

Primary Angle-closure Disease & Primary Angle-closure Glaucoma

Definition & Frequency

Paul J Foster

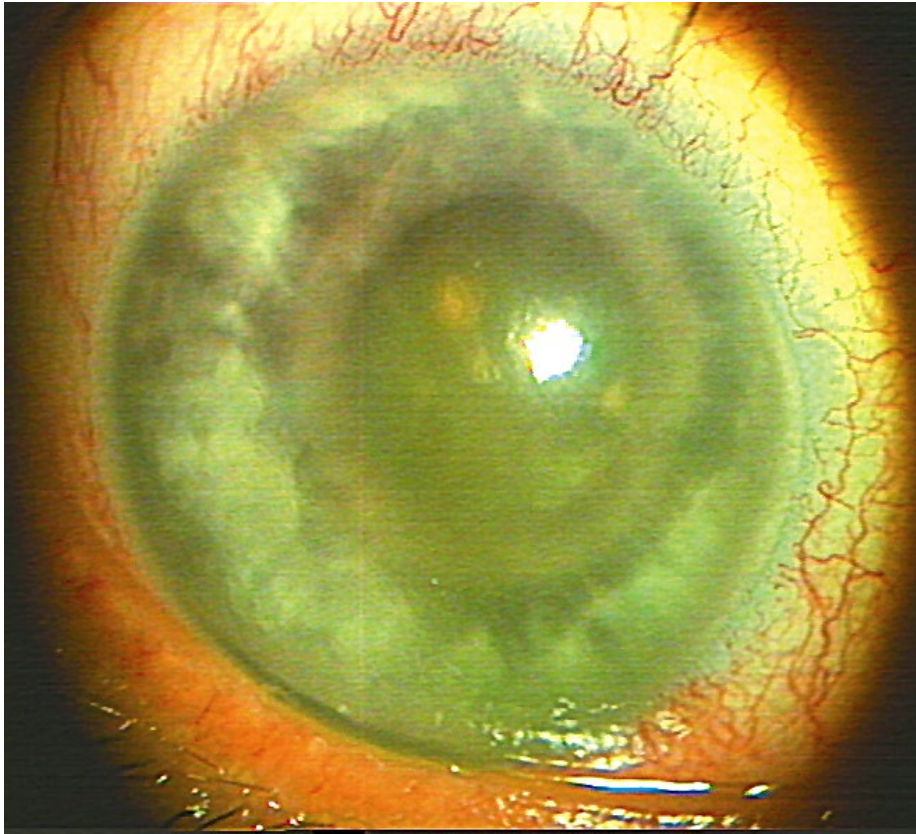
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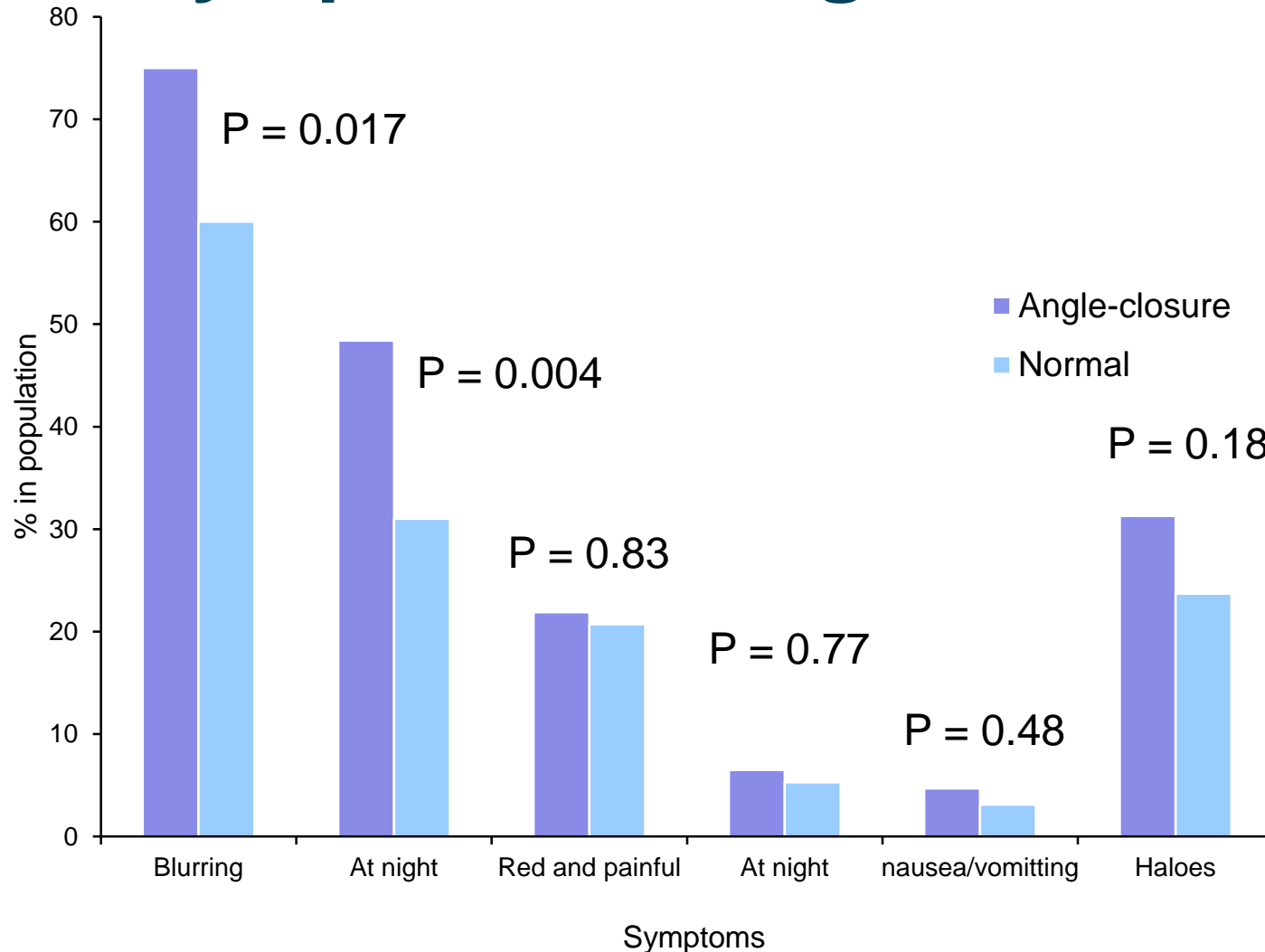
*National Institute for
Health Research*

Acute Angle-closure (“Glaucoma”?)

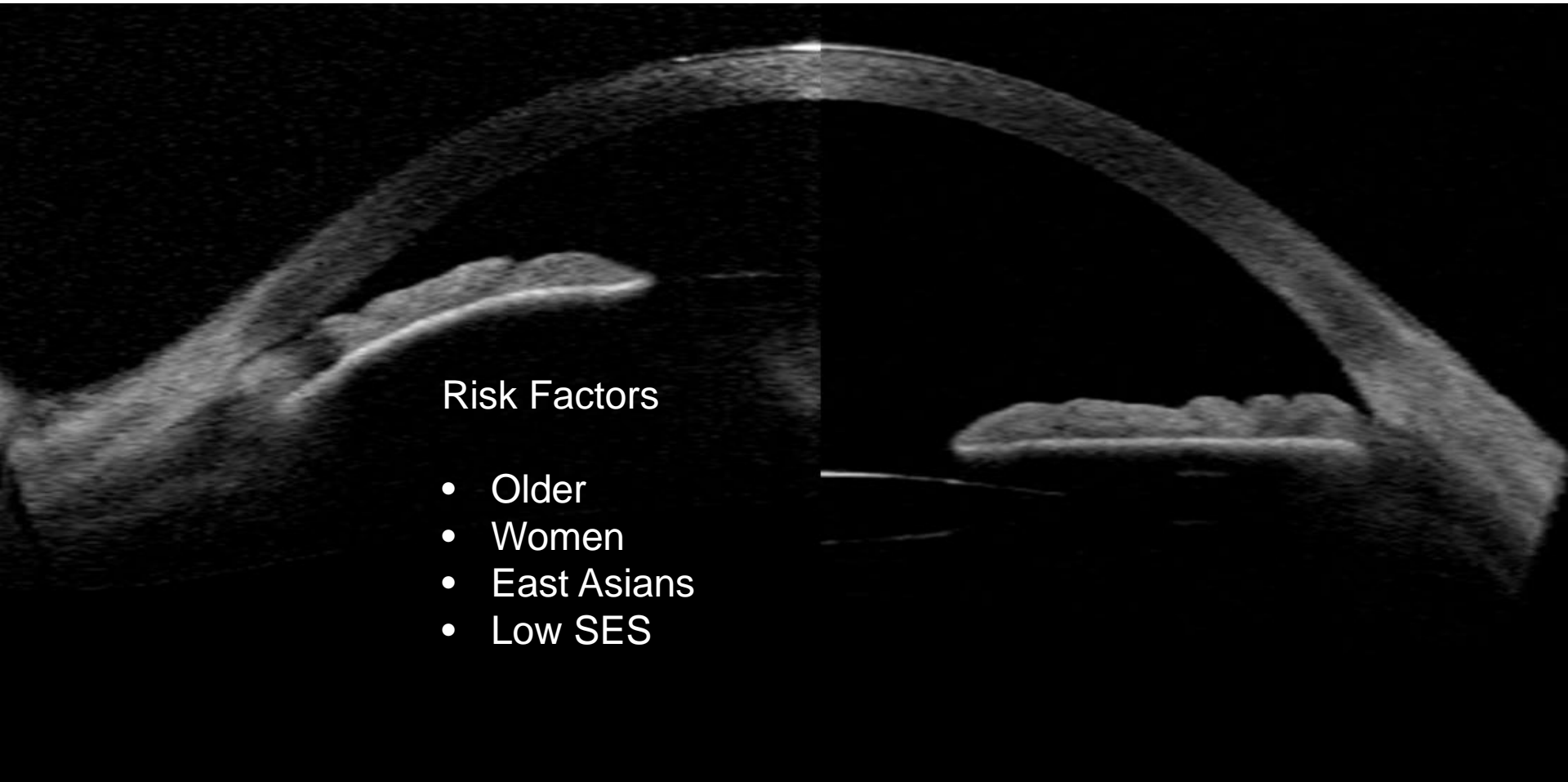


- Sudden, symptomatic OHT
- Total occlusion of TM
- Symptoms
 - Pain, redness, blurred vision
- Visual prognosis generally good

Symptoms in Angle-closure



Angle-closure = Irido-trabecular contact

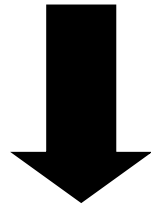


Risk Factors

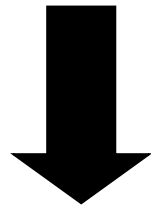
- Older
- Women
- East Asians
- Low SES

Natural history of angle-closure glaucoma

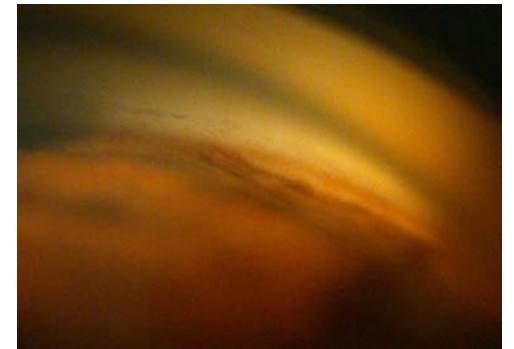
Narrow Angle (PACS)



Angle-closure (PAC)

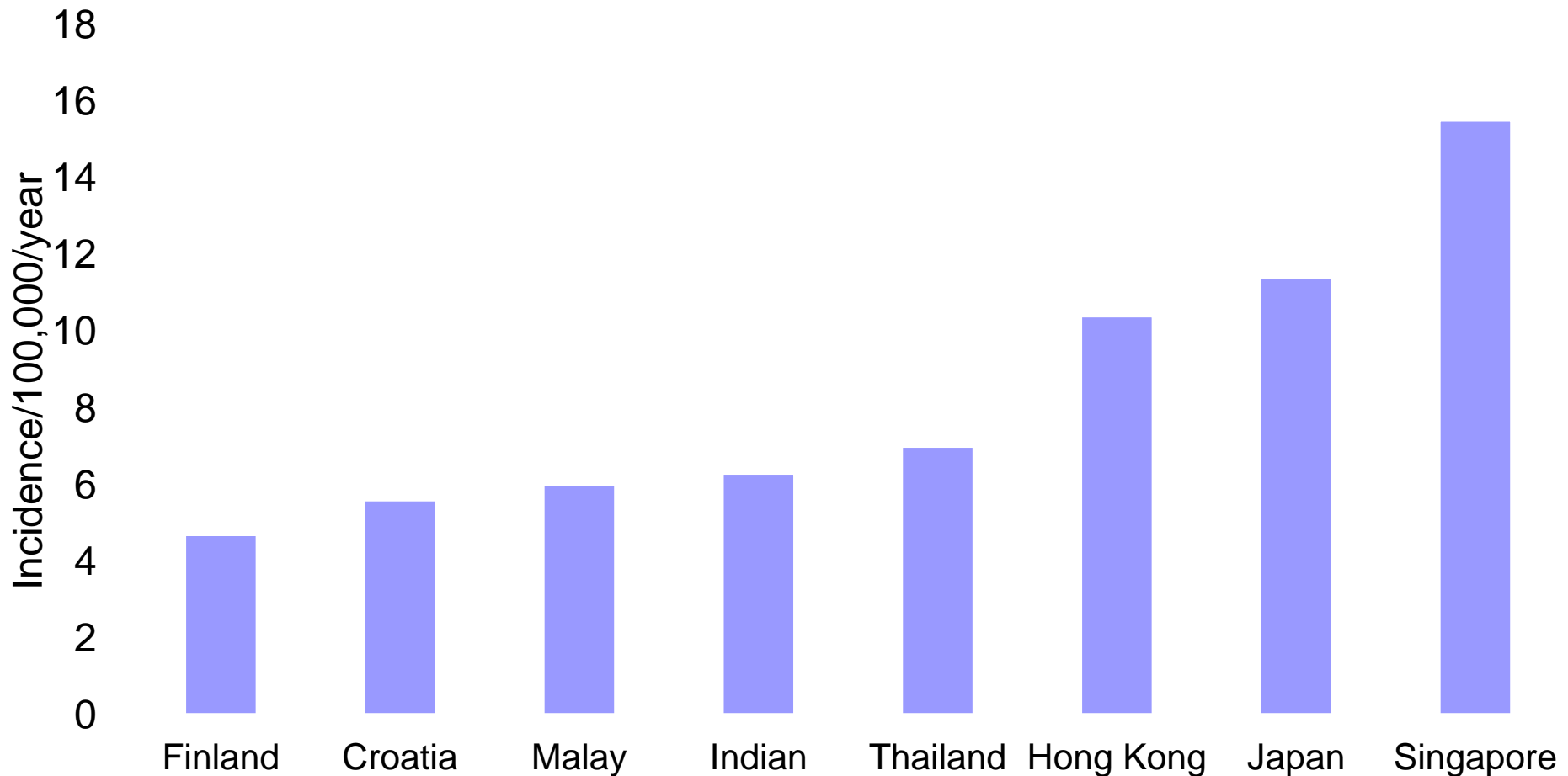


Glaucoma (PACG)



Foster P *et al.* The definition and classification of glaucoma in prevalence surveys. *BJO* 2002.

Incidence of symptomatic PAC by nation



Foster PJ et al. Arch Ophthalmol 1996

The prevalence of primary angle closure glaucoma in European derived populations: a systematic review

Alexander C Day,^{1,2} Gianluca Baio,³ Gus Gazzard,² Catey Bunce,^{1,2,4}
Augusto Azuara-Blanco,⁵ Beatriz Munoz,⁶ David S Friedman,⁶ Paul J Foster^{1,2}

PACG Prevalence

- Aged 40 and older 0.4% (95% CI: 0.3 to 0.5)
- Aged 70 and older 0.95% (95% CI: 0.63 to 1.35)
- $\frac{3}{4}$ are female

The small eye phenotype in the EPIC-Norfolk eye study: prevalence and visual impairment in microphthalmos and nanophthalmos

Alexander C Day,¹ Anthony P Khawaja,² Tunde Peto,¹ Shabina Hayat,²
Robert Luben,² David C Broadway,³ Kay-Tee Khaw,² Paul J Foster¹

- 1.2% of cohort had AL < 21 mm
- 0.27% had AL < 20 mm
- 0.14% AL < 18 mm

Conclusions: The prevalence of people with small eyes is higher than previously thought. While small eyes were more common in women, this appears to be related to shorter height and lower body mass index. Participants with small eyes were more likely to be blind or to have unilateral visual impairment.

Research into Glaucoma And Ethnicity (ReGAE) 8: is there a relationship between social deprivation and acute primary angle closure?

Maged Nessim,¹ Alastair Keith Denniston,¹ Winifred Nolan,¹ Roger Holder,²
Peter Shah^{1,3}

Conclusions In this population, patients presenting with APAC were more likely to come from areas of a high level of social deprivation

ZAP Trial

Efficacy of Laser PI for the Prevention of Angle Closure

The incidence of primary angle-closure disease was VERY LOW
0.8% / year in PACS (36 / 889 untreated eyes)

Acute Angle Closure (AAC)

5 eyes ; 0.11%/year (3 cases after dilation)

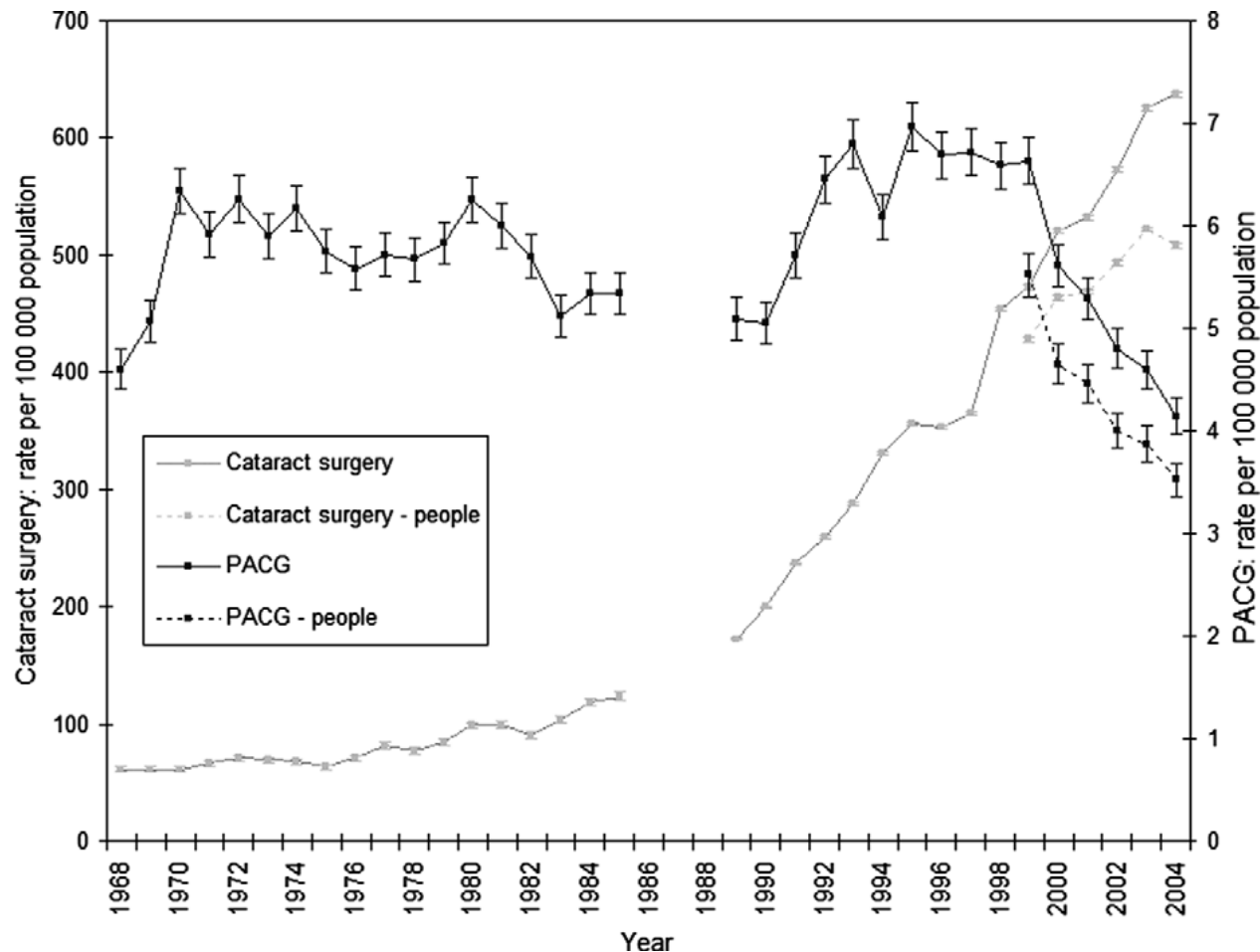
Asymptomatic IOP Elevation on Two Consecutive Visits

5 eyes ; 0.11%/year

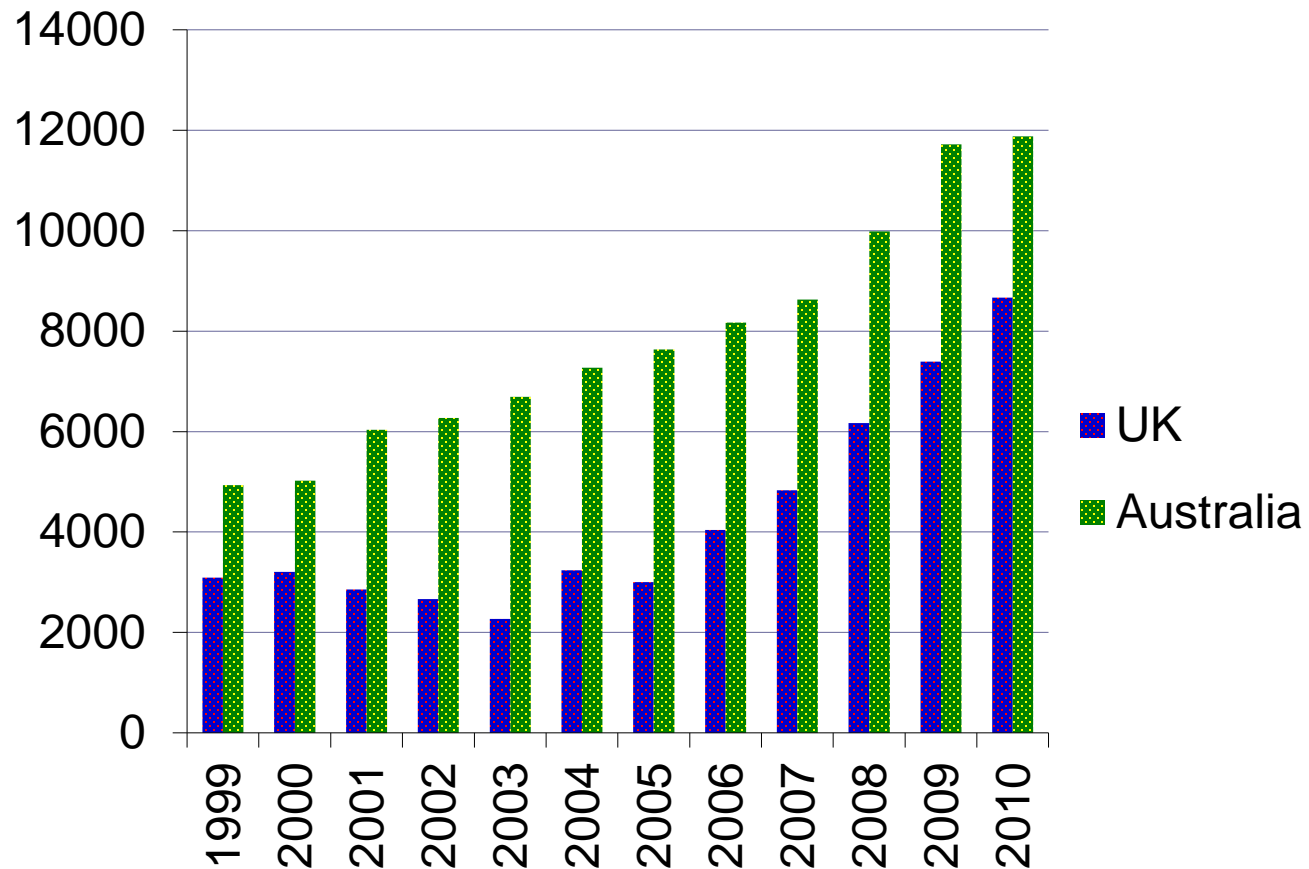
PAS > 1 Clock Hours

30 eyes ; 0.66%/year

Acute angle-closure incidence and cataract surgery



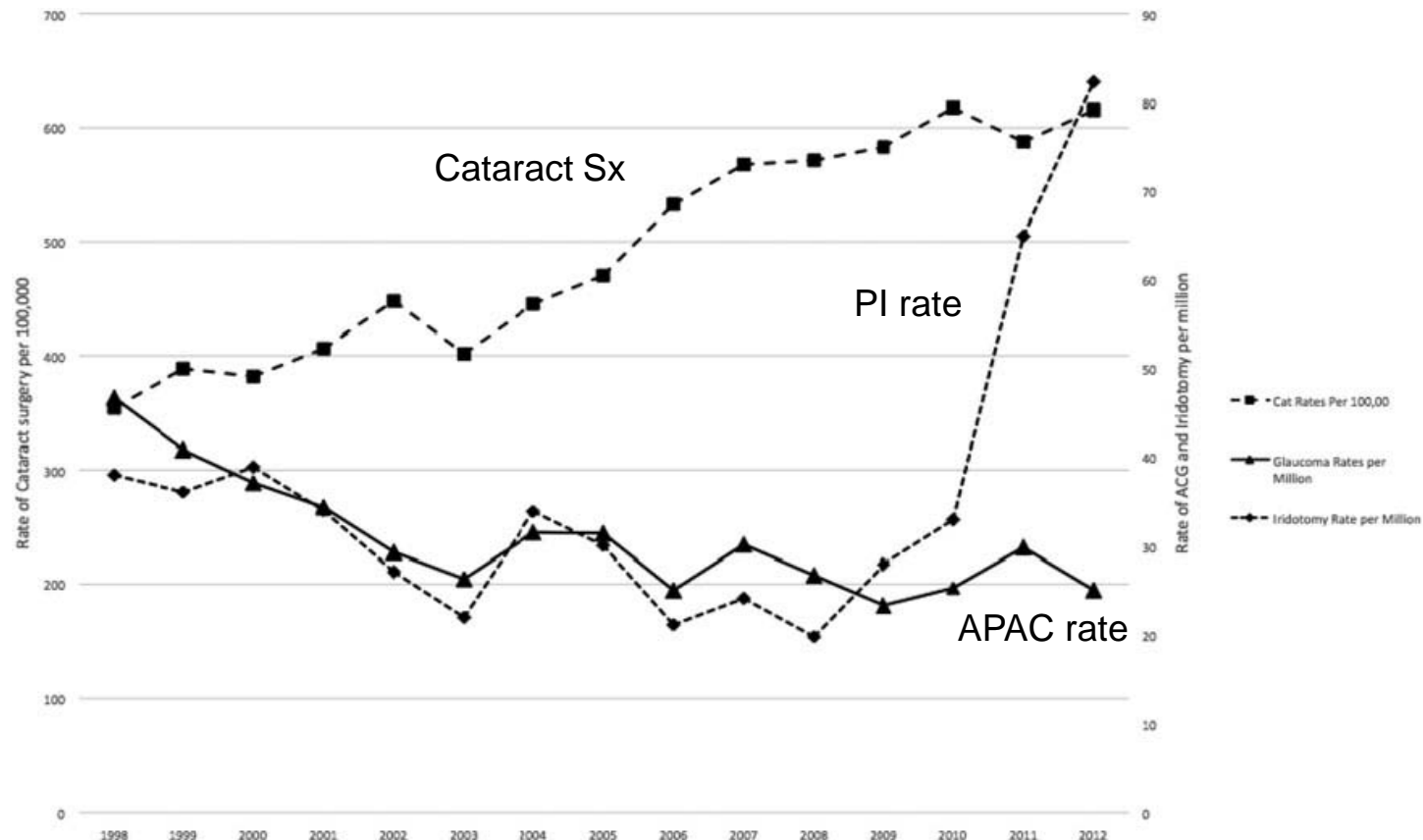
Hu CC, Lin HC, Chen CS, Kuo NW. Acta Ophthalmol 2008 Jun;86(4):440-5
 Keenan, Salmon, Yeates, Goldacre. J Glaucoma 2009;18:2001-5.



Iridotomy numbers per year

Trends in Acute Primary Angle-Closure Glaucoma, Peripheral Iridotomy and Cataract Surgery in Scotland, 1998–2012

Stewart N. Gillan^a, Peter J. Wilson^a, David S. Knight^b, and Roshini Sanders^c



Summary

- Angle-closure is defined by irido-trabecular contact
- Staging of disease is based on physical signs
- Don't rely on symptoms to diagnose
- Incidence of AAC is low even in high risk people
- Frequency is declining in response to higher phaco rates

Faculty of Brain Sciences



Study Here at the Institute of Ophthalmology

<https://www.ucl.ac.uk/ioo/study>