

# 帶狀皰疹

## 流行病學與臨床表現

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2024 May 26

# 綱要

- 高齡生活之準備不足
- 1/3的人，在80歲前會罹患過帶狀皰疹
- 水痘帶狀皰疹病毒的自然暴露機會減少
- 80歲帶狀皰疹病人，約20%會有皰疹後神經痛
- 帶狀皰疹後，一年內中風比率增加30%
- 約10%病人帶狀皰疹會復發
- 皰疹抗病毒藥物無法減少皰疹後神經痛的發生

為高齡生活  
所做的準備不足

## 近10年國人平均壽命趨勢圖



資料來源：內政部統計處

# LIVING LONGER. LIVING HEALTHIER?

[ TIPS FOR BETTER AGING ]

1900



2013



Average life expectancy

## Americans are living longer.

*National Center for Health Statistics, 2013*



But nearly  
**61%** of  
Americans age 65+  
have multiple  
chronic conditions.



*United Nations, 2011*

## Practice healthy aging:



Be physically active



Make smart food choices



Get regular health screenings



Participate in activities you enjoy

我們的社會投入很多資源來研究如何  
延長壽命，但對於壽命延長後該如何  
應付生活所需開支的投入卻寥寥無幾

貝萊德董事長芬克2024給市場的一封信《重思退休養老》：  
高齡化與退休金、能源務實主義與公私合作模式

3 分之 1 的人，  
在 80 歲前會罹患帶狀疱疹

# 3 分之 1 的人會在一生中罹患帶狀疱疹<sup>1</sup>

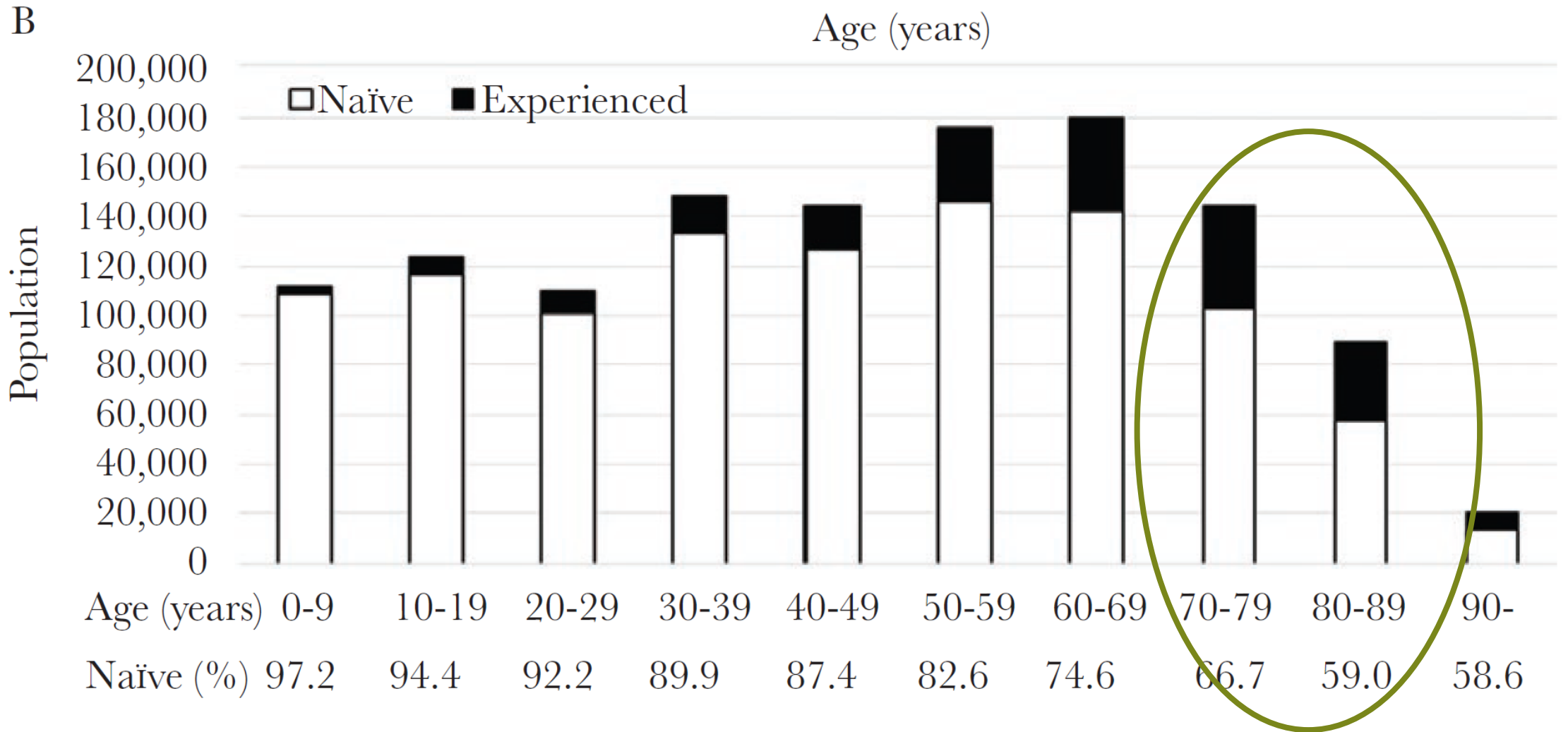
- 50 歲以上成年人有 99.5% 感染過水痘帶狀疱疹病毒 (varicella-zoster virus, VZV)，並有罹患帶狀疱疹的風險<sup>1</sup>
- 由於 VZV 再活化，3 分之 1 的人會在一生中罹患帶狀疱疹<sup>1</sup>



- 帶狀疱疹的發生率在北美、歐洲、和亞太地區相似：  
60 歲成年人每 1,000 人年 6-8 例，80 歲成年人每 1,000 人年 8-12 例<sup>2</sup>
- 據估計，台灣每年帶狀疱疹病例數約 12 萬人<sup>3</sup>



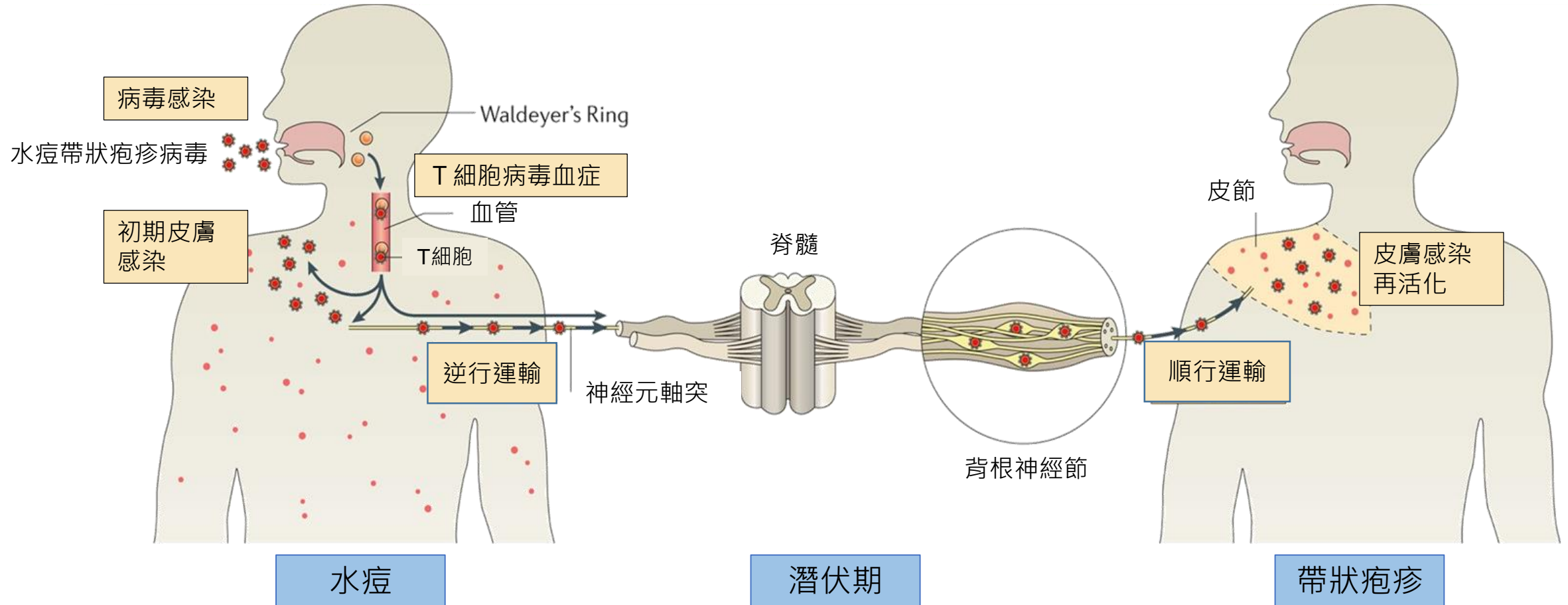
# 80歲時，1/3的人會得過帶狀皰疹



水痘帶狀皰疹病毒的  
自然暴露機會減少

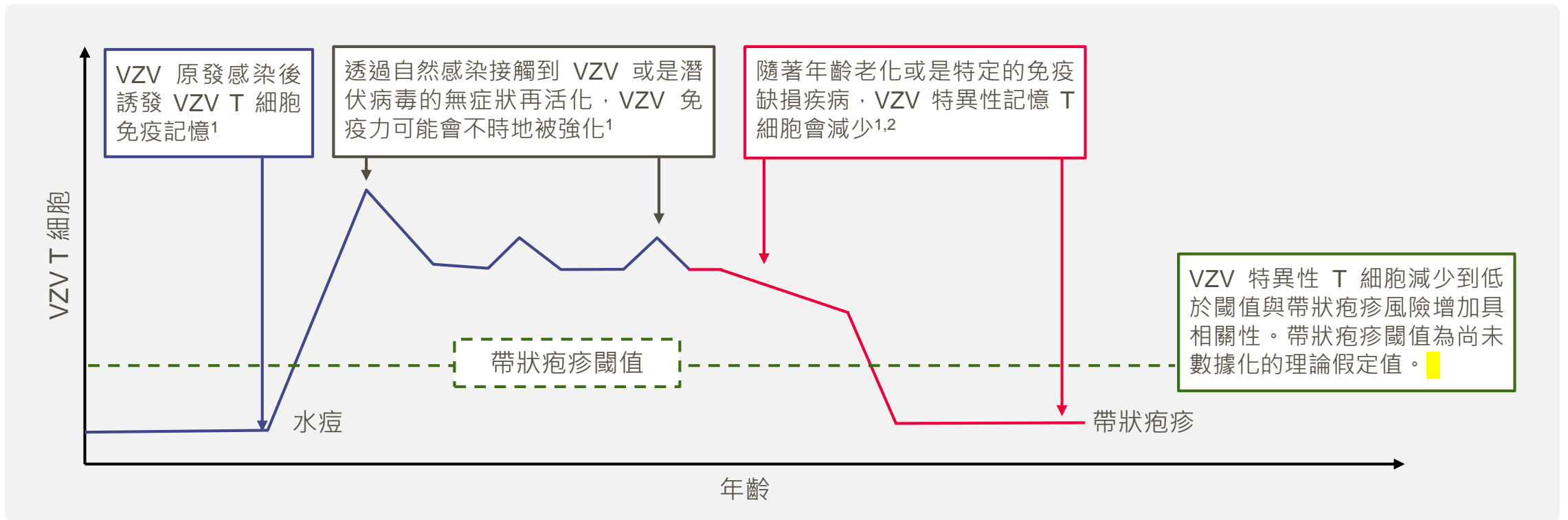
→ 帶狀皰疹發生率增加？

# 水痘帶狀疱疹病毒感染與再活化過程



# 水痘帶狀疱疹病毒 (VZV) 免疫力與年齡的關係

## 從原發感染到再活化

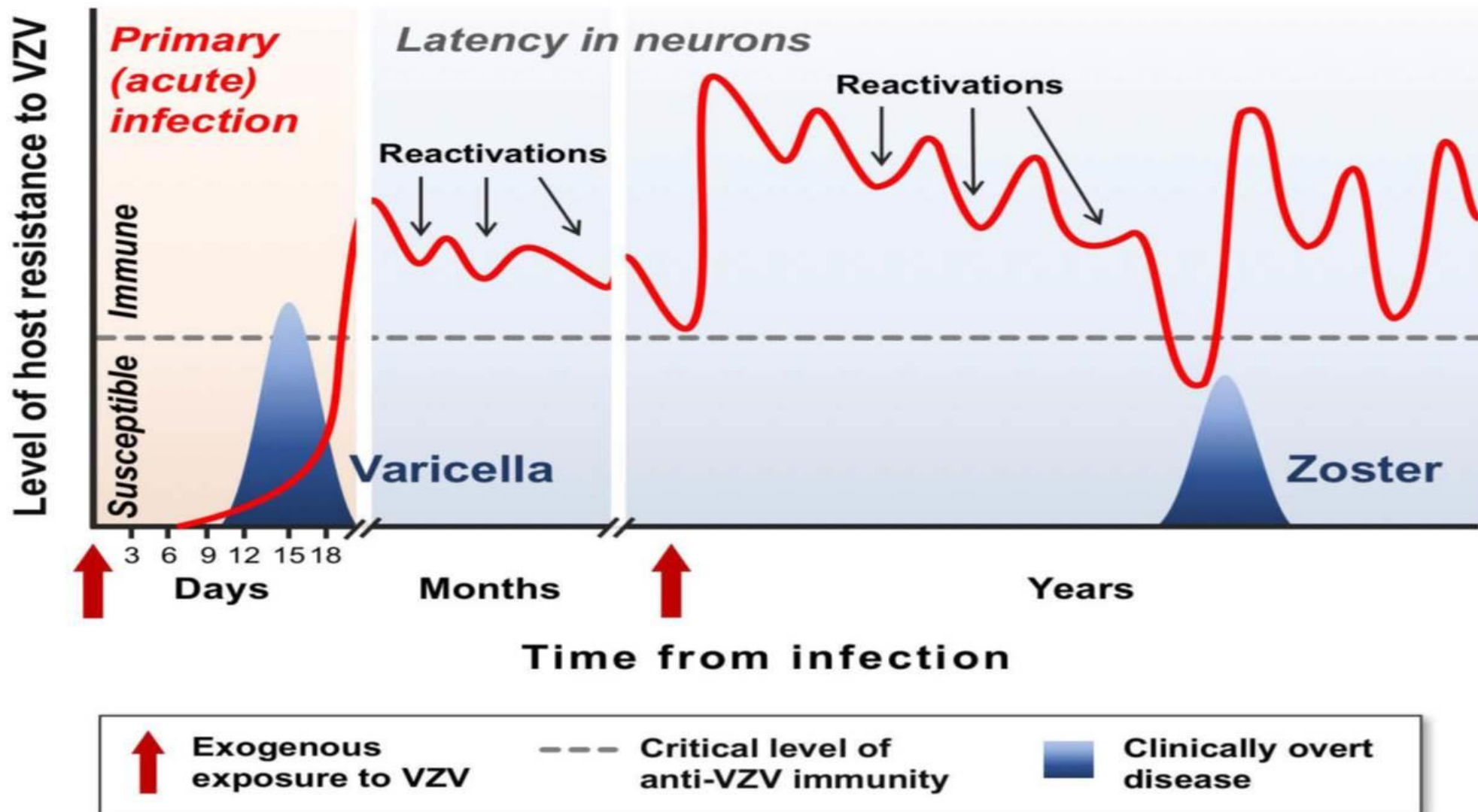


圖表經 Kimberlin DW 同意重製；原始資料發表於 Arwin A. N Engl J Med. 2005。

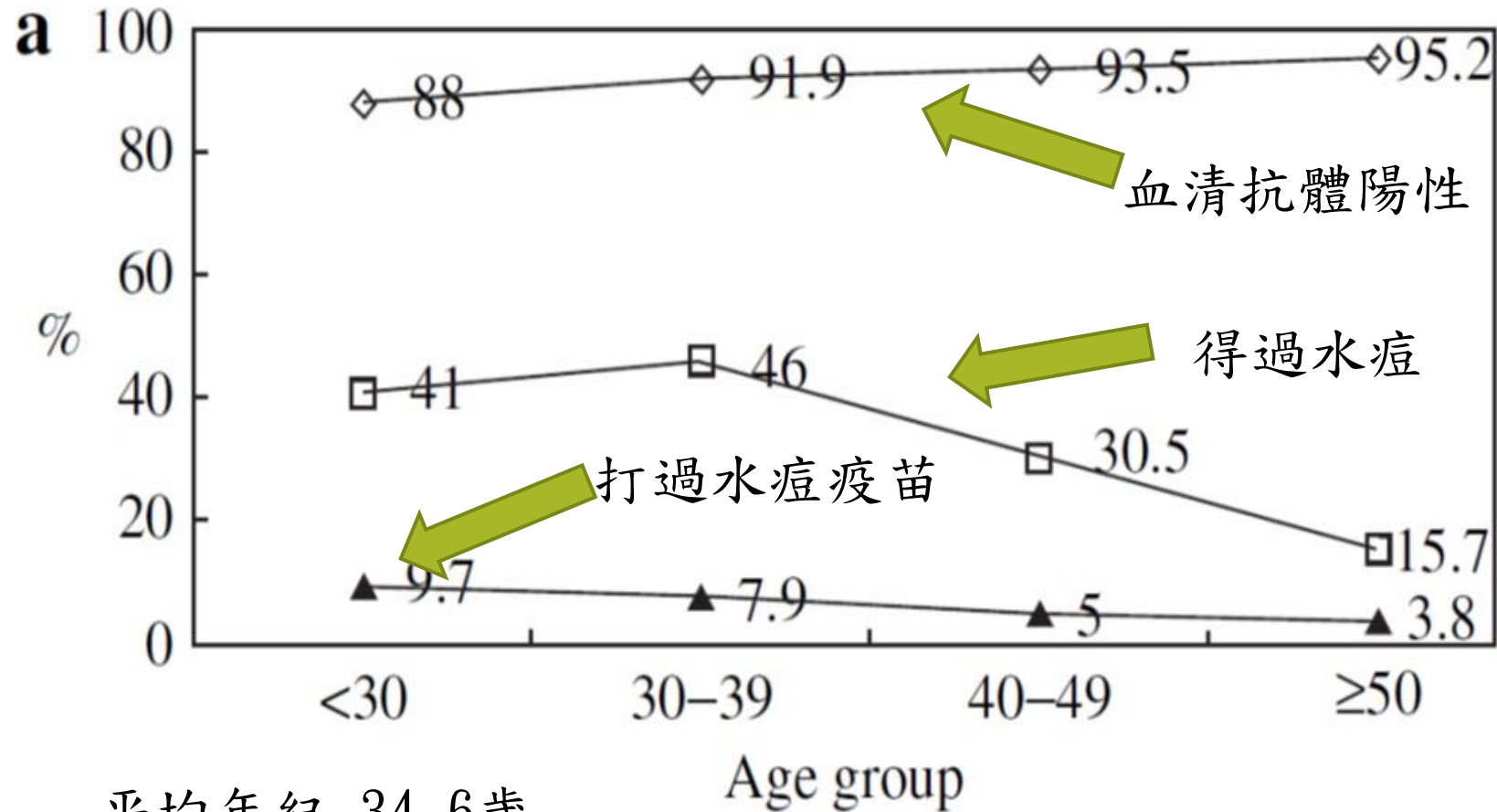
VZV, varicella zoster virus.

1. Kimberlin DW, Whitley RJ. N Engl J Med. 2007;356(13):1338-43. 2. Levin MJ, et al. JID. 2003;188:1336-1344. 3. Zhou J, et al. Korean J Pain 2020;33(3):208-215.

# Natural history and pathogenesis of zoster



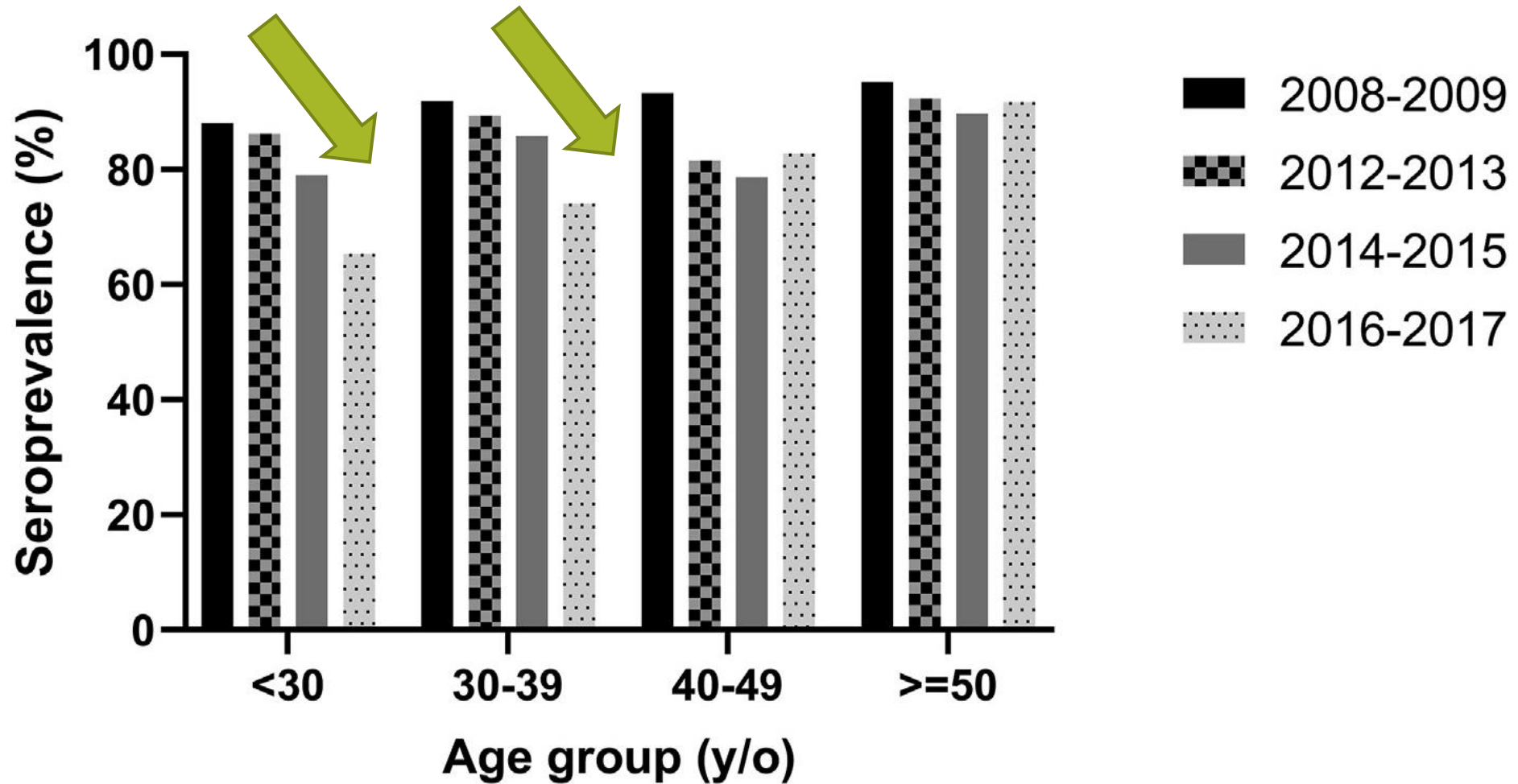
# 有多少人得過水痘？



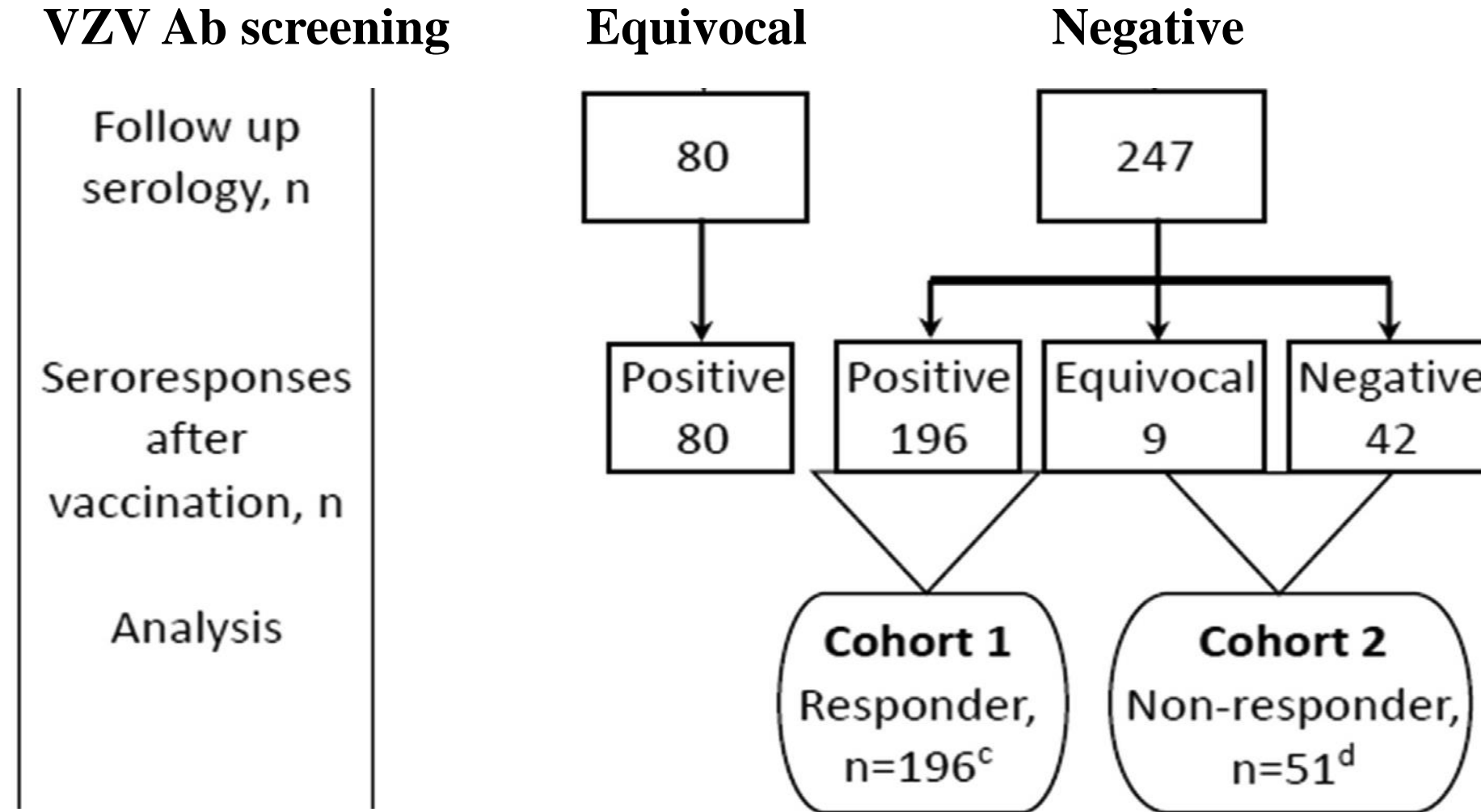
平均年紀 34.6歲

總血清抗體陽性率 91.1%

# Trend of seroprevalence of VZV among HCWs



# Antibody response after 2 doses VZV vaccines



20.6%人接種  
VZV疫苗後，無  
法產生足夠抗體

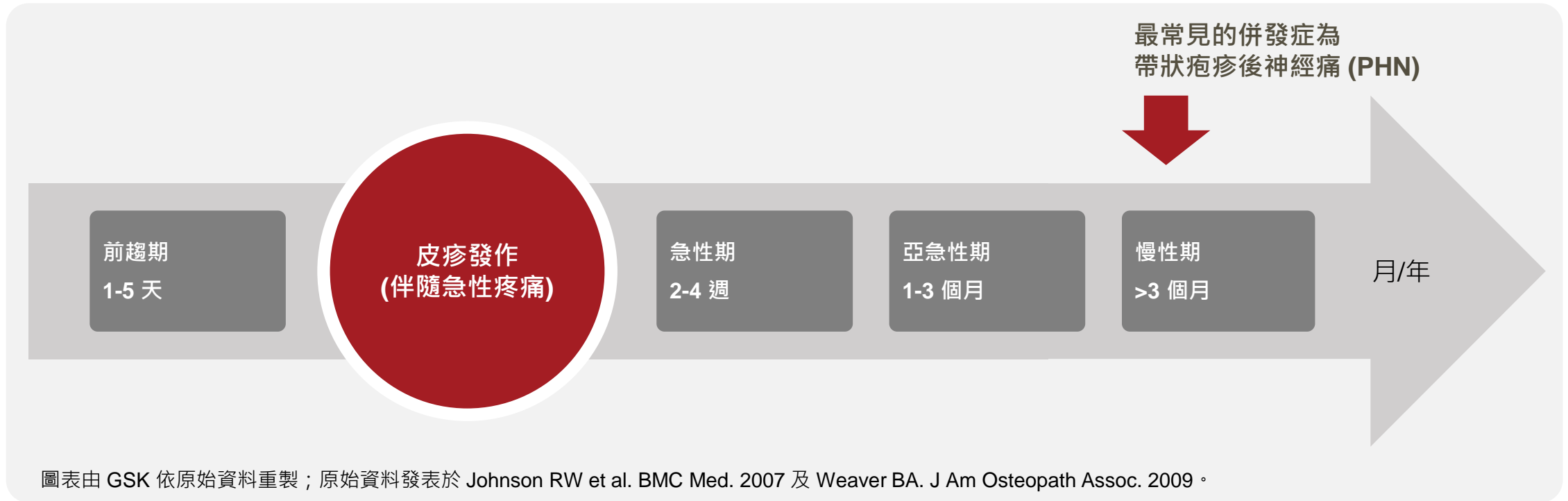


80歲帶狀皰疹病人，  
約20%會有帶狀皰疹後神經痛

# 帶狀皰疹分期

- 前趨症狀期 (prodromal pain)
- 出疹期
- 帶狀皰疹痊癒後期

# 帶狀疱疹的自然病程



帶狀疱疹的自然病程可能會有所不同；疾病可能會緩解，或是可能會轉為慢性疾病，包括像是 PHN<sup>1,2</sup>

PHN, post-herpetic neuralgia.

# 皮疹發作 (伴隨急性疼痛)

皮疹出現之前會有持續 2-3 天的前驅期，並伴有以下症狀<sup>1,2</sup>：

- 疼痛及強烈的搔癢感
- 頭痛
- 發燒
- 不適感
- 急性畏光

皮疹通常會沿著單一皮節的神經在身體的單側發作，會與從單一背根神經或腦神經神經節發生的病毒再活化一致<sup>1-3</sup>

- 最常受影響的部位為：胸部、腹部、背部及臉部<sup>1,3</sup>

皮疹開始以**斑疹**及**丘疹**呈現，並逐漸發展成水泡<sup>2,3</sup>



# 帶狀皰疹的併發症

Complication	Galil et al. [24]	Ragozzino et al. [79]
Any complication	11.6 %	12.0 %
Postherpetic neuralgia <sup>a</sup>	7.9 %	9.3 %
Ocular complications	2.2 %	1.9 %
Motor deficit	0.9 %	1.0 %
Meningitis, encephalitis, or CNS vasculitis	0.5 %	0.2 %
Herpes zoster oticus	0.2 %	0.2 %

<sup>a</sup>Defined as pain continuing after healing of rash

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C.P.N. Watson et al. (eds.), Herpes Zoster: Postherpetic Neuralgia and Other Complications

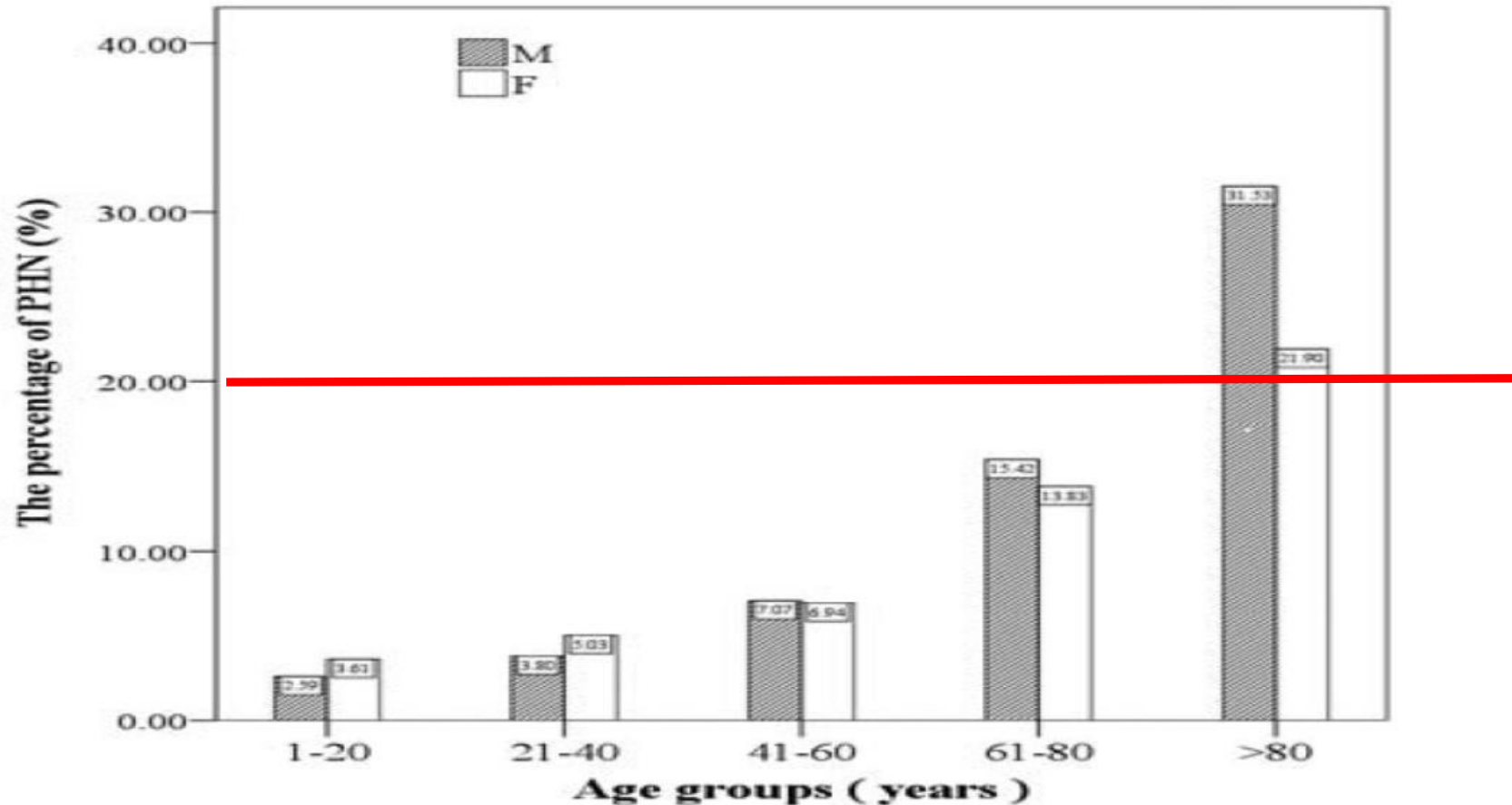
DOI 10.1007/978-3-319-44348-5\_6

# 帶狀皰疹後神經痛

## 危險因子

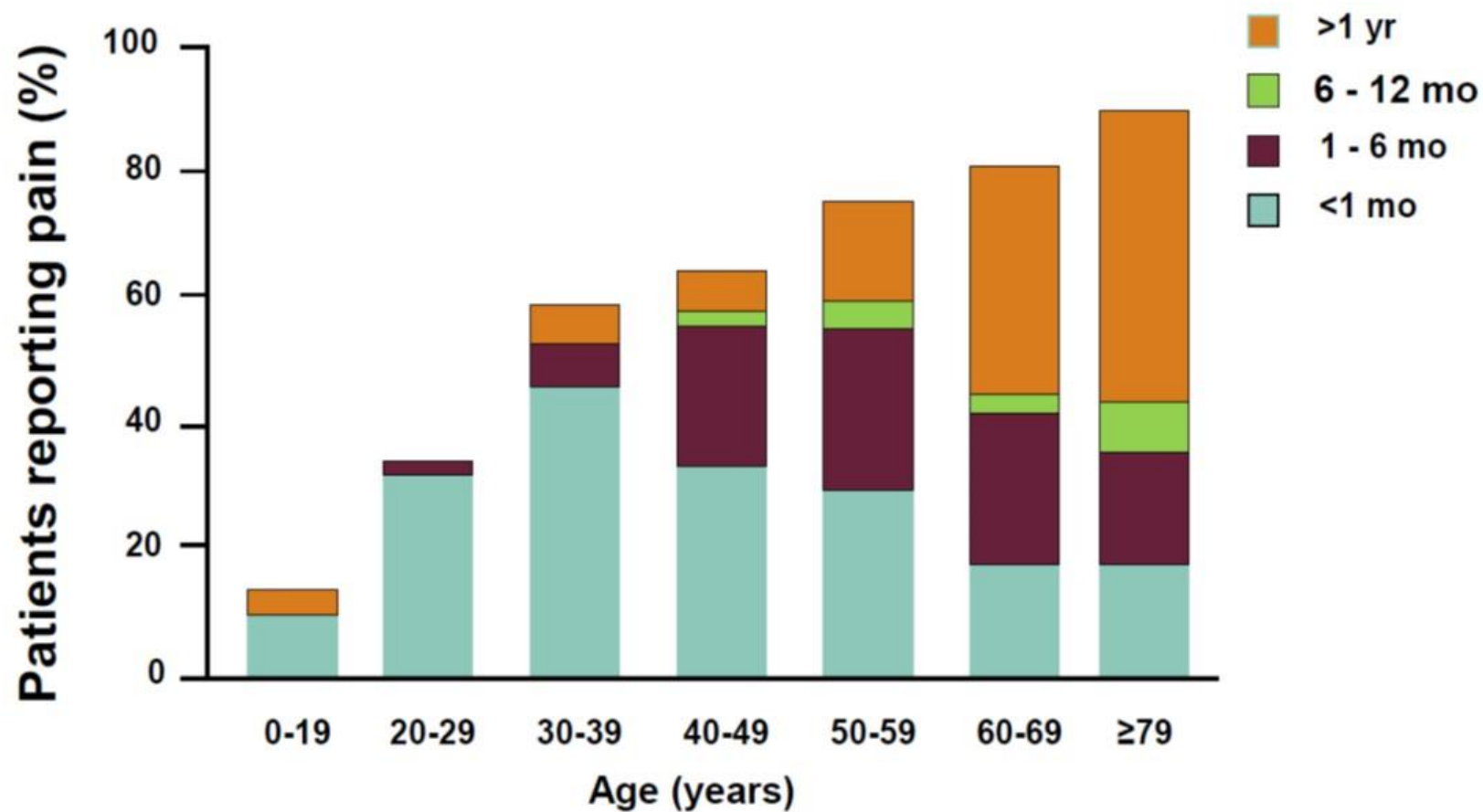
- 年齡超過50歲
- 有疼痛之前驅症狀
- 嚴重疼痛(超過5/10)及皮疹

# 帶狀皰疹後神經痛發生率



*Fig. 2.* Percentage of post-herpetic neuralgia (PHN) in patients with herpes zoster.

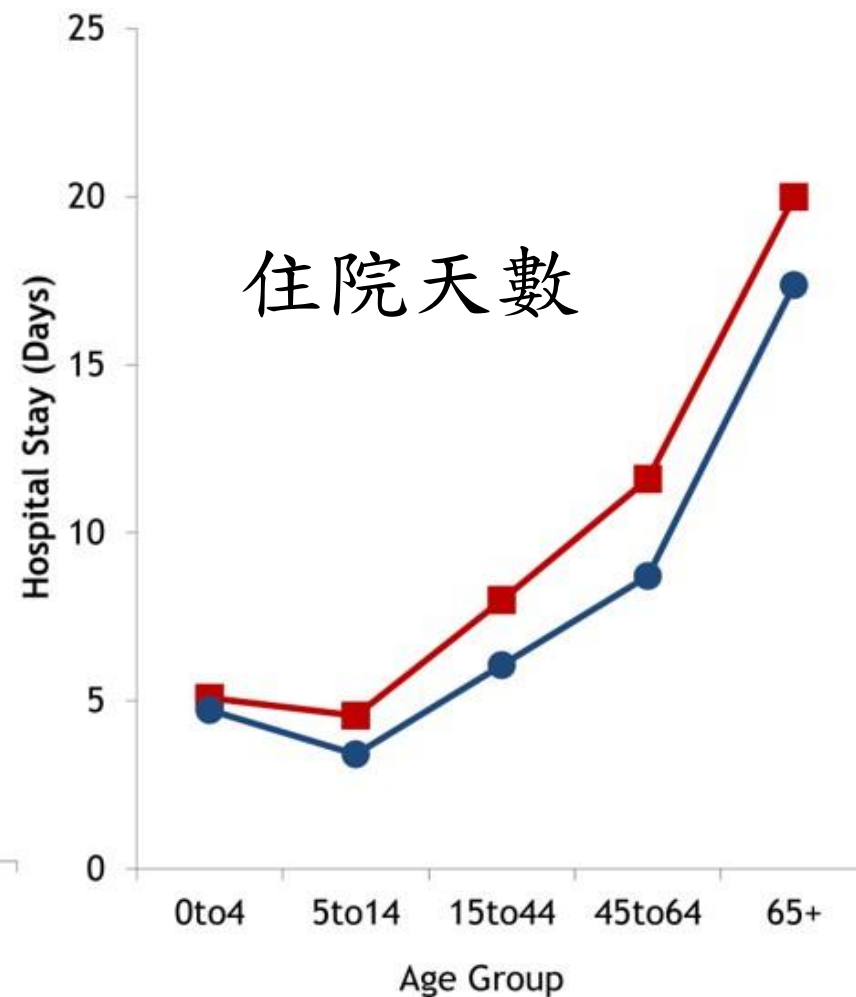
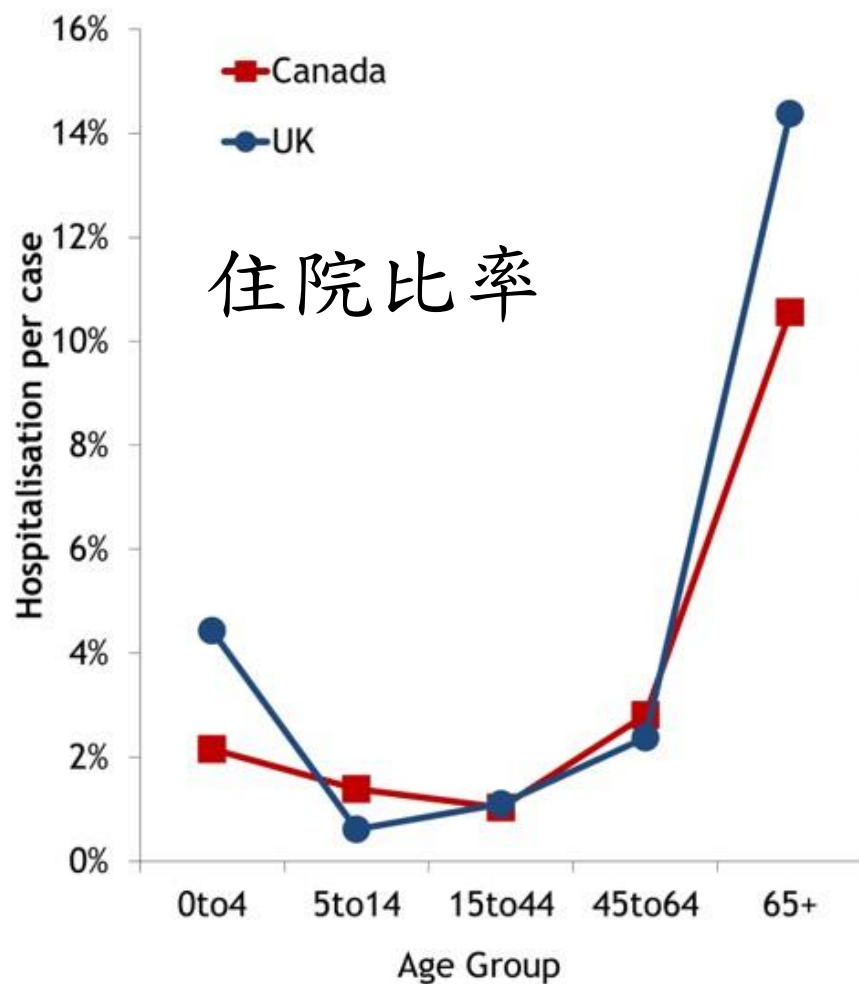
# 帶狀皰疹疼痛持續時間與年齡關係



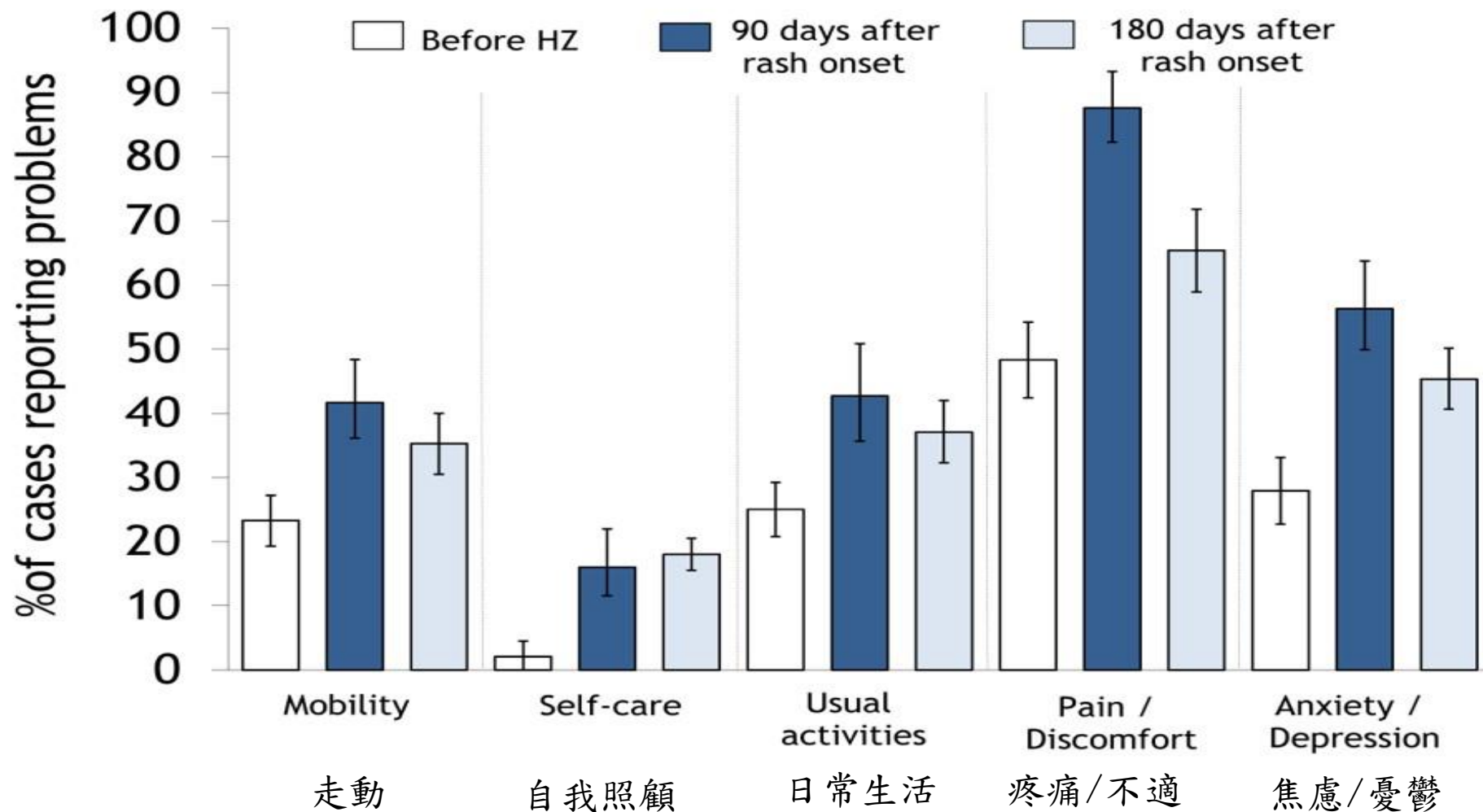
Kost R *et al.* N Engl J Med. 1996;335:32-42.



# 帶狀皰疹的嚴重度隨著年紀增加



# 帶狀皰疹後神經痛對生活影響



Ref: Drolet et al. Hum Vaccin Immunother. 2013; 9(5): 1177–1184; Schmader. Clin Infect Dis. 2001; 15;32(10):1481-6.

身體（慢性疲勞，體重減輕，不活動，失眠），社交（社交生活的變化），心理（焦慮，抑鬱，自殺意念），功能性（干擾穿衣，進食，洗澡，做飯）

# 帶狀皰疹後神經痛 (Post-herpetic neuralgia, PHN)

- 疼痛持續數月甚至數年（中位數=6個月）
- 抗病毒藥物預防PHN（出疹後<72小時）
  - 減輕急性疼痛
  - 加速疹子消失
  - 能否能預防PHN仍然存在爭議

帶狀皰疹還有哪些併發症？

# 帶狀疱疹造成的疾病影響



Shutterstock.



BMJ. 2019;364:k5234.



BMJ. 2005;331(7509):147-51.

## 急性表現<sup>1</sup>

- 單側水疱狀皮疹
- 難以忍受的疼痛

## 其他影響<sup>1</sup>

- 嚴重影響生活品質
- 皮膚疤痕

## 併發症

皮疹發作後持續超過 90 天的神經性疼痛<sup>3</sup>

5% 到超過 30%\* 的帶狀疱疹患者

疱疹後神經痛 (PHN)<sup>2</sup>

神經相關疾病<sup>6-8</sup>

<1%

的帶狀疱疹患者

無菌性腦膜炎、腦炎、腦梗塞、  
脊髓炎、Guillain-Barré syndrome、  
Ramsay Hunt syndrome、貝爾氏麻痺症

眼部帶狀疱疹 (HZO)<sup>4</sup>

腦血管和  
心血管事件<sup>9</sup>

1%

的帶狀疱疹患者<sup>10</sup>

中風、暫時性腦缺血 (TIA)、  
心肌梗塞、心血管疾病

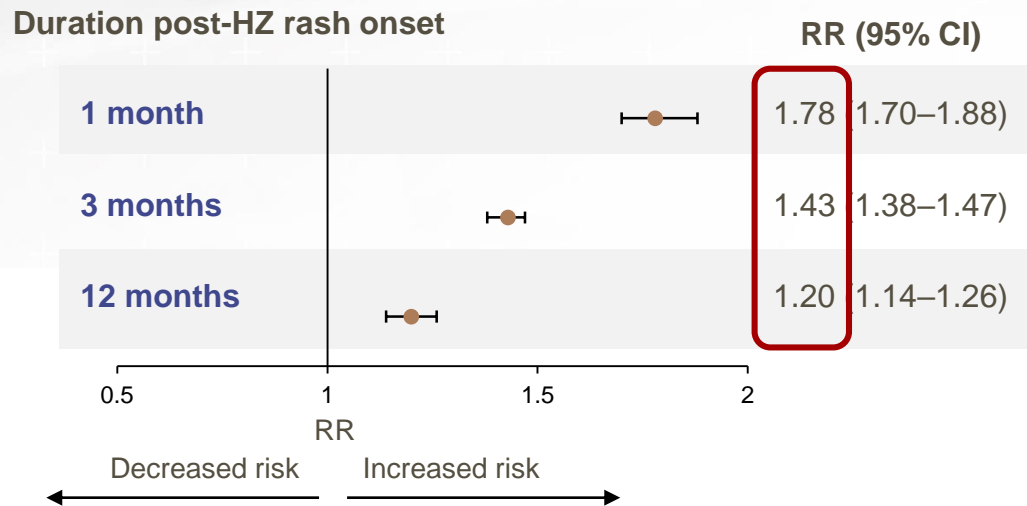
眼部帶狀疱疹發生在  
10-15%  
的帶狀疱疹患者<sup>4</sup>

眼部相關併發症發生在  
30-78%  
的眼部帶狀疱疹患者<sup>4</sup>

\*資料蒐集來自 26 個國家，因為各國家間在老年族群的失能、其他潛在共病症的盛行率不同，PHN 的風險也可能有所差異。  
HZO, herpes zoster ophthalmicus; PHN, post-herpetic neuralgia; TIA, transient ischaemic attack.

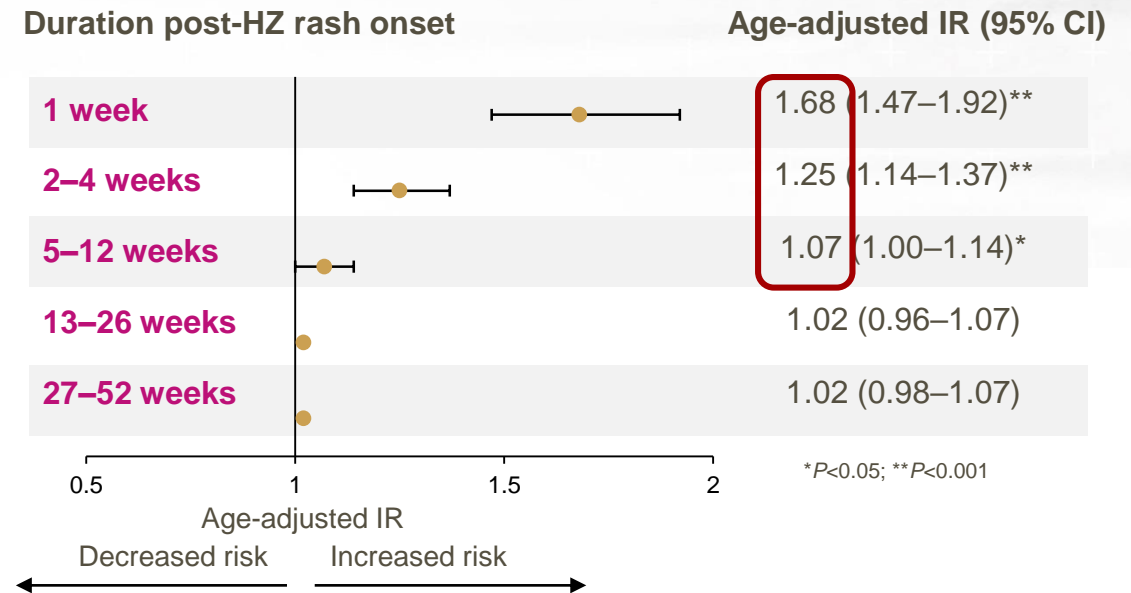
# 帶狀疱疹會增加腦血管及心血管疾病風險<sup>1,2</sup>

## 帶狀疱疹對中風風險的影響



A systematic review and meta-analysis of nine studies reported that HZ is an established risk factor for increasing the risk of stroke, especially shortly after infection.<sup>1</sup>

## 帶狀疱疹對心肌梗塞風險的影響



A self-controlled case series study estimated rates of acute myocardial infarction (MI) after HZ.<sup>2</sup>

CI, confidence interval; HZ, herpes zoster; RR, relative risk; IR, incidence ratio.

Figure modified from Marra F et al. 2017, under a Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/>). Figure was independently created by GSK from the original data as reported in Minassian et al. 2015. Images reproduced from Parviz Y, Shah N. J Med Cases 2012;3:358–360 with permission from Elmer Press.

1. Marra F et al. BMC Infect Dis 2017;17:198. 2. Minassian C, et al. PLoS Med. 2015;12(12):e1001919.

# 帶狀皰疹增加中風機率

增加30%

## Increased Risk of Stroke After a Herpes Zoster Attack A Population-Based Follow-Up Study

Jiunn-Horng Kang, MSc, MD; Jau-Der Ho, PhD, MD; Yi-Hua Chen, PhD; Heng-Ching Lin, PhD

**Background and Purpose**—Varicella zoster virus-induced vasculopathy and postherpes zoster attack stroke syndromes have been reported previously; nevertheless, data regarding the exact prevalence and risk of stroke occurring postherpes zoster attack are still lacking. This study aims to investigate the frequency and risk of stroke after a herpes zoster attack using a nationwide, population-based study of a retrospective cohort design.

**Method**—A total of 7760 patients who had received treatment for herpes zoster between 1997 and 2001 were included and matched with 23 280 randomly selected subjects. A 1-year stroke-free survival rate was then estimated using the Kaplan-Meier method. After adjusting for potential confounders, Cox proportional hazard regressions were carried out to compute the adjusted 1-year survival rate.

**Results**—Of the sampled patients, 439 patients (1.41%) developed strokes within the 1-year follow-up period, that is, 133 individuals (1.71% of the patients with herpes zoster) from the study cohort and 306 individuals (1.31% of patients in the comparison cohort) from the comparison cohort. The log rank test indicated that patients with herpes zoster had significantly lower 1-year stroke-free survival rates than the control ( $P < 0.001$ ). The adjusted hazard ratios of stroke after herpes zoster and herpes zoster ophthalmicus during the 1-year follow-up period were 1.31 and 4.28, respectively.

**Conclusion**—The risk for stroke increased after a zoster attack. Although varicella zoster virus vasculopathy is a well-documented complication that may induce a stroke postherpes zoster attack, it does not fully account for the unexpectedly high risk of stroke in these patients. (*Stroke*. 2009;40:3443-3448.)

# 帶狀皰疹會不會復發？





We assessed literature  
on **HZ recurrence**

January  
2003



February  
2023



PubMed

## Incidence of HZ recurrence varied with study design and follow-up duration

Up to around

**10%**



of individuals in general populations had **HZ recurrence**

# Risk Factors of Zoster Recurrence

Multiple factors may increase the risk of HZ recurrence



Immunocompromised status



Family history



Comorbidities



Female sex



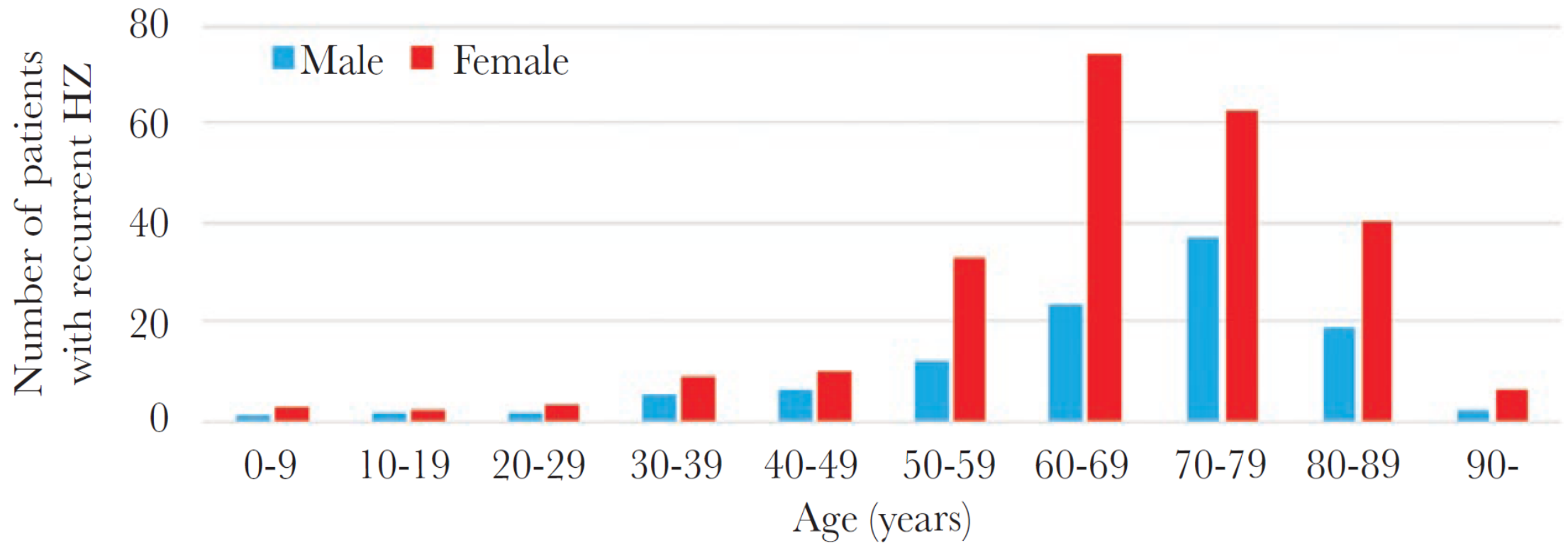
Long-lasting post-herpetic pain



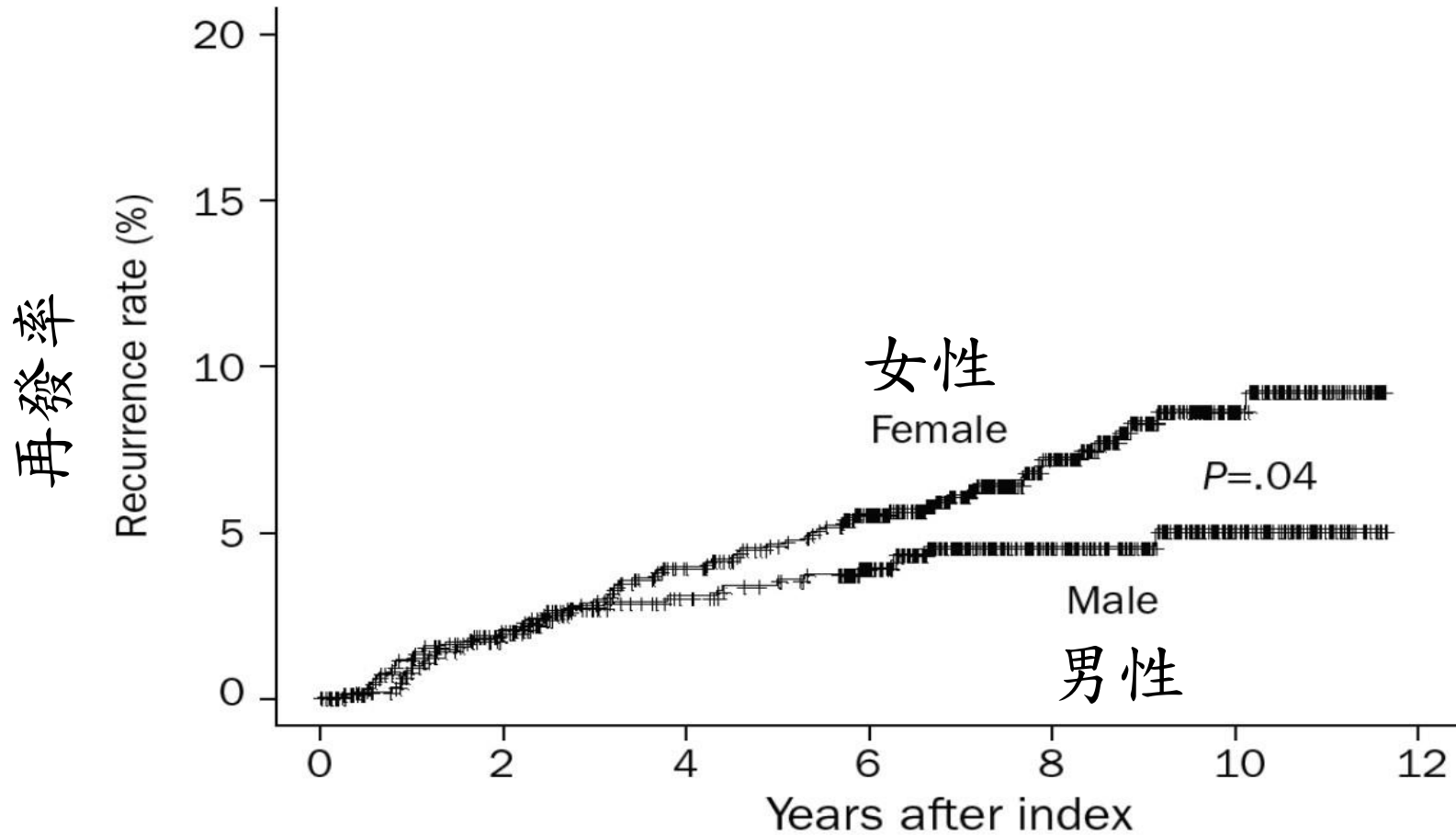
HZ ophthalmicus

# 女性有較高的帶狀皰疹復發率

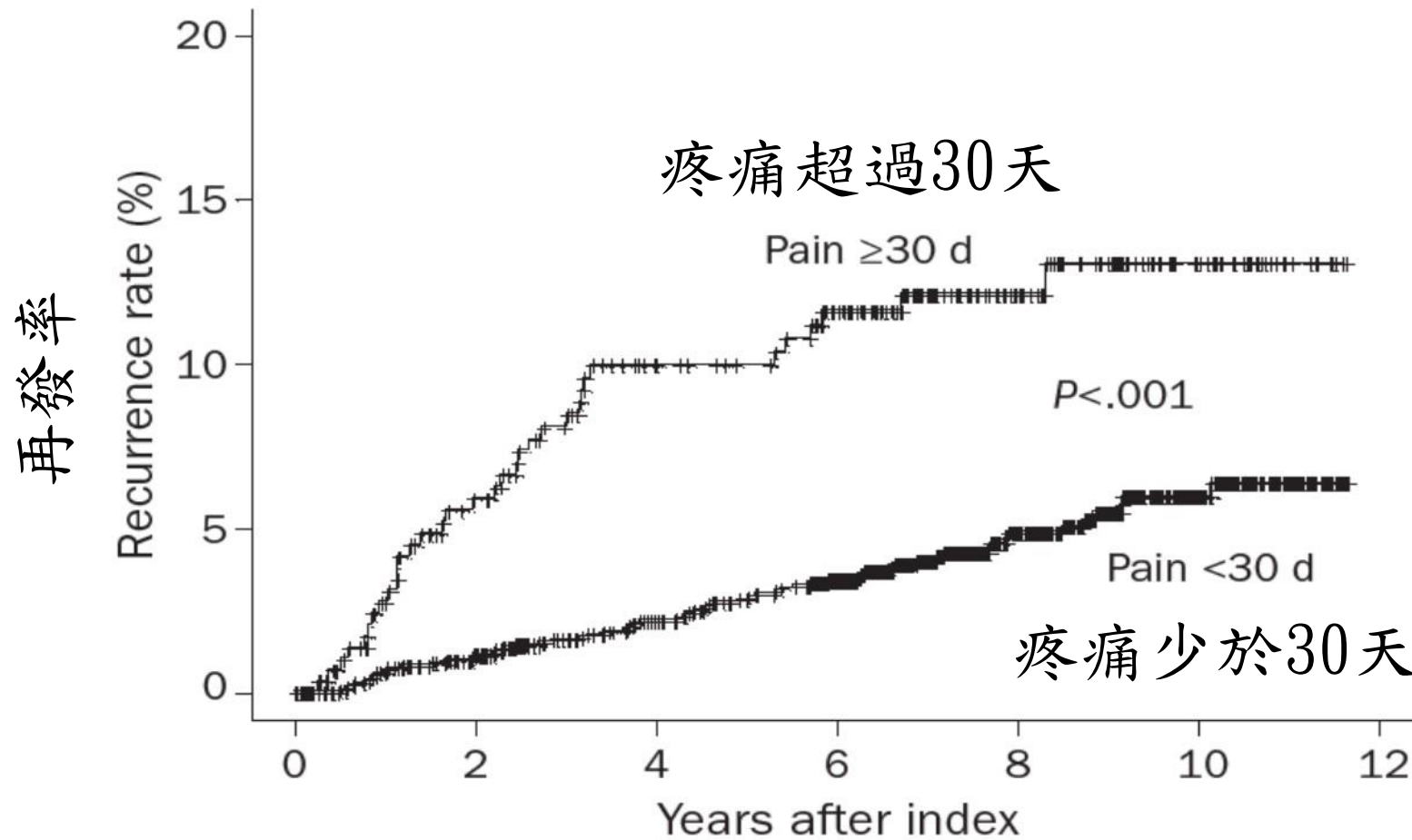
D



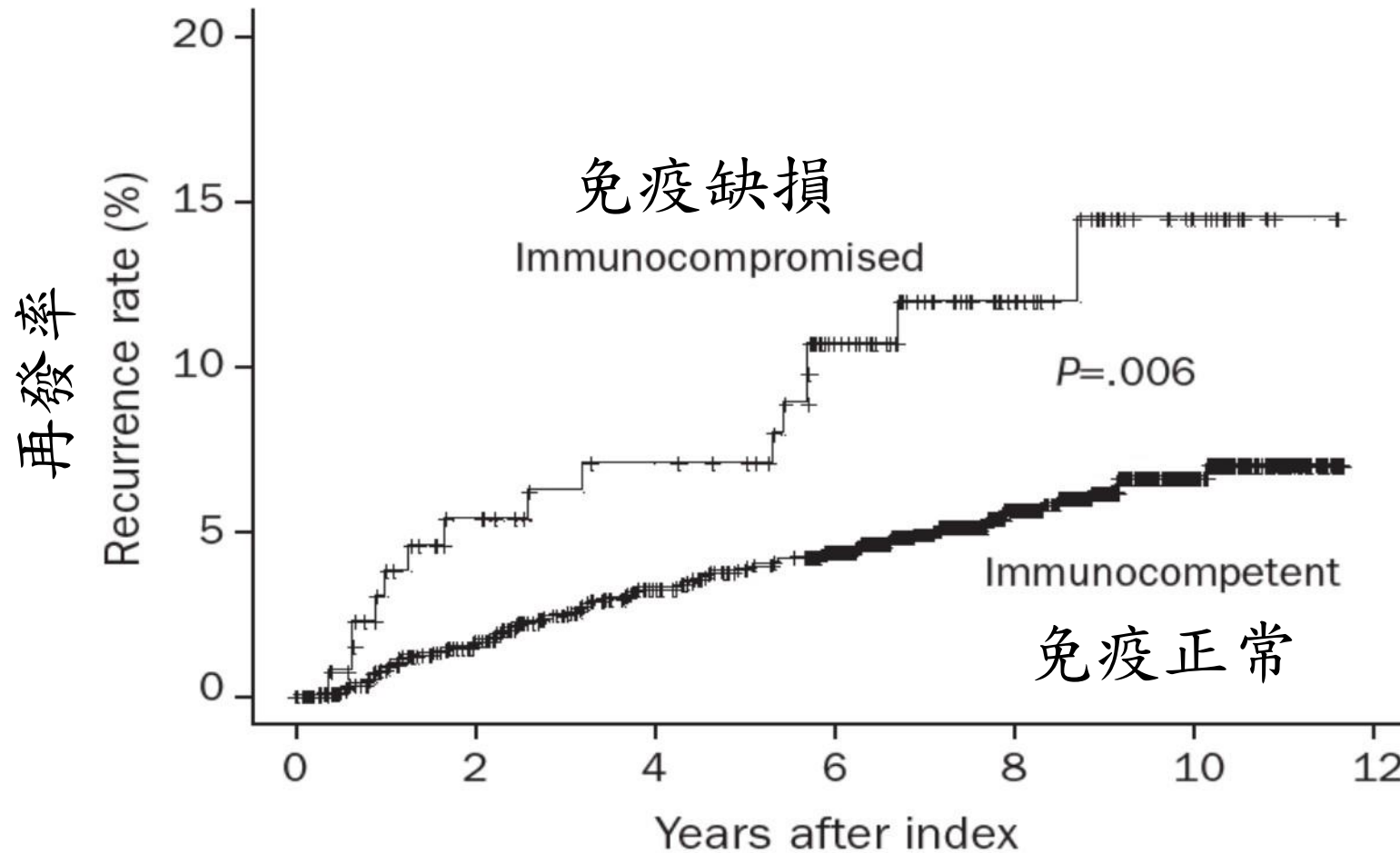
# 帶狀皰疹復發情形—性別

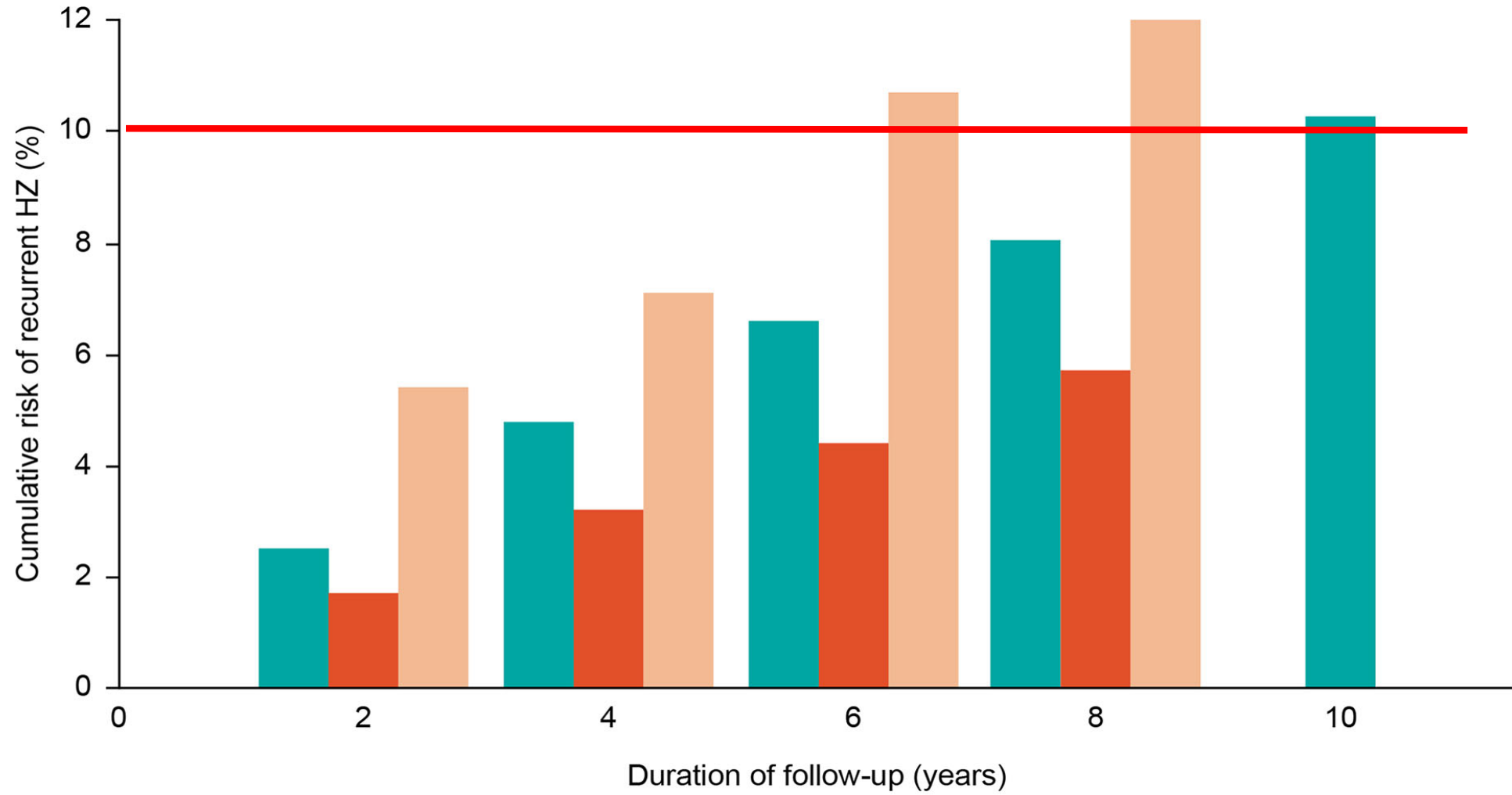


# 帶狀皰疹復發情形—疼痛情形



# 帶狀皰疹復發情形—免疫情形





■ Tseng (2020) non-IC    ■ Yawn (2011) non-IC    ■ Yawn (2011) IC

IC, immunocompromised  
 non-IC, non-immunocompromised

治療帶狀皰疹的抗病毒藥物  
無法減少皰疹後神經痛的發生



# 治療

目標：

- 減少疼痛的嚴重程度和持續時間。
- 限制病毒複製。
- 恢復表皮缺陷和預防的繼發感染。
- 減少或預防帶狀皰疹後神經痛。

# 急性帶狀皰疹--保守性治療

## 抗病毒藥物

- 抑制病毒DNA聚合酶，因此抑制病毒複製
  - 必須給予所有帶狀皰疹患者
  - 在皮疹出現72小時內給予有益
- 
- 即使超過72小時仍應使用抗病毒藥：
    - 眼帶狀皰疹
    - 免疫力低下病患
    - 神經損傷病患

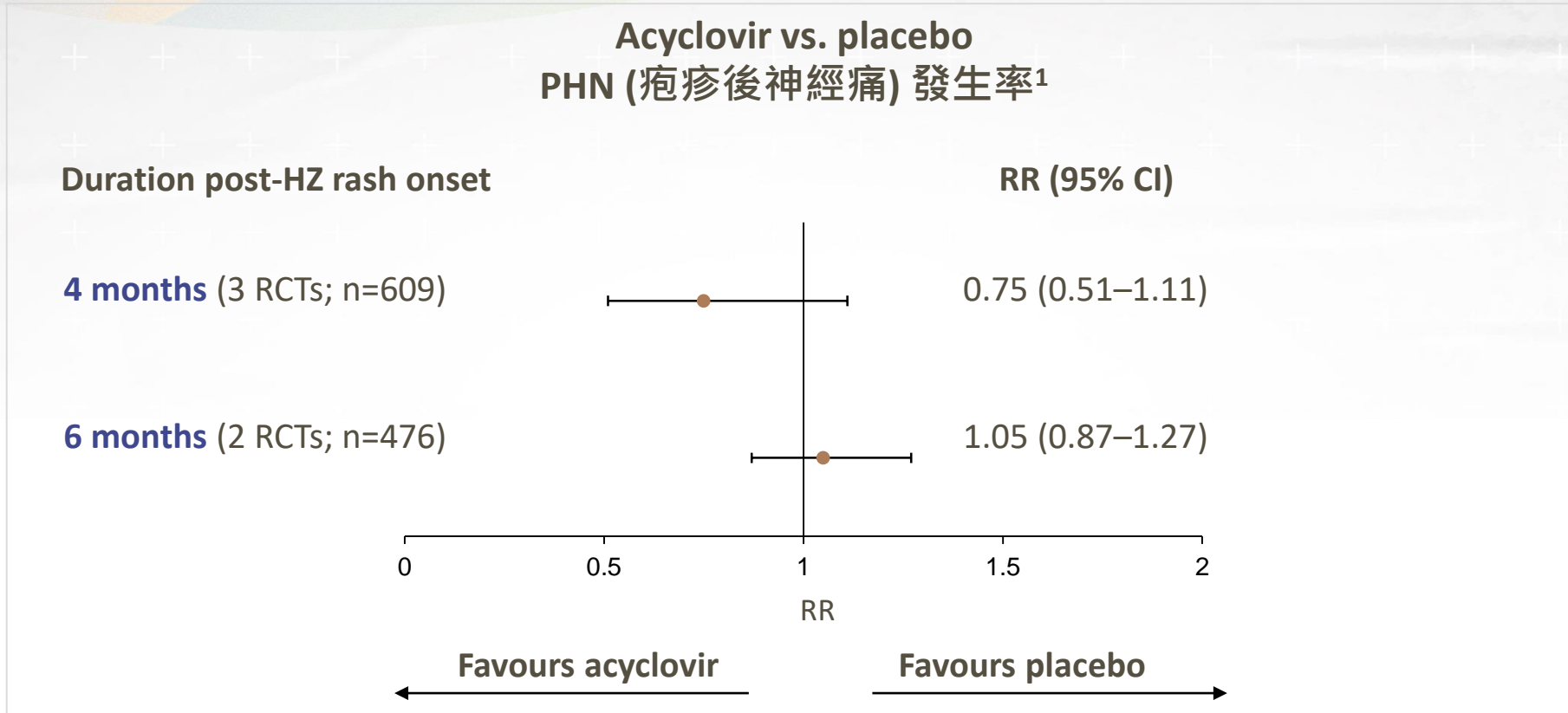
# 抗病毒治療的好處

- 抑制病毒複製，減少病毒脫落的持續時間
- 加速皮疹癒合
- 降低神經損傷的程度
- 減少急性疼痛的嚴重程度和持續時間

N Engl J Med. 2002;347(5):340-6.

- 減少帶狀皰疹後神經痛的持續時間(?)
- 減少帶狀皰疹後神經痛的發病率(?)

# 抗病毒藥無法有效預防預防PHN的發生<sup>1</sup>



5個RCTs結果顯示：**Acyclovir**無法達到統計上顯著減少PHN的發生率

CI, confidence interval; HZ, herpes zoster; PHN, post-herpetic neuralgia; RCT, randomised controlled trial; RR, risk ratio. The figures have been independently created by GSK from the original data published in Chen et al. 2014 and Bouhassira et al. 2012.

1. Chen N et al. Cochrane Database Syst Rev 2014;6:CD006866.

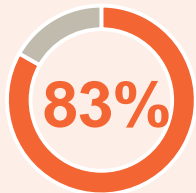
# 急性帶狀皰疹--保守性治療

## 止痛藥

- 輕度                      NSAID/普拿疼/弱鴉片類藥物 (codeine、ramadol)
- 中度                      強鴉片類藥物 (嗎啡、pethidine)
- 聯合止痛藥 (co-analgesics)
  - 止痙攣      gabapentin、pregabalin
  - 抗憂鬱藥物 (imipramine 25 mg)

# 病患需要使用多種藥物來處理帶狀疱疹<sup>1,2</sup>

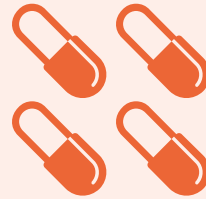
在一項包含53個來源的系統性文獻回顧研究顯示<sup>1</sup>：



**帶狀疱疹患者** 接受藥物治療



**疱疹後神經痛患者** 接受藥物治療

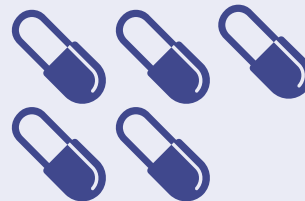


帶狀疱疹病患  
平均服用  
**至少4種**不同的  
藥物

**服藥原因：**

- 緩解疼痛
- 限制皮疹的擴散/持續時間
- 預防或減輕併發症\*

在ZQOL (Zoster Quality of Life) 研究中，評估152名  
來自英國、≥50歲、且確診疱疹後神經痛的病患顯示<sup>2</sup>：



疱疹後神經痛  
病患平均服用  
**5種**不同的藥物

**服藥原因：**

- 緩解疼痛

\*When started within 72 hours of rash onset.

1. Gater A et al. BMC Public Health 2015;15:193. 2. Serpell M et al. Health Qual Life Outcomes 2014;12:92.

# 預防方法

## 預防帶狀皰疹發生

- 帶狀皰疹疫苗



## 預防帶狀皰疹併發症/帶狀皰疹後神經痛

- 帶狀皰疹疫苗
- 盡快抗病毒藥物治療

# 總結

- 水痘病毒自然暴露機會降低：(對帶狀皰疹發生率影響不明)
  - 年輕族群，VZV抗體陽性率較低(2016/2017，<40歲，抗體陽性率約70%)。
  - 約20% VZV疫苗注射族群無法產生足夠抗體。
  - 95% 50歲以上人口皆感染過水痘
- 隨著年齡增長，80歲時，1/3會得過帶狀皰疹。
- 帶狀皰疹症狀，年紀越大會越嚴重，帶狀皰疹後神經痛的時間也越久。(80歲帶狀皰疹病人，20%會有皰疹後神經痛)
- 所有帶狀皰疹病患都應該給予抗病毒藥物，最好在72小時內給予，可以縮短病程，但對預防皰疹後神經痛發生無效。



# 預防勝於治療

