMFP changes management for ~40% of patients
- ▶ NMFP improves diagnostic accuracy
- ▶ This is saving SIGHT, LIVES, TIME and \$\$\$

Would you like a photo of the brain with that?



the impact on patient management of non-myriatic fundus photography

