Articles de l'année en virologie

Pr Karine Lacombe
Sorbonne Université
Inserm UMR-S1136, IPLESP
Service de maladies infectieuses et tropicales,
Hôpital St Antoine, Paris, France

Global, regional, and national burden of HIV/AIDS, 1990–2021, and forecasts to 2050, for 204 countries and territories: the Global Burden of Disease Study 2021

GBD 2021 HIV Collaborators*

Lancet HIV 2024; 11: e807–22

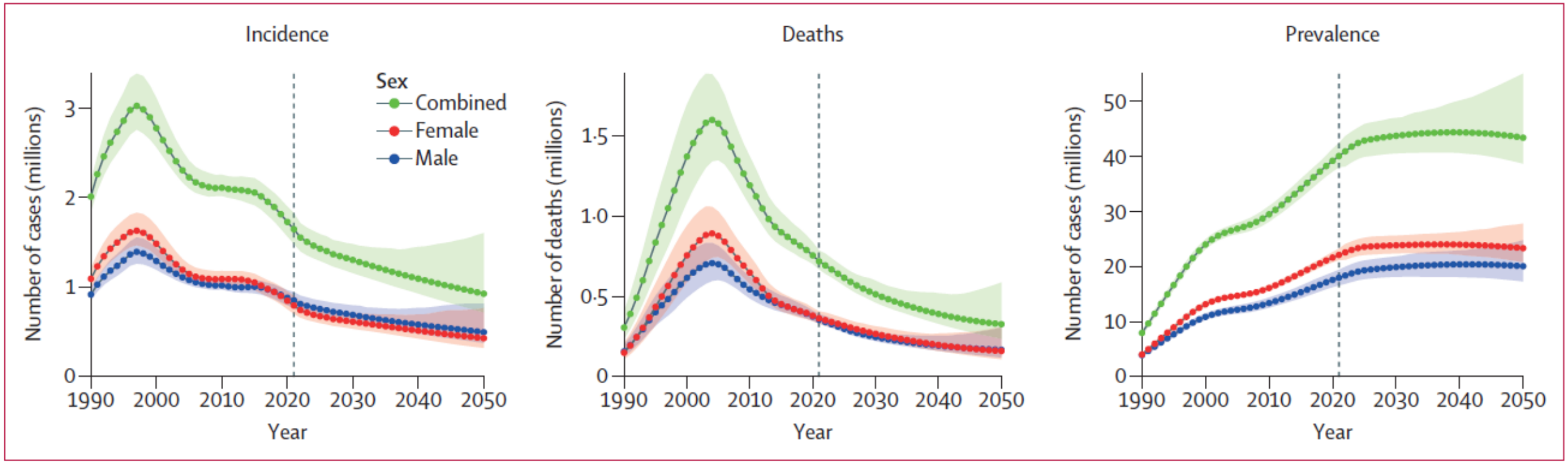
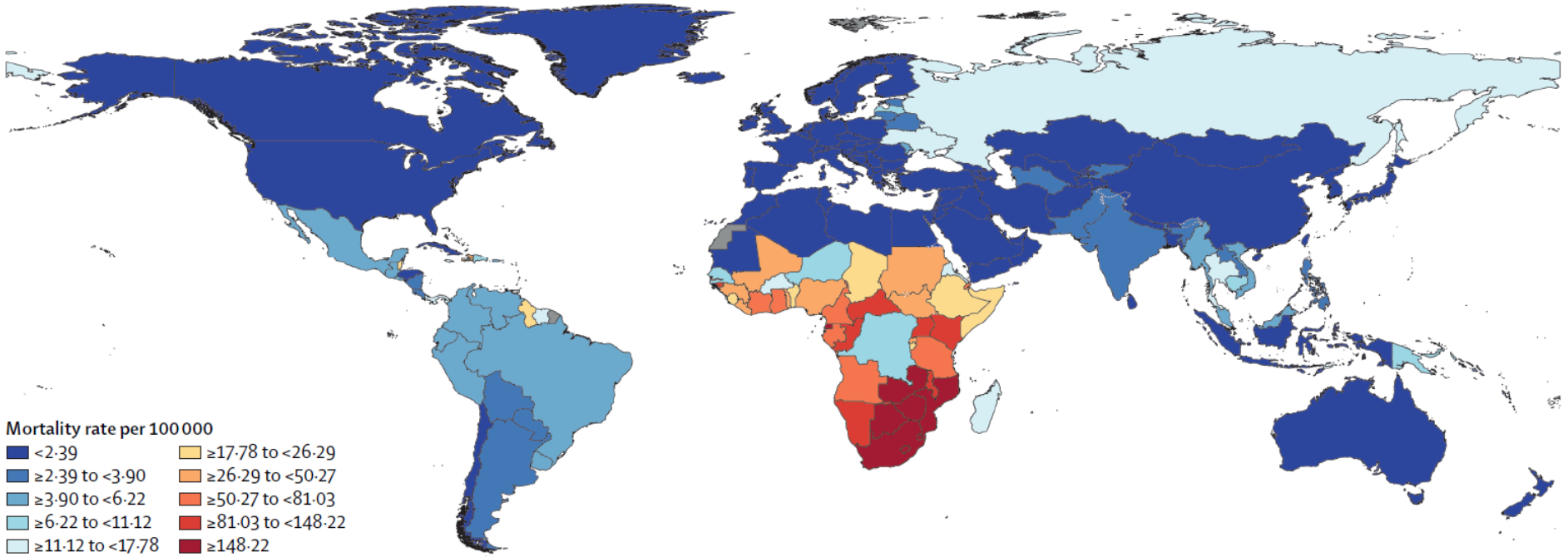
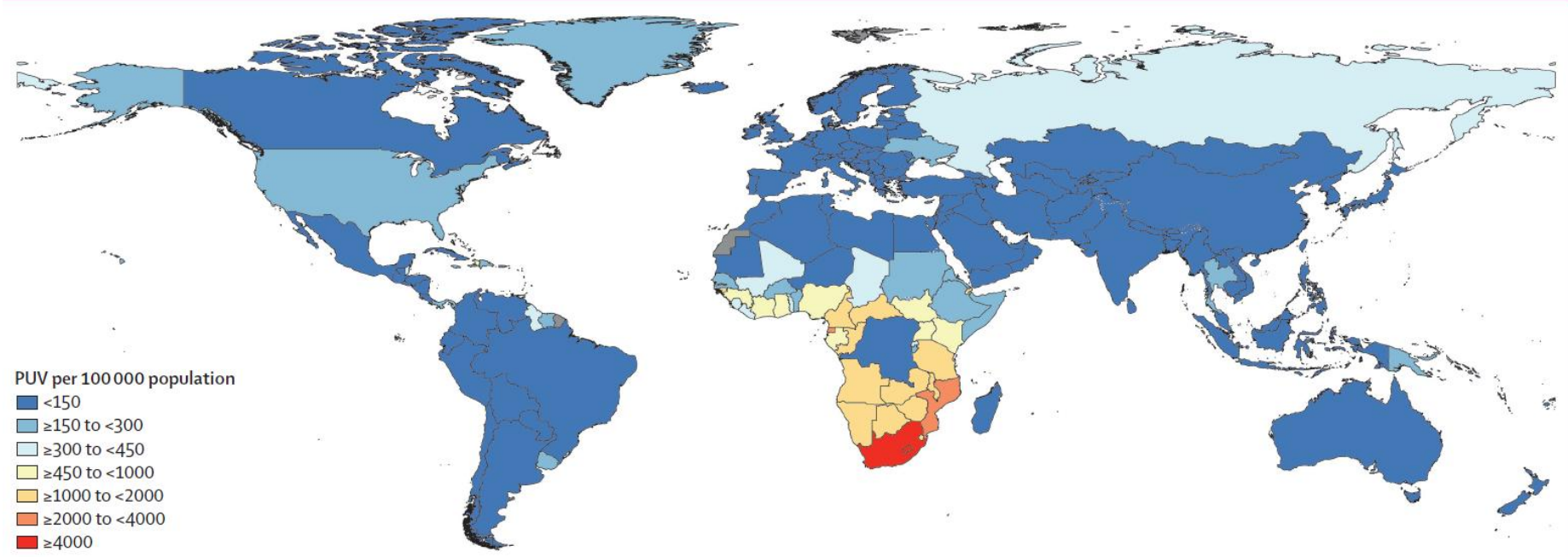


Figure 1: **Temporal trends of HIV incidence, mortality, and prevalence counts for 1990–2050**

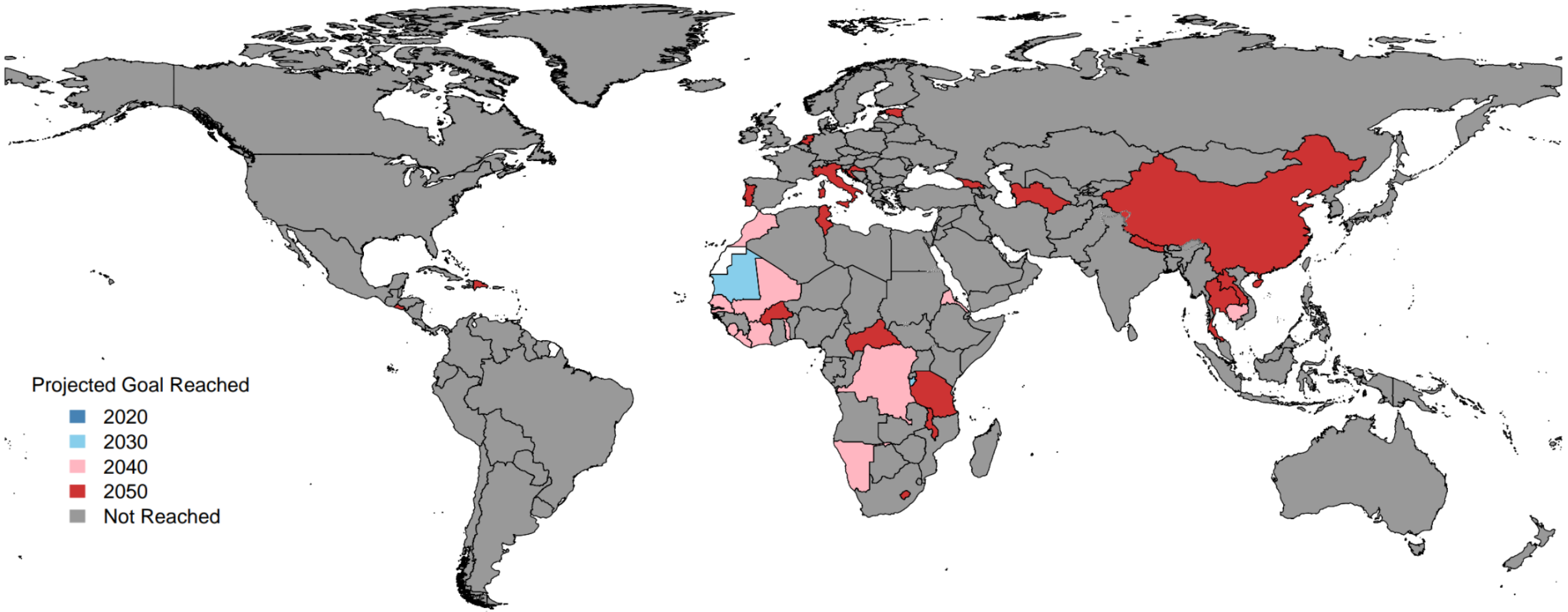
Time trends presented for all-age males, females, and both sexes combined. The shaded areas represent 95% uncertainty intervals.

B

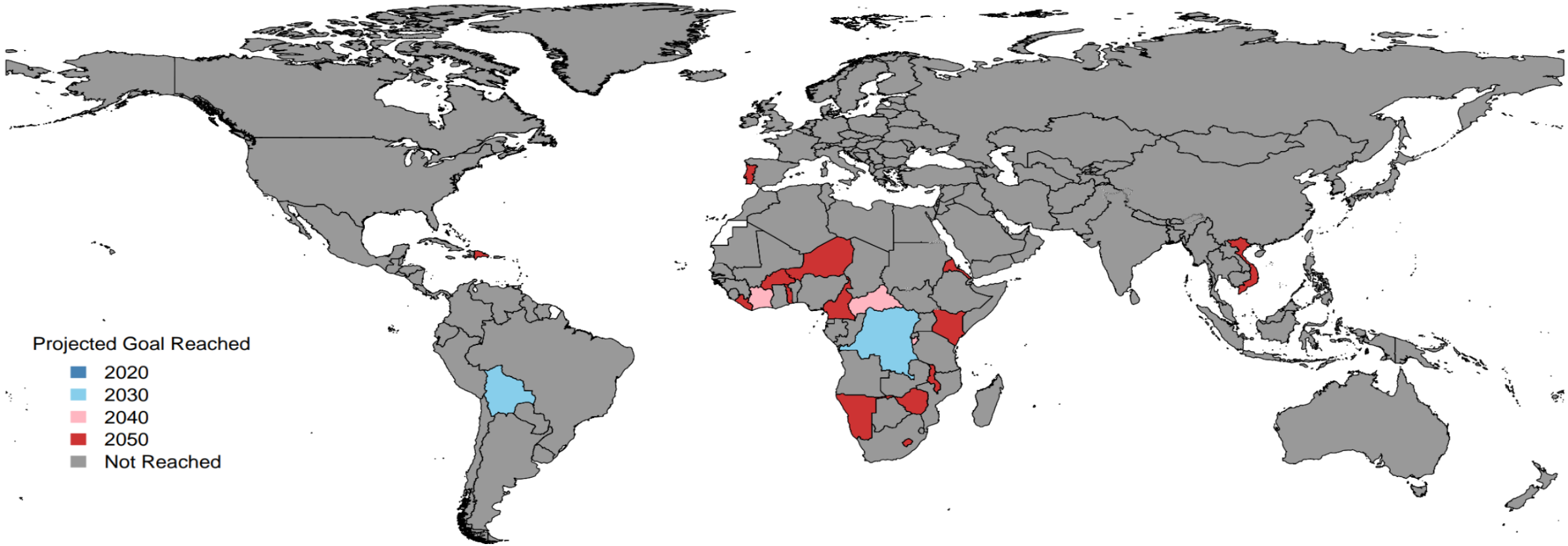

Mortality rate per 100 000
<2·39
≥2·39 to <3·90
≥3·90 to <6·22
≥6·22 to <11·12
≥11·12 to <17·78
≥17·78 to <26·29
≥26·29 to <50·27
≥50·27 to <81·03
≥81·03 to <148·22
≥148·22


PUV per 100 000 population
<150
≥150 to <300
≥300 to <450
≥450 to <1000
≥1000 to <2000
≥2000 to <4000
≥4000

Appendix Figure 5. (A) Timing of target threshold achievement (90% in reduction in new HIV infection)



Appendix Figure 5. (A) Timing of target threshold achievement for 90% decrease in HIV deaths by country



PURPOSE-1, Une révolution dans le paradigme de la prévention du VIH

The NEW ENGLAND JOURNAL of MEDICINE

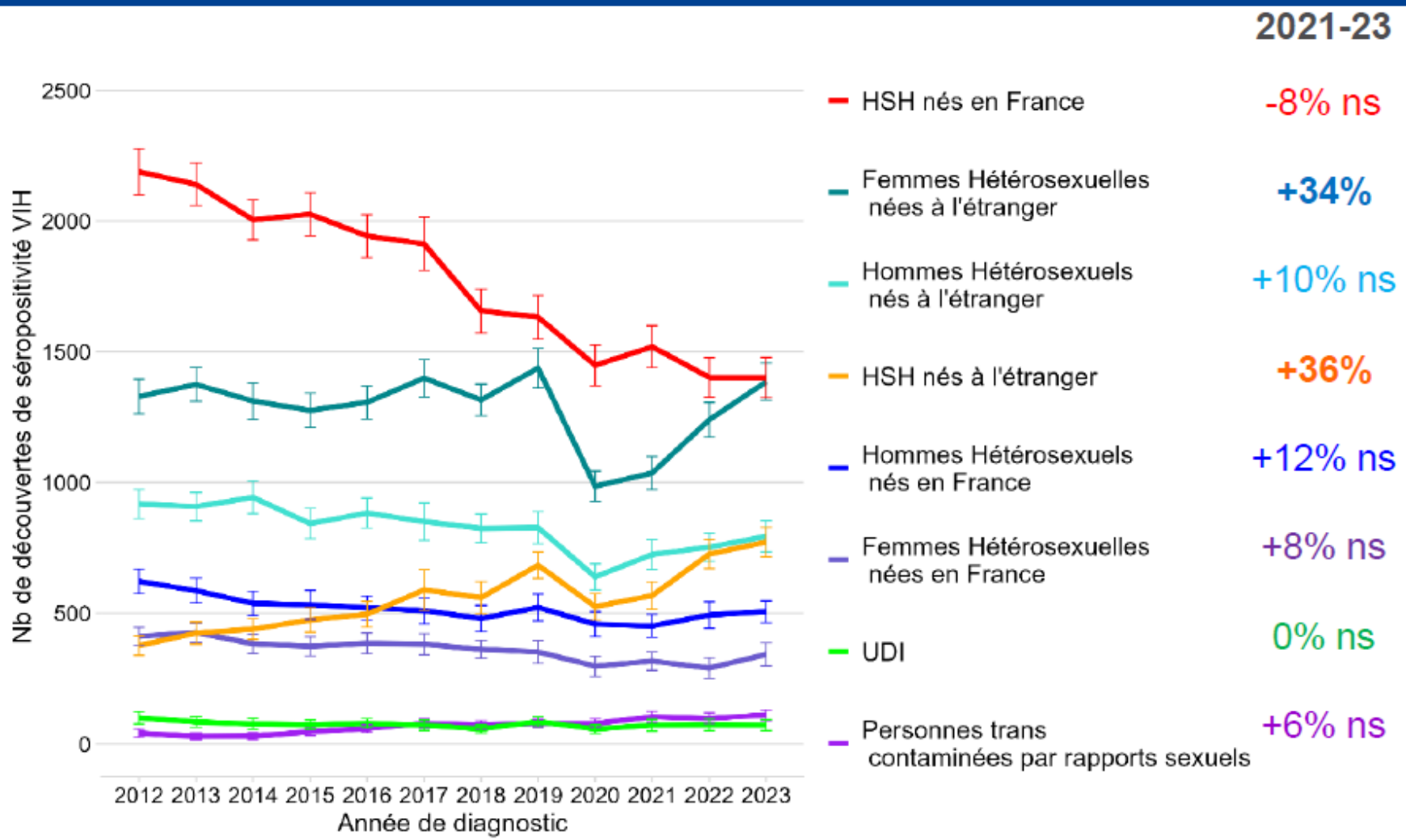
ESTABLISHED IN 1812 OCTOBER 3, 2024 VOL. 391 NO. 13

Twice-Yearly Lenacapavir or Daily F/TAF for HIV Prevention in Cisgender Women

L.-G. Bekker, M. Das, Q. Abdool Karim, K. Ahmed, J. Batting, W. Brumskine, K. Gill, I. Harkoo, M. Jaggernath, G. Kigozi, N. Kiwanuka, P. Kotze, L. Lebina, C.E. Louw, M. Malahleha, M. Manentsa, L.E. Mansoor, D. Moodley, V. Naicker, L. Naidoo, M. Naidoo, G. Nair, N. Ndlovu, T. Palanee-Phillips, R. Panchia, S. Pillay, D. Potloane, P. Selepe, N. Singh, Y. Singh, E. Spooner, A.M. Ward, Z. Zwane, R. Ebrahimi, Y. Zhao, A. Kintu, C. Deaton, C.C. Carter, J.M. Baeten, and F. Matovu Kiweewa, for the PURPOSE 1 Study Team*

DÉCOUVERTES DE SÉROPOSITIVITÉ VIH PAR POPULATION

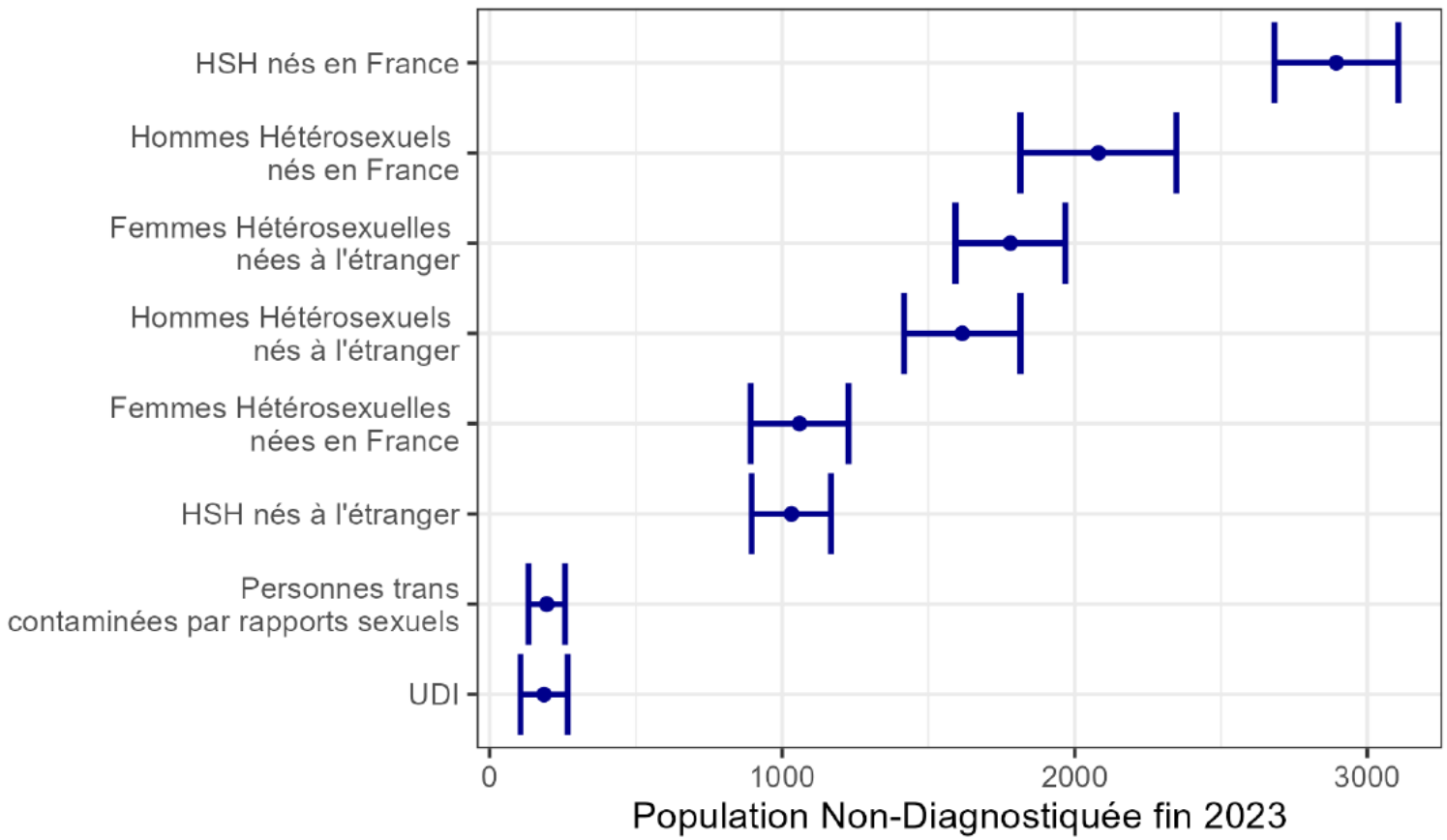
Santé publique France



2021-2023 : augmentation chez les femmes hétérosexuelles nées à l'étranger et les HSH nés à l'étranger

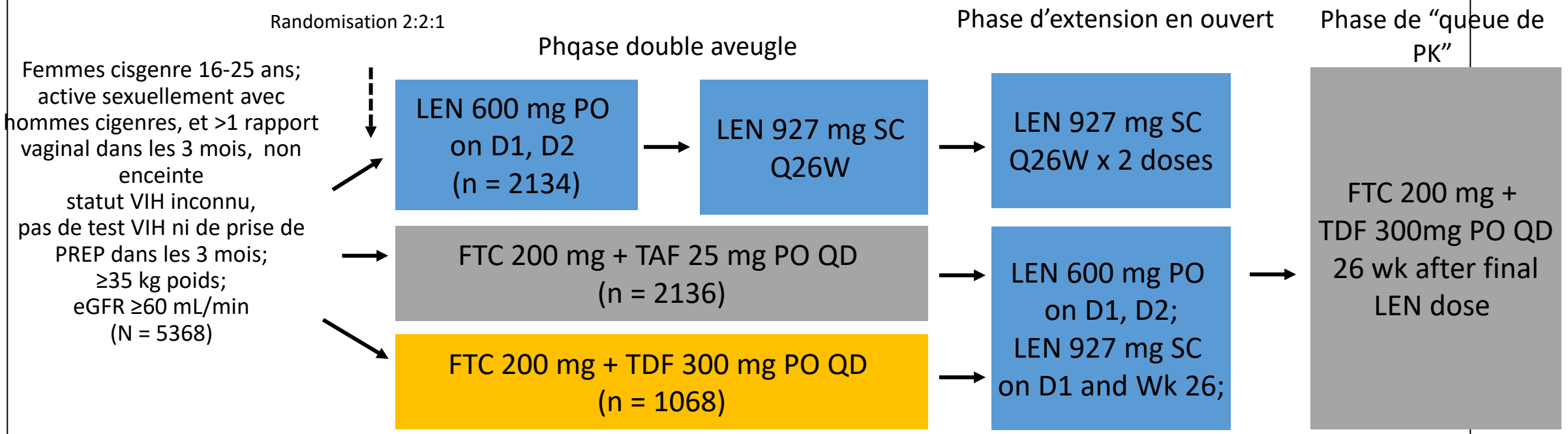
Nous estimons que **10 756 (IC 10 244 – 11 267)** personnes vivant avec le VIH en France fin 2023 ne connaissaient pas leur séropositivité, dont:

- **9 136 (8 644 - 9 627)** ont été contaminées en France (85%)
- **1 620 (1 478-1 762)** ont été contaminées avant l'arrivée (15%)



PURPOSE 1: Schéma d'étude

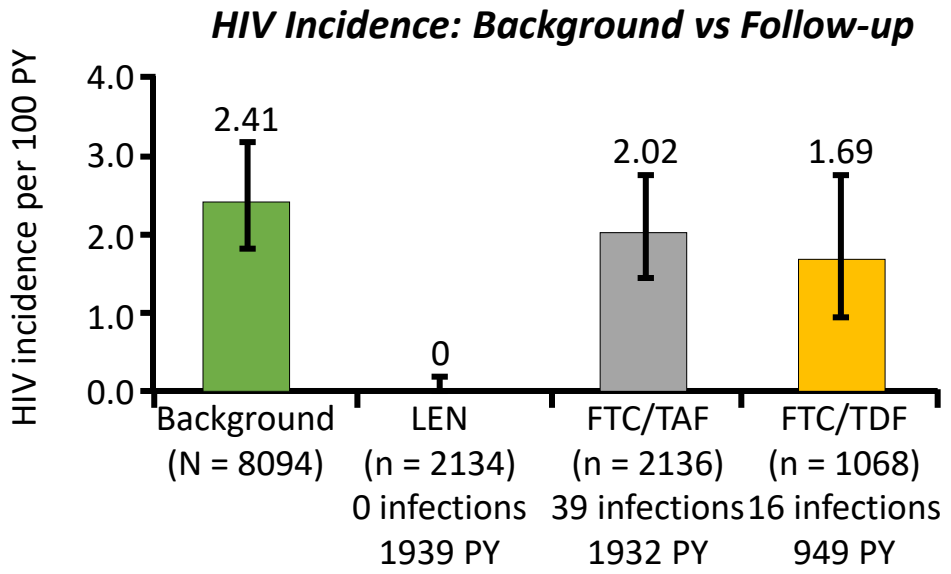
- Essai de phase III, controlé, randomisé, multicentrique, double aveugle, en Afrique du Sud et Ouganda: **efficacité du lenacapavir / 6 mois dans la prévention du VIH**

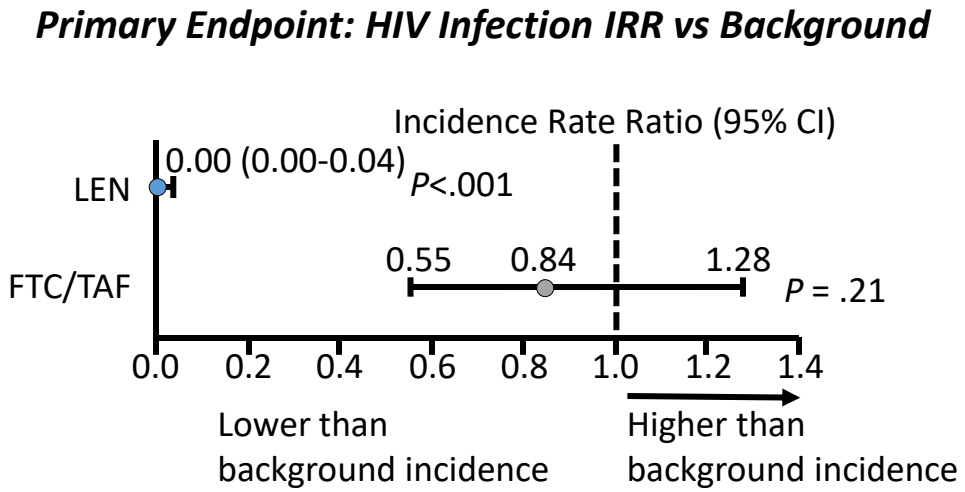


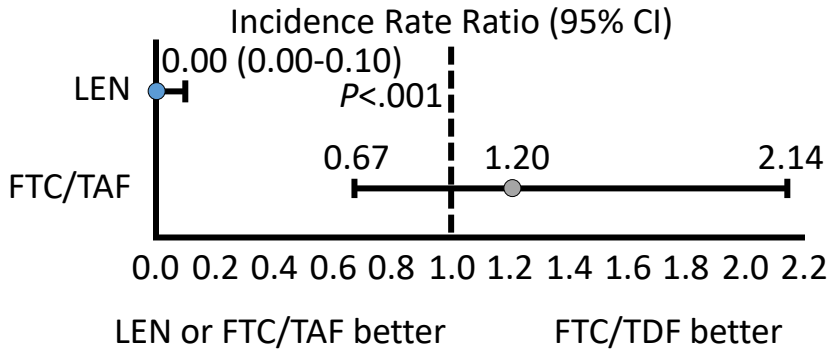
- Primary endpoint: HIV incidence vs background HIV
- Key secondary endpoints: HIV incidence among subgroups, safety, adherence

Bekker. N Engl J Med. 2024;391:1179. NCT04994509.

PURPOSE-1: Incidence du VIH



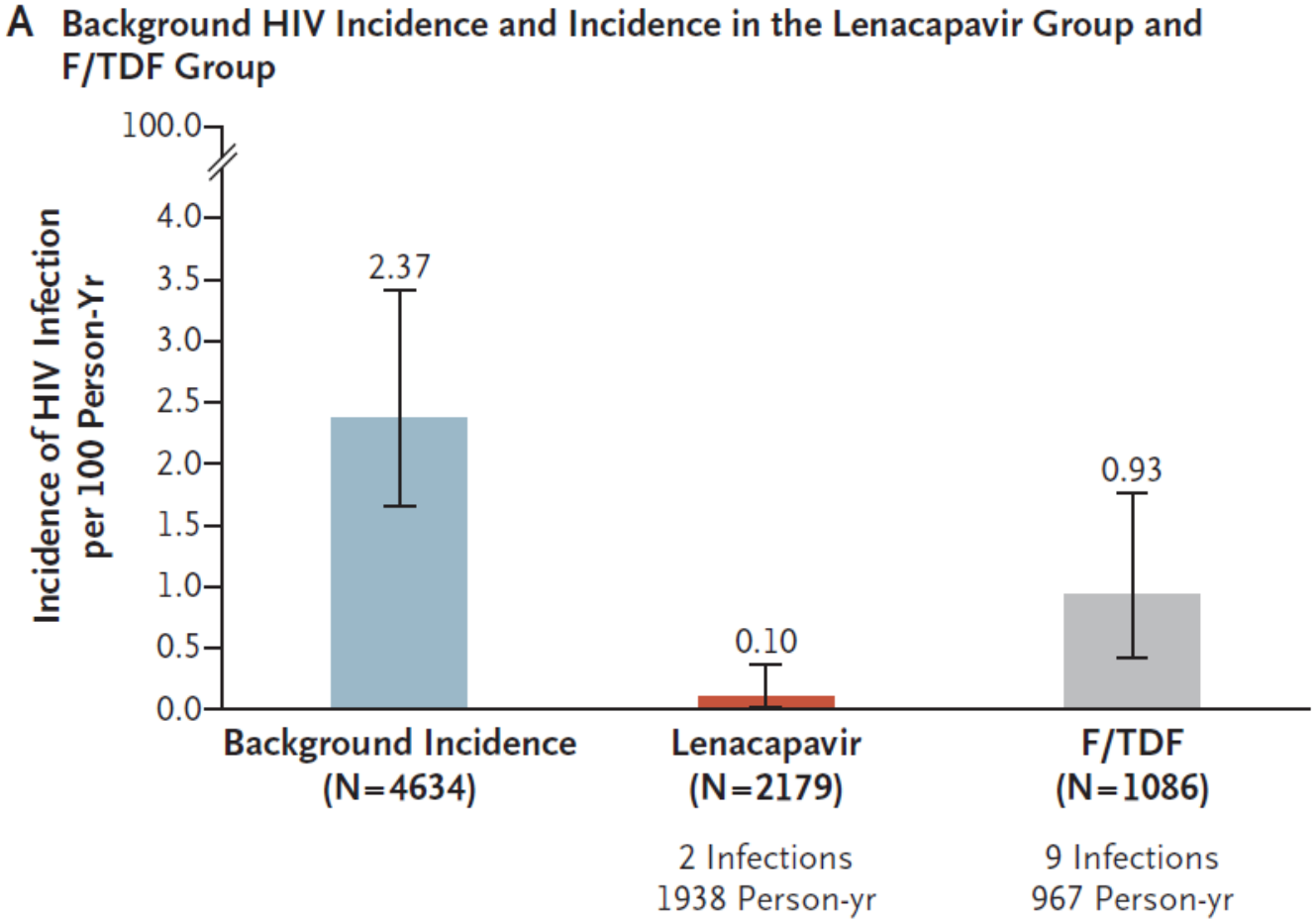


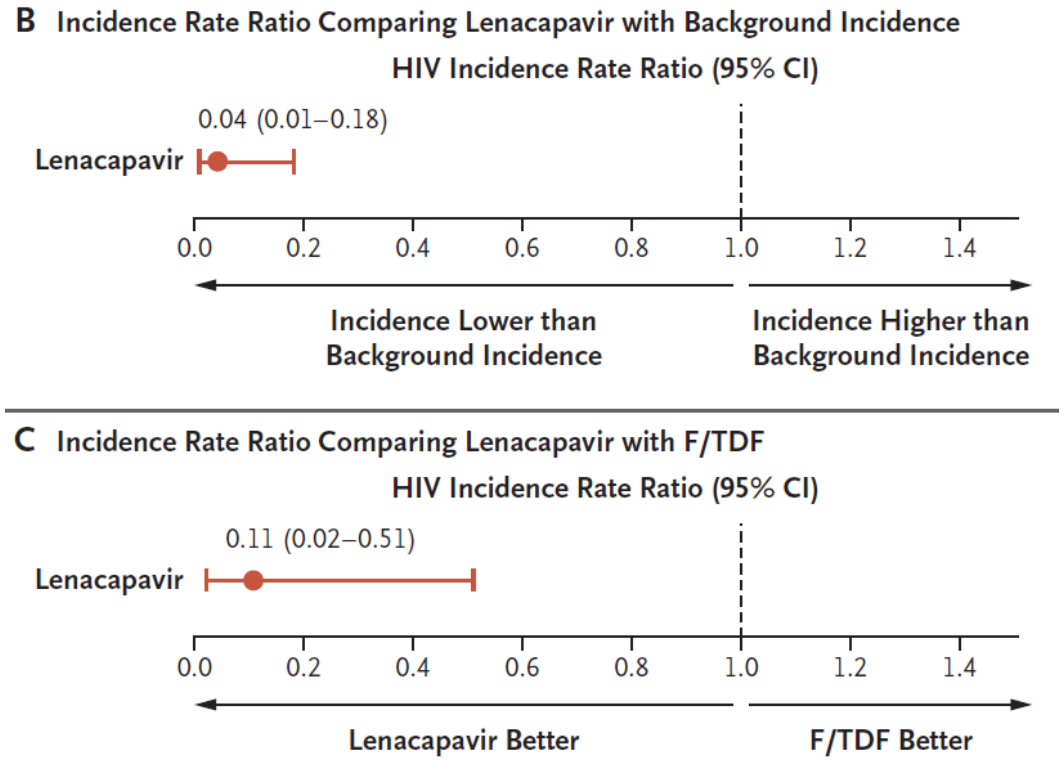


- Pas d'infection VIH dans le groupe LEN
- IRR avec LEN significativement plus basse que l'incidence de base ou sous FTC/TDF
- IRR avec FTC/TAF pas différente de l'incidence de base ou sous FTC/TDF

Bekker. AIDS 2024. Abstr SS0407. Bekker. NEJM. 2024;[Epub].

Résultats confirmés dans Purpose-2 (hommes)





Kelley CF, et al. **N Engl J Med. 2024 Nov 27.** doi: 10.1056/NEJMoa2411858.

H5N1 clade 2.3.4.4b: à l'origine d'une pandémie à venir ?

nature

https://doi.org/10.1038/s41586-025-08609-8

Accelerated Article Preview

Pathogenesis of bovine H5N1 clade 2.3.4.4b infection in Macaques

Received: 30 September 2024

Accepted: 7 January 2025

Accelerated Article Preview
Published online: 15 January 2025

Cite this article as: Rosenke, K. et al. Pathogenesis of bovine H5N1 clade 2.3.4.4b infection in Macaques. *Nature* https://doi.org/10.1038/s41586-025-08609-8 (2025)

Kyle Rosenke, Amanda Giffin, Franziska Kaiser, Ekaterina Altynova, Reshma Mukesh, Meaghan Flagg, Thomas Tipih, Kerry Goldin, Arthur Wickenhagen, Brandi N. Williamson, Shane Gallogly, Shanna S. Leventhal, Tessa Lutterman, Atsushi Okumura, Matthew C. Lewis, Kishore Kanakabandi, Craig Martens, Kwe C. Yinda, Deepashri Rao, Brian J. Smith, Carl Shaia, Greg Saturday, Patrick Hanley, Neeltje van Doremalen, Emmie de Wit, Vincent J. Munster & Heinz Feldmann

PLANÈTE • GRIPPE AVIAIRE

Les Etats-Unis rapportent un premier décès humain lié à la grippe aviaire

Le malade, âgé de plus de 65 ans, était le premier cas grave humain détecté dans le pays, et souffrait d'autres pathologies. Il avait été contaminé par le virus H5N1 par des oiseaux de basse-cour et sauvages.

Le Monde avec AFP

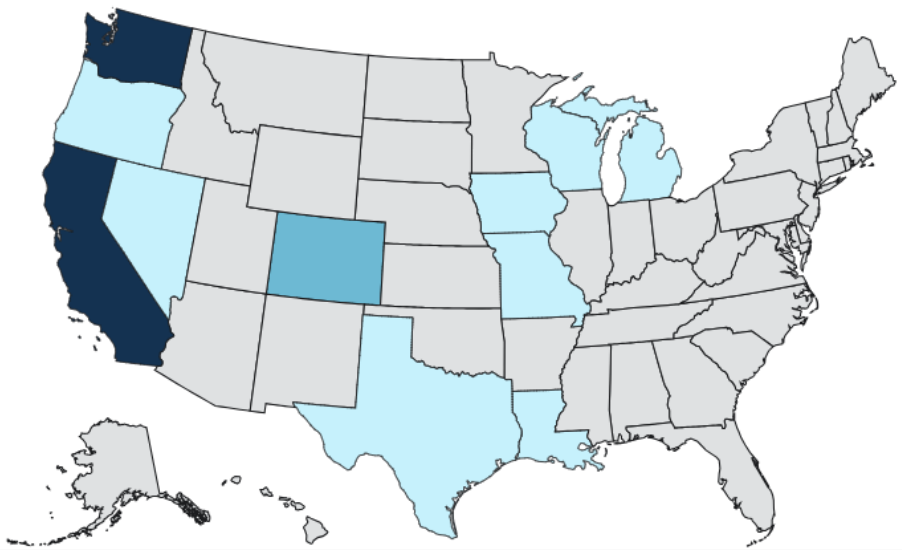
Publié le 07 janvier 2025 à 02h09, modifié le 07 janvier 2025 à 07h28 • Lecture 2 min.

National Total Cases: 68

Cases	Exposure Source
41	Dairy Herds (Cattle)*
23	Poultry Farms and Culling Operations*
1	Other Animal Exposure†
3	Exposure Source Unknown‡

NOTE: One additional case was previously detected in a poultry worker in Colorado in 2022. Louisiana reported the first H5 bird flu death in the U.S.

*Exposure Associated with Commercial Agriculture and Related Operations
†Exposure was related to other animals such as backyard flocks, wild birds, or other mammals
‡Exposure source was not able to be identified



Total cases

0 1-5 6-10 >10

Download Data (CSV)

National situation summary

Person-to-person spread	Current public health risk
NONE There is no known person-to-person spread at this time.	LOW The current public health risk is Low.

Cases in the U.S.	Deaths in U.S.
68 cases	1 cases

Notes from the Field: Seroprevalence of Highly Pathogenic Avian Influenza A(H5) Virus Infections Among Bovine Veterinary Practitioners — United States, September 2024

Weekly / February 13, 2025 / 74(4);50–52

Print

Jerome Leonard[1,2]; Elizabeth J. Harker[1]; Christine M. Szablewski[1]; Sara F. Margrey[3]; K. Fred Gingrich II[4]; Keyana Crossley[5]; Emily Fletcher[3]; Claire J. McCreavy[1]; Sabrina Weis-Torres[6]; Dennis Wang[2,7]; Emma K. Noble[1]; Min Z. Levine[1]; H. Pamela Pagano[1]; Crystal Holiday[1]; Feng Liu[1]; Stacie Jefferson[1]; Zhu-Nan Li[1]; F. Liaini Gross[1]; Carrie Reed[1]; Sascha Ellington[1]; Alexandra M. Mellis[1]; Samantha M. Olson[1] (VIEW AUTHOR AFFILIATIONS)

Summary

What is already known about this topic?

Highly pathogenic avian influenza (HPAI) A(H5) virus infections have been detected in humans exposed to infected dairy cattle.

What is added by this report?

Public health officials conducted a serosurvey among 150 bovine veterinary practitioners. Three practitioners had evidence of recent infection with HPAI A(H5) virus, including two without exposures to animals with known or suspected HPAI A(H5) virus infections and one who did not practice in a U.S. state with known HPAI A(H5) virus–infected cattle.

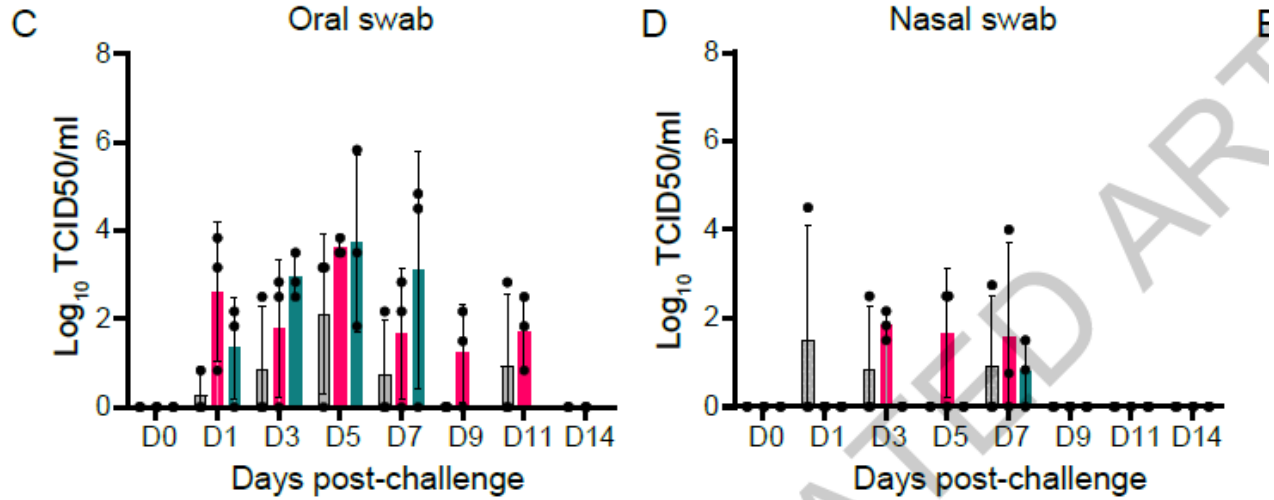
What are the implications for public health practice?

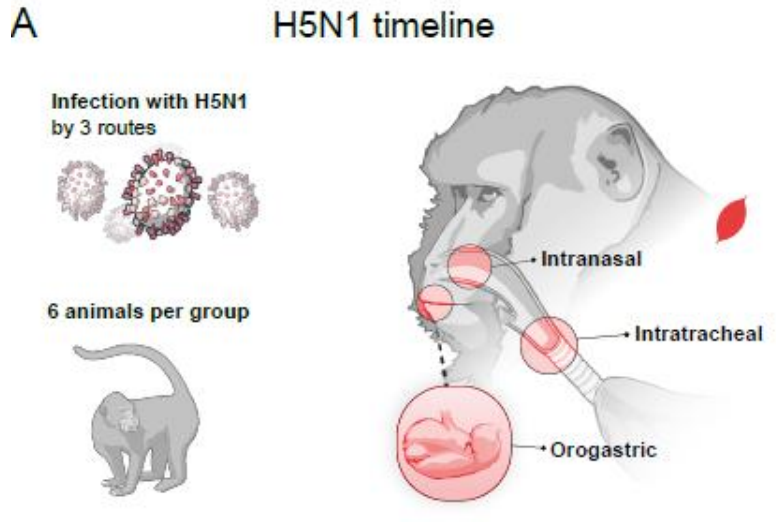
These findings suggest the possible benefit of systematic surveillance for rapid identification of HPAI A(H5) virus in dairy cattle, milk, and humans who are exposed to cattle to ensure appropriate hazard assessments.

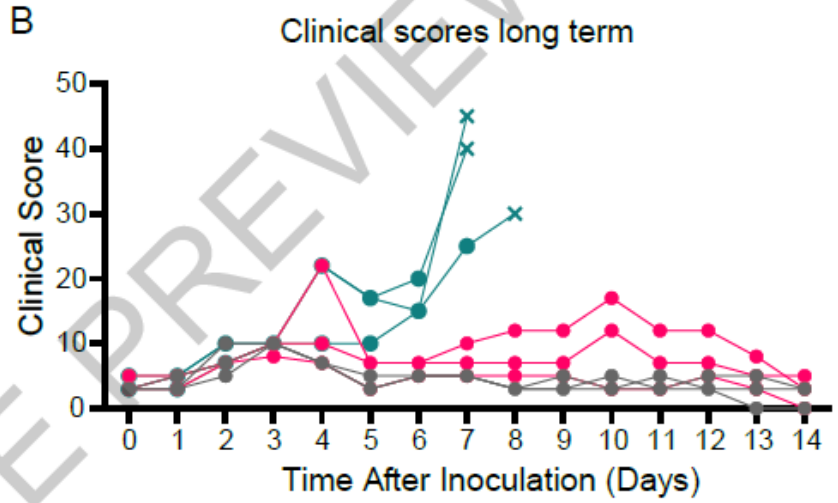
Historique de l’émergence – modèle expérimental

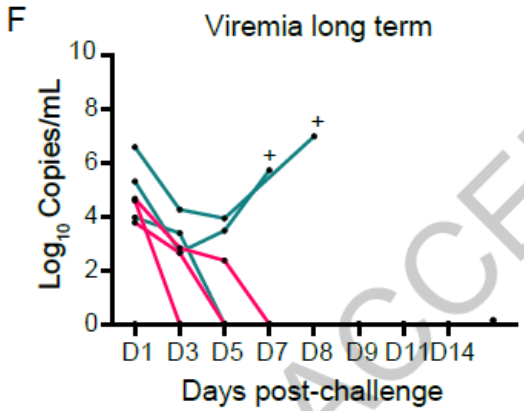
- 1ère détection de ce variant hautement pathogène chez les oiseaux en 2022
- Preuve début 2024 d’une contamination des vaches et autres mammifères aux US avec contamination du lait
- Très haut titre viral dans le lait et crainte d’une transmission à l’homme par l’ingestion de lait et pas seulement par l’air
- Modèle expérimental sur macaque Rhesus avec challence intratrachéal, intranasal et gastrique

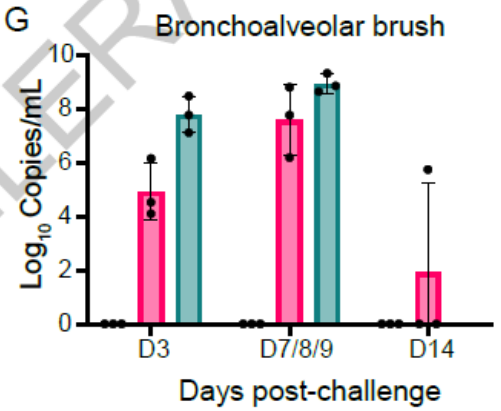
Résultats expérimentaux

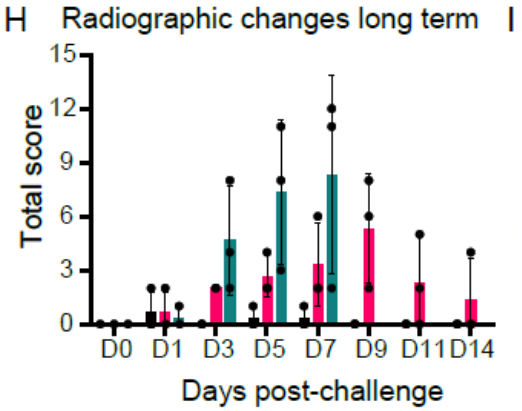












Orogastric

Intranasal

Intratracheal

Conclusion:

- Risque de grippe modérée à sévère avec passage systémique de virus chez les macaques infectés par voie nasale ou intratrachéale, respectivement
- Risque très faible de grippe symptomatique si absorption gastrique de virus

NEWS EXPLAINER | 30 January 2025

Will bird flu spark a human pandemic? Scientists say the risk is rising

H5N1 is adapting to new mammalian hosts, raising the possibility of the virus spreading between humans.

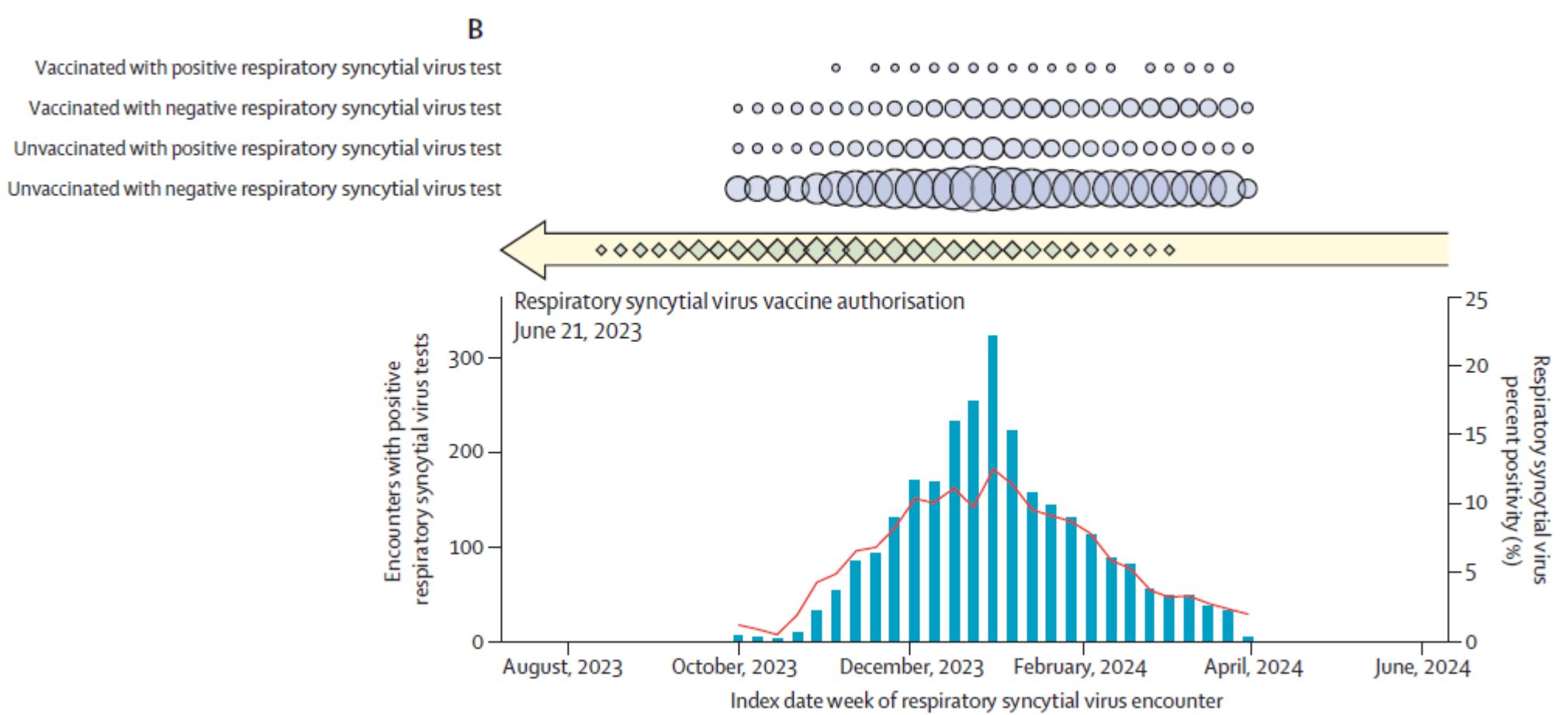
By Max Kozlov

Respiratory syncytial virus (RSV) vaccine effectiveness against RSV-associated hospitalisations and emergency department encounters among adults aged 60 years and older in the USA, October, 2023, to March, 2024: a test-negative design analysis

Lancet 2024; 404: 1547–59

Amanda B Payne, Janet A Watts, Patrick K Mitchell, Kristin Dascomb, Stephanie A Irving, Nicola P Klein, Shaun J Grannis, Toan C Ong, Sarah W Ball, Malini B DeSilva, Karthik Natarajan, Tamara Sheffield, Daniel Bride, Julie Arndorfer, Allison L Naleway, Padma Koppolu, Bruce Fireman, Ousseny Zerbo, Julius Timbol, Kristin Goddard, Brian E Dixon, William F Fadel, Colin Rogerson, Katie S Allen, Suchitra Rao, David Mayer, Michelle Barron, Sarah E Reese, Elizabeth A K Rowley, Morgan Najdowski, Allison Avrich Ciesla, Josephine Mak, Emily L Reeves, Omobosola O Akinsete, Charlene E McEvoy, Inih J Essien, Mark W Tenforde, Katherine E Fleming-Dutra, Ruth Link-Gelles

- Etude en vie réelle effectuée aux Etaus-Unis sur base de données électroniques (équivalent EDS)
- Personnes consultant aux urgences + hospitalisées pour pathologie respiratoire basse virale
- Vaccination GSK ou Pfizer > 14 jours
- Efficacité vaccinale: rapport du taux de vaccination chez les patients à test VRS + v. patients à test VRS –
- Ajustement sur âge, ethnie, jour du test, index de vulnérabilité sociale, région d’oriigine, nombre de comorbidités générales et comorbités respiratoires
- 36 706 sujets


B
Vaccinated with positive respiratory syncytial virus test
Vaccinated with negative respiratory syncytial virus test
Unvaccinated with positive respiratory syncytial virus test
Unvaccinated with negative respiratory syncytial virus test
Respiratory syncytial virus vaccine authorisation
June 21, 2023
Encounters with positive respiratory syncytial virus tests
Respiratory syncytial virus percent positivity (%)
0
100
200
300
0
5
10
15
20
25
August, 2023
October, 2023
December, 2023
February, 2024
April, 2024
June, 2024
Index date week of respiratory syncytial virus encounter

	Total	Positive RSV test result (number [%])	Median interval since dose (days [IQR])	Unadjusted vaccine effectiveness (% [95% CI])	Adjusted* vaccine effectiveness (% [95% CI])
Immunocompetent—hospitalisation					
≥60 years					
Unvaccinated	25816	1567 (6%)	NA	0 (ref)	0 (ref)
Vaccinated†	2455	35 (1%)	74 (44–109)	78 (69–84)	80 (71–85)
14–59 days earlier	934	7 (1%)	37 (26–48)	88 (75–94)	90 (79–95)
≥60 days earlier	1520	27 (2%)	100 (79–125)	72 (59–81)	73 (60–82)
GSK, Arexvy	1812	21 (1%)	73 (43–105)	82 (72–88)	83 (73–89)
Pfizer, Abrysvo	642	13 (2%)	81 (48–116)	68 (44–82)	73 (52–85)
60–74 years					
Unvaccinated	11048	670 (6%)	NA	0 (ref)	0 (ref)
Vaccinated	836	11 (1%)	75 (46–110)	79 (62–89)	81 (66–90)
≥75 years					
Unvaccinated	14768	897 (6%)	NA	0 (ref)	0 (ref)
Vaccinated	1619	24 (1%)	74 (43–108)	77 (65–85)	79 (68–86)
Critical illness					
≥60 years					
Unvaccinated	24506	257 (1%)	NA	0 (ref)	0 (ref)
Vaccinated	2425	5 (<1%)	74 (44–109)	81 (52–92)	81 (52–92)
With immunocompromise–hospitilisation					
≥60 years					
Unvaccinated	7615	314 (4%)	NA	0 (ref)	0 (ref)
Vaccinated	820	10 (1%)	72 (43–108)	71 (46–85)	73 (48–85)

NEJM Evidence

Published February 25, 2025
NEJM Evid 2025;4(3)
DOI: 10.1056/EVIDoa2400275

ORIGINAL ARTICLE

Nirsevimab Effectiveness at Preventing RSV-Related Hospitalization in Infants

Marie Joelle Jabagi, Pharm.D., Ph.D.,[1] Jérémie Cohen, M.D., Ph.D.,[2] Marion Bertrand, M.Sc.,[1] Martin Chalumeau, M.D., Ph.D.,[2] and Mahmoud Zureik, M.D., Ph.D.[1]

- Données issues du PMSI (analyse du consortium EPIPHARE): 82 474 enfants
- Enfants nés en le 6/02 et le 15/09 2023
- Cohorte traitée par nirsevimab / cohorte non exposée
- Appariement sur sexe, mois de naissance, âge gestationnel, département de résidence et index de déprivation sociale

Table 3. Effectiveness of Nirsevimab Monoclonal Antibody Infusion Against Hospitalization for Respiratory Syncytial Virus–Associated Lower Respiratory Tract Infection (RSV- LRTI)*

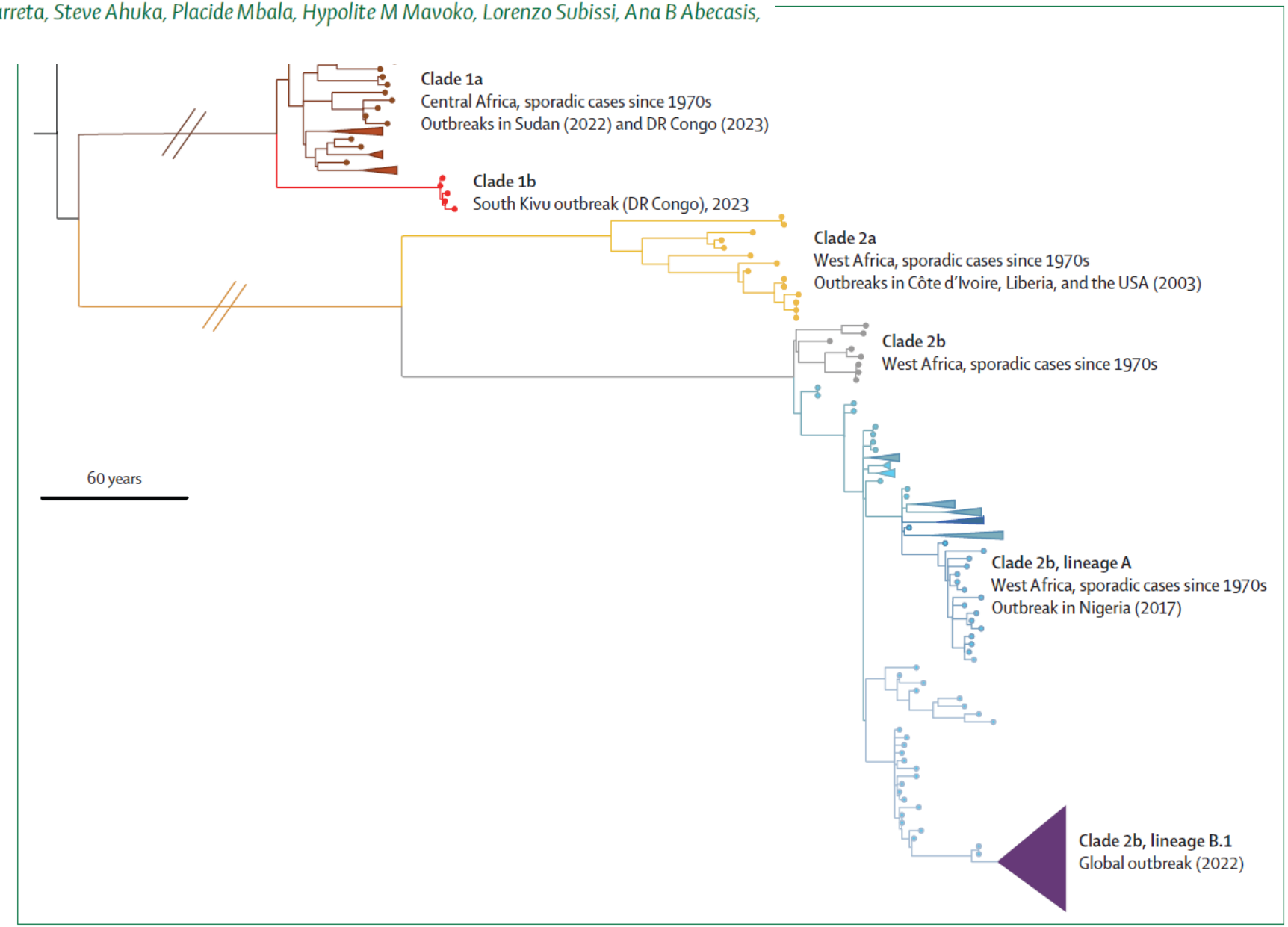
	Nirsevimab		Unimmunized		HR	wHR	Effectiveness
Primary Analyses†	Events (no.)/ Infants (no.)	Mean Follow-Up (SD) — days	Events (no.)/ Infants (no.)	Mean Follow-Up (SD) — days	(95% CI)	(95% CI)	(95% CI)
Hospitalization for RSV-LRTI	342/41,237	99.4 (37.1)	992/41,237	99.4 (37.1)	0.34 (0.30 to 0.39)	0.35 (0.31 to 0.39)	65 (61 to 69)
Hospitalization for RSV-LRTI with HDU admission	110/41,237	99.4 (37.1)	309/41,237	99.4 (37.1)	0.36 (0.29 to 0.44)	0.36 (0.29 to 0.45)	64 (55 to 71)
Hospitalization for RSV-LRTI with PICU admission	17/41,237	99.4 (37.1)	66/41,237	99.4 (37.1)	0.26 (0.15 to 0.44)	0.26 (0.15 to 0.44)	74 (56 to 85)
Hospitalization for RSV- LRTI with HDU or PICU admission	120/41,237	99.4 (37.1)	337/41,237	99.4 (37.1)	0.36 (0.29 to 0.44)	0.36 (0.29 to 0.45)	64 (55 to 71)
Hospitalization for RSV-LRTI with oxygen therapy	79/41,237	99.4 (37.1)	238/41,237	99.4 (37.1)	0.33 (0.26 to 0.43)	0.33 (0.25 to 0.43)	67 (57 to 75)
Hospitalization for RSV-LRTI with ventilation support	44/41,237	99.4 (37.1)	126/41,237	99.4 (37.1)	0.35 (0.25 to 0.49)	0.34 (0.24 to 0.49)	66 (51 to 76)

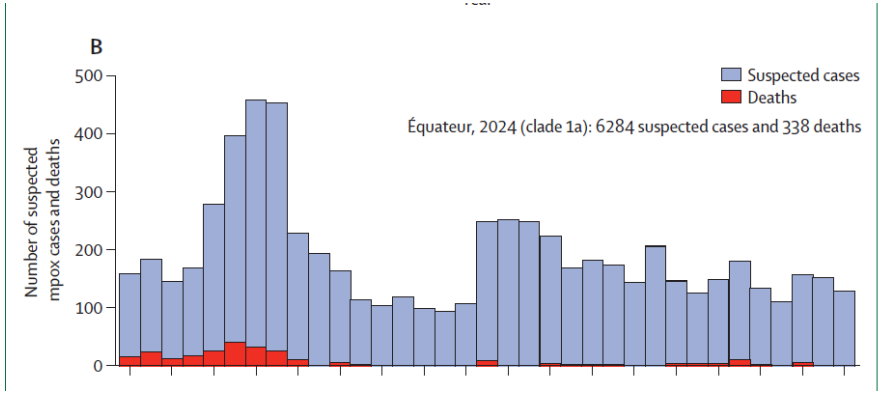
Concurrent outbreaks of mpox in Africa—an update

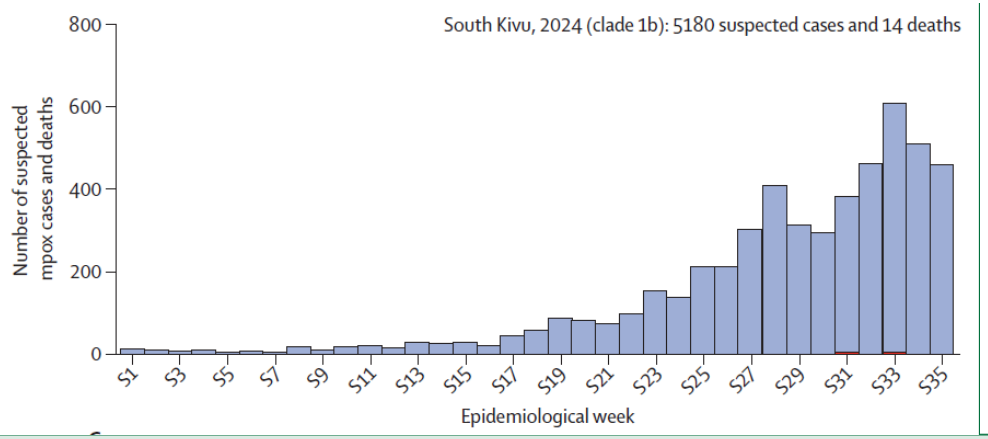
Camila G Beiras, Emile Malembi, Roser Escrig-Sarreta, Steve Ahuka, Placide Mbala, Hypolite M Mavoko, Lorenzo Subissi, Ana B Abecasis, Michael Marks, Oriol Mitjà

Lancet 2025; 405: 86–96

Published Online
December 11, 2024
https://doi.org/10.1016/
S0140-6736(24)02353-5







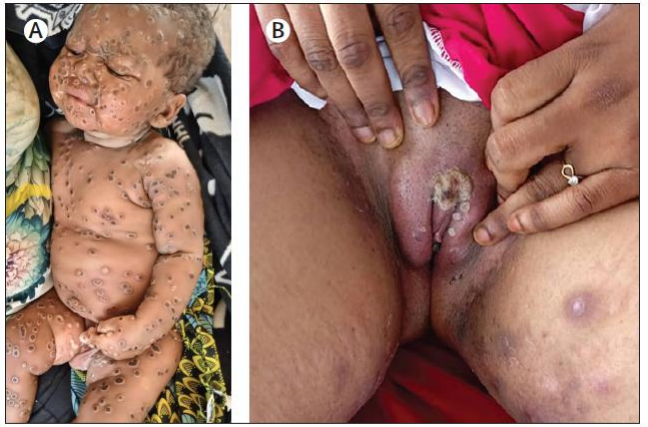


Figure 3: Comparison of disseminated and genital mpox presentations in clades 1a and 1b

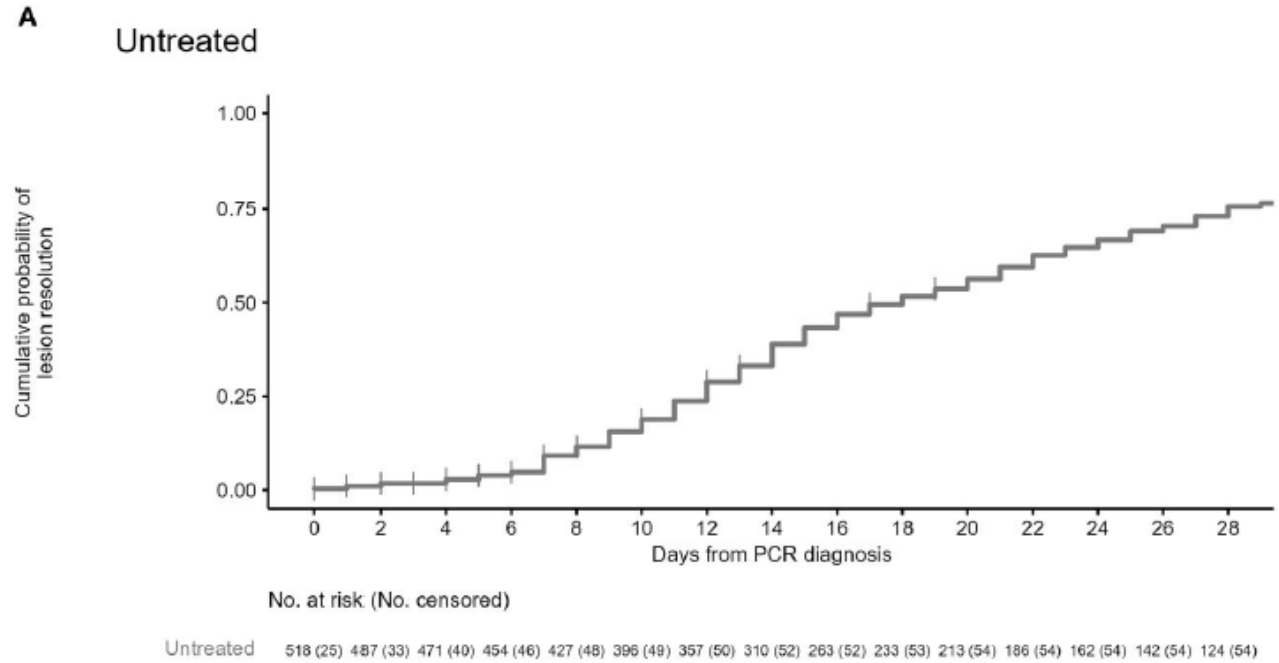
	Clade 1a	Clade 1b	Clade 2a	Clade 2b, lineage A	Clade 2b, lineage B.1
Population characteristics					
Populations affected	10% adults, 90% children	Democratic Republic of the Congo: 85% adults, 15% children	73% adults, 27% children	70% adults, 30% children	80–99% adults, 1–20% children
Mean age	14 years	22 years	--	26–32 years	37–41 years
Sex	M: 50–64%; F: 26–50%	M: 48%; F: 52%	M: 53%; F: 47%	M: 53–78%; F: 22–47%	M: 97–100%; F: 0–3%
Smallpox vaccination in childhood	2%	Unknown	Unknown	20%	11–18%
Exposure to animal products	100%	0%	100%	No	No
Living with HIV	0·5%	7%	Unknown	ND	36–67%
Systemic symptoms					
Fever	44–50%	60%	85%	45–90%	54–72%
Fatigue or myalgia	85%	--	71%	73–85%	24–81%
Headache	24%	--	65%	48–79%	25–53%
Sore throat or cough	78%	--	50%	ND	ND
Lymphadenopathy	51–98% (submaxillary, cervical)	42%	71%	57–87% (cervical, 50%)	60% (inguinal)

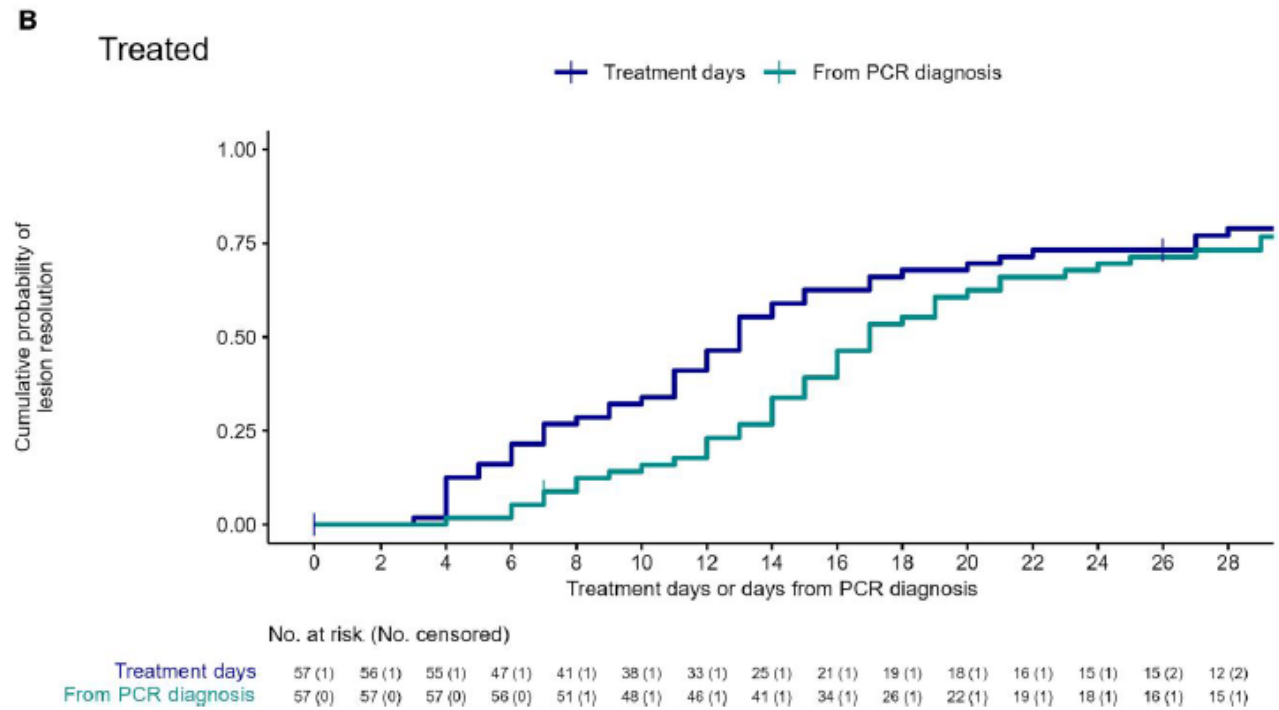
Clinical Infectious Diseases

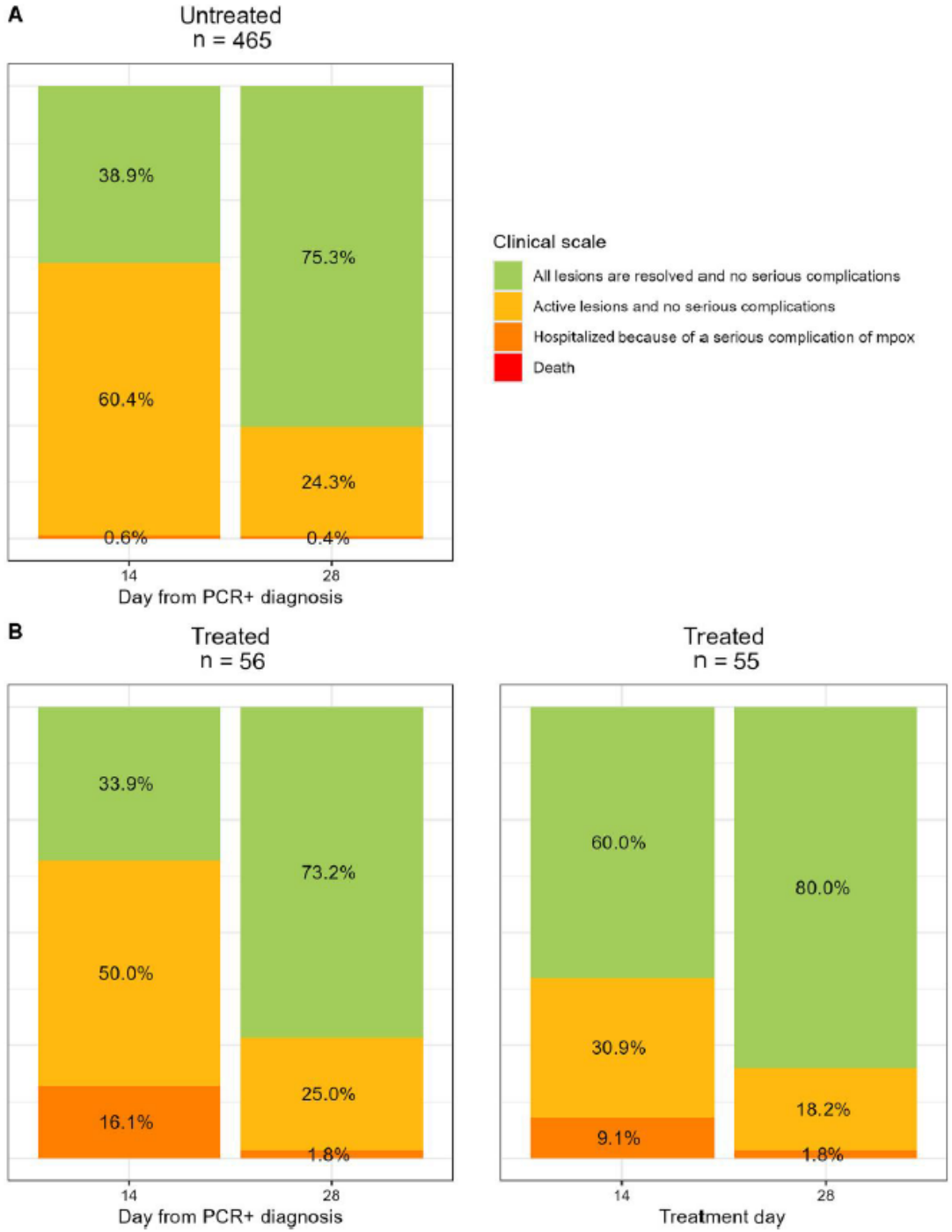
MAJOR ARTICLE

Clinical Characterization and Outcomes of Human Clade IIb Mpox Virus Disease: A European Multicenter Mpox Observational Cohort Study (MOSAIC)

Elise Pesonel,[1,a] Cédric Laouénan,[2,3,a] Laetitia Guiraud,[4,a] Josephine Bourner,[1] Isabelle Hoffmann,[2] Diana Molino,[5] Coralie Tardivon,[2] Delphine Bachelet,[2] France Mentré,[2,3] Alain Amstutz,[6,7,8] Laura Merson,[1] Amanda Rojek,[1] Minerva Cervantes Gonzalez,[2,3] Andrea Antinori,[9] Antonella Castagna,[10,11] Silvia Nozza,[10,11] Valérie Pourcher,[12] Agnès Libois,[13] Jake Dunning,[1] Evelina Tacconelli,[14] Maya Hites,[15] Fernando De La Calle Prieto,[16] Peter Horby,[1] Yazdan Yazdanpanah,[5] Alexandra Calmy,[4,b] François-Xavier Lescure,[3,17,b] and Piero Olliaro[1,b]; for the Mpox ObServAtIonal Cohort (MOSAIC) Study Group[c]







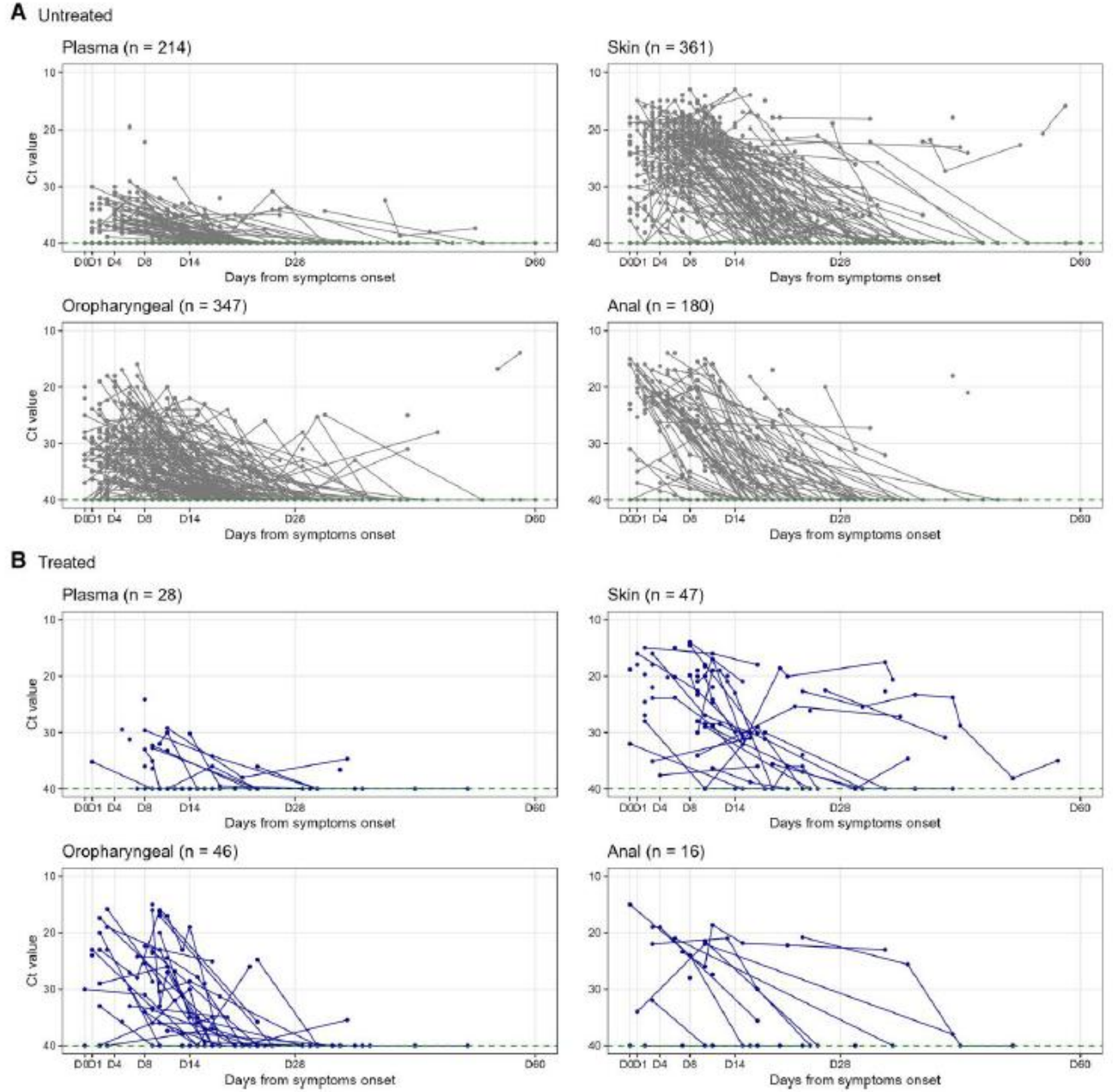


Figure 5. Spaghetti plots of cycle threshold (Ct) values over time for treated and untreated participants with at least 1 virological sample in 1 of the 4 compartments of interest (days [D] since symptom onset).

Peu d’options thérapeutiques

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Detailed results from Palm007 study: no clinical impact of tecovirimat against mpox clade 1

6 January 2025. Related: mpox (monkeypox), IDWeek 2024.

Simon Collins, HIV i-Base

Although for the last two years tecovirimat has been recommended as a treatment for severe mpox based on activity in animal and in vitro studies, two randomised controlled human studies recently closed earlier than planned due to the lack of clinical effect.