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Post-Herpetic Neuralgia Occurrence and Herpes Zoster Recurrence in Immunocompromised Adults Aged 18 Years or Older in England: a Large Retrospective Cohort Study (Clinical Practice Research Datalink, 2012-2019)

Abda Mahmood¹, Marie Nishimwe², Yasmeeta Vekria³, Driss Oraichi⁴, Manjit Hunjan³, Saskia Hagenaars⁵, Karabo Keapoletswe⁶, Bhagya Chengat⁶, Spyros Paparrodopoulos⁷, Simeon Stavrev⁸, Sarah Lay-Flurrie⁶, Louise Raiteri⁶, Inga Posiuniene¹, Susan Farrow³, Boriana Guimicheva³ and Alen Marijam¹

¹GSK, Wavre, Belgium; ²GSK, Rueil Malmaison, France; ³GSK, London, UK; ⁴GSK, Rockville, USA; ⁵IQVIA Ltd, Amsterdam, The Netherlands; ⁶IQVIA Ltd, London, UK; ⁷IQVIA Ltd, Athens, Greece; ⁸IQVIA Ltd, Sofia, Bulgaria

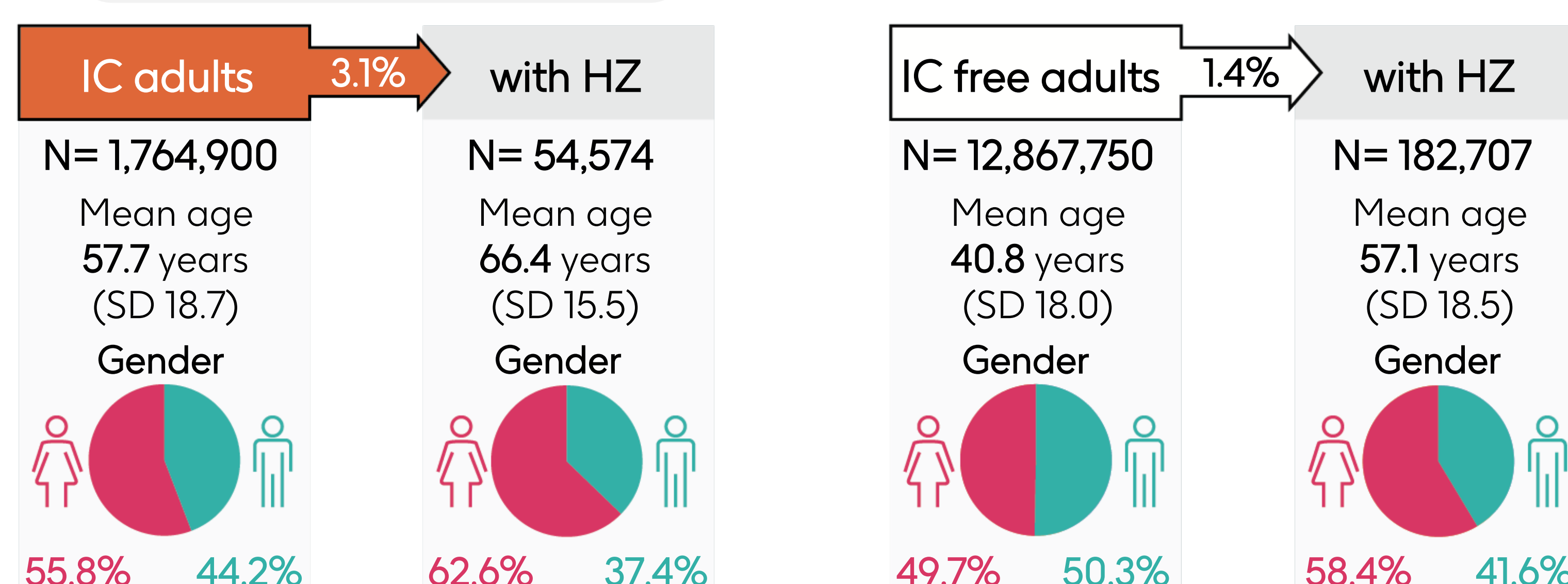
Background & Aim

- Herpes zoster (HZ), commonly known as shingles, is caused by reactivation of the varicella zoster virus and is common in immunocompromised (IC) individuals.¹
- HZ may recur after the initial episode or result in complications, including post-herpetic neuralgia (PHN) that can persist for months or years after HZ.¹



This study aims to provide robust, current data on **HZ complications** (including PHN) and **HZ recurrence in IC adults**.

Demographics



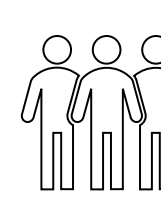
Study design



This **retrospective cohort study** analysed data from the Clinical Practice Research Datalink (CPRD) Aurum with linkage to Hospital Episode Statistics (HES) data and office for National Statistics (ONS) data.



Adults (≥18 years old) with a CPRD-HES database record of any of the following IC conditions of interest (IC cohort) were identified from 2012–2018 and followed until 31 December 2019: haematological malignancies, haematopoietic stem cell transplantation, solid organ transplant, solid organ malignancies, human immunodeficiency virus, and autoimmune diseases.



Adults without any of the ICs of interest (IC-free cohort) were also identified and followed during the same period.



The proportion of adults who had **PHN reported within 365 days following HZ diagnosis** were estimated (two timepoint definitions: 0 to 365 and 90–365 days post-HZ event). Only HZ patients with 365 days of follow-up data were included in these analyses. HZ recurrence rates were estimated per 1,000 person-years (PYs) with 95% confidence intervals (CIs). Recurrent events were defined as HZ occurring after a 180-day HZ-free and HZ complications (except PHN) free period and included any HZ occurring after the first recurrent event.[#]



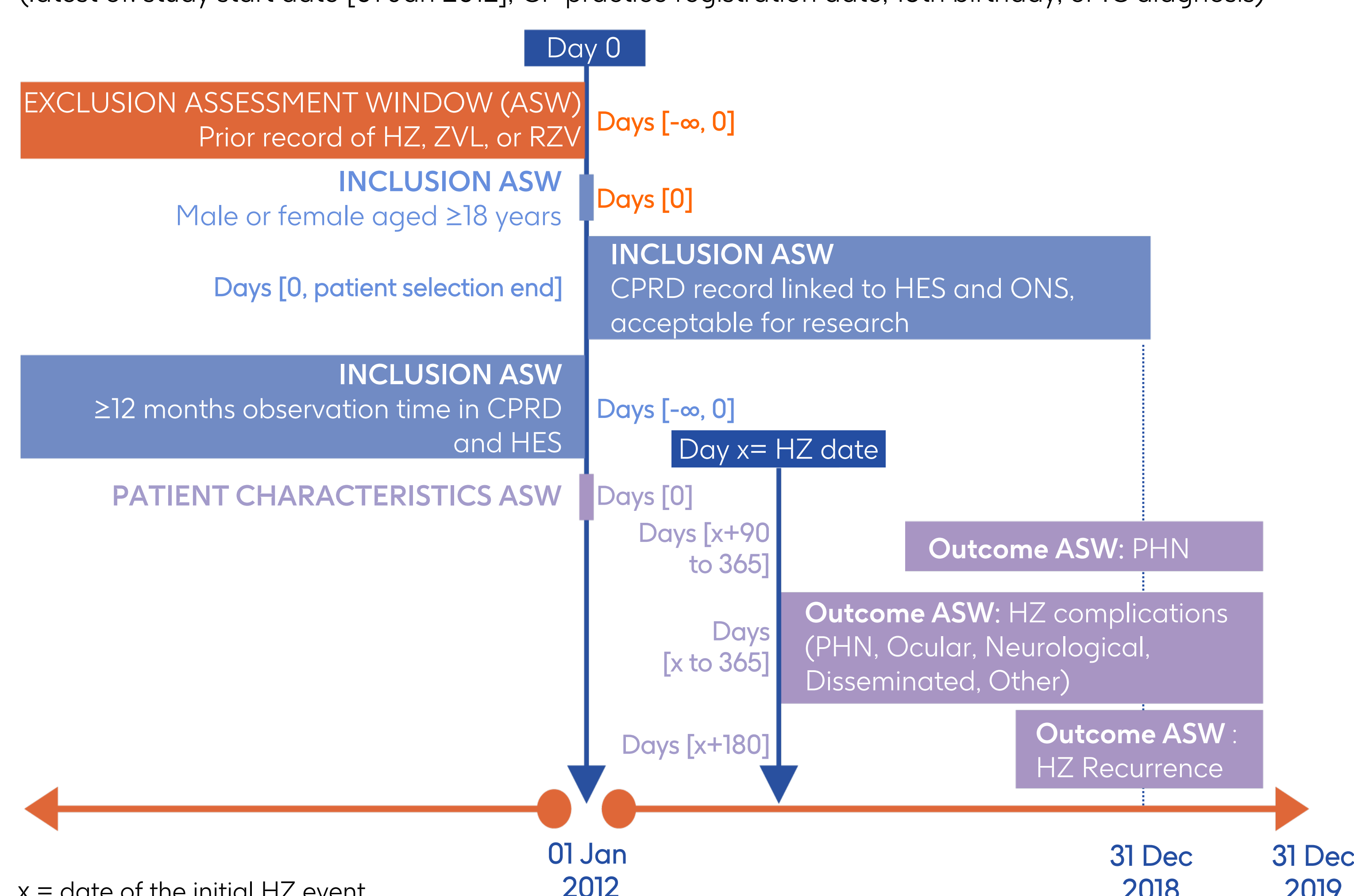
PHN and HZ Recurrence data were stratified by:

- Study population: IC cohort, IC-free cohort
- Age (years): 18–49, 50–59, 60–64, 65–69, 70–79, ≥80

[#]For complete definitions of HZ events, see supplementary table 1 (available through QR code)

INDEX DATE

(latest of: study start date [01 Jan 2012], GP practice registration date, 18th birthday, or IC diagnosis)



Results

Figure 1. PHN cases reported between 90 to 365 days after HZ index date by age, in IC vs. IC-free adults*

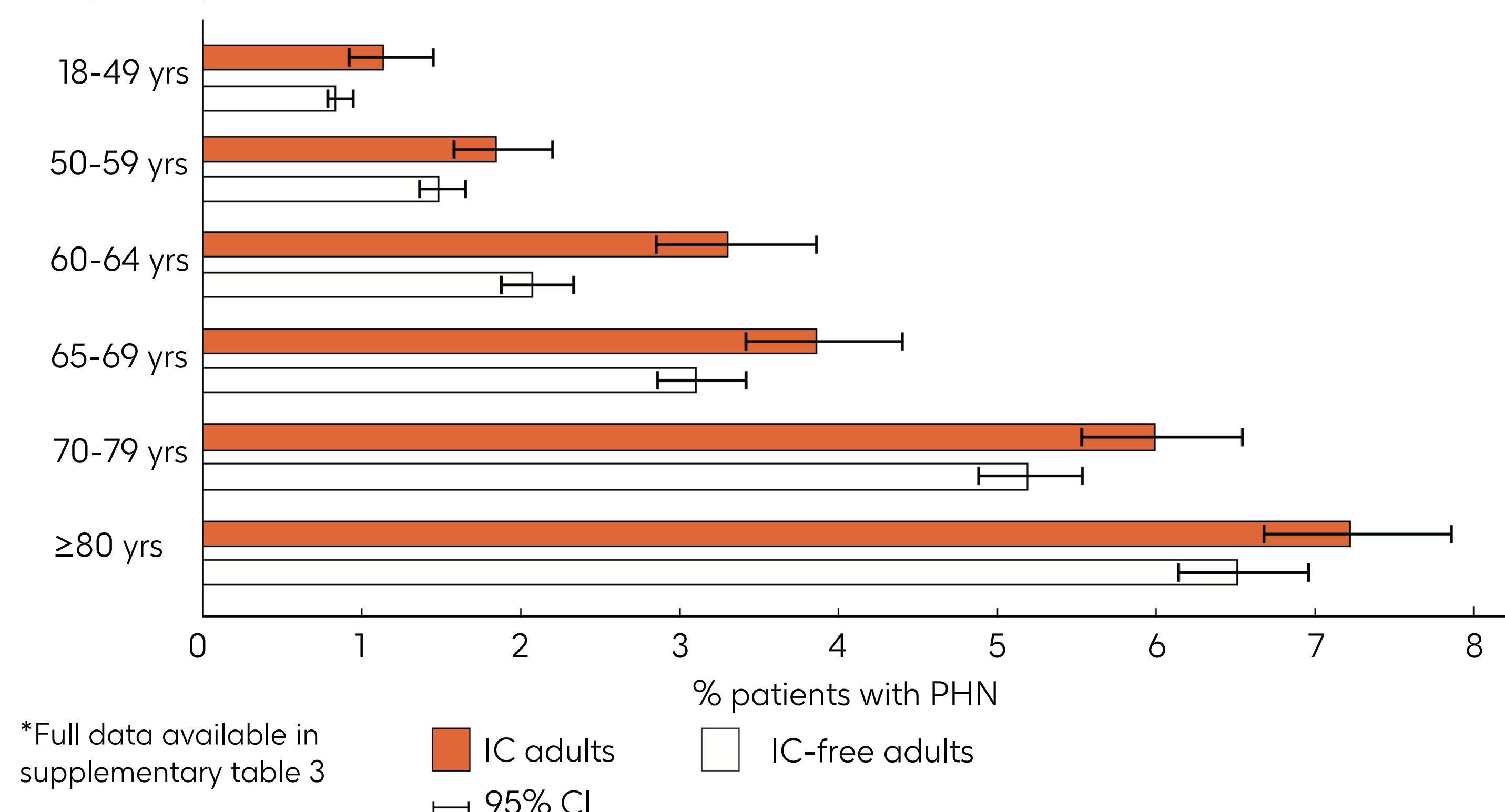


Figure 2. PHN by age and timepoint post-HZ in IC adults*

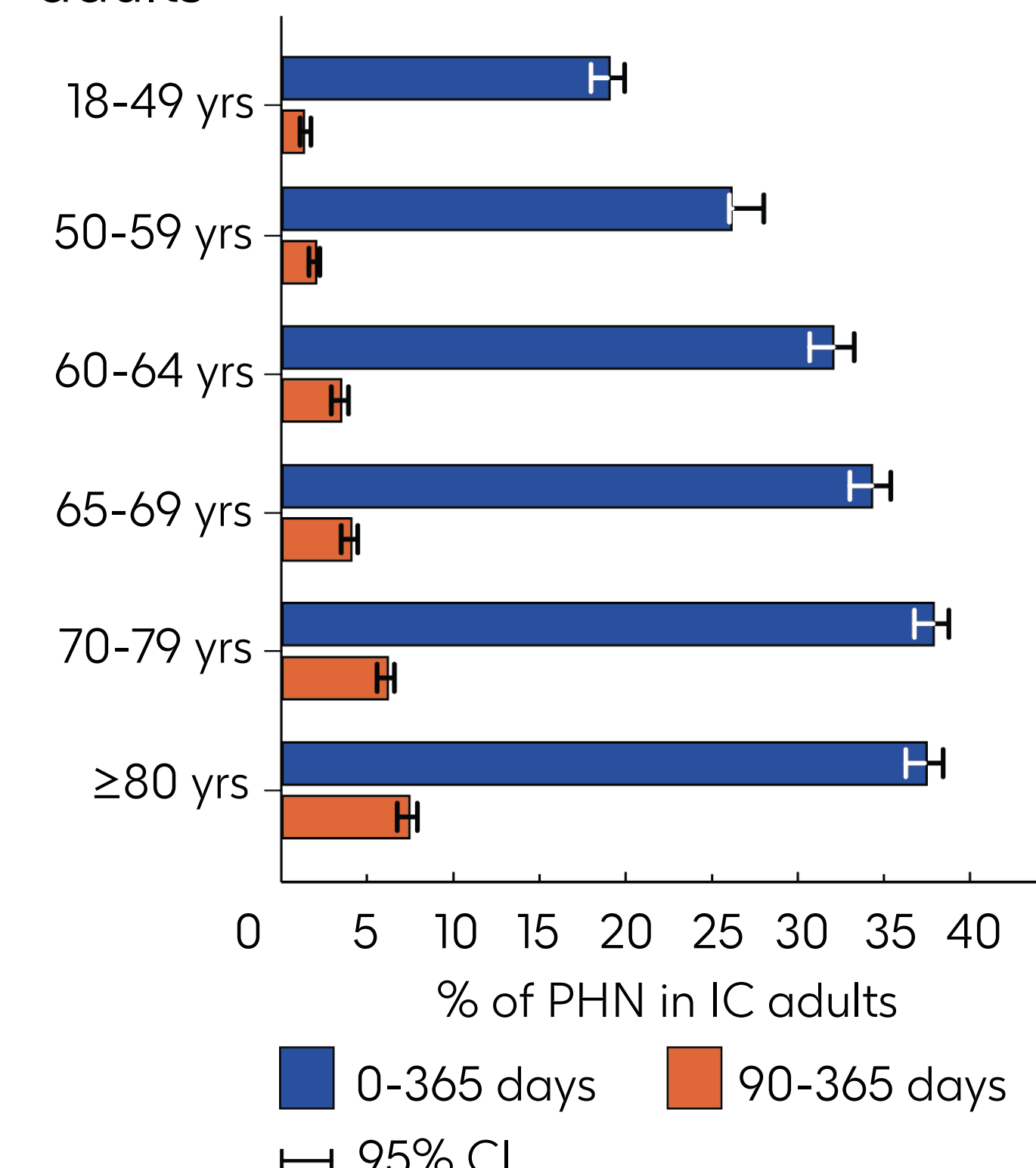
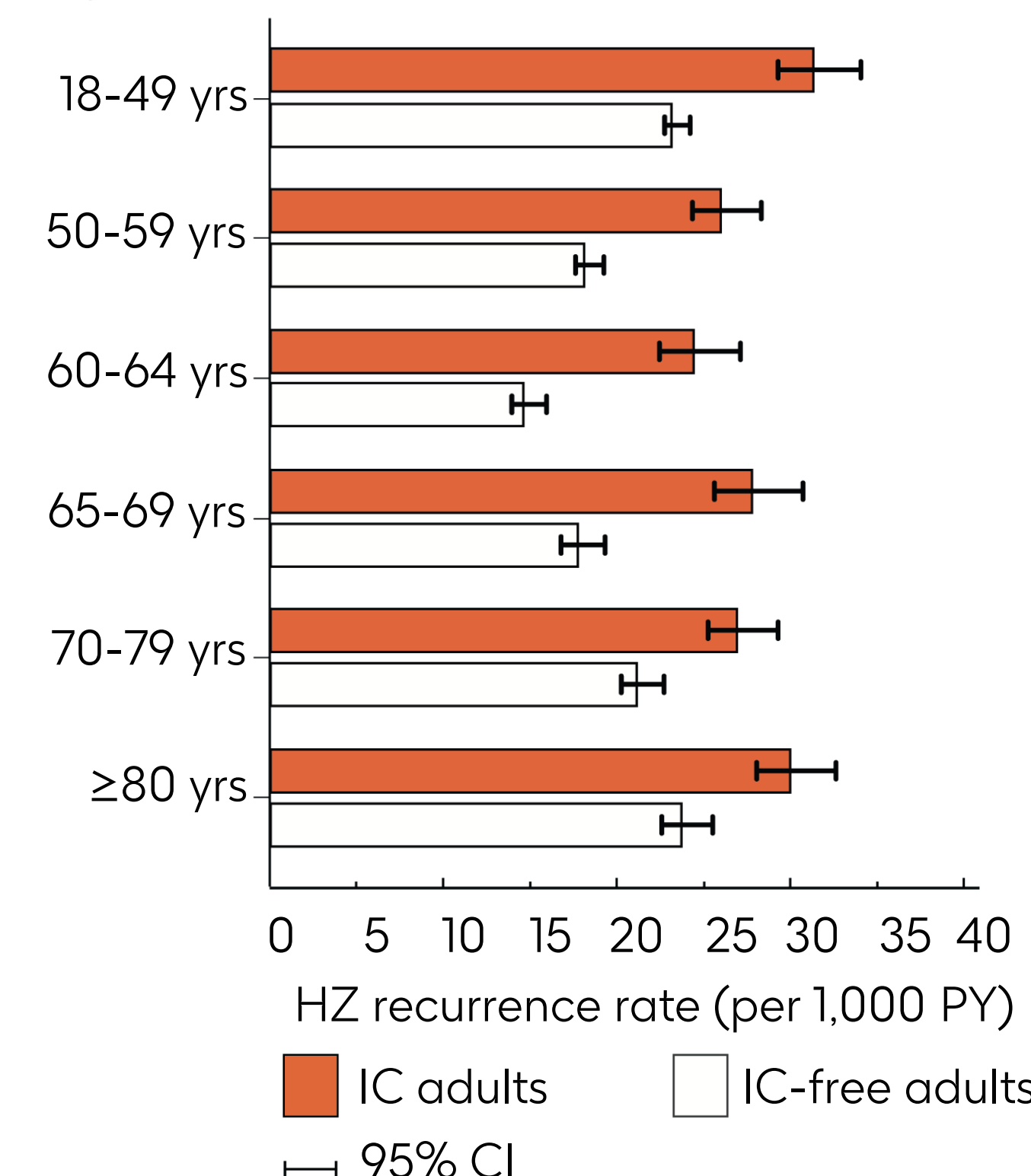


Figure 3. HZ recurrence rates by age in IC vs. IC-free adults



Conclusions



This large real-world study highlights that PHN and recurrent HZ are more common in IC than IC-free adults with HZ.



These findings could be used to advance HZ research and inform clinical guidelines and immunisation recommendations.

Abbreviations

ASW: assessment window; CI: confidence interval; CPRD: Clinical Practice Research Datalink; GP: general practitioner; HES: Hospital Episode Statistics; HZ: herpes zoster; IC: immunocompromised; N: number; ONS: Office for National Statistics; PHN: post-herpetic neuralgia; PY: person-years; RZV: recombinant zoster vaccine; SD: standard deviation; vs.: versus; yrs: years; ZVL: zoster vaccine live

References

1. Yanni EA, et al. Burden of herpes zoster in 16 selected immunocompromised populations in England: a cohort study in the Clinical Practice Research Datalink 2000–2012. *BMJ Open*. 2018;8(6):e020528.

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Disclosures

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