Vaccination contre le zona chez le senior

Olivier Epaulard

Infectiologie

CHU Grenoble-Alpes

Journées inter-DES sur la vaccination – juin 2026

Conflict of interest

- None to declare

- Member of the French NITAG
  - *Commission technique des vaccinations, Haute autorité de santé*

Zoster (ζωστήρ)

« Ceinture » en grec ancien

Zona (ζώνη)

Une large ceinture portée par les jeunes filles au niveau des hanches ; (Hom. Od. V, 231; Ov. Fast. II, 321) ; la ceinture plus habituelle (cingulum) était placée juste sous la poitrine.

Fardeau de la maladie

BMC Infectious Diseases

RESEARCH ARTICLE Open Access

Similar herpes zoster incidence across Europe: results from a systematic literature review

Sybil Pinchinat[1], Ana M Cebrián-Cuenca[2], Hélène Bricout[3*] and Robert W Johnson[4]

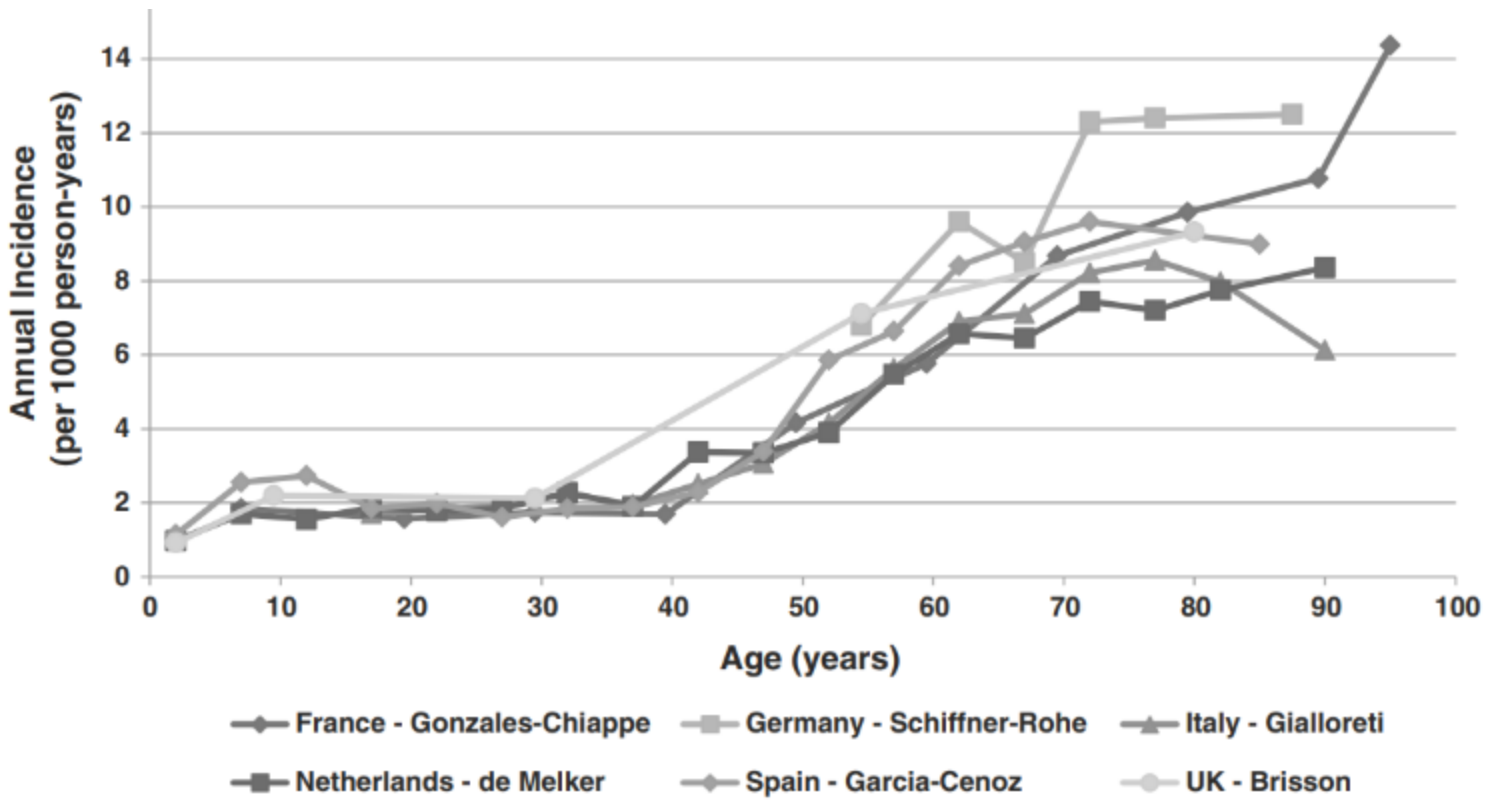


Figure 3 Herpes zoster incidence by age in Europe. Note: These studies were the most recent with available HZ incidence data by age group per country.

Clinical Infectious Diseases

MAJOR ARTICLE

Herpes Zoster and Postherpetic Neuralgia: Changing Incidence Rates From 1994 to 2018 in the United States

Ryan R. Thompson,[1] Christina L. Kong,[1] Travis C. Porco,[1,2,3] Eric Kim,[1] Caleb D. Ebert,[1] and Nisha R. Acharya[1,2,3,4]

[1]Francis I. Proctor Foundation, University of California, San Francisco, California, USA, [2]Department of Ophthalmology, University of California, San Francisco, California, USA, [3]Department of Epidemiology and Biostatistics, University of California, San Francisco, California, USA, and [4]OptumLabs Visiting Fellow, Cambridge, Massachusetts, USA

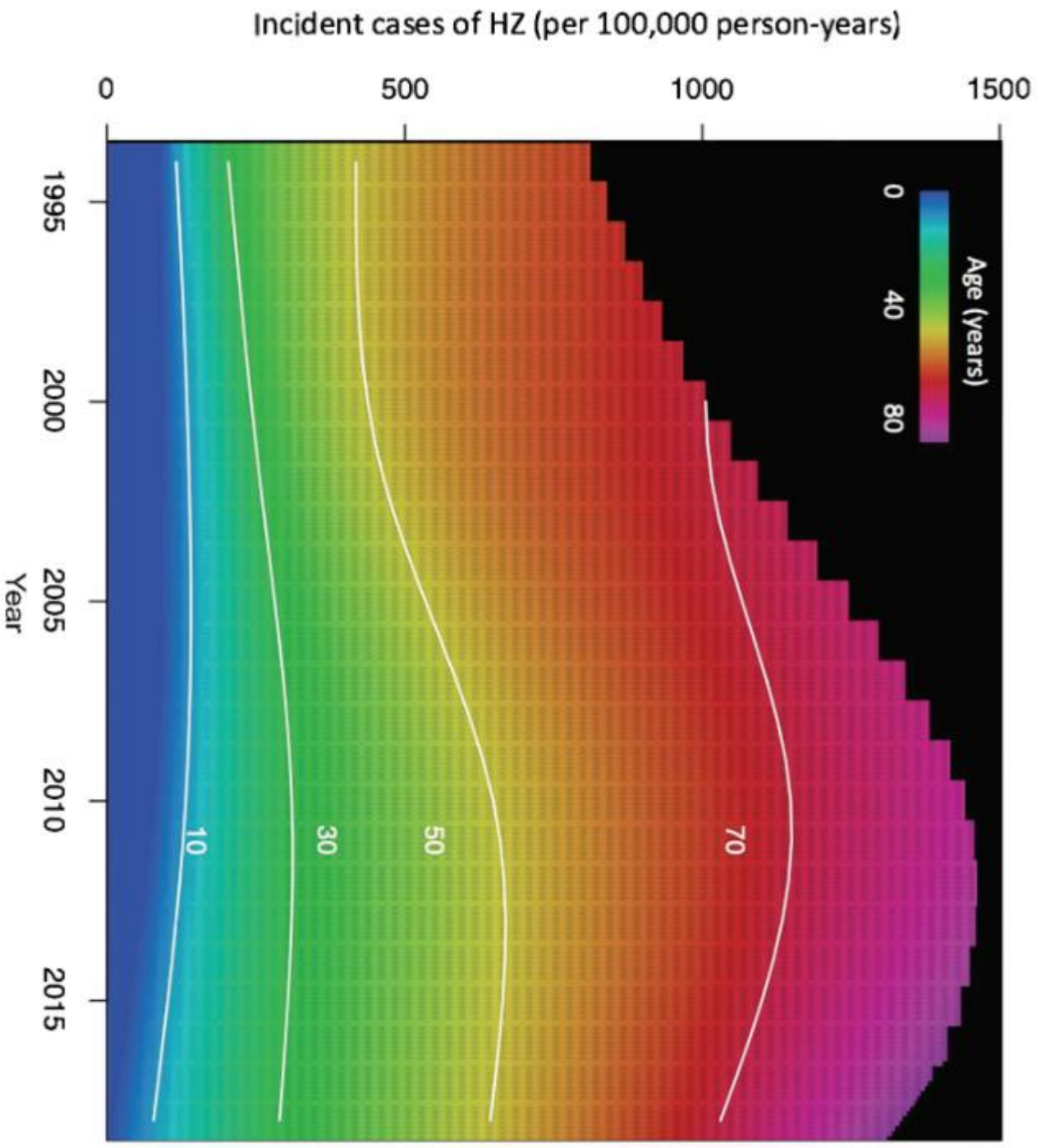


Figure 1. Incidence rate of HZ by age, 1994 to 2018. Note: From 1994 to 2000,

Open Forum Infectious Diseases

MAJOR ARTICLE

Incidence of Herpes Zoster and Postherpetic Neuralgia and Herpes Zoster Vaccination Uptake in a US Administrative Claims Database

Zachary A. Marcum,[1] Purva Jain,[1,©] Alan Embry,[2] Brent Arakaki,[1] Irisdaly Estevez,[1] and Emma Viscidi[2]

[1]Science, Aetion, Inc, New York, New York, USA, and [2]Clinical Development–Infectious Diseases, Moderna, Inc, Cambridge, Massachusetts, USA

Zona

algies post-zostériennes

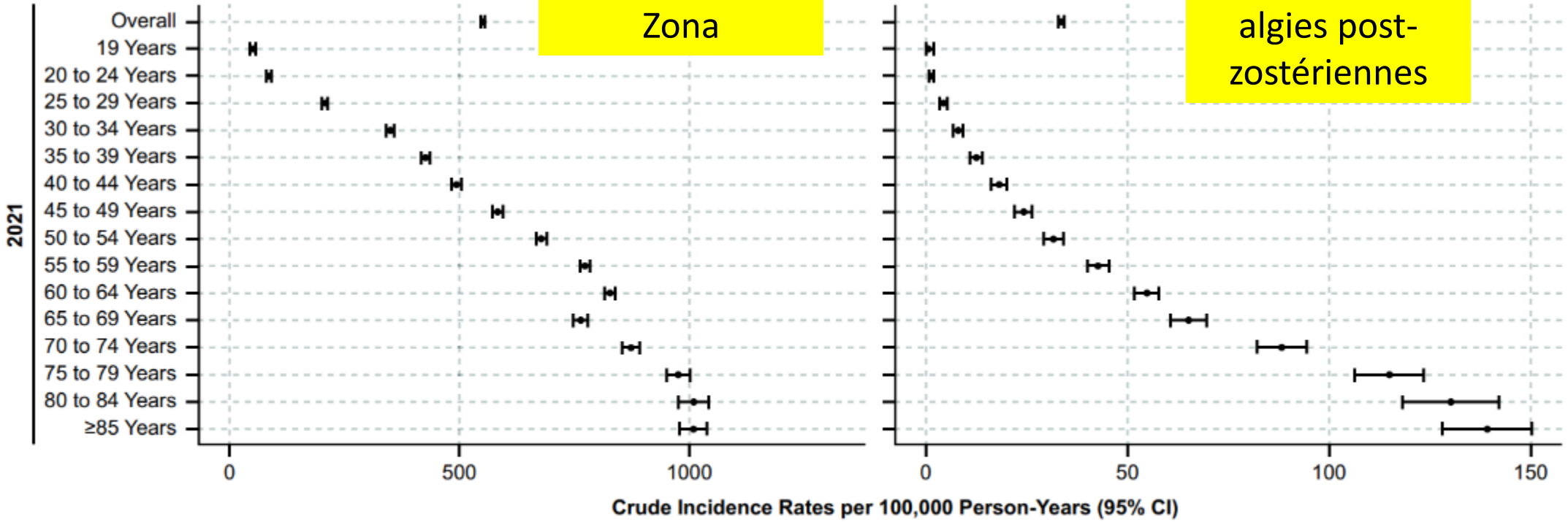


Figure 1. Crude incidence rates of herpes zoster and postherpetic neuralgia overall and by age (2019–2021).

Cebrián-Cuenca et al. BMC Infectious Diseases 2011, 11:302
http://www.biomedcentral.com/1471-2334/11/302

BMC Infectious Diseases

RESEARCH ARTICLE Open Access

Epidemiology and cost of herpes zoster and postherpetic neuralgia among patients treated in primary care centres in the valencian community of Spain

Ana M Cebrián-Cuenca[1], Javier Díez-Domingo[2*], María San-Martín-Rodríguez[3], Joan Puig-Barberá[2] and Jorge Navarro-Pérez[4], for the Herpes Zoster Research Group of the Valencian Community

Proportion de personnes rapportant une persistance des douleurs dans les jours suivant un zona

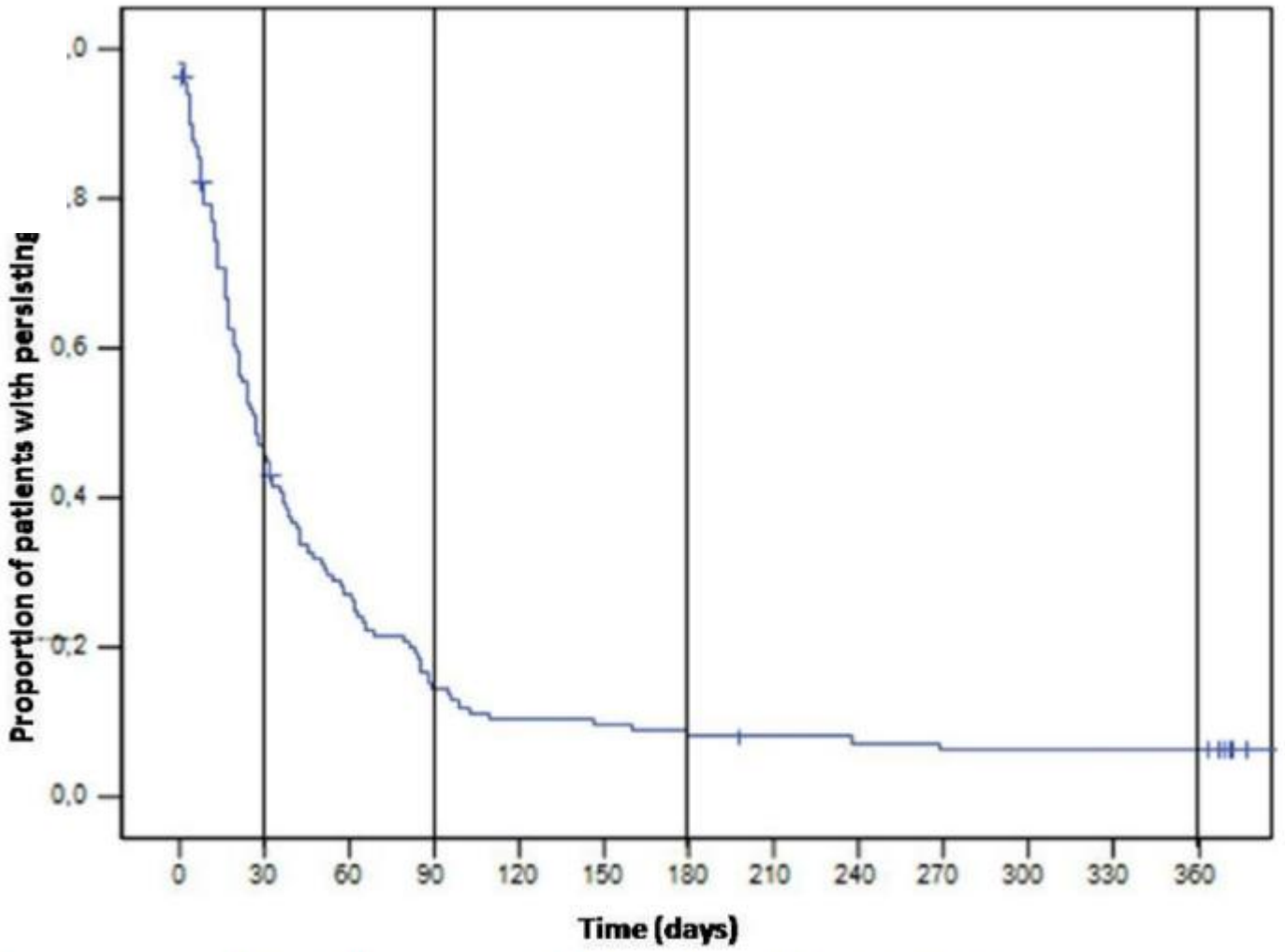


Figure 1 Kaplan-Meier method showing the percentage of patients with persisting pain during the follow-up.

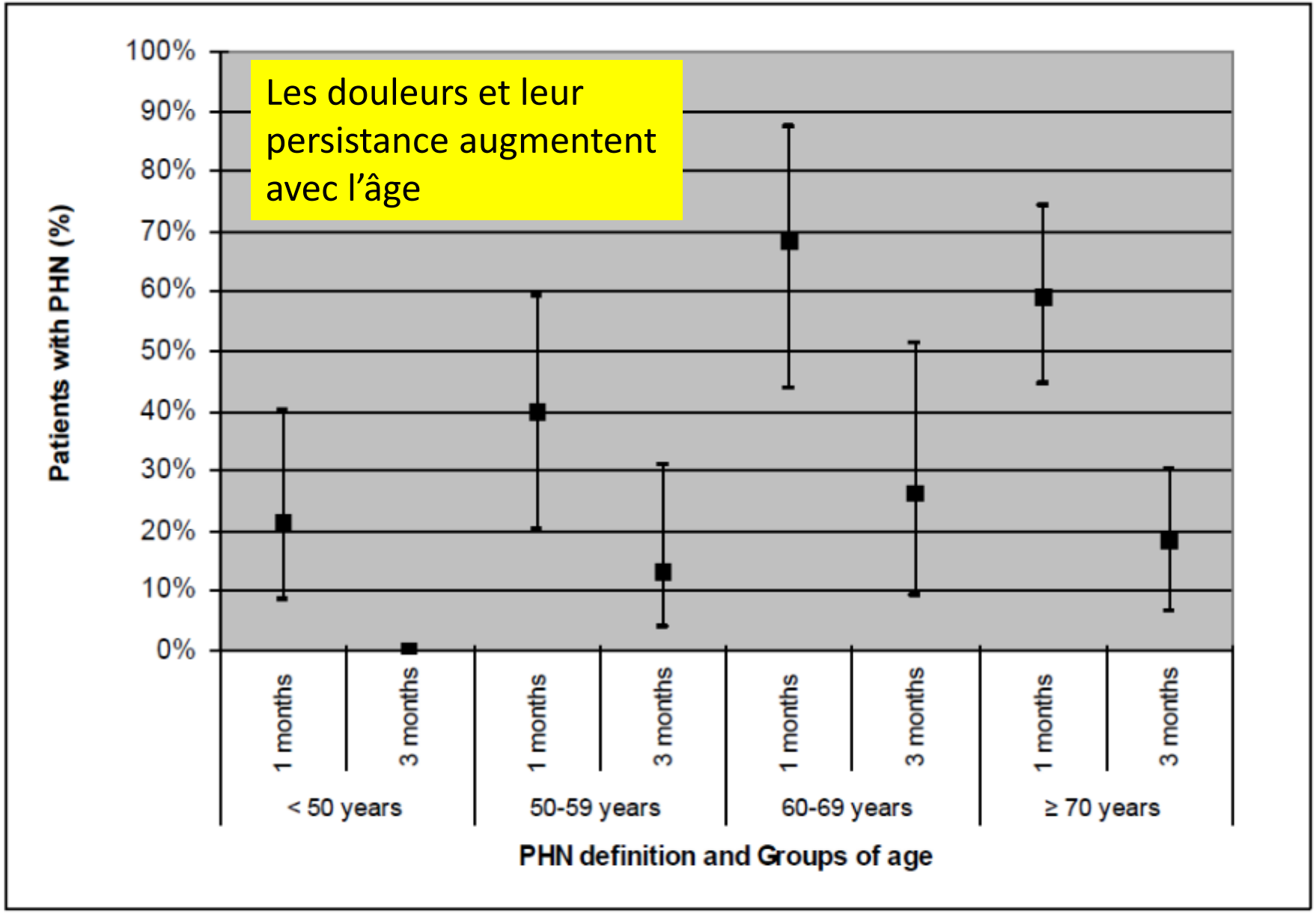


Figure 2 Percentage of patients developing postherpetic neuralgia (PHN) at 1 and 3 months per age groups (95% confidence intervals are presented).

Open Forum Infectious Diseases
MAJOR ARTICLE

The Economic Burden and Impact on Quality of Life of Herpes Zoster and Postherpetic Neuralgia in Individuals Aged 50 Years or Older in Italy

Sean Matthews,[1] Antonio De Maria,[2] Marco Passamonti,[3] Giovanni Ristori,[4] Idalba Loiacono,[5] Anna Puggina,[5] and Desmond Curran[1]

[1]Value Evidence, GSK, Wavre, Belgium; [2]Investigator site, Puglia, Galatina, Italy; [3]Investigator site, Lombardia, Fagnano Olona, Italy; [4]Investigator site, Lazio, Roma, Italy; [5]Payers and Evidence Solutions, GSK, Verona, Italy

Intensité de la douleur au cours du temps selon l'âge

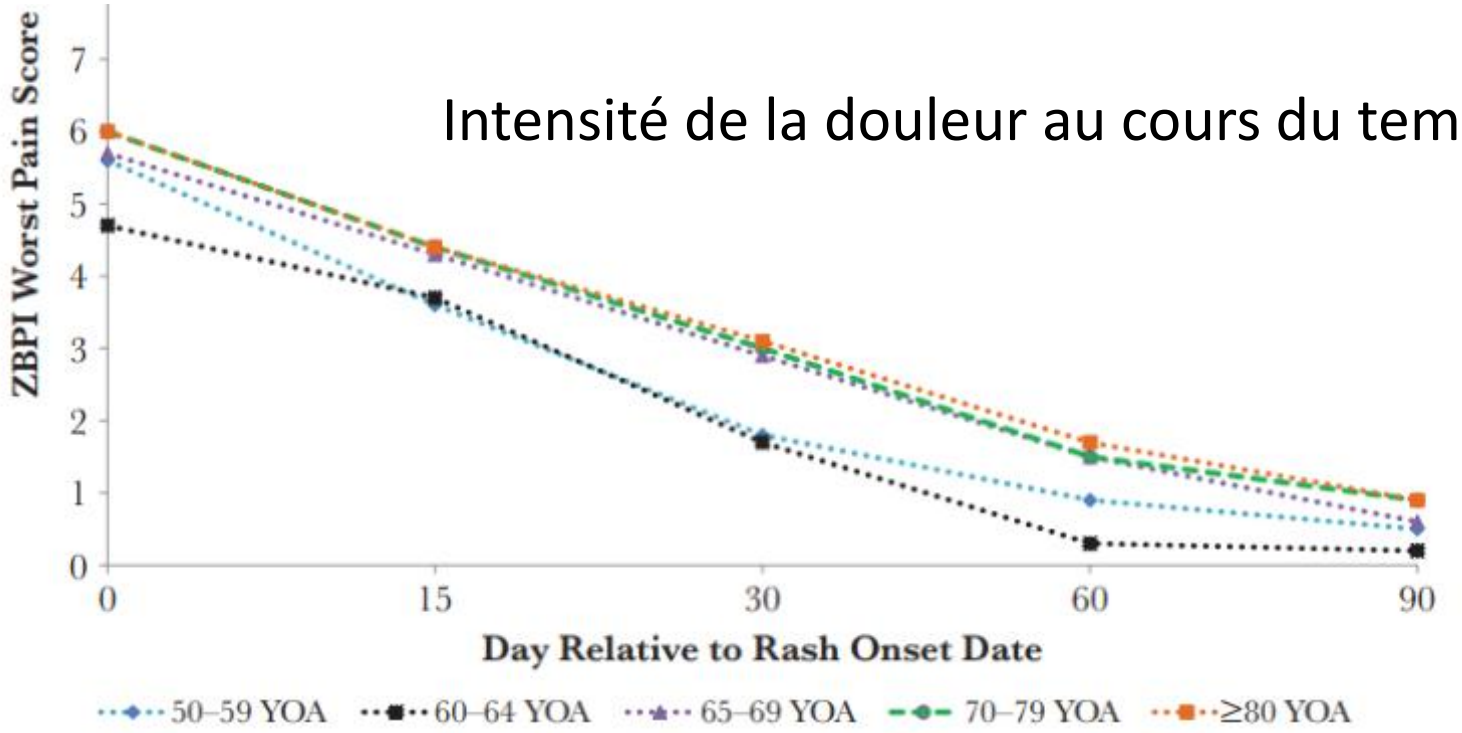
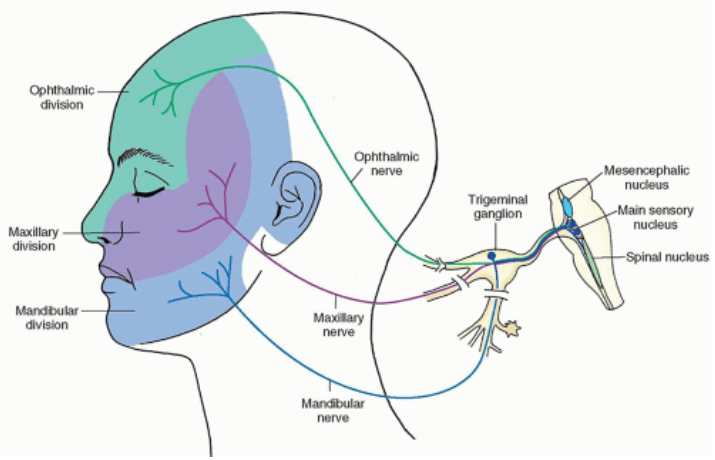


Figure 1. Mean Zoster Brief Pain Inventory worst pain scores by age category and time. Abbreviations: YOA, years of age; ZBPI, Zoster Brief Pain Inventory.

Vascularite granulomateuse des gros vaisseaux

- Après un zona ou une varicelle

- Tableau typique : AVC homolatéral à un zona trigéminal survenue dans la/les semaines précédentes
  - L'ADN du VZV est détecté dans le LCR 1/3 des cas
  - Des anticorps anti-VZV sont présents dans le LCR
  - L'ADN du VZV est détecté dans la paroi vasculaire



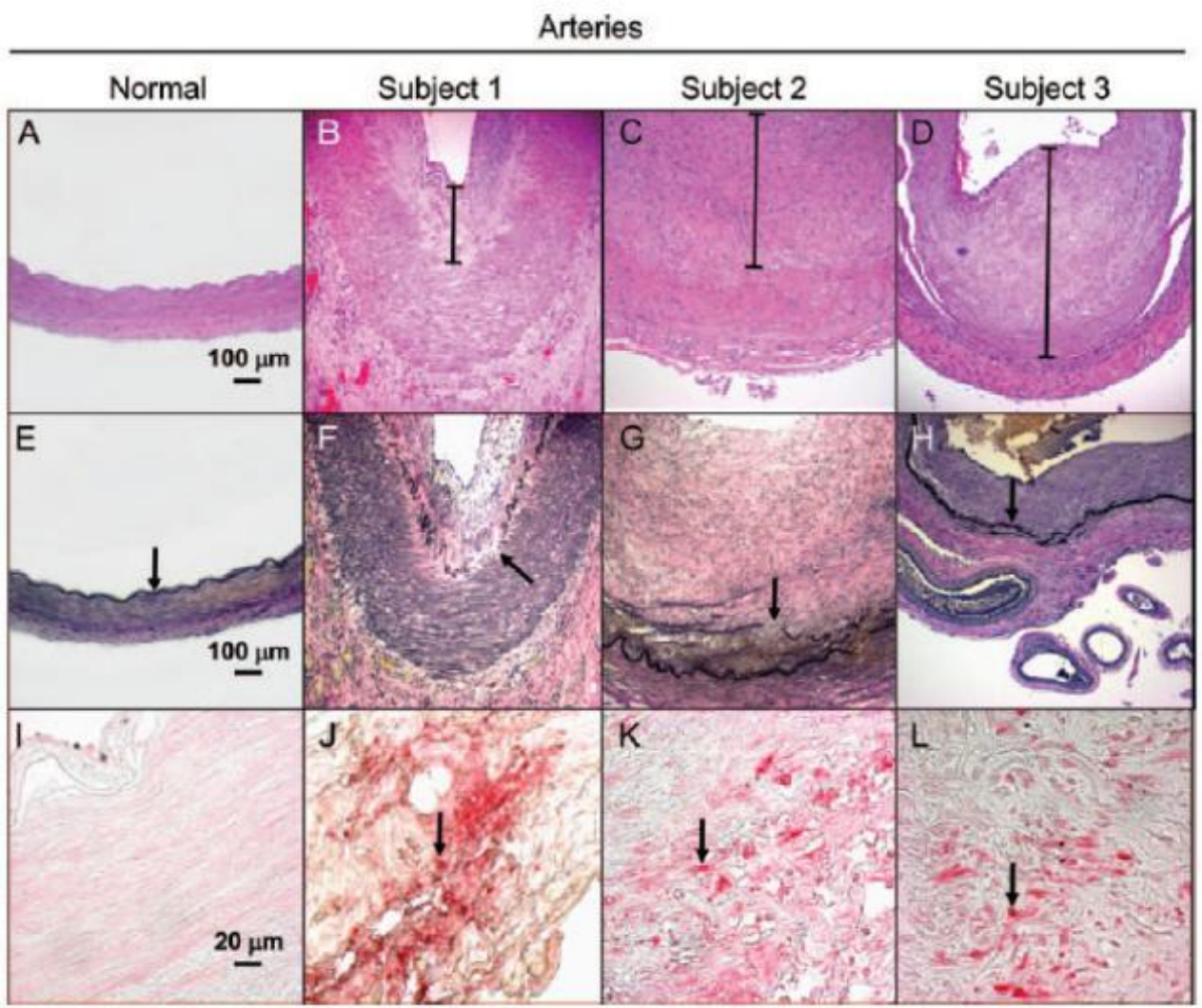
- Plutôt chez l'immunocompetent

- Cette vascularite n'est pas observée dans d'autres territoires … Pourquoi ?

Nagel 2011

staining anti- VZV

Figure 2 Histologic and virologic analysis of a normal human cerebral artery and varicella zoster virus (VZV)–infected temporal and cerebral arteries of patients with VZV vasculopathy



Hematoxylin & eosin (H&E) stain of a normal uninfected middle cerebral artery from subject 3 (A); Verhoeff-Van Gieson (VVG) staining shows an intact internal elastic lamina (E, arrow) devoid of VZV antigen (I). In the temporal artery of subject 1 with early VZV vasculopathy, as well as the right middle cerebral artery of subjects 2 and 3 (both of whom died of protracted VZV vasculopathy), H&E staining reveals a hyperplastic intima in all 3 arteries (B–D, vertical black lines), and VVG staining shows duplication or frank disruption of the internal elastic lamina in the arteries of all 3 subjects with VZV vasculopathy (F–H, arrows). VZV antigen (pink) in seen in the adventitia of subject 1 at 4 weeks after zoster (J, arrow), in the media of subject 2 (without a history of zoster rash) after a 45-week course of VZV vasculopathy (K, arrow), and in the hyperplastic intima of subject 3 at 48 weeks after zoster (L, arrow). Magnification = ×100 in panels A–H and ×600 in panels I–L.

2009

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; Herng-Ching Lin, PhD

Table 2. Crude and Adjusted HRs for Stroke Among Sample Patients During the 1-Year Follow-Up Period Starting From the Index Ambulatory Care Visit (n=31 040)

	Total Sample		Comparison		Herpes Zoster, Total		Herpes Zoster Ophthalmicus	
Presence of Stroke	No.	Percent	No.	Percent	No.	Percent	No.	Percent
One-year follow-up period								
Yes	439	1.41	306	1.31	133	1.71	7	5.83
No	30 601	98.59	22 974	98.69	7627	98.29	113	94.17
Crude HR (95% CI)		—		1.00	1.31† (1.07–1.61)		4.59‡ (2.12–9.93)	
Adjusted* HR (95% CI)		—		1.00	1.31† (1.06–1.60)		4.28‡ (2.01–9.03)	

*Adjustments are made for patient's age, sex, hypertension, diabetes, coronary heart disease, hyperlipidemia, renal disease, atrial fibrillation, heart failure, heart valve/myocardium disease, carotid/peripheral vascular disease, monthly income, urbanization level, and geographical region.

†$P<0.05$.

‡$P<0.001$.

30% de surrisque d'AVC après un zona

Increased Risk of Stroke After a Herpes Zoster Attack

A Population-Based Follow-Up Study

2009

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

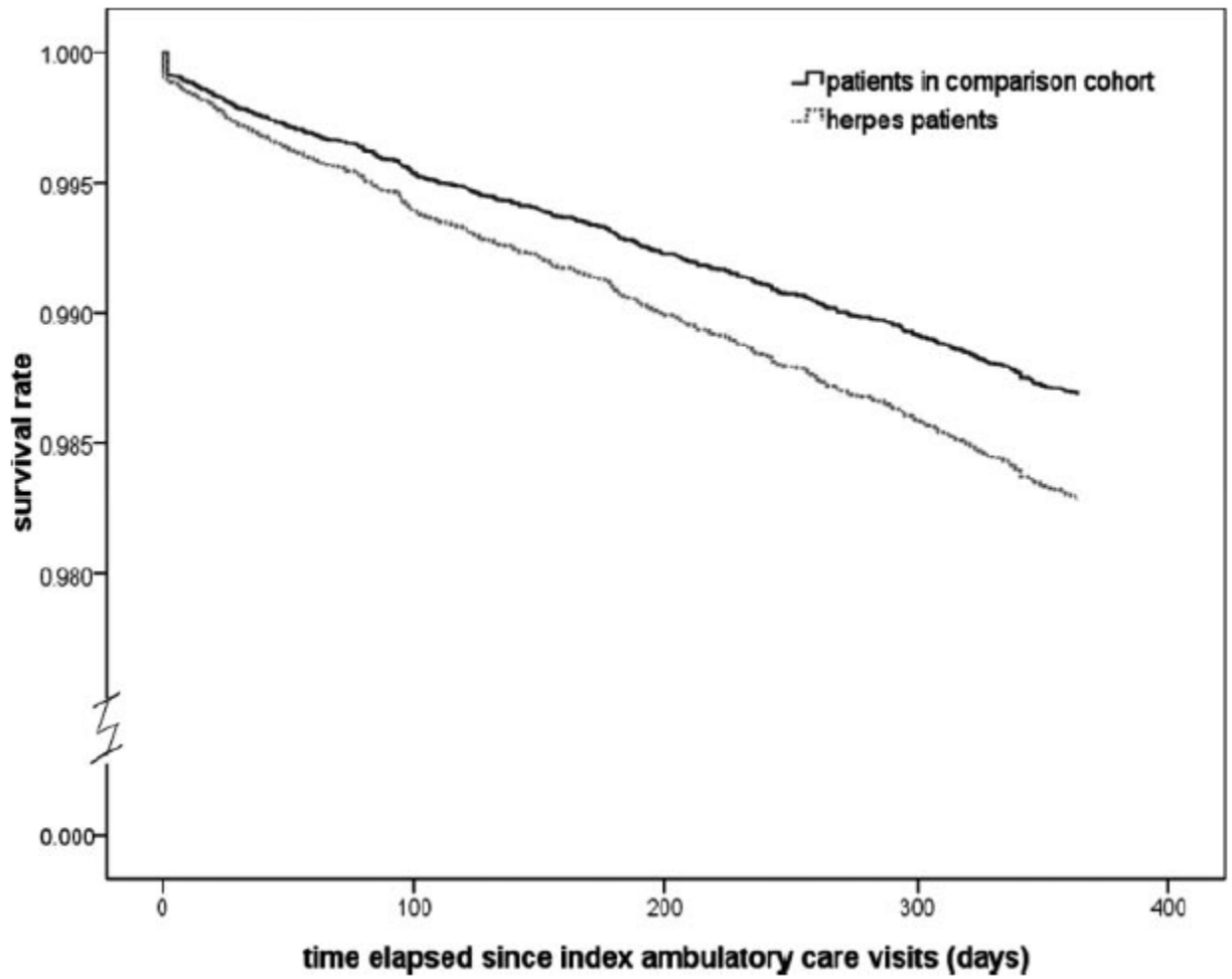


Figure. Stroke-free survival rates for patients with herpes zoster in Taiwan and patients in the comparison cohort, 1999 to 2001.

Risk of Stroke Following Herpes Zoster: A Self-Controlled Case-Series Study

2014

Sinéad M. Langan,[a] Caroline Minassian,[a] Liam Smeeth, and Sara L. Thomas

Faculty of Epidemiology and Population Health, London School of Hygiene and Tropical Medicine, United Kingdom

Table 2. Age-Adjusted Incidence Ratios for Stroke in Risk Periods Following Zoster

Outcome and Risk Period	No. of Cases	IR[a] (95% CI)
Stroke (all types)	6584	
Risk period after zoster		
1–4 wk	90	1.63 (1.32–2.02)
5–12 wk	149	1.42 (1.21–1.68)
13–26 wk	215	1.23 (1.07–1.42)
27–52 wk	303	0.99 (.88–1.12)

Abbreviations: CI, confidence interval; IR, incidence ratio.

[a] Incidence ratio, adjusting for age in 5-year bands.

Le surrisque d'AVC prédomine dans les 4 semaines suivant le zona

Systematic Review and Meta-Analysis

Medicine

OPEN

2023

Herpes Zoster virus infection and the risk of developing dementia

A systematic review and meta-analysis

Rowan H. Elhalag[a], Karam R. Motawea[a], Nesreen Elsayed Talat[a], Samah S. Rouzan[a], Sarraa M. Reyad[a], Soliman M. Elsayed[a], Pensée Chébl[a], Marwan Abowafia[a], Jaffer Shah[b,*]

Study or Subgroup	HZV Events	HZV Total	No HZV Events	No HZV Total	Weight	Risk Ratio M-H, Random, 95% CI
Omland 2021	17	517	156	9823	2.6%	2.07 [1.27, 3.39]
Schmidt 2022	23989	247305	127297	1235891	49.9%	0.94 [0.93, 0.95]
Warren-Gash 2022	5372	177144	21213	706901	47.5%	1.01 [0.98, 1.04]
Total (95% CI)		**424966**		**1952615**	**100.0%**	**0.99 [0.92, 1.08]**
Total events	29378		148666			

Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 27.89$, df = 2 ($P < 0.00001$); $I^2 = 93\%$

Test for overall effect: $Z = 0.14$ ($P = 0.89$)

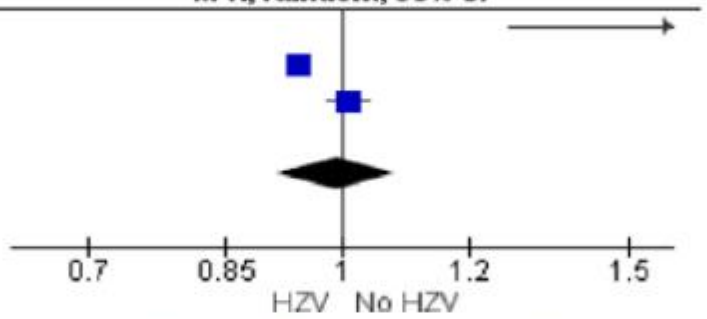


Figure 2. Forest plot explaining the incidences of dementia in the HZV group compared with the no HZV group. CI = confidence interval, HZV = Herpes Zoster Virus.

Il n'y a pas de lien entre zona « toutes localisations » et démence…

Study or Subgroup	log[Risk Ratio]	SE	Weight	Risk Ratio IV, Random, 95% CI
Schmidt 2022	1.66	0.53	30.6%	5.26 [1.86, 14.86]
Tsai 2017	2.97	0.23	34.3%	19.49 [12.42, 30.59]
Warren-Gash 2022	0.88	0.061	35.2%	2.41 [2.14, 2.72]
Total (95% CI)			**100.0%**	**6.26 [1.30, 30.19]**

Heterogeneity: Tau² = 1.83; Chi² = 78.60, df = 2 (P < 0.00001); I² = 97%
Test for overall effect: Z = 2.29 (P = 0.02)

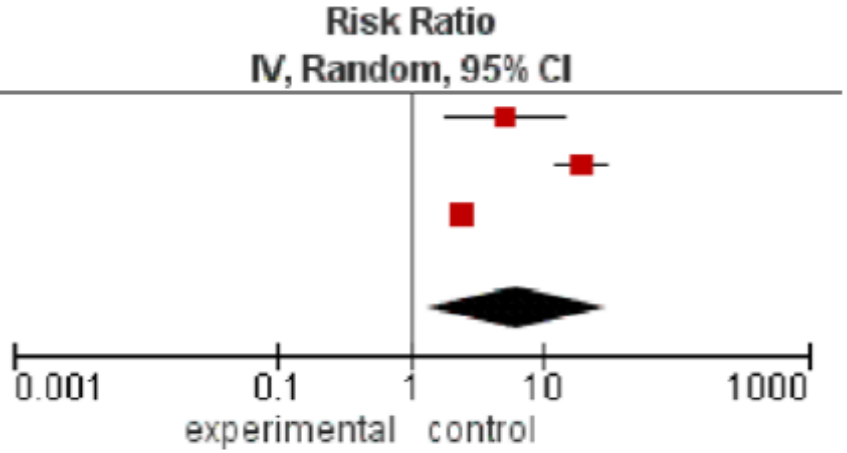


Figure 9. Forest plot explaining the association between patients who have HZO and the incidence of dementia. CI = confidence interval, HZO = Herpes Zoster Ophthalmicus.

Mais il y a un lien entre zona ophtalmique et démence

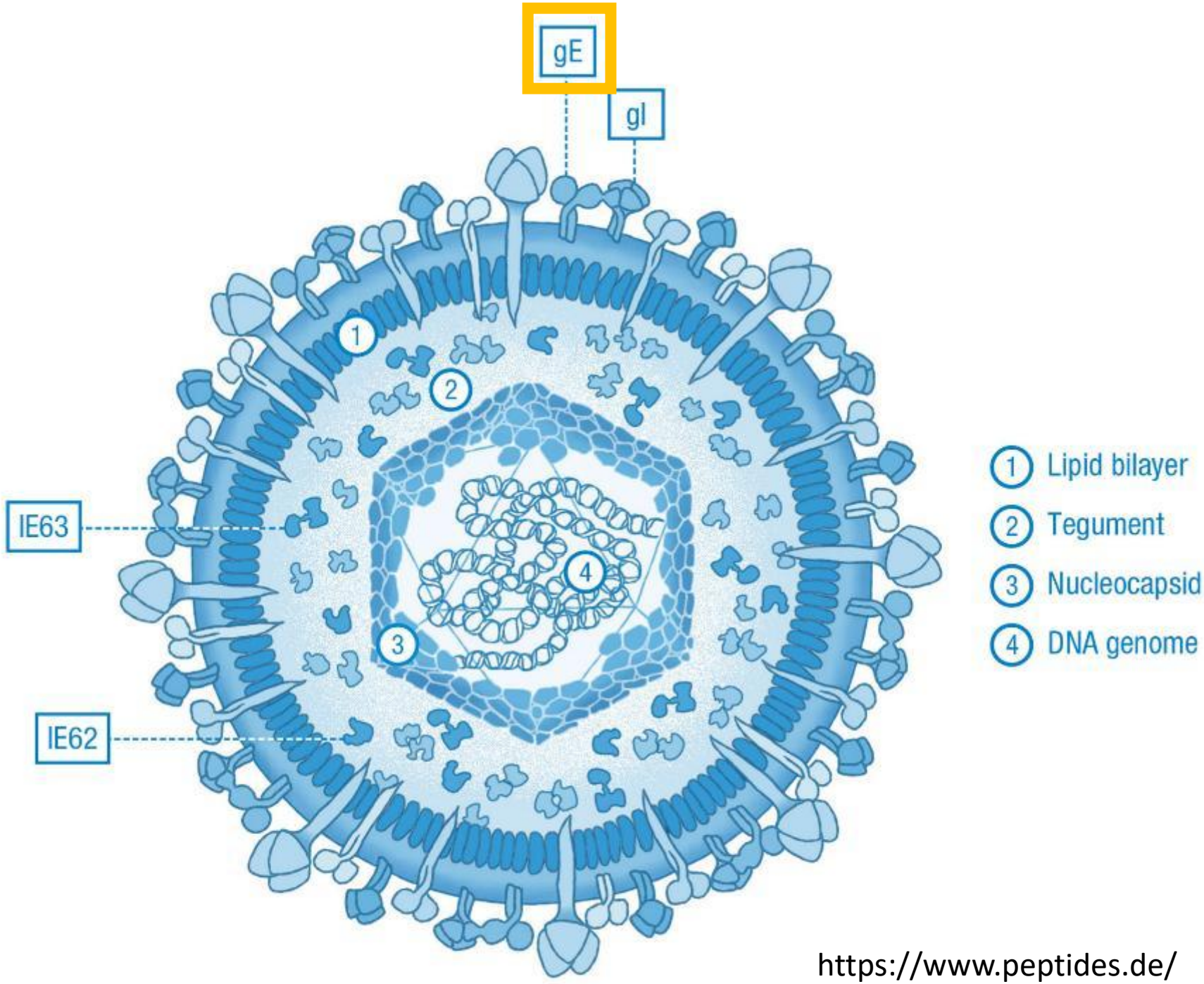
Vaccination contre le zona

Spécificités de la vaccination contre le zona

- Immunisation d'une personne **déjà infectée**
  - Pour prévenir la réactivation d'une infection latente

- L'efficacité repose surtout sur l'**immunité cellulaire**
  - Mais de nombreuses études regardant surtout l'immunité humorale (plus simple …)

- La vaccination cible surtout les **seniors**
  - L'immunosenescence peut impacter l'efficacité



https://www.peptides.de/

Deux vaccins ont successivement existé

- Un vaccin vivant atténué : aujourd'hui en cours d'abandon
  - Basé sur la souche atténuée Oka
  - Même vaccin que la varicelle
    - Mais 10 fois plus dosé
  - Zostavax®

- Un vaccin recombinant subunitaire
  - Basé sur la glycoprotéine gE
  - Adjuvanté avec AS01B
    - Saponine QS21
    - Monophosphoryl A
  - Shingrix®

Vaccin vivant atténué

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 JUNE 2, 2005 VOL. 352 NO. 22

A Vaccine to Prevent Herpes Zoster and Postherpetic Neuralgia in Older Adults

M.N. Oxman, M.D., M.J. Levin, M.D., G.R. Johnson, M.S., K.E. Schmader, M.D., S.E. Straus, M.D., L.D. Gelb, M.D., R.D. Arbeit, M.D., M.S. Simberkoff, M.D., A.A. Gershon, M.D., L.E. Davis, M.D., A. Weinberg, M.D., K.D. Boardman, R.Ph., H.M. Williams, R.N., M.S.N., J. Hongyuan Zhang, Ph.D., P.N. Peduzzi, Ph.D., C.E. Beisel, Ph.D., V.A. Morrison, M.D., J.C. Guatelli, M.D., P.A. Brooks, M.D., C.A. Kauffman, M.D., C.T. Pachucki, M.D., K.M. Neuzil, M.D., M.P.H., R.F. Betts, M.D., P.F. Wright, M.D., M.R. Griffin, M.D., M.P.H., P. Brunell, M.D., N.E. Soto, M.D., A.R. Marques, M.D., S.K. Keay, M.D., Ph.D., R.P. Goodman, M.D., D.J. Cotton, M.D., M.P.H., J.W. Gnann, Jr., M.D., J. Loutit, M.D., M. Holodniy, M.D., W.A. Keitel, M.D., G.E. Crawford, M.D., S.-S. Yeh, M.D., Ph.D., Z. Lobo, M.D., J.F. Toney, M.D., R.N. Greenberg, M.D., P.M. Keller, Ph.D., R. Harbecke, Ph.D., A.R. Hayward, M.D., Ph.D., M.R. Irwin, M.D., T.C. Kyriakides, Ph.D., C.Y. Chan, M.D., I.S.F. Chan, Ph.D., W.W.B. Wang, Ph.D., P.W. Annunziato, M.D., and J.L. Silber, M.D., for the Shingles Prevention Study Group*

2005

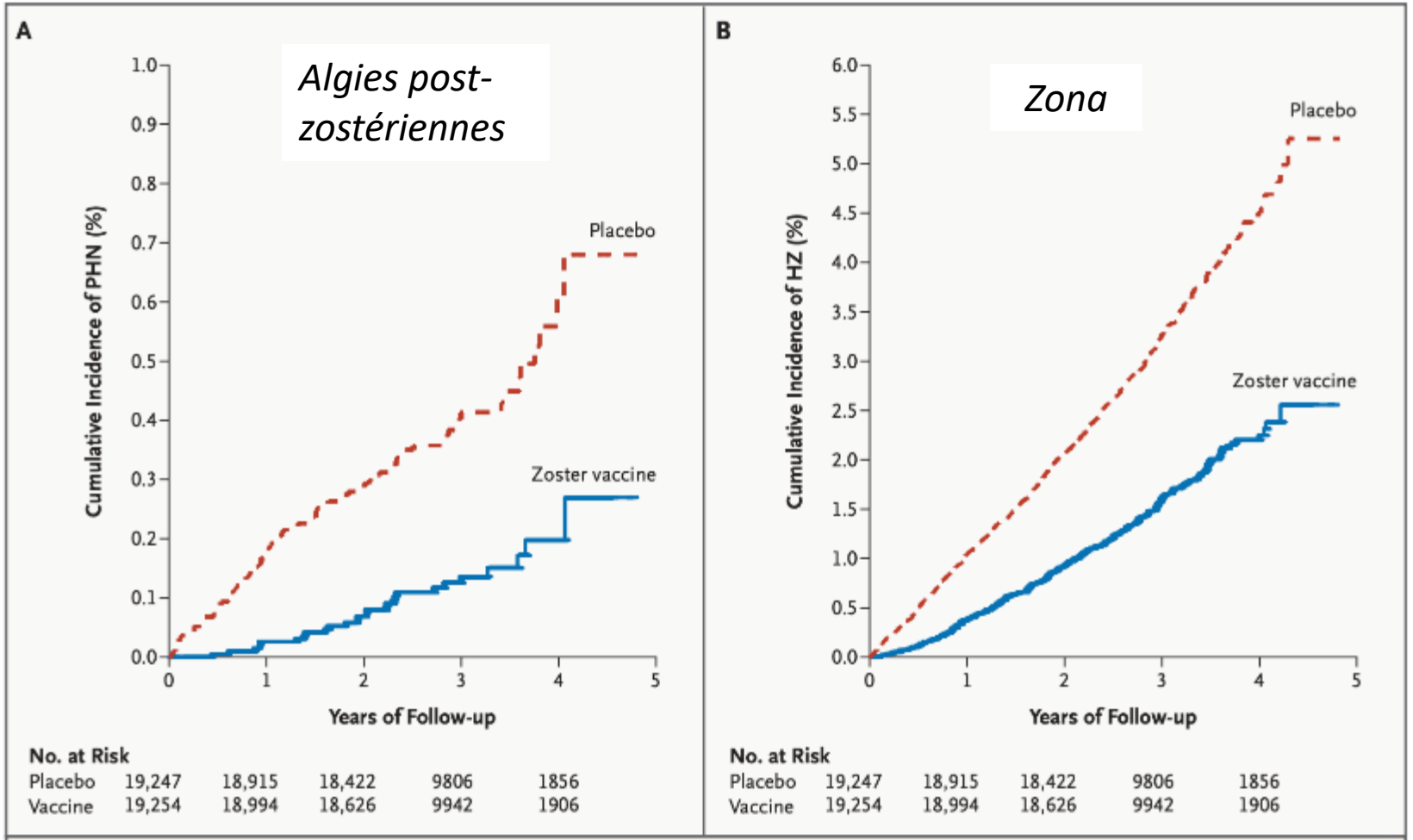


Figure 2. Kaplan–Meier Estimates of the Effect of Zoster Vaccine on the Cumulative Incidence of Postherpetic Neuralgia (Panel A) and Herpes Zoster (Panel B) in the Modified Intention-to-Treat Population.

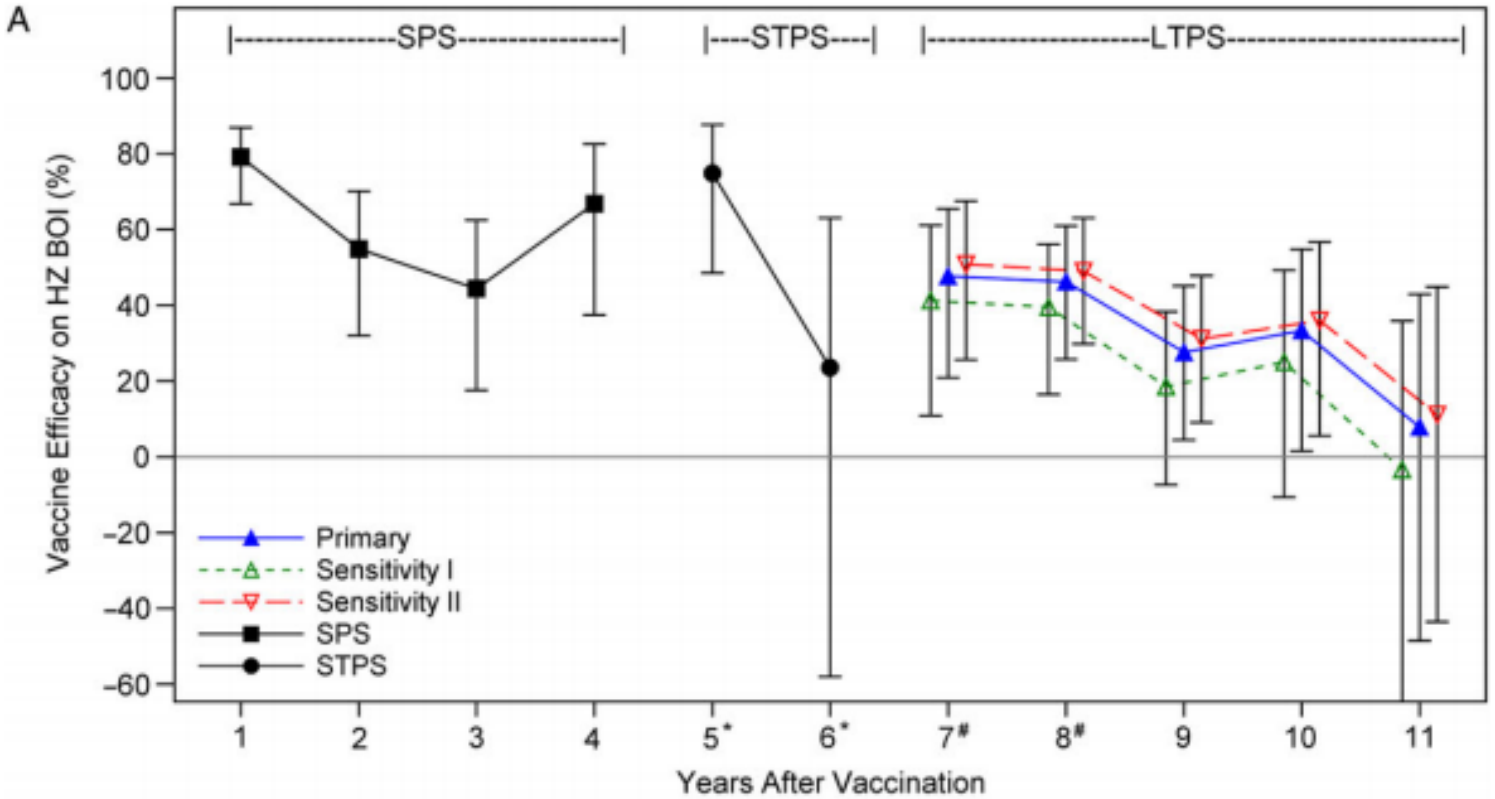
Table 2. Effect of Zoster Vaccine on the Burden of Illness in Herpes Zoster in the Modified Intention-to-Treat Population.*

Group of Subjects	Vaccine Group			Placebo Group			VE_{BOI} (95% CI)§
	No. of Confirmed Cases/No. of Subjects	BOI Score†	Incidence per 1000 Person-Yr‡	No. of Confirmed Cases/No. of Subjects	BOI Score†	Incidence per 1000 Person-Yr‡	%
All subjects	315/19,254	2.21	5.42	642/19,247	5.68	11.12	61.1 (51.1–69.1)
Age							
60–69 yr	122/10,370	1.50	3.90	334/10,356	4.33	10.79	65.5 (51.5–75.5)
≥70 yr	193/8884	3.47	7.18	308/8891	7.78	11.50	55.4 (39.9–66.9)
Sex							
Male	181/11,390	2.09	5.30	361/11,337	5.81	10.65	64.0 (51.4–73.4)
Female	134/7864	2.34	5.58	281/7910	5.47	11.79	57.3 (39.6–69.8)

Clinical Infectious Diseases Advance Access published November 20, 2014

Morrison V.A.[1], Johnson G.R.[2], Schmader K.E.[3], Levin M.J.[4], Zhang J.H.[2], Looney D.J.[5], Betts R.[6], Gelb L.[7], Guatelli J.C.[5], Harbecke R.[5], Pachucki C.[8], Keay S.[9], Menzies B.[10], Griffin M.R.[11], Kauffman C.A.[12], Marques A.[13], Toney J.[14], Boardman K.[15], Su S.[16], Li X.[16], Chan I.S.F.[16], Parrino J.[16], Annunziato P.[16], Oxman M.N.[5], for the Shingles Prevention Study Group

Long-Term Persistence of Zoster Vaccine Efficacy



Primary						47.7	46.2	27.6	33.3	7.9
Sensitivity I						41.2	39.5	18.6	25.1	-3.3
Sensitivity II						50.9	49.1	31.1	36.0	11.1
SPS	79.2	54.9	44.4	66.9						
STPS					74.9	23.6				

Vaccin vivant atténué : efficacité peu durable

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 MAY 28, 2015 VOL. 372 NO. 22

Efficacy of an Adjuvanted Herpes Zoster Subunit Vaccine in Older Adults

Nirmal Lal, M.D., Anthony L. Cunningham, M.B., B.S., M.D., Olivier Godeaux, M.D., Roman Chlibek, M.D., Ph.D., Javier Diez-Domingo, M.D., Ph.D., Shinn-Jang Hwang, M.D., Myron J. Levin, M.D., Janet E. McElhaney, M.D., Airi Poder, M.D., Joan Puig-Barberà, M.D., M.P.H., Ph.D., Timo Vesikari, M.D., Ph.D., Daisuke Watanabe, M.D., Ph.D., Lily Weckx, M.D., Ph.D., Toufik Zahaf, Ph.D., and Thomas C. Heineman, M.D., Ph.D., for the ZOE-50 Study Group*

2015

Vaccine base sur la glycoprotéine E (GpE)

Table 2. Vaccine Efficacy against the First or Only Episode of Herpes Zoster Infection.*

Cohort and Age Group	HZ/su Group				Placebo Group				Vaccine Efficacy†
	No. of Participants	No. of Confirmed Cases	Cumulative Follow-up Period ‡ *person-yr*	Rate of Herpes Zoster *no./1000 person-yr*	No. of Participants	No. of Confirmed Cases	Cumulative Follow-up Period‡ *person-yr*	Rate of Herpes Zoster *no./1000 person-yr*	*% (95% CI)*
Modified vaccinated cohort									
All participants in cohort	7344	6	23,297.0	0.3	7415	210	23,170.5	9.1	97.2 (93.7–99.0)
50–59 yr	3492	3	11,161.3	0.3	3525	87	11,134.7	7.8	96.6 (89.6–99.3)
60–69 yr	2141	2	7,007.9	0.3	2166	75	6,952.7	10.8	97.4 (90.1–99.7)
70 yr or older	1711	1	5,127.9	0.2	1724	48	5,083.0	9.4	97.9 (87.9–100.0)
Total vaccinated cohort									
All participants in cohort	7698	9	25,584.5	0.4	7713	235	25,359.9	9.3	96.2 (92.7–98.3)
50–59 yr	3645	3	12,244.9	0.2	3644	95	12,162.5	7.8	96.9 (90.6–99.4)
60–69 yr	2244	5	7,674.1	0.7	2246	83	7,581.8	10.9	94.1 (85.6–98.1)
70 yr or older	1809	1	5,665.5	0.2	1823	57	5,615.6	10.2	98.3 (89.9–100.0)

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 SEPTEMBER 15, 2016 VOL. 375 NO. 11

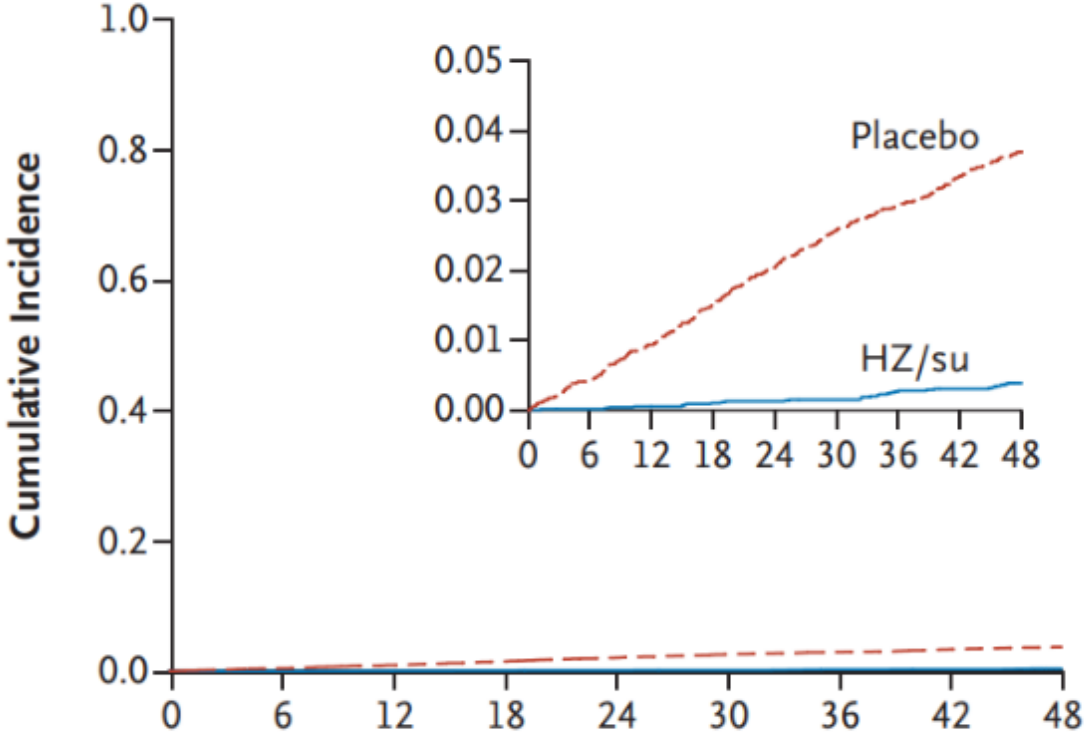
Efficacy of the Herpes Zoster Subunit Vaccine in Adults 70 Years of Age or Older

A.L. Cunningham, H. Lal, M. Kovac, R. Chlibek, S.-J. Hwang, J. Díez-Domingo, O. Godeaux, M.J. Levin, J.E. McElhaney, J. Puig-Barberà, C. Vanden Abeele, T. Vesikari, D. Watanabe, T. Zahaf, A. Ahonen, E. Athan, J.F. Barba-Gomez, L. Campora, F. de Looze, H.J. Downey, W. Ghesquiere, I. Gorfinkel, T. Korhonen, E. Leung, S.A. McNeil, L. Oostvogels, L. Rombo, J. Smetana, L. Weckx, W. Yeo, and T.C. Heineman, for the ZOE-70 Study Group*

2016

Vaccin basé sur GpE

D Total Vaccinated Cohort in ZOE-50 and ZOE-70



No. at Risk									
HZ/su	8758	8436	8355	8177	8066	7865	7732	7499	5376
Placebo	8773	8463	8310	8077	7910	7693	7521	7276	5188

Cumulative No. of Cases									
HZ/su	0	2	5	9	11	13	23	25	31
Placebo	0	39	81	128	173	215	244	275	300

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 SEPTEMBER 15, 2016 VOL. 375 NO. 11

Efficacy of the Herpes Zoster Subunit Vaccine in Adults 70 Years of Age or Older

A.L. Cunningham, H. Lal, M. Kovac, R. Chlibek, S.-J. Hwang, J. Díez-Domingo, O. Godeaux, M.J. Levin, J.E. McElhaney, J. Puig-Barberà, C. Vanden Abeele, T. Vesikari, O. Watanabe, T. Zahaf, A. Ahonen, E. Athan, J.F. Barba-Gomez, L. Campora, F. de Looze, H.J. Downey, W. Ghesquiere, I. Gorfinkel, T. Korhonen, E. Leung, S.A. McNeil, I. Oostvogels, I. Rombo, J. Smetana, I. Weckx, W. Yeo, and T.C. Heineman, for the ZOE-70 Study Group*

Vaccin basé sur GpE

Table 1. Vaccine Efficacy against the First or Only Episode of Herpes Zoster and Postherpetic Neuralgia in the Modified Vaccinated Cohort.*

Condition and Cohort	HZ/su Group				Placebo Group				Vaccine Efficacy†
	Participants	Cases	Cumulative Follow-up Period‡	Incidence Rate	Participants	Cases	Cumulative Follow-up Period‡	Incidence Rate	
	number		*person-yr*	*cases/1000 person-yr*	*number*		*person-yr*	*cases/1000 person-yr*	*% (95% CI)*
Herpes zoster									
ZOE-70									
Age group									
Overall	6,541	23	24,405.1	0.9	6,622	223	24,167.8	9.2	89.8 (84.2 to 93.7)
70–79 yr	5,114	17	19,346.5	0.9	5,189	169	19,247.5	8.8	90.0 (83.5 to 94.4)
≥80 yr	1,427	6	5,058.5	1.2	1,433	54	4,920.3	11.0	89.1 (74.6 to 96.2)
Year§									
1	6,541	2	6,464.7	0.3	6,622	68	6,511.2	10.4	97.0 (88.8 to 99.7)
2	6,379	6	6,281.0	1.0	6,372	68	6,240.4	10.9	91.3 (79.9 to 96.9)
3	6,137	9	6,043.5	1.5	6,076	48	5,943.0	8.1	81.6 (61.9 to 92.1)
4	5,898	6	5,615.9	1.1	5,776	39	5,473.2	7.1	85.1 (64.4 to 94.9)
Pooled ZOE-70 and ZOE-50									
Age group									
Overall	8,250	25	30,725.5	0.8	8,346	284	30,414.7	9.3	91.3 (86.8 to 94.5)
70–79 yr	6,468	19	24,410.9	0.8	6,554	216	24,262.8	8.9	91.3 (86.0 to 94.9)
≥80 yr	1,782	6	6,314.6	1.0	1,792	68	6,151.9	11.1	91.4 (80.2 to 97.0)
Year§									
1	8,250	2	8,156.2	0.2	8,346	83	8,206.2	10.1	97.6 (90.9 to 99.8)
2	8,039	7	7,916.9	0.9	8,024	87	7,860.5	11.1	92.0 (82.8 to 96.9)
3	7,736	9	7,612.2	1.2	7,661	58	7,488.4	7.7	84.7 (69.0 to 93.4)
4	7,426	7	7,040.3	1.0	7,267	56	6,859.6	8.2	87.9 (73.3 to 95.4)
Postherpetic neuralgia									
Pooled ZOE-70 and ZOE-50									
≥70 yr¶	8,250	4	30,760.3	0.1	8,346	36	30,942.0	1.2	88.8 (68.7 to 97.1)
≥50 yr	13,881	4	53,171.5	0.1	14,035	46	53,545.0	0.9	91.2 (75.9 to 97.7)

HUMAN VACCINES & IMMUNOTHERAPEUTICS
2024, VOL. 20, NO. 1, 2351584
https://doi.org/10.1080/21645515.2024.2351584

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RESEARCH ARTICLE

OPEN ACCESS Check for updates

Efficacy, reactogenicity, and safety of the adjuvanted recombinant zoster vaccine for the prevention of herpes zoster in Chinese adults ≥ 50 years: A randomized, placebo-controlled trial

Diana Alexandra Echeverria Proano[a*], Fengcai Zhu[b*], Xiaodong Sun[c*], Jesús Zoco[a], Jyoti Soni[a], Neeraj Parmar[d], S. Omar Ali[e], and on behalf of Zoster-076 Study Group

Table 2. Vaccine efficacy against the first or only episode of herpes zoster infection, from 30 days post-second vaccination up to study end (modified exposed set).

	RZV group				Placebo group				VE	
Type	N	n	T (years)	IR (per 1000 person-years)	N	n	T (years)	IR (per 1000 person-years)	% (95% CI)	p-value
Overall*	2965	0	3752.3	0.0	2991	31	3769.0	8.2	100 (89.82–100)	<.0001
50–69 years	2330	0	2957.0	0.0	2360	22	2981.8	7.4	100 (85.29–100)	
≥ 70 years	635	0	795.2	0.0	631	9	787.2	11.4	100 (60.90–100)	

*VE adjusted by age strata.

mean follow-up period: 15.2 (±1.1) months

Clinical Infectious Diseases

MAJOR ARTICLE

The Adjuvanted Recombinant Zoster Vaccine Confers Long-Term Protection Against Herpes Zoster: Interim Results of an Extension Study of the Pivotal Phase 3 Clinical Trials ZOE-50 and ZOE-70

Céline Boutry,[1,a] Andrew Hastie,[2] Javier Diez-Domingo,[3] Juan Carlos Tinoco,[4] Chong-Jen Yu,[5] Charles Andrews,[6] Jean Beytout,[7] Covadonga Caso,[8] Huey-Shinn Cheng,[9] Hee Jin Cheong,[10] Eun Ju Choo,[11] Dan Curiac,[12] Emmanuel Di Paolo,[13] Marc Dionne,[14] Tamara Eckermann,[15] Meral Esen,[16] Murdo Ferguson,[17] Wayne Ghesquiere,[18] Shinn-Jang Hwang,[19,20] Thiago Junqueira Avelino-Silva,[21] Pavel Kosina,[22] Chiu-Shong Liu,[23] Jukka Markkula,[24] Beate Moeckesch,[25] Cláudia Murta de Oliveira,[26] Dae Won Park,[27] Karlis Pauksens,[28] Paola Pirrotta,[29] Georg Plassmann,[30] Carol Pretswell,[31] Lars Rombo,[32] Bruno Salaun,[13] Johan Sanmartin Berglund,[33] Isabelle Schenkenberger,[34] Tino Schwarz,[35] Meng Shi,[2] Benita Ukkonen,[36] Toufik Zahaf,[29] Cristiano Zerbini,[37] Anne Schuind,[2,b] and Anthony L. Cunningham[38,39]; on behalf of the Zoster-049 Study Group[*]

Table 2. Vaccine Efficacy in the ZOE-50 and ZOE-70 Studies and the Current Long-Term Follow-up Study After at Least 2 Additional Years of Follow-up

	Adjuvanted Recombinant Zoster Vaccine				Historical Control[a]/Placebo Group in ZOE-50 and ZOE-70[b]				
	N	n	Sum of Follow-up Years	Incidence (per 1000 Person-Years)	N	n	Sum of Follow-up Years	Incidence (per 1000 Person-Years)	Vaccine Efficacy, % (95% Confidence Interval)
Vaccine efficacy in the current follow-up study: primary objective (up to the data lock point for the interim analysis in the current follow-up study)									
Overall[a]	7277	27	19 621.7	1.4	7277	169	19 621.7	8.6	84.0 (75.9–89.8)
Vaccine efficacy from 1 month post-dose 2: secondary objective (up to the data lock point for the interim analysis in the current follow-up study)									
Overall	13 881	59	72 744.6	0.8	13 881	651	72 744.6	8.9	90.9 (88.2–93.2)
Year 1[b]	13 881	3	13 744.5	0.2	14 035	130	13 823.3	9.4	97.7 (93.1–99.5)
Year 2[b]	13 569	10	13 415.6	0.7	13 564	136	13 332.5	10.2	92.7 (86.2–96.6)
Year 3[b]	13 185	9	13 016.1	0.7	13 074	116	12 834.0	9.0	92.4 (85.0–96.6)
Year 4[b]	12 757	10	12 946.7	0.8	12 517	95	12 637.4	7.5	89.8 (80.3–95.2)
Year 6[a]	7277	10	7208.8	1.4	7277	66	7208.8	9.2	84.9 (70.4–93.1)
Year 7[a]	7097	10	6993.1	1.4	7097	68	6993.1	9.7	85.3 (71.3–93.3)
Year 8 [a,c]	6876	7	5160.2	1.4	6876	44	5160.2	8.5	84.1 (64.4–94.0)

Open Forum Infectious Diseases

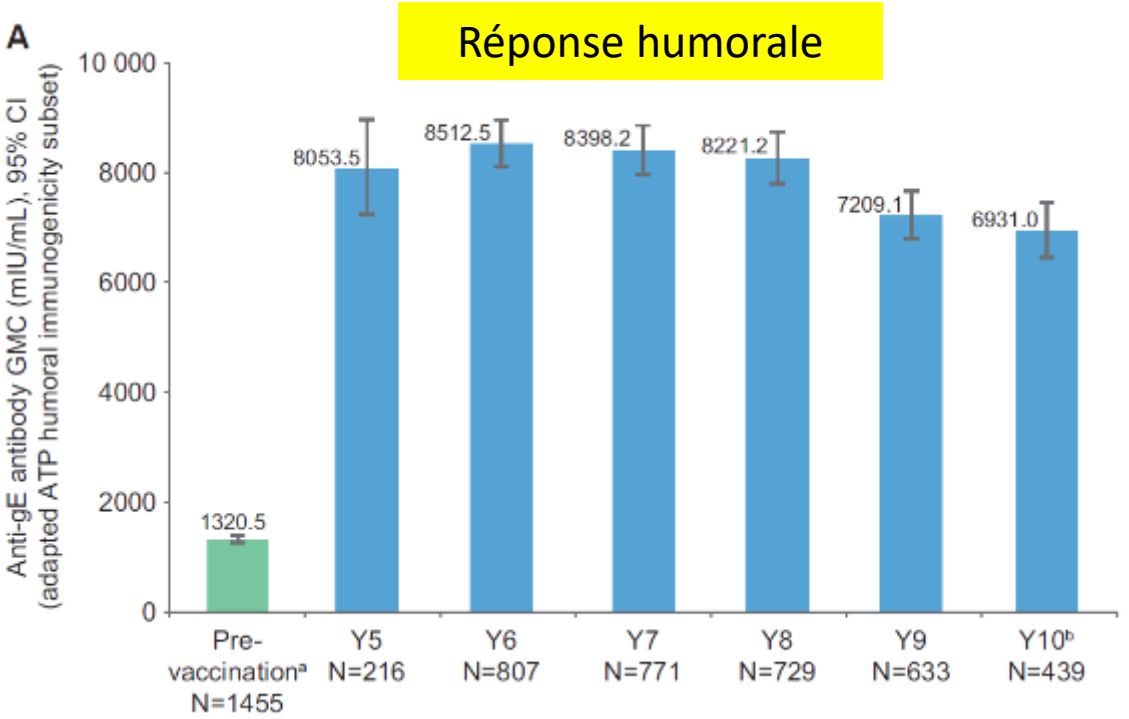
BRIEF REPORT

Long-term Protection Against Herpes Zoster by the Adjuvanted Recombinant Zoster Vaccine: Interim Efficacy, Immunogenicity, and Safety Results up to 10 Years After Initial Vaccination

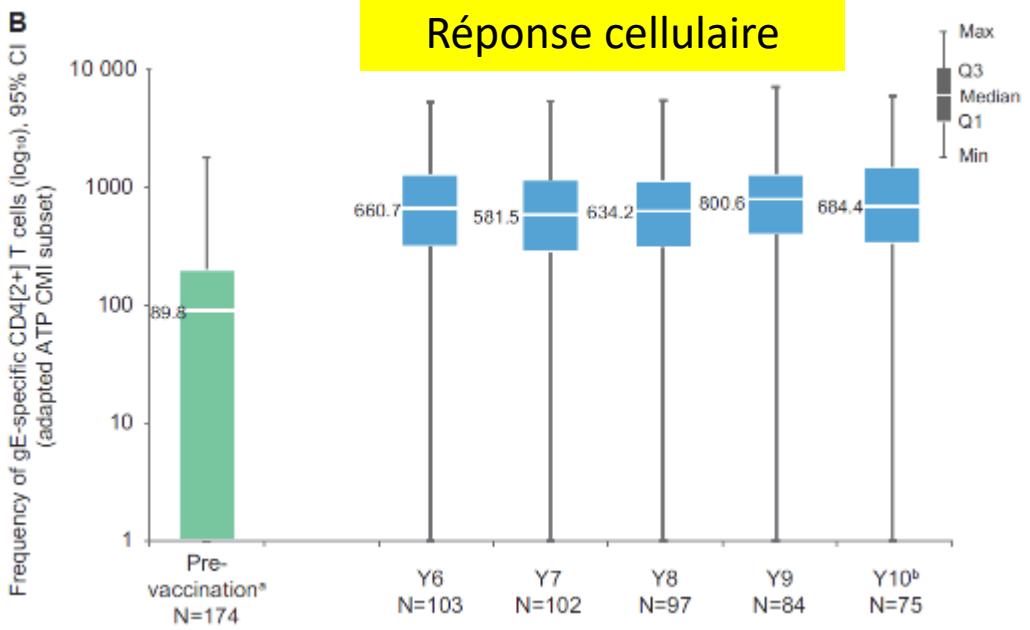
Ana Strezova,[1] Javier Diez-Domingo,[2] Kamal Al Shawafi,[3] Juan Carlos Tinoco,[4] Meng Shi,[5] Paola Pirrotta,[6] and Agnes Mwakingwe-Omari[5] on behalf of the Zoster-049 Study Group[a]

[1]GSK, Rixensart, Belgium, [2]FISABIO Fundación para el Fomento Investigación Sanitaria y Biomédica de la Comunitat Valenciana, Valencia, Spain, [3]Modis, Belgium c/o GSK, Wavre, Belgium, [4]Hospital General de Durango, Durango, Mexico, [5]GSK, Rockville, Maryland, USA, and [6]GSK, Wavre, Belgium

Réponse humorale



Réponse cellulaire



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VACCINES AND ANTIVIRAL AGENTS

Comparative Antibody Responses to the Live-Attenuated and Recombinant Herpes Zoster Vaccines

D. Scott Schmid,[a] Congrong Miao,[a] Jessica Leung,[a] Michael Johnson,[b] Adriana Weinberg,[b,c,d] Myron J. Levin[b,c]

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[b]Department of Pediatrics, University of Colorado Denver School of Medicine, Anschutz Medical Campus, Aurora, Colorado, USA
[c]Department of Medicine, University of Colorado Denver School of Medicine, Anschutz Medical Campus, Aurora, Colorado, USA
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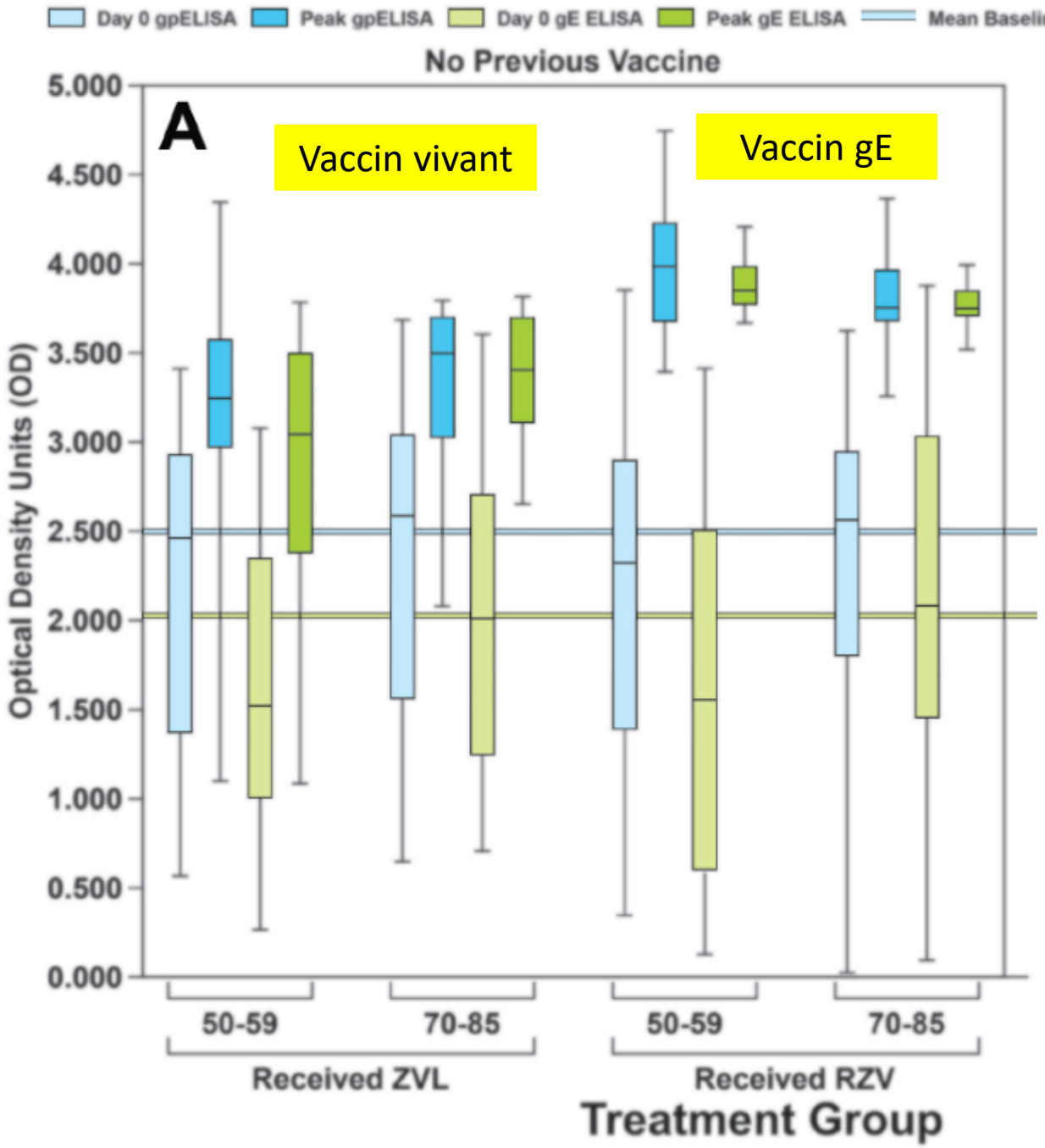


L'augmentation des anticorps avant/après vaccination est plus importante avec le vaccin subunitaire

Age classes

The Journal of Infectious Diseases

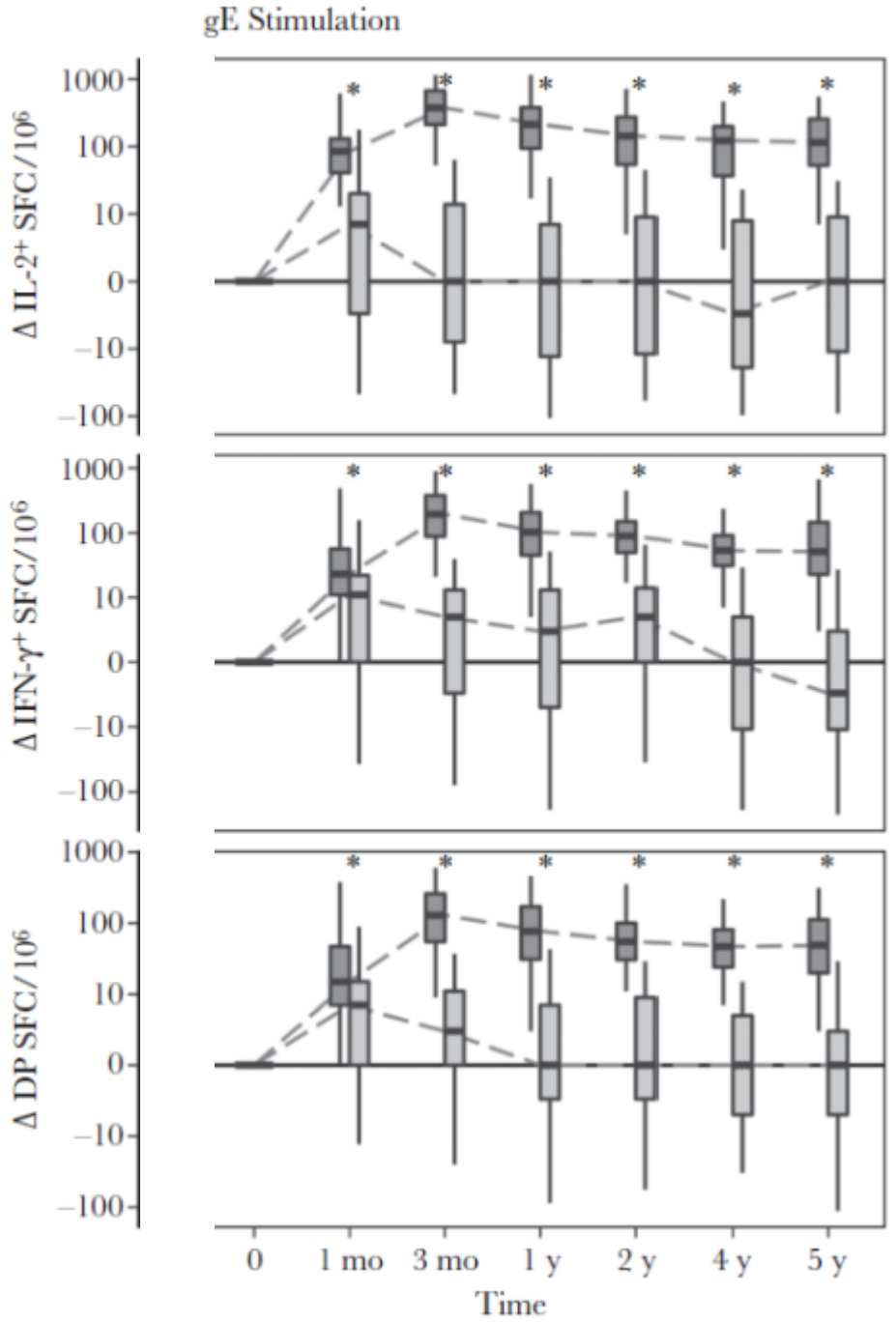
BRIEF REPORT

Cell-Mediated Immune Responses After Administration of the Live or the Recombinant Zoster Vaccine: 5-Year Persistence

Michael J. Johnson,[1] Cuining Liu,[2] Debashis Ghosh,[2] Nancy Lang,[1] Myron J. Levin,[1] and Adriana Weinberg[1]

[1]University of Colorado School of Medicine, Aurora, Colorado, USA, and [2]Colorado School of Public Health, Aurora, Colorado, USA

Vaccine RZV ZVL



La réponse cellulaire à long terme est bien meilleure avec le vaccin subunitaire

nature medicine

Brief Communication

https://doi.org/10.1038/s41591-024-03201-5

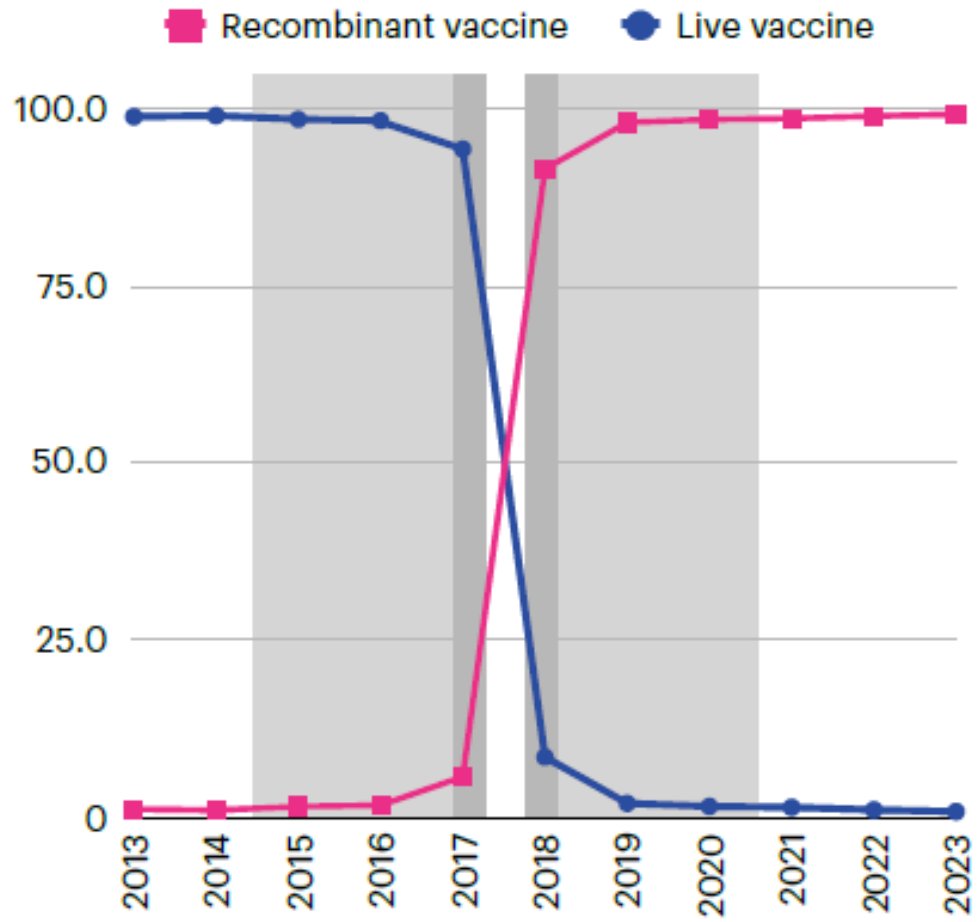
The recombinant shingles vaccine is associated with lower risk of dementia

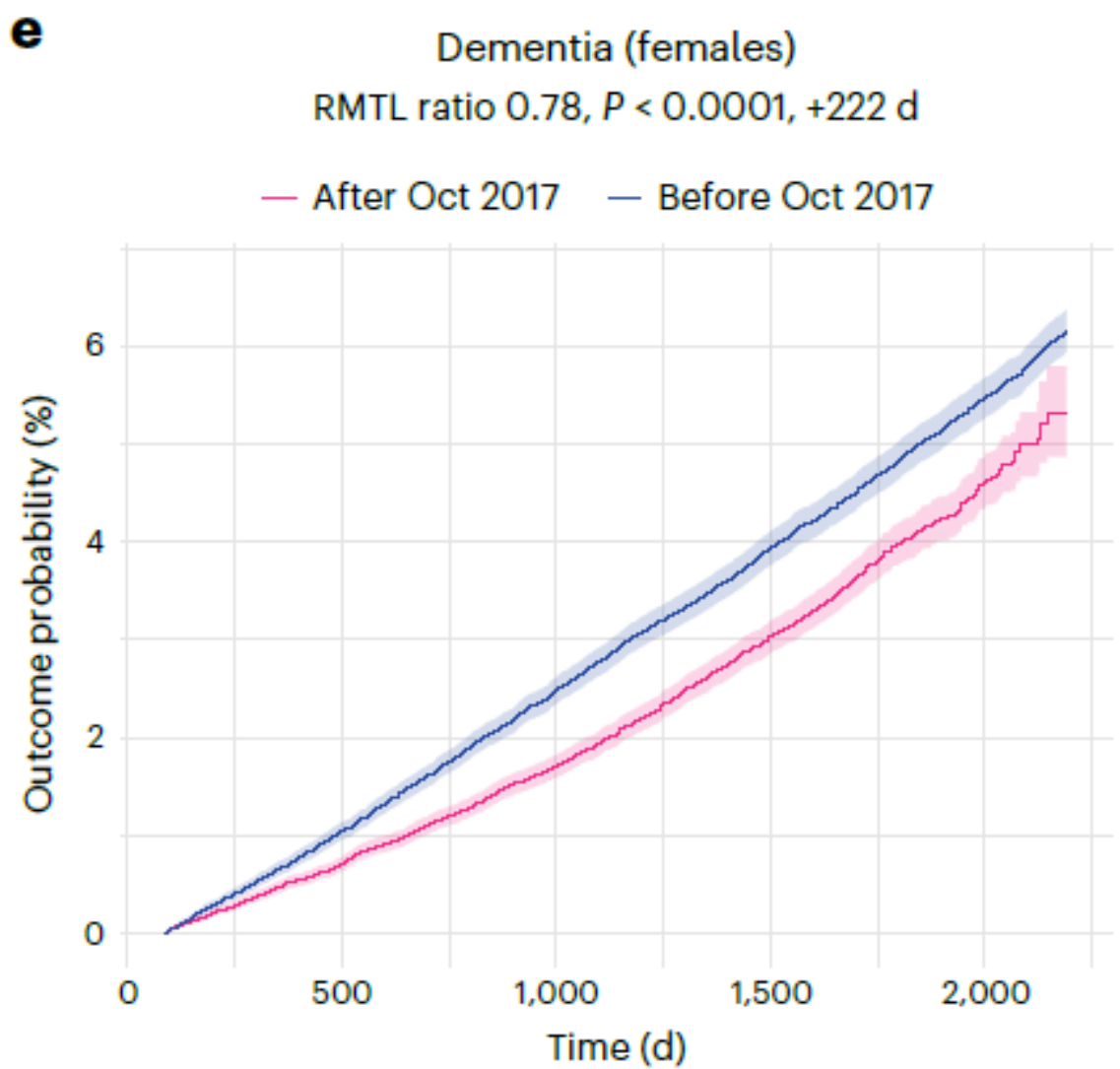
Received: 7 June 2024

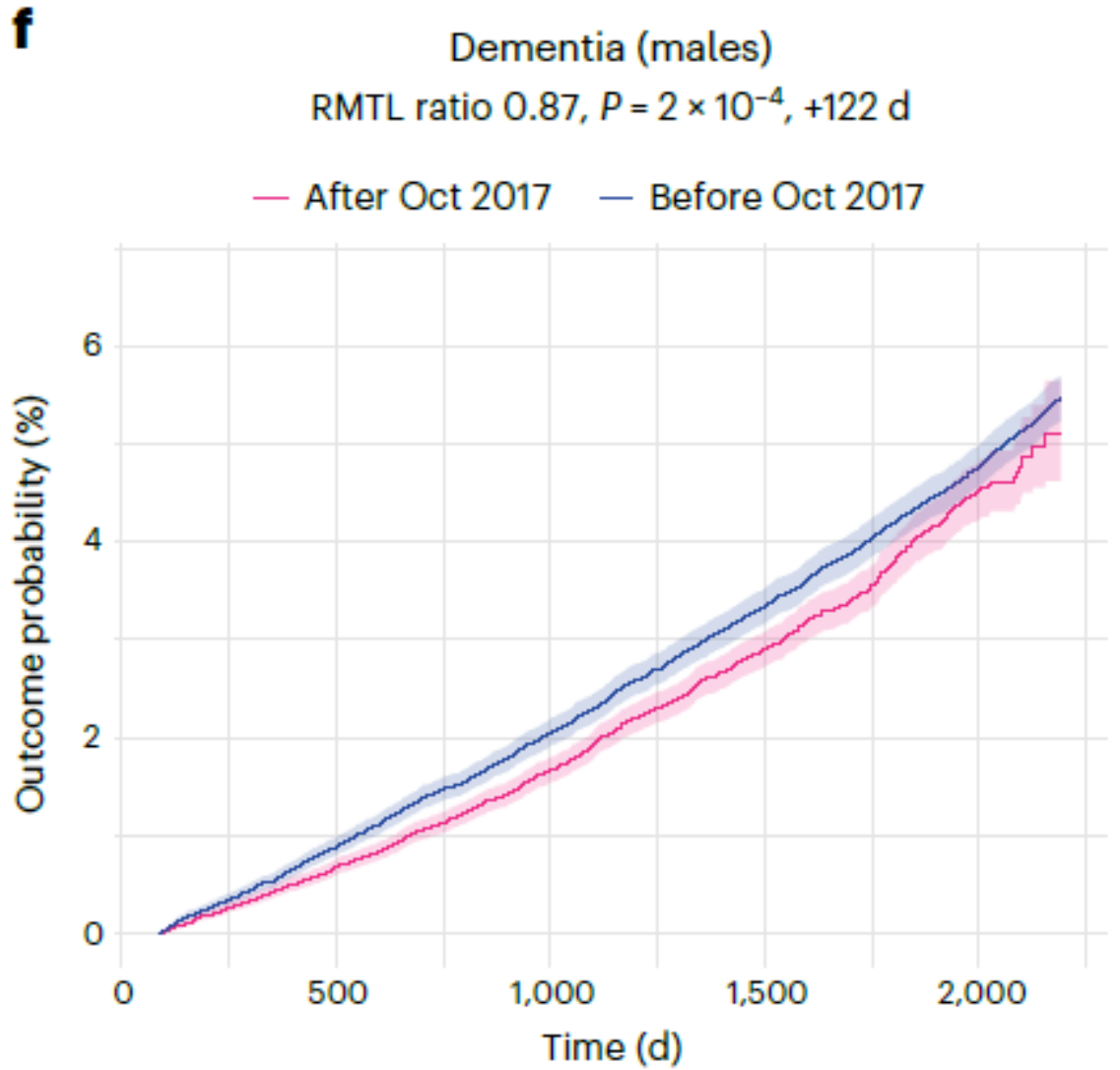
Accepted: 17 July 2024

Maxime Taquet[1,2], Quentin Dercon[3], John A. Todd[4] & Paul J. Harrison[1,2]

Entre 2016 et 2019, le vaccin vivant a été remplacé par le vaccin subunitaire aux USA







Et ce remplacement a été associé à un moindre risque de démence dans les 6 ans à compter de la date de vaccination

Vaccine 46 (2025) 126673

Contents lists available at ScienceDirect

Vaccine

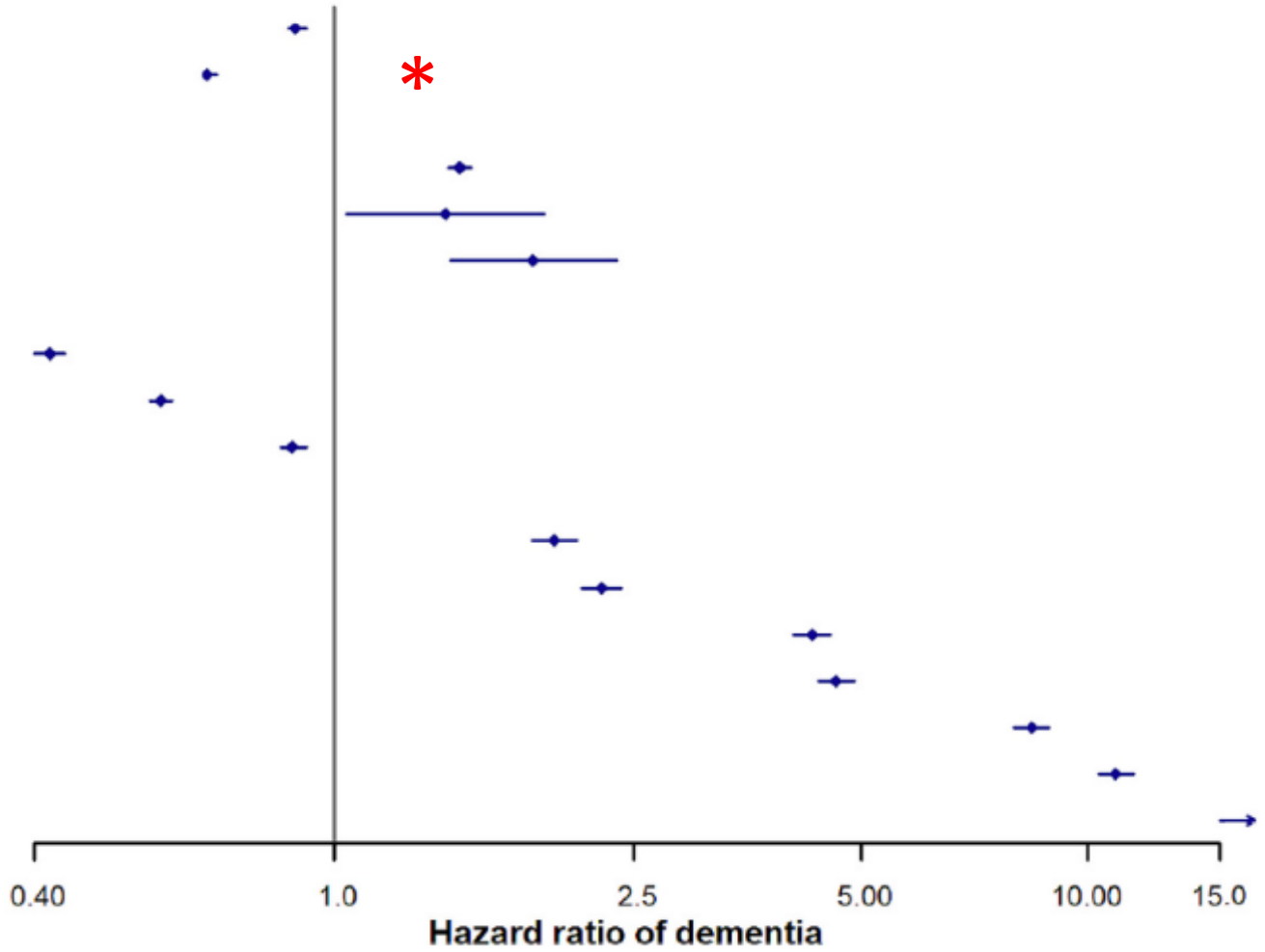
journal homepage: www.elsevier.com/locate/vaccine

Recombinant zoster vaccine and the risk of dementia

Emily Tang [a], Isabel Ray [a], Benjamin F. Arnold [a,b], Nisha R. Acharya [a,b,c,*]

[a] F.I. Proctor Foundation, University of California, San Francisco, California, United States
[b] Department of Ophthalmology, University of California, San Francisco, California, United States
[c] Department of Epidemiology and Biostatistics, University of California, San Francisco, California, United States

Variable	Hazard Ratio (95% CI)	P-value
RZV status (ref: Unvaccinated)		
Partially vaccinated	0.89 (0.87, 0.92)	<.001
Fully vaccinated	0.68 (0.67, 0.70)	<.001
Herpes zoster diagnosis (ref: no HZ dx)		
Prior to any RZV dose	1.47 (1.42, 1.52)	<.001
Post 1st dose	1.41 (1.04, 1.90)	.03
Post 2nd dose	1.84 (1.43, 2.37)	<.001
Antivirals Taken (ref: Unexposed)		
Herpes zoster related	0.42 (0.40, 0.44)	<.001
Other medical condition	0.59 (0.57, 0.61)	<.001
Baseline ZVL	0.88 (0.85, 0.92)	<.001
Age groups (ref: 50-54)		
55-59	1.96 (1.83, 2.10)	<.001
60-64	2.27 (2.13, 2.41)	<.001
65-69	4.31 (4.07, 4.56)	<.001
70-74	4.64 (4.39, 4.90)	<.001
75-79	8.43 (7.98, 8.90)	<.001
80-84	10.90 (10.33, 11.51)	<.001
85-89	17.60 (16.66, 18.60)	<.001



Dans cette étude également, avoir reçu le vaccin subunitaire* est associé à un moindre risque de démence

Journal of Infection 84 (2022) 490–498

Contents lists available at ScienceDirect

Journal of Infection

journal homepage: www.elsevier.com/locate/jinf

The adjuvanted recombinant zoster vaccine co-administered with the 13-valent pneumococcal conjugate vaccine in adults aged ≥50 years: A randomized trial

Ji-Young Min[a], Agnes Mwakingwe-Omari[a,*], Megan Riley[a], Lifeter Yenwo Molo[b], Jyoti Soni[c], Ginette Girard[d], Jasur Danier[a,*]

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[d] DIEX Recherche Sherbrooke, Sherbrooke, QC, Canada

Sécurité du vaccin

RESEARCH

Skin manifestations after immunisation with an adjuvanted recombinant zoster vaccine, Germany, 2020

Stefano Orru'[1], Sibylle Bierbaum[2,3,4], Alexander Enk[5], Hartmut Hengel[2,3,4], Marcus Hoffelner[1], Daniela Huzly[2,3,4], Brigitte Keller-Stanislawski[1], Vera Mahler[6], Maja Mockenhaupt[2,7], Doris Oberle[1]

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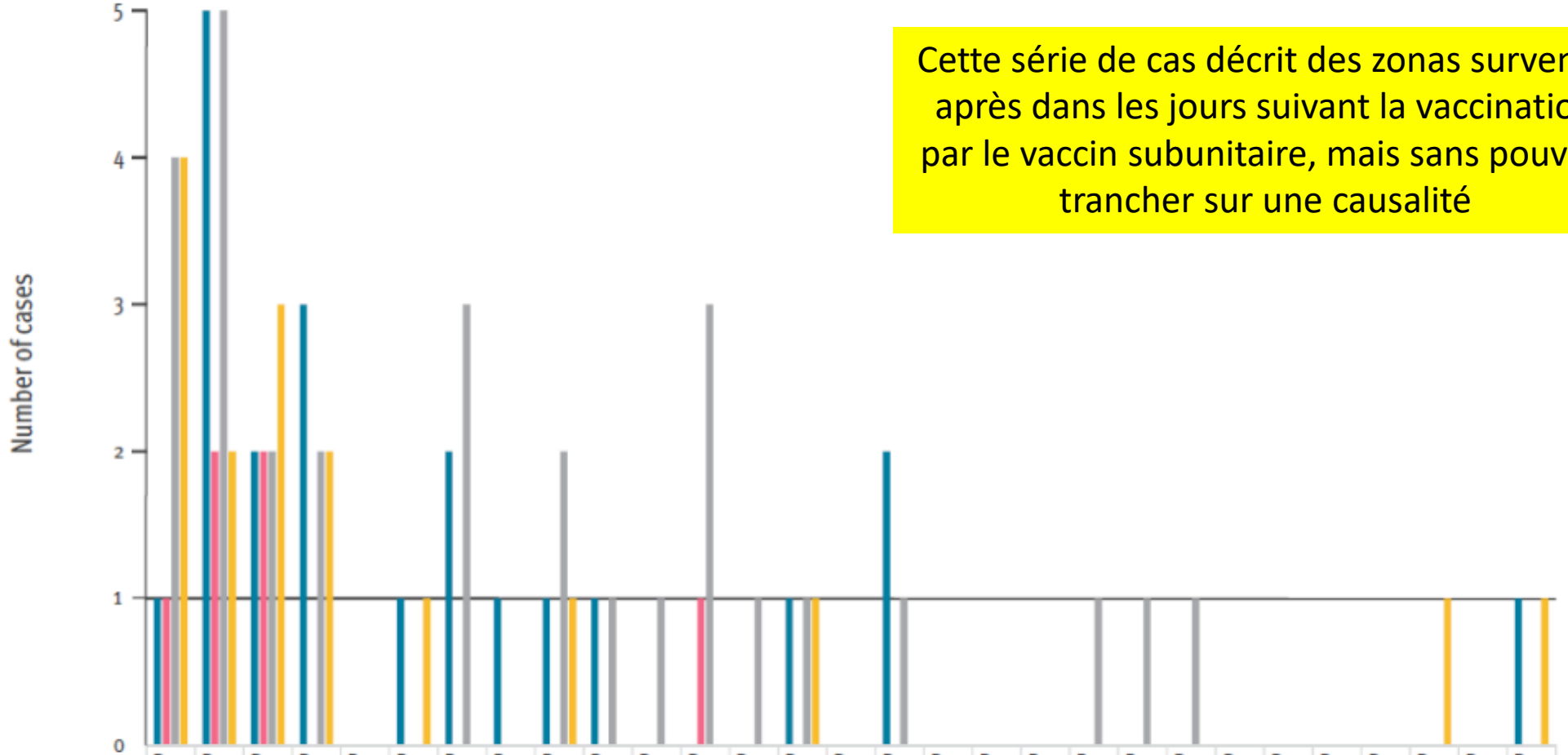
4. German Consulting Laboratory for HSV and VZV, Medical Center, University of Freiburg, Freiburg, Germany
5. Department of Dermatology, University Hospital Heidelberg, Heidelberg, Germany
6. Division of Allergology, Paul-Ehrlich-Institut, Langen, Germany
7. Dokumentationszentrum schwerer Hautreaktionen (dZh), Department of Dermatology, Medical Center, University of Freiburg, Freiburg, Germany

Correspondence: Doris Oberle (Doris.Oberle@pei.de)

Cette série de cas décrit des zonas survenus après dans les jours suivant la vaccination par le vaccin subunitaire, mais sans pouvoir trancher sur une causalité



	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28
VZV-pos. cases after first dose (n = 21)	1	5	2	3		1	2	1	1	1				1		2													1
VZV-pos. cases after second dose (n = 6)	1	2	2									1																	
VZV-neg. cases after first dose (n = 29)	4	5	2	2			3		2	1	1	3	1	1		1				1	1	1							
VZV-neg. cases after second dose (n = 16)	4	2	3	2		1			1					1													1		1

neg.: negative; pos.: positive; VZV: varicella-zoster virus.

JAMA Ophthalmology

Original Investigation FREE

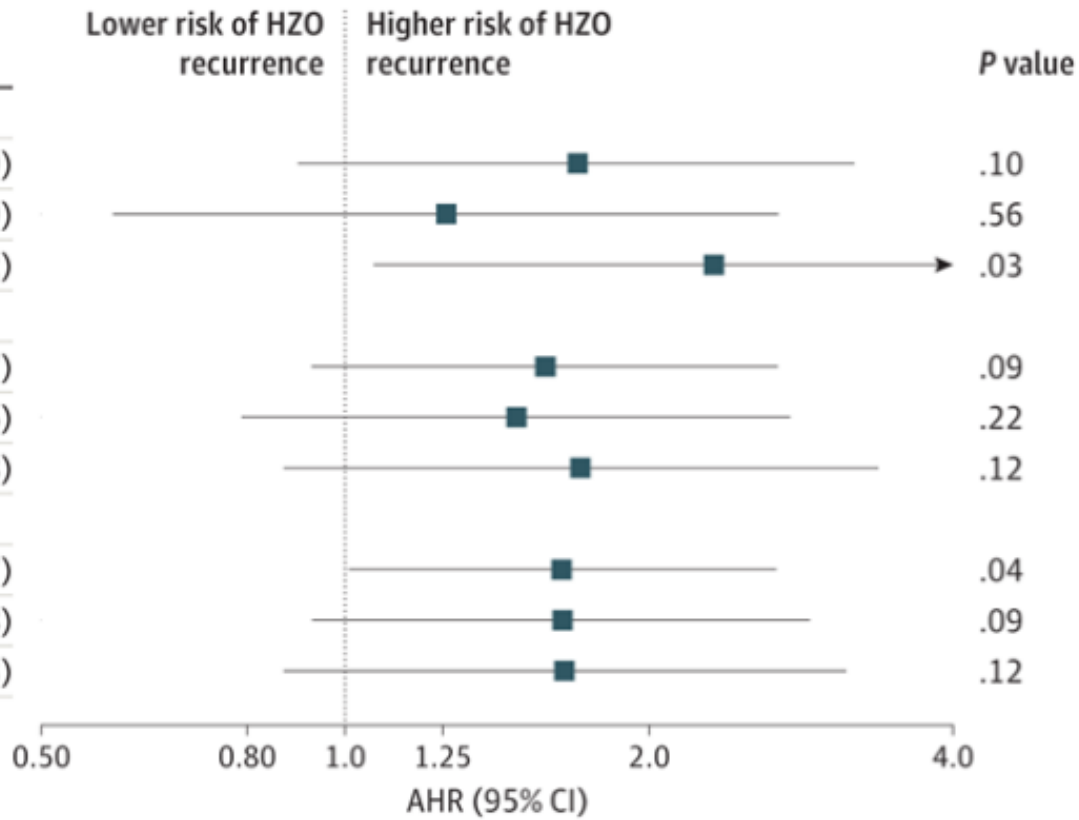
Risk of Herpes Zoster Ophthalmicus Recurrence After Recombinant Zoster Vaccination

Anushka Walia, BS[1]; Yuwei Sun, MS[2]; Nisha R. Acharya, MD[2,3,4]

Cette étude constate un surrisque de zona ophtalmique après vaccination

Figure 2. Adjusted Hazard Ratios (AHRs) of Herpes Zoster Ophthalmicus (HZO) Recurrence Associated With Recombinant Zoster Vaccine (RZV) Exposure

Outcome period, RZV exposure	AHR (95% CI)	P value
1-28 d		
Any exposure	1.70 (0.90-3.19)	.10
Dose 1	1.26 (0.59-2.69)	.56
Dose 2	2.32 (1.07-5.02)	.03
1-42 d		
Any exposure	1.58 (0.93-2.67)	.09
Dose 1	1.48 (0.79-2.76)	.22
Dose 2	1.71 (0.87-3.38)	.12
1-56 d		
Any exposure	1.64 (1.01-2.67)	.04
Dose 1	1.64 (0.93-2.88)	.09
Dose 2	1.65 (0.87-3.13)	.12



JAMA Internal Medicine

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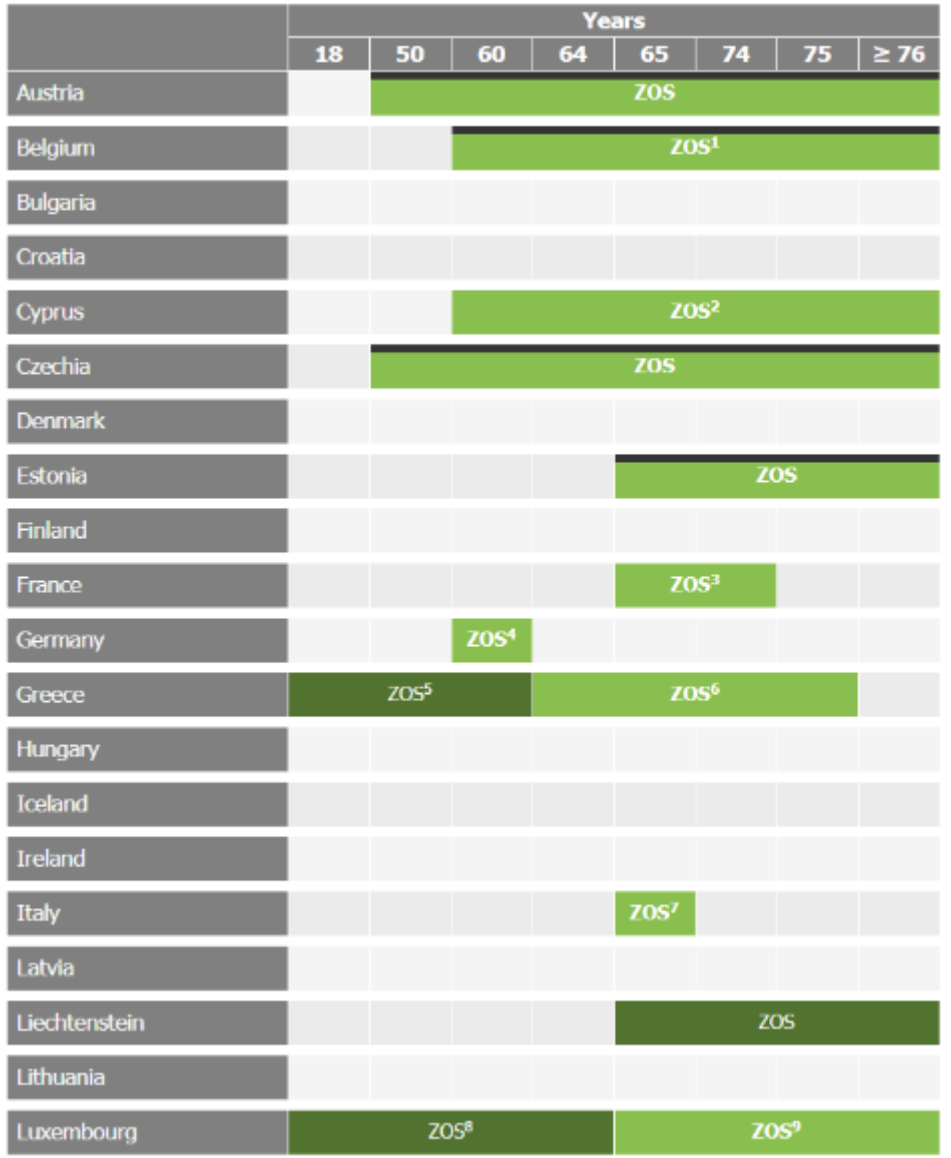
Original Investigation FREE

Risk of Guillain-Barré Syndrome Following Recombinant Zoster Vaccine in Medicare Beneficiaries

Ravi Goud, MD, MPH[1]; Bradley Lufkin, MPA, MSES[2]; Jonathan Duffy, MD, MPH[3] ; et al

- Dans cette étude : 3 cas de syndrome de Guillain-Barré par million de vaccination
- À suivre en pharmacovigilance

Résumé des recommandations en Europe : âge hétérogène



Recommandations

- Vaccination de tous les seniors (65 ans)
  - Faut-il débuter avant ?
- Vaccination par ailleurs de tous les adultes immunocompromés
- 2 doses à 2 mois d'intervalle
  - Faudra-t-il un rappel après 10-15 ans?
- Pas d'utilité d'une sérologie prévaccinale
- Sans doute inutile chez celles & ceux vacciné.e.s contre la varicelle dans l'enfance …

https://vaccine-schedule.ecdc.europa.eu/Scheduler/ByDisease?SelectedDiseaseId=51&SelectedCountryIdByDisease=-1