

# Sélection VIH et (coinfections) hépatites

Lionel Piroth

Journée SPILF 2024

**Vital Signs: Progress Toward Eliminating HIV as a Global Public Health Threat Through Scale-Up of Antiretroviral Therapy and Health System Strengthening Supported by the U.S. President’s Emergency Plan for AIDS Relief — Worldwide, 2004–2022**

Helen M. Chun, MD<sup>1,\*</sup>; Emilio Dirlikov, PhD<sup>1,\*</sup>; Mackenzie Hurlston Cox, MSPH<sup>1</sup>; Michelle Williams Sherlock, MPH<sup>1</sup>; Yaa Obeng-Aduasare, MPH<sup>1</sup>;

MMWR / March 24, 2023 / Vol. 72 / No. 12



Morbidity and Mortality Weekly Report  
December 1, 2023

Weekly / Vol. 72 / No. 48

- 54 pays
- 66550 PVVIH traitées en 2004
- > 20 millions en 2022

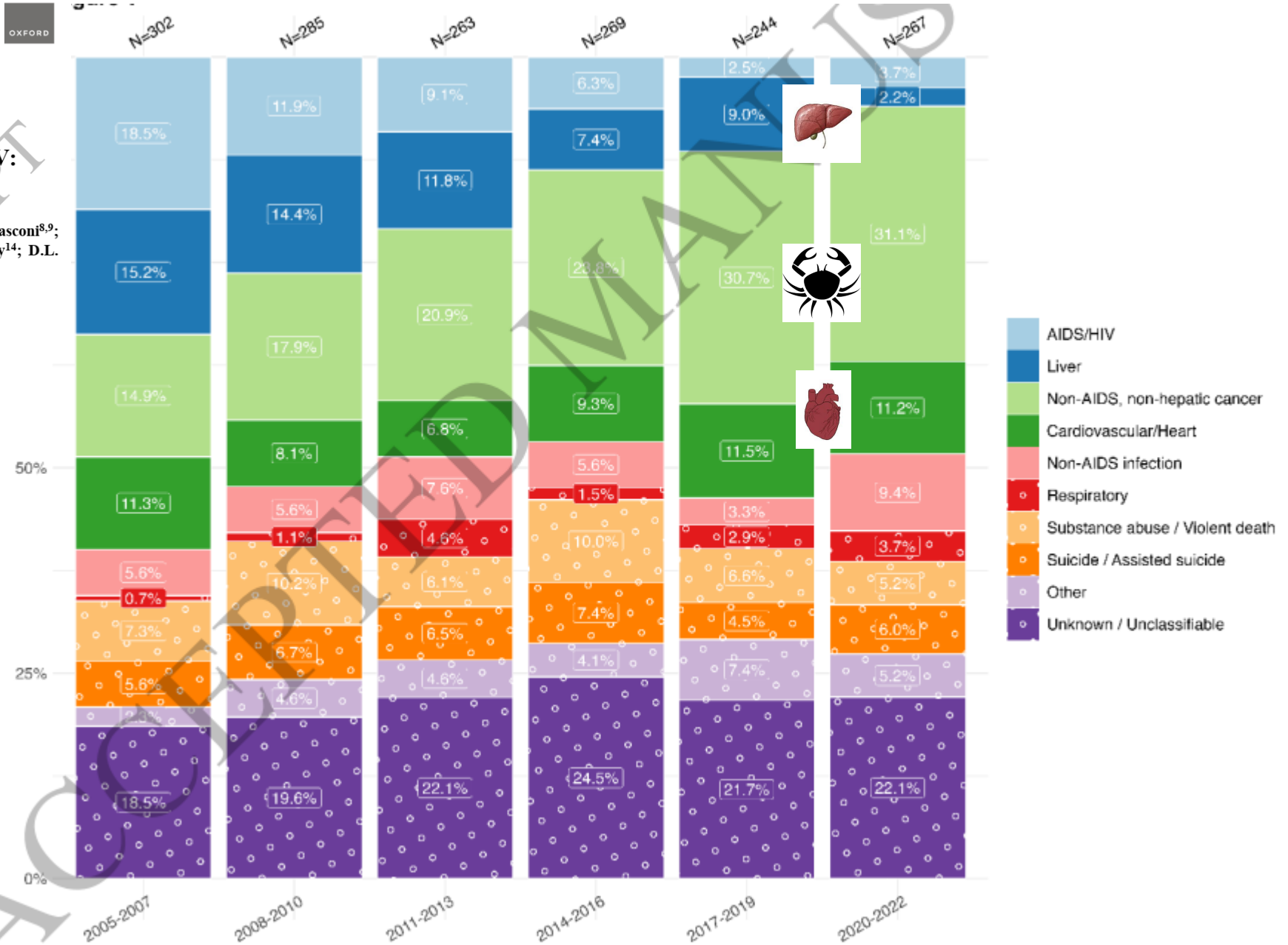
**TABLE 1. Annual proportion of reported deaths and crude mortality ratios among persons living with HIV and receiving antiretroviral treatment — U.S. President’s Emergency Plan for AIDS Relief, 28 supported countries and regions,\* 2021–2022<sup>†</sup>**

Characteristic	2021			2022			2021 and 2022 (annual mean) <sup>§</sup>		
	% Died	No. died	No. receiving ART	% Died	No. died	No. receiving ART	% Died	No. died	No. receiving ART
<b>Age group, yrs</b>									
<1	4.4	585	13,223	5.5	587	10,737	4.9	586	11,980
1–4	2.6	2,786	108,325	2.5	2,581	102,695	2.5	2,604	105,510
5–14	0.5	2,943	537,867	0.5	2,772	534,105	0.5	2,857	535,986
15–49	0.7	94,539	13,089,351	0.6	90,672	13,984,027	0.7	92,606	13,536,689
≥50	1.4	50,001	3,488,945	1.3	51,913	3,936,499	1.4	50,957	3,712,722
<b>Total</b>	<b>0.9</b>	<b>150,854</b>	<b>17,237,711</b>	<b>0.8</b>	<b>148,525</b>	<b>18,568,063</b>	<b>0.8</b>	<b>149,691</b>	<b>17,902,887</b>

Handwritten red annotations:  $= x9,2$  and  $= x7,2$  with brackets indicating comparisons between the 2021 and 2022 columns for the first three age groups.

### Time Trends in Causes of Death in People with HIV: Insights from the Swiss HIV Cohort Study

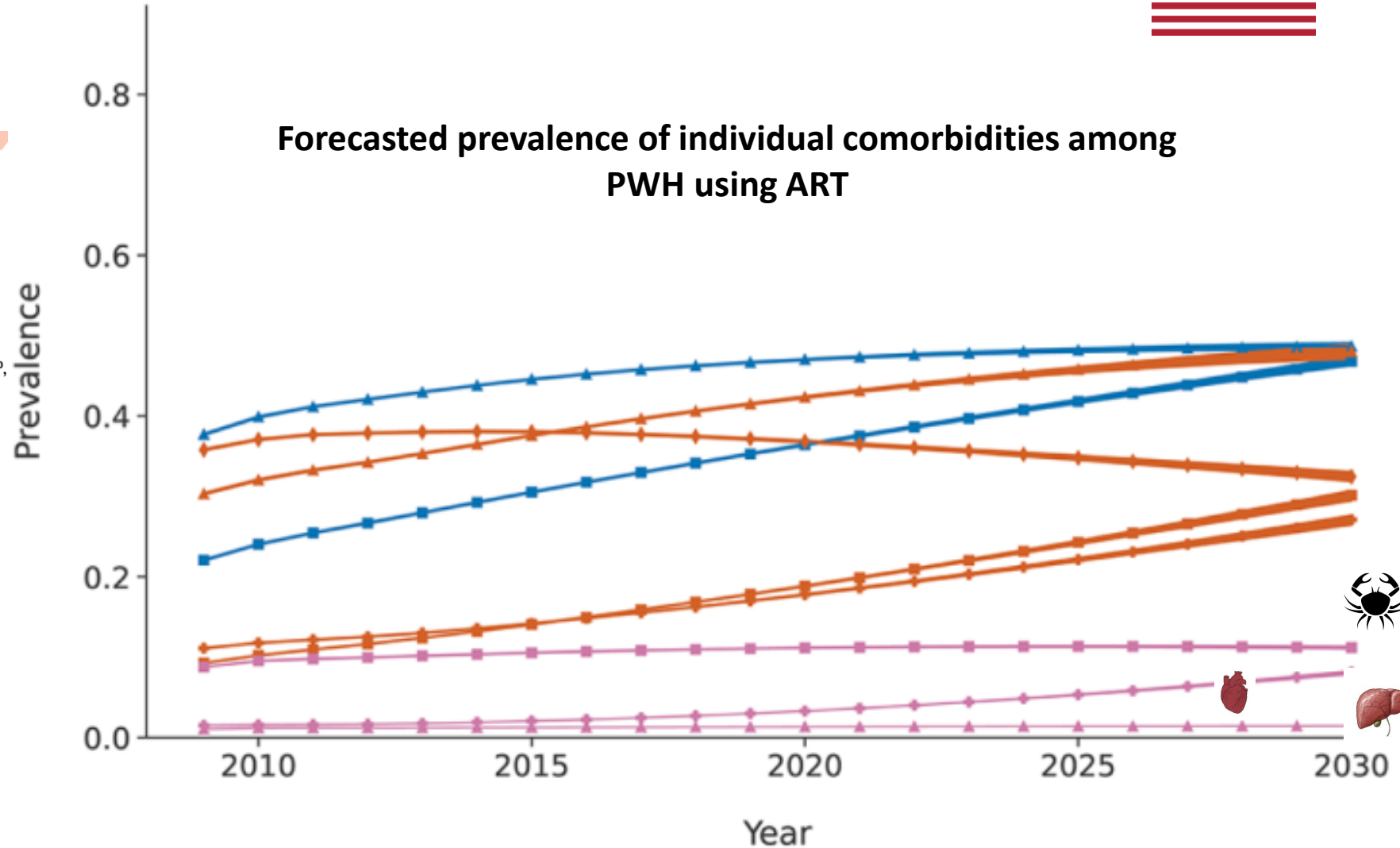
M.S.R. Weber<sup>1,2</sup>; J.J. Duran Ramirez<sup>1,2</sup>; M. Hentzien<sup>3,4,5</sup>; M. Cavassini<sup>6,7</sup>; E. Bernasconi<sup>8,9</sup>; E. Hofmann<sup>10</sup>; H. Furrer<sup>10</sup>; H. Kovari<sup>11</sup>; M. Stöckle<sup>12</sup>; P. Schmid<sup>13</sup>; D. Haerry<sup>14</sup>; D.L. Braun<sup>\*1,2</sup>; H.F. Günthard<sup>\*1,2</sup>; K. Kusejko<sup>\*1,2</sup>; Swiss HIV Cohort Study\*\*



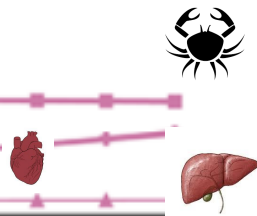
Overall



### Forecasted prevalence of individual comorbidities among PWH using ART



- Anxiety
- ▲ Depression
- CKD
- ▲ Dyslipidemia
- Diabetes
- ▲ Hypertension
- Cancer
- ▲ ESKD
- MI



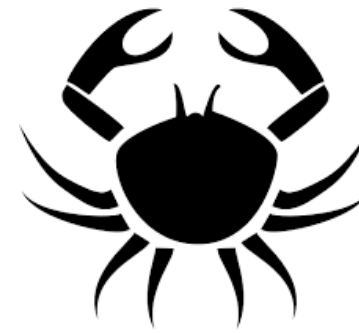
The forecasted prevalence of comorbidities and multimorbidity in people with HIV in the United States through the year 2030: A modeling study

Keri N. Althoff<sup>1\*</sup>, Cameron Stewart<sup>1</sup>, Elizabeth Humes<sup>1</sup>, Lucas Gerace<sup>1</sup>, Cynthia Boyd<sup>1,2,3</sup>, Kelly Gebo<sup>4</sup>, Amy C. Justice<sup>5,6</sup>, Emily P. Hyle<sup>7,8</sup>, Sally B. Coburn<sup>1</sup>, Raynell Lang<sup>9</sup>, Michael J. Silverberg<sup>10,11</sup>, Michael A. Horberg<sup>12</sup>, Viviane D. Lima<sup>13</sup>, M. John Gill<sup>9</sup>, Maile Karris<sup>14</sup>, Peter F. Rebeiro<sup>15</sup>, Jennifer Thorne<sup>16</sup>, Ashleigh J. Rich<sup>17</sup>, Heidi Crane<sup>18</sup>, Mari Kitahata<sup>18</sup>, Anna Rubtsova<sup>19</sup>, Cherise Wong<sup>20</sup>, Sean Leng<sup>2</sup>, Vincent C. Marconi<sup>21,22</sup>, Gypsyamber D'Souza<sup>1</sup>, Hyang Nina Kim<sup>18</sup>, Sonia Napravnik<sup>23</sup>, Kathleen McGinnis<sup>6</sup>, Gregory D. Kirk<sup>1,4</sup>, Timothy R. Sterling<sup>24,25</sup>, Richard D. Moore<sup>26</sup>, Parastu Kasaie<sup>1</sup>

PLOS Medicine  
January 12, 2024

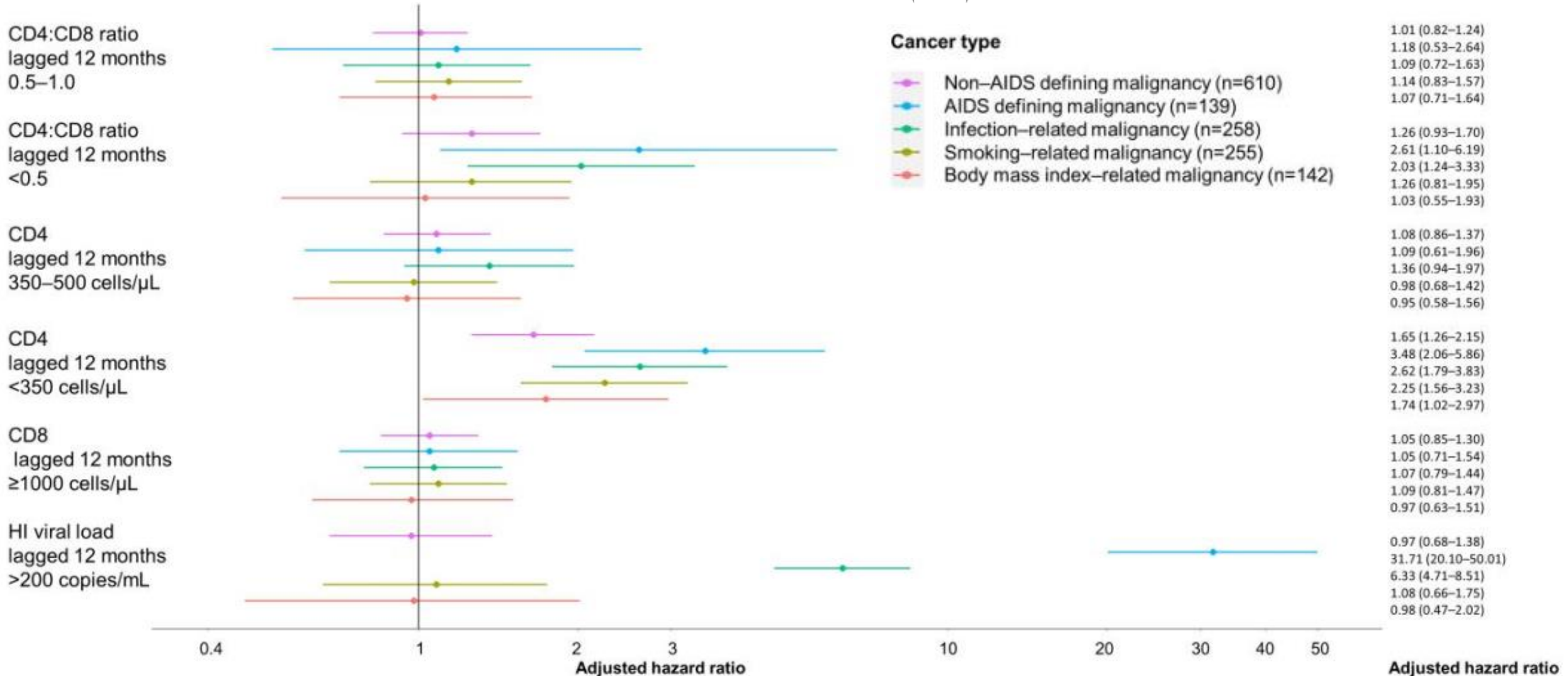
# Measures of Longitudinal Immune Dysfunction and Risk of AIDS and Non-AIDS Defining Malignancies in Antiretroviral Treated People With Human Immunodeficiency Virus (HIV)

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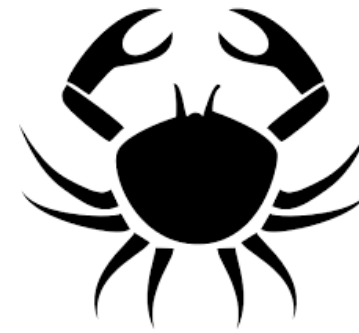
*Clinical Infectious Diseases*

**MAJOR ARTICLE**



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*Clinical Infectious Diseases*

**MAJOR ARTICLE**

CD4:CD8 ratio  
lagged 12 months  
0.5–1.0

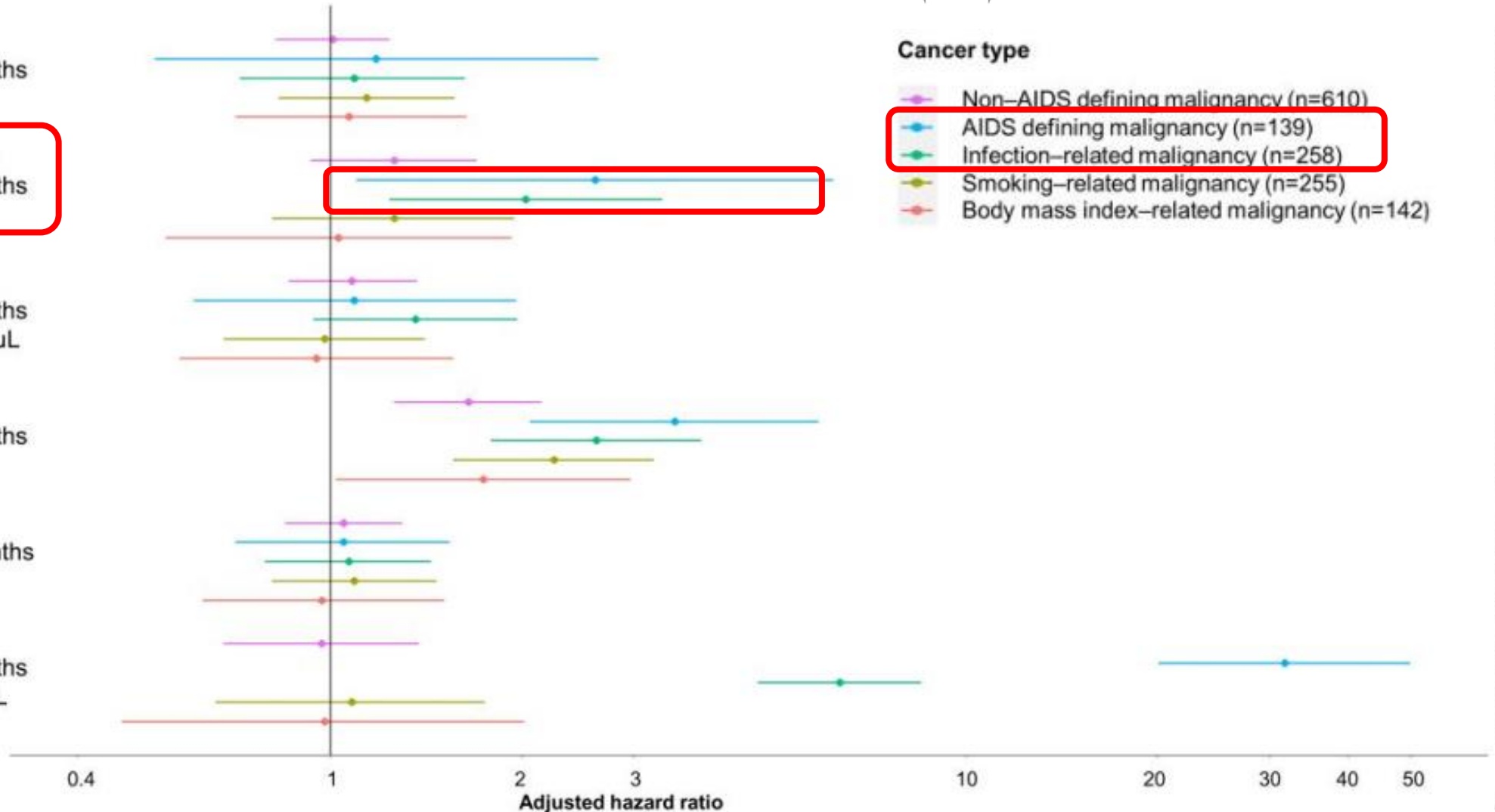
CD4:CD8 ratio  
lagged 12 months  
<0.5

CD4  
lagged 12 months  
350–500 cells/ $\mu$ L

CD4  
lagged 12 months  
<350 cells/ $\mu$ L

CD8  
lagged 12 months  
 $\geq$ 1000 cells/ $\mu$ L

HI viral load  
lagged 12 months  
>200 copies/mL



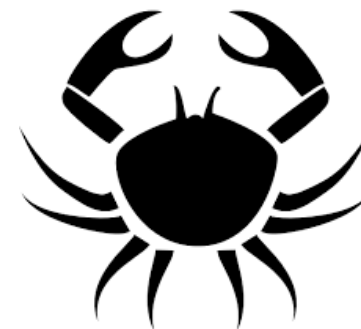
**Cancer type**

- Non-AIDS defining malignancy (n=610)
- AIDS defining malignancy (n=139)
- Infection-related malignancy (n=258)
- Smoking-related malignancy (n=255)
- Body mass index-related malignancy (n=142)

Adjusted hazard ratio

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*Clinical Infectious Diseases*

**MAJOR ARTICLE**

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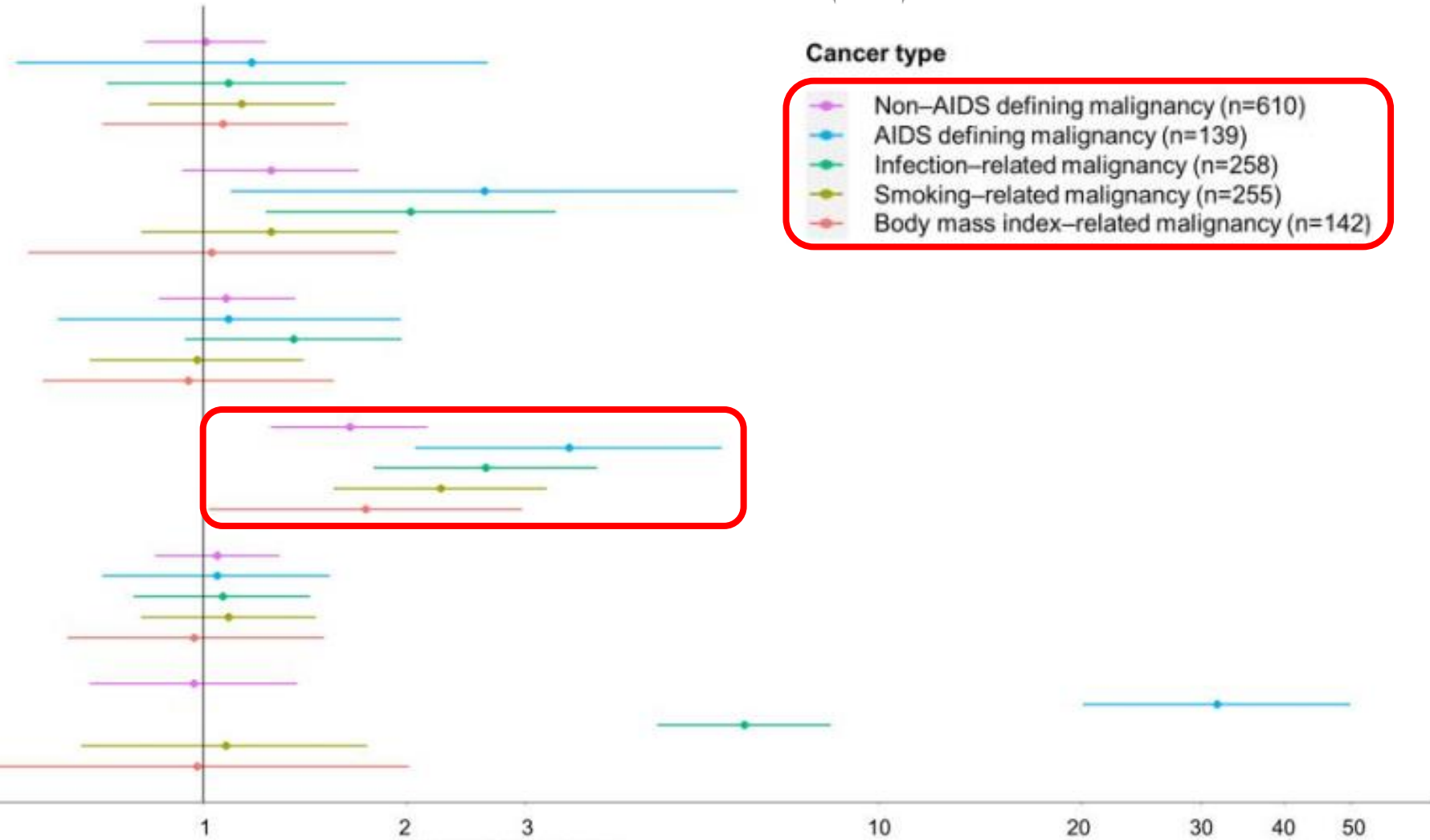
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1.01 (0.82–1.24)  
1.18 (0.53–2.64)  
1.09 (0.72–1.63)  
1.14 (0.83–1.57)  
1.07 (0.71–1.64)  
1.26 (0.93–1.70)  
2.61 (1.10–6.19)  
2.03 (1.24–3.33)  
1.26 (0.81–1.95)  
1.03 (0.55–1.93)  
1.08 (0.86–1.37)  
1.09 (0.61–1.96)  
1.36 (0.94–1.97)  
0.98 (0.68–1.42)  
0.95 (0.58–1.56)  
1.65 (1.26–2.15)  
3.48 (2.06–5.86)  
2.62 (1.79–3.83)  
2.25 (1.56–3.23)  
1.74 (1.02–2.97)  
1.05 (0.85–1.30)  
1.05 (0.71–1.54)  
1.07 (0.79–1.44)  
1.09 (0.81–1.47)  
0.97 (0.63–1.51)  
0.97 (0.68–1.38)  
31.71 (20.10–50.01)  
6.33 (4.71–8.51)  
1.08 (0.66–1.75)  
0.98 (0.47–2.02)

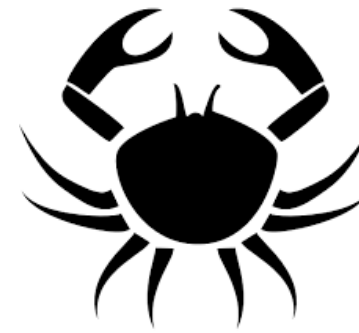
0.4 1 2 3 10 20 30 40 50

Adjusted hazard ratio

Adjusted hazard ratio

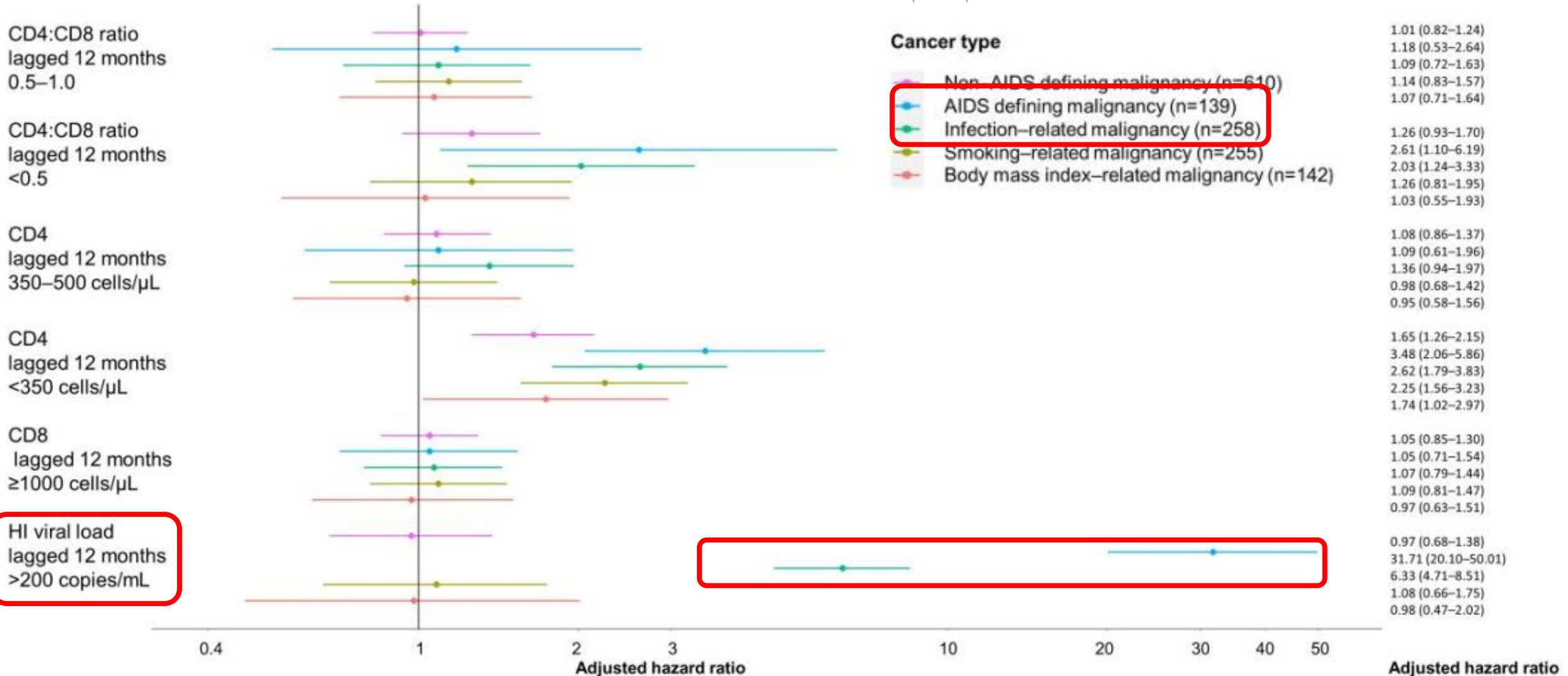
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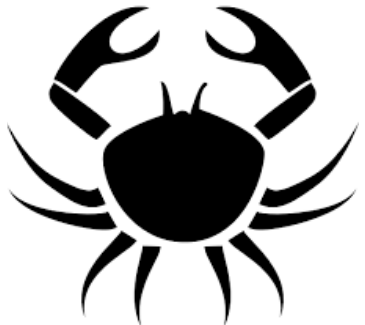
*Clinical Infectious Diseases*

**MAJOR ARTICLE**





# Survival by sex and HIV status in patients with anal cancer in the USA between 2001 and 2019: a retrospective cohort study

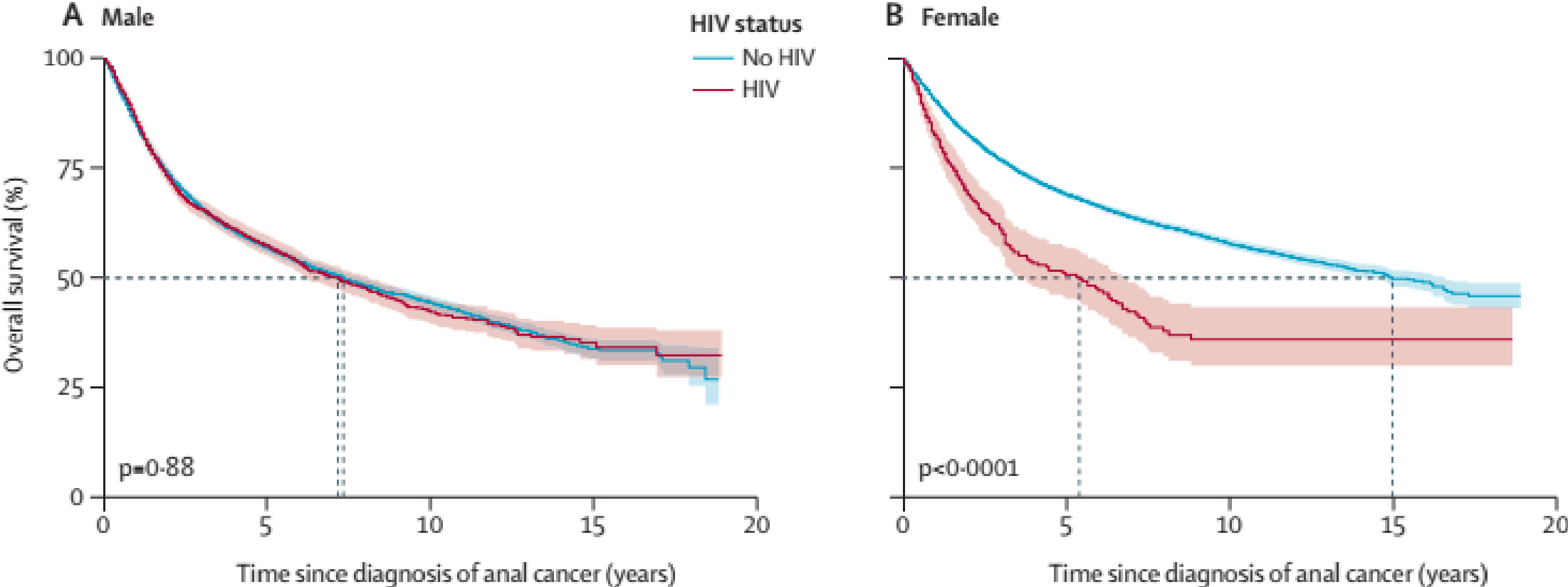


Jaimie Z Shing, Eric A Engels, April A Austin, Megan A Clarke, Jennifer H Hayes, Aimée R Kreimer, Analise Monterosso, Marie-Josèphe Horner, Karen S Pawlish, Qianlai Luo, Elizabeth R Zhang, Aimee J Koestler, Ruth M Pfeiffer, Meredith S Shiels

Lancet HIV 2024; 11: e31-41

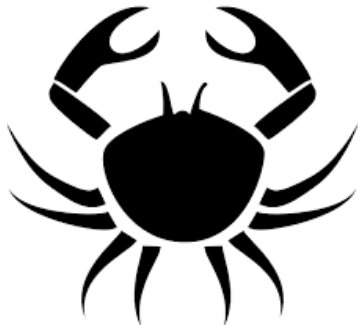
**2662 PVVIH avec cancer anal (43,6% décès) comparées à 21 824 personnes non infectées par le VIH (35,4% décès)**

**MORTALITE GLOBALE**



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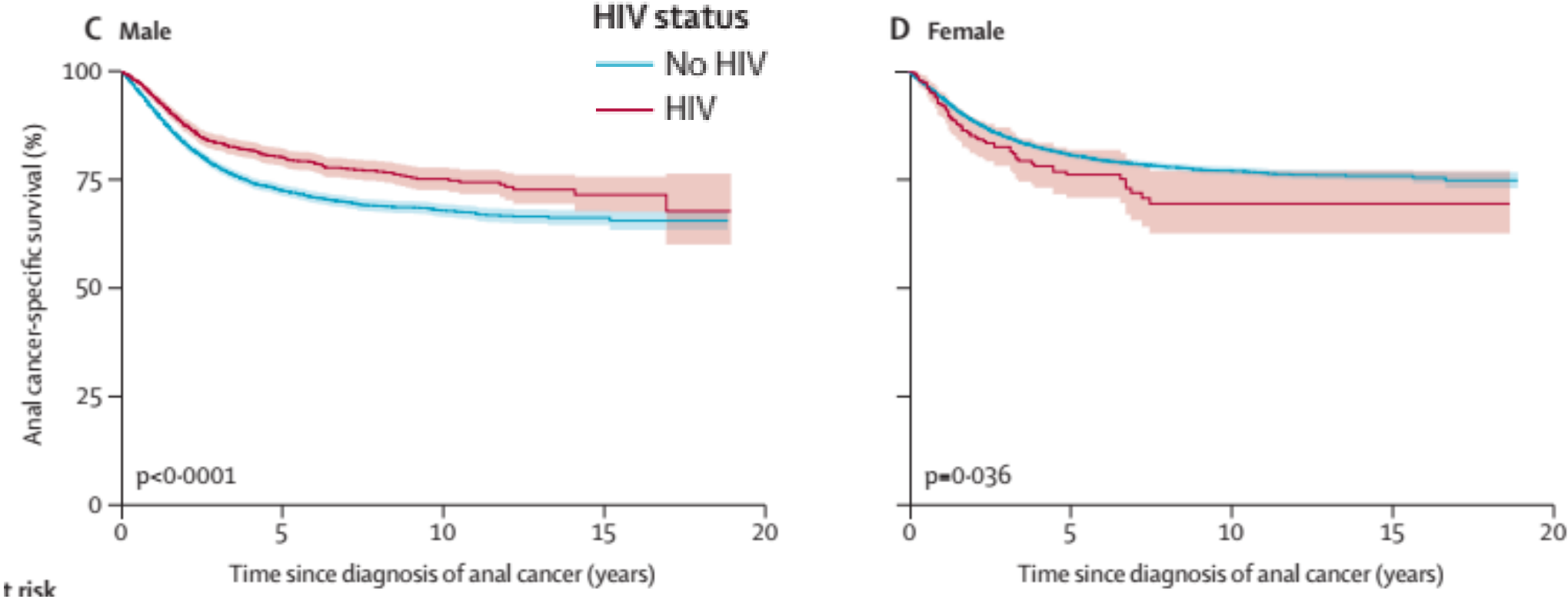
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**MORTALITE  
LIEE AU  
CANCER  
ANAL**



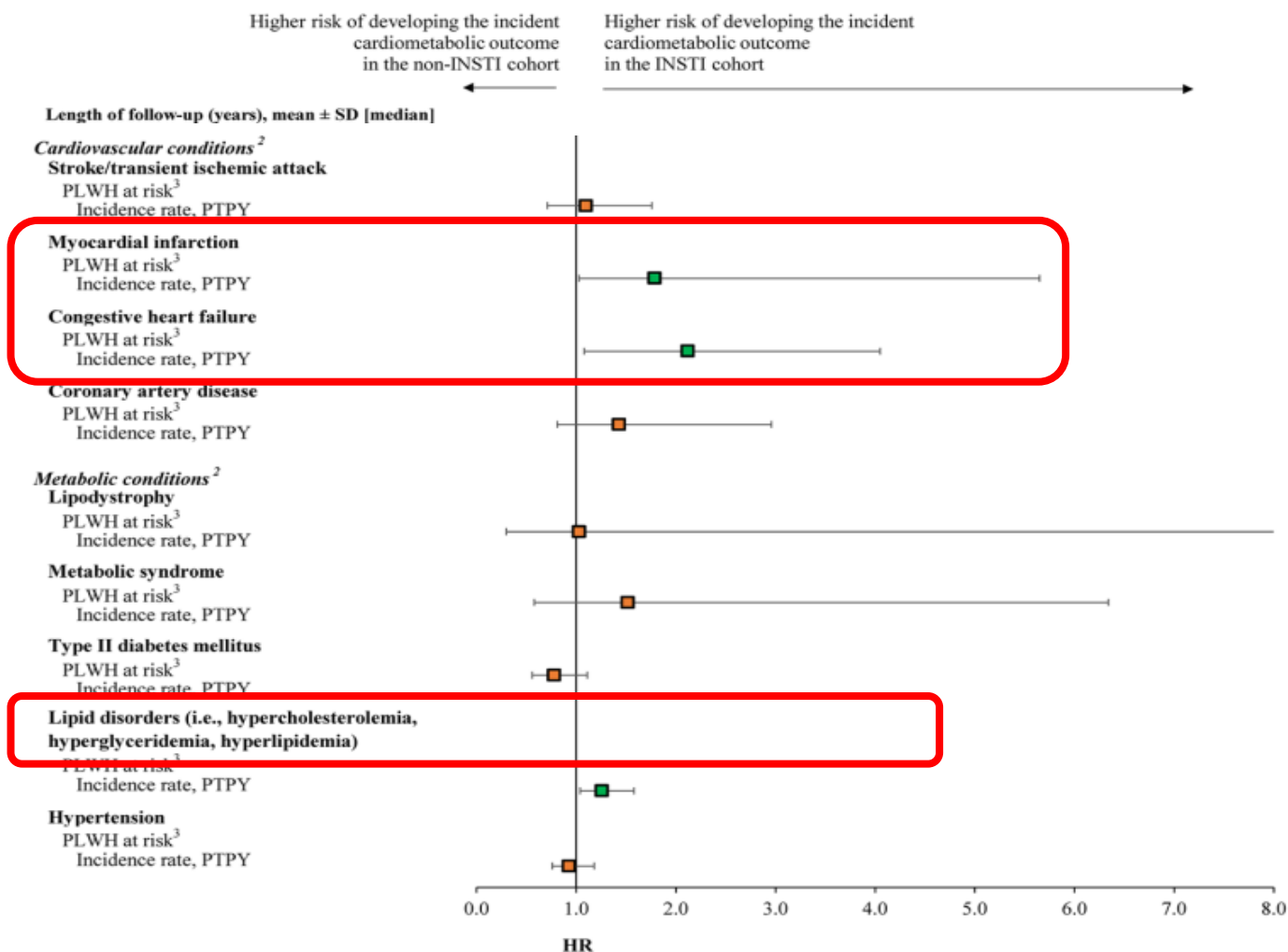
# Incidence of cardiometabolic outcomes among people living with HIV-1 initiated on integrase strand transfer inhibitor versus non-integrase strand transfer inhibitor antiretroviral therapies: a retrospective analysis of insurance claims in the United States

Peter F. Rebeiro<sup>1</sup>, Bruno Emond<sup>2,§</sup>, Carmine Rossi<sup>2</sup>, Brahim K. Bookhart<sup>3</sup>, Aditi Shah<sup>2</sup>, Gabrielle Caron-Lapointe<sup>2</sup>, Marie-Hélène Lafeuille<sup>2</sup> and Prina Donga<sup>3</sup>

PLWH eligi  
**INSTI cohort**  
 N= 10,115 (84.7%)

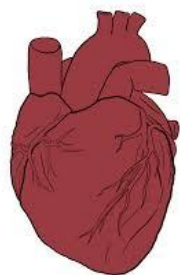
ion criteria  
**Non-INSTI cohort**  
 N= 3,961 (81.2%)

Rebeiro PF et al. *Journal of the International AIDS Society* 2023, **26**:e26123



	Weighted population		Doubly robust weighted HR (bootstrapped 95% CI) <sup>1</sup>	Bootstrapped p-value
	INSTI cohort	Non-INSTI cohort		
Length of follow-up (years), mean ± SD [median]	1.5 ± 1.5 [1.0]	1.1 ± 1.2 [0.7]		
<b>Cardiovascular conditions<sup>2</sup></b>				
Stroke/transient ischemic attack				
PLWH at risk <sup>3</sup>	N=6,796	N=6,738		
Incidence rate, PTPY	9.18	9.44	1.10 (0.71, 1.76)	0.620
<b>Myocardial infarction</b>				
PLWH at risk <sup>3</sup>	N=5,951	N=5,859		
Incidence rate, PTPY	3.68	2.13	<b>1.79 (1.03, 5.65)</b>	<b>0.036*</b>
<b>Congestive heart failure</b>				
PLWH at risk <sup>3</sup>	N=5,853	N=5,785		
Incidence rate, PTPY	4.81	2.78	<b>2.12 (1.08, 4.05)</b>	<b>0.036*</b>
Coronary artery disease				
PLWH at risk <sup>3</sup>	N=5,656	N=5,598		
Incidence rate, PTPY	4.10	3.35	1.43 (0.81, 2.96)	0.232
<b>Metabolic conditions<sup>2</sup></b>				
Lipodystrophy				
PLWH at risk <sup>3</sup>	N=7,046	N=7,000		
Incidence rate, PTPY	0.90	0.81	1.03 (0.30, 12.52)	0.960
Metabolic syndrome				
PLWH at risk <sup>3</sup>	N=7,041	N=6,996		
Incidence rate, PTPY	0.85	0.84	1.52 (0.58, 6.34)	0.360
Type II diabetes mellitus				
PLWH at risk <sup>3</sup>	N=6,464	N=6,444		
Incidence rate, PTPY	14.91	17.28	0.78 (0.56, 1.11)	0.168
<b>Lipid disorders (i.e., hypercholesterolemia, hyperglyceridemia, hyperlipidemia)</b>				
PLWH at risk <sup>3</sup>	N=5,728	N=5,543		
Incidence rate, PTPY	64.66	54.66	<b>1.26 (1.04, 1.58)</b>	<b>0.020*</b>
Hypertension				
PLWH at risk <sup>3</sup>	N=5,083	N=4,967		
Incidence rate, PTPY	51.23	58.38	0.93 (0.76, 1.18)	0.532

# Integrase strand-transfer inhibitor use and cardiovascular events in adults with HIV: an emulation of target trials in the HIV-CAUSAL Collaboration and the Antiretroviral Therapy Cohort Collaboration



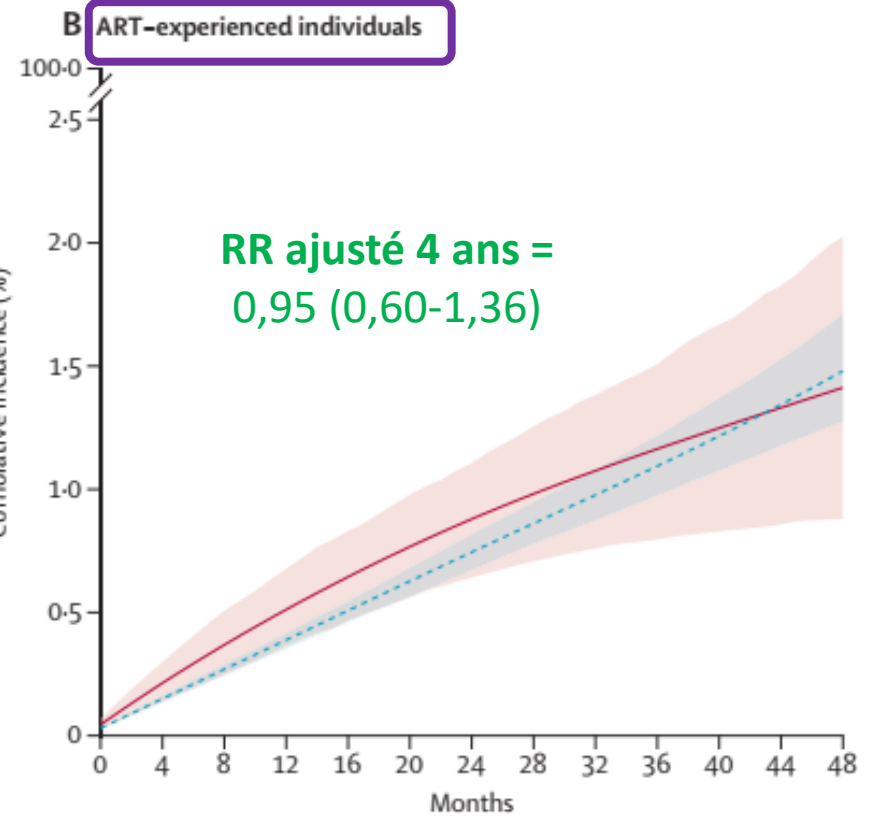
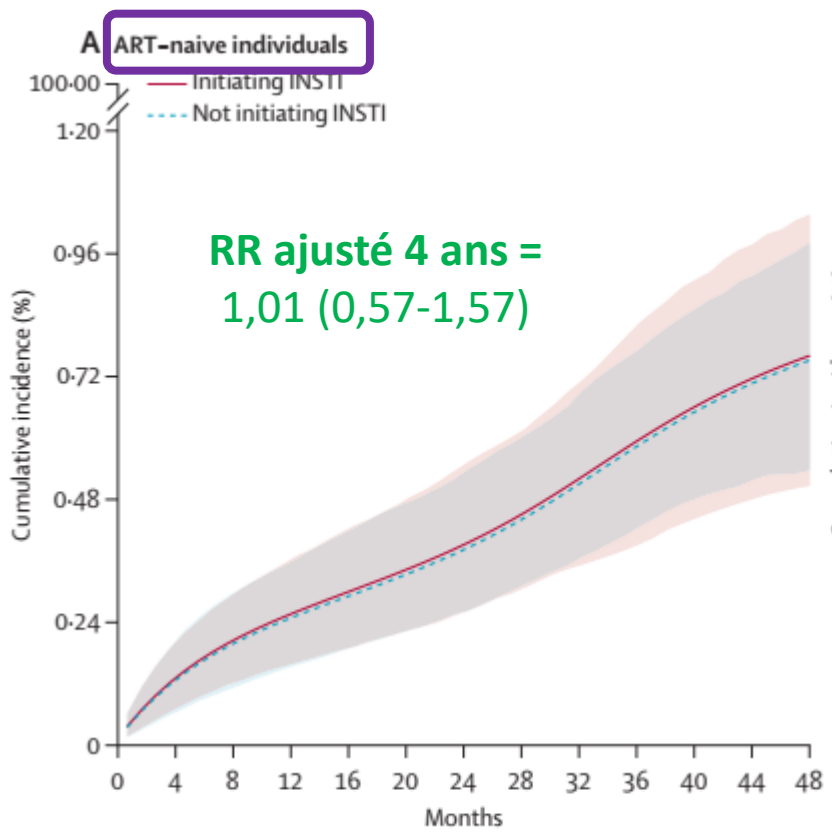
Sophia M Rein, Sara Lodi, Roger W Logan, Giota Touloumi, Anastasia Antoniadou, Linda Wittkop, Fabrice Bonnet, Ard van Sighem, Marc van der Valk, Peter Reiss, Marina B Klein, James Young, Inmaculada Jarrin, Antonella d'Arminio Monforte, Alessandro Tavelli, Laurence Meyer, Laurent Tran, Michael J Gill, Raynell Lang, Bernard Surial, Andreas D Haas, Amy C Justice, Christopher T Rentsch, Andrew Phillips, Caroline A Sabin, Jose M Miro, Adam Trickey, Suzanne M Ingle, Jonathan A C Sterne, Miguel A Hernán, on behalf of the Antiretroviral Therapy Cohort Collaboration and the HIV-CAUSAL Collaboration

Lancet HIV 2023; 10: e723-32

2013 - 2023

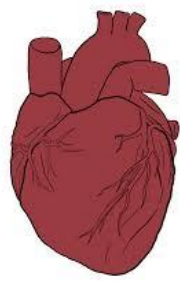
Naifs =  
10767 sous INSTI /  
8292 sous autres

Prétraités =  
7875 sous INSTI /  
67411 sous autres



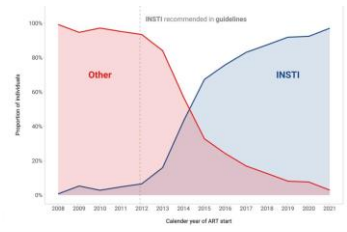
Estimated cumulative incidence of cardiovascular events

# Impact of Integrase Inhibitors on Cardiovascular Disease Events in People With Human Immunodeficiency Virus Starting Antiretroviral Therapy



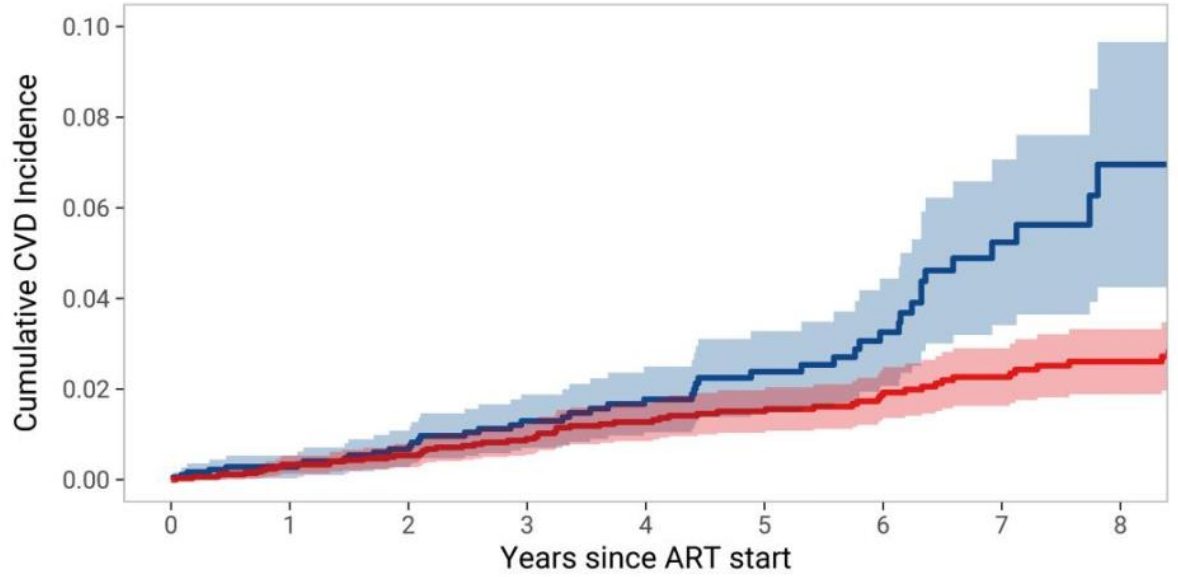
Bernard Surial,<sup>1,✉</sup> Frédérique Chammartin,<sup>2</sup> José Damas,<sup>3</sup> Alexandra Calmy,<sup>4</sup> David Haerry,<sup>5</sup> Marcel Stöckle,<sup>6</sup> Patrick Schmid,<sup>7</sup> Enos Bernasconi,<sup>8</sup> Christoph A. Fux,<sup>9</sup> Philip E. Tarr,<sup>10</sup> Huldrych F. Günthard,<sup>11,12</sup> Gilles Wandeler,<sup>1,a</sup> Andri Rauch,<sup>1,a</sup> and the Swiss HIV Cohort Study

Clinical Infectious Diseases® 2023;77(5):729–37

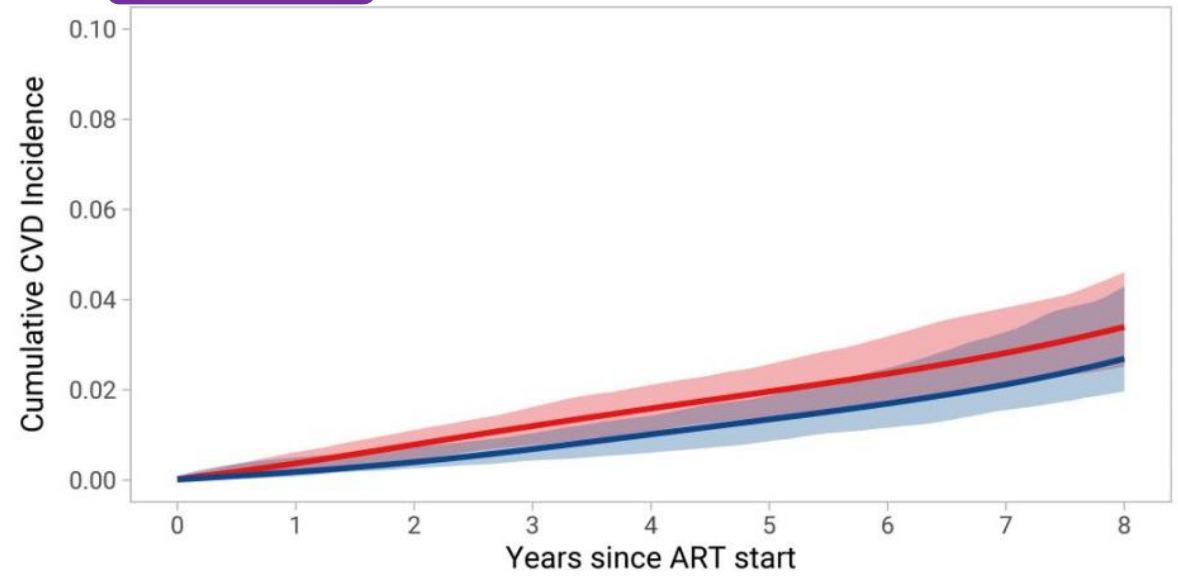


5362 participants naïfs de traitement ARV = 1837 INSTI/ 3525 autres

**A** Unadjusted

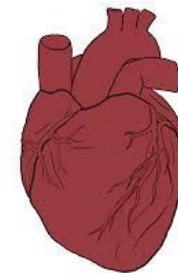


**B** Adjusted



Number at risk

INSTI (top)	1813	1615	1398	1165	945	722	504	275	130
Other (bottom)	3549	3161	2855	2522	2227	1933	1582	1261	976



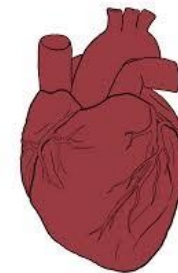
## Pitavastatin to Prevent Cardiovascular Disease in HIV Infection

Steven K. Grinspoon, M.D., Kathleen V. Fitch, M.S.N., Markella V. Zanni, M.D., Carl I. Fichtenbaum, M.D.,

- Essai randomisé vs placebo phase 3
- 7769 participants 40-75 ans à risque faible à modéré CV (score AHA)
- 4mg pitavastatine ou placebo
- CDJP = évènement cardiovasculaire majeur (**MACE** = décès cause inconnue ou CV, infarctus, angine de poitrine instable, AVC, AIT, ischémie artérielle périphérique)

**Table 1. Characteristics of the Participants at Baseline.\***

Characteristic	Pitavastatin (N = 3888)	Placebo (N = 3881)	Total (N = 7769)
<b>Age</b>			
Median (IQR) — yr	50 (45–55)	50 (45–55)	50 (45–55)
Range — yr	40 to 72	40 to 74	40 to 74
<b>Sex — no. (%)†</b>			
Male	2677 (68.9)	2673 (68.9)	5350 (68.9)
Female	1211 (31.1)	1208 (31.1)	2419 (31.1)
<b>CD4 count — no. (%)†</b>			
≤500 cells/per mm <sup>3</sup>	1257 (32.3)	1253 (32.3)	2510 (32.3)
>500 cells/per mm <sup>3</sup>	2631 (67.7)	2628 (67.7)	5259 (67.7)
<b>HIV-1 RNA — no./total no. (%)‖</b>			
<LLOQ copies/ml	2641/3009 (87.8)	2609/2988 (87.3)	5250/5997 (87.5)
LLOQ to <400 copies/ml	305/3009 (10.1)	312/2988 (10.4)	617/5997 (10.3)
≥400 copies/ml	63/3009 (2.1)	67/2988 (2.2)	130/5997 (2.2)



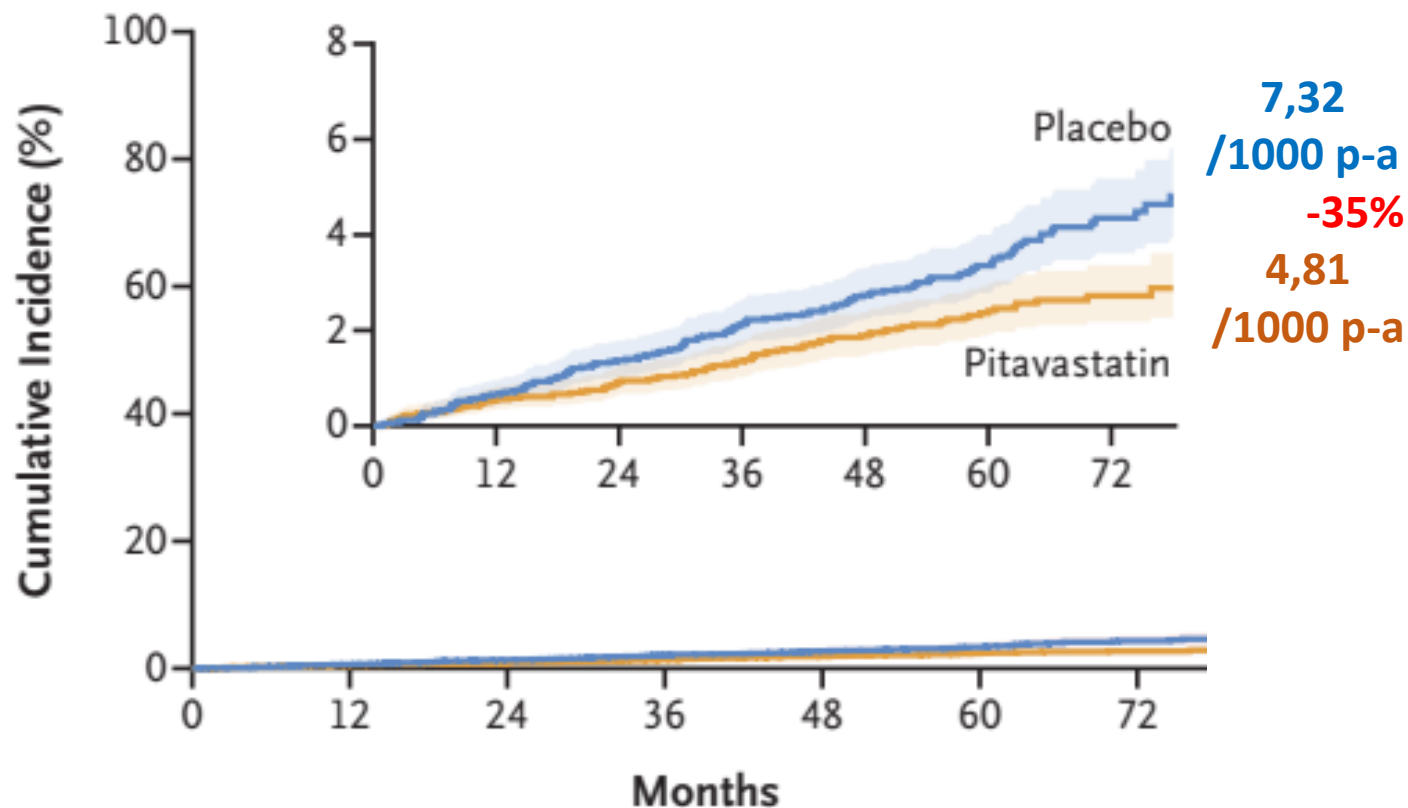
## Pitavastatin to Prevent Cardiovascular Disease in HIV Infection

Steven K. Grinspoon, M.D., Kathleen V. Fitch, M.S.N., Markella V. Zanni, M.D., Carl I. Fichtenbaum, M.D.,

- Essai randomisé vs placebo phase 3
- 7769 participants 40-75 ans à risque faible à modéré CV (score AHA)
- 4mg pitavastatine ou placebo
- CDJP = évènement cardiovasculaire majeur (**MACE** = décès cause inconnue ou CV, infarctus, angine de poitrine instable, AVC, AIT, ischémie artérielle périphérique)

**ARRET PREMATURE PAR DSMB**

### B First MACE





## Pitavastatin to Prevent Cardiovascular Disease in HIV Infection

Steven K. Grinspoon, M.D., Kathleen V. Fitch, M.S.N., Markella V. Zanni, M.D., Carl I. Fichtenbaum, M.D.,

Subgroup	Pitavastatin	Placebo	Pitavastatin	Placebo	Hazard Ratio (95% CI)	
	<i>no. of participants</i>		<i>no./1000 person-yr (no. of events)</i>			
Overall	3888	3881	4.81 (89)	7.32 (136)		0.65 (0.48–0.90)
ASCVD risk score						
0 to <2.5%	1096	1060	1.6 (9)	3.1 (17)		0.51 (0.23–1.16)
2.5 to <5%	1030	1025	5.3 (27)	4.1 (21)		1.30 (0.73–2.30)
5 to 10%	1474	1521	5.5 (36)	11.5 (78)		0.48 (0.32–0.71)
>10%	288	275	13.9 (17)	17.5 (20)		0.79 (0.41–1.50)
Smoking status						
Current smoker	920	1014	9.0 (36)	12.0 (54)		0.75 (0.49–1.14)
Former or never	2965	2862	3.7 (53)	5.8 (82)		0.62 (0.44–0.88)
Hypertension						
No	2496	2499	3.0 (36)	6.4 (77)		0.47 (0.31–0.69)
Yes	1392	1382	8.3 (53)	9.1 (59)		0.91 (0.63–1.31)
LDL cholesterol at screening						
<130 mg/dl	2973	3044	4.8 (68)	7.4 (107)		0.64 (0.48–0.87)
≥130 mg/dl	915	837	4.9 (21)	7.2 (29)		0.69 (0.39–1.21)
CD4 count (cells/mm <sup>3</sup> )						
<500	1257	1253	4.7 (28)	6.9 (41)		0.67 (0.42–1.09)
>500	2631	2628	4.9 (61)	7.5 (95)		0.65 (0.47–0.89)

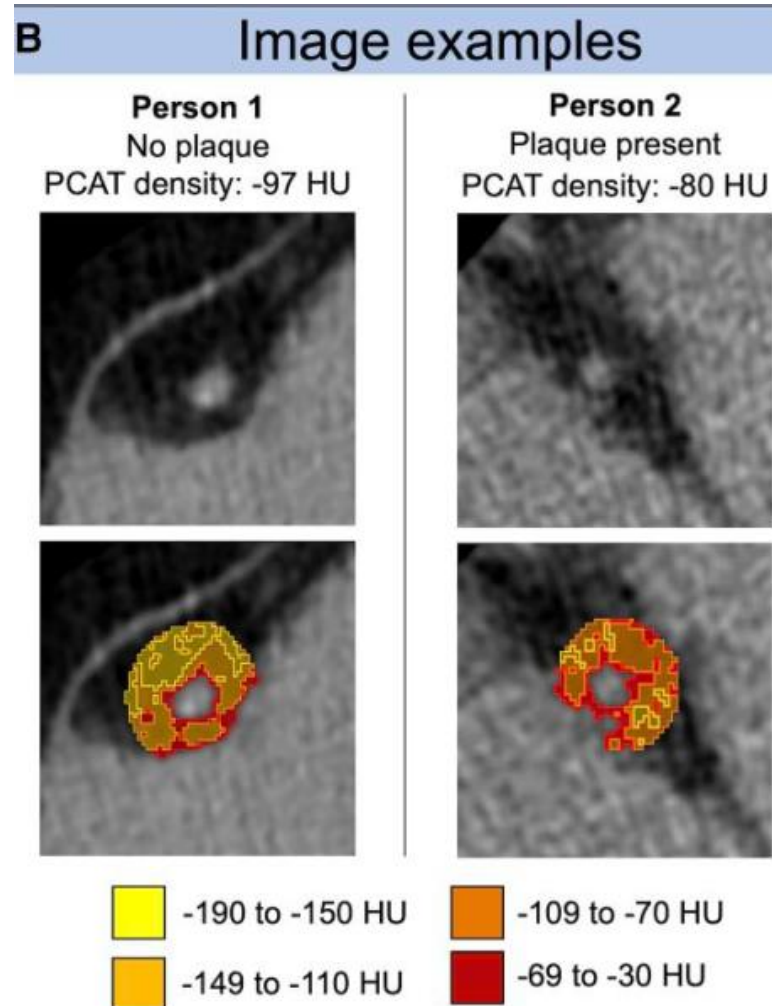


# Pericoronary Adipose Tissue Density, Inflammation, and Subclinical Coronary Artery Disease Among People With HIV in the REPRIEVE Cohort

Borek Foldyna,<sup>1</sup> Thomas Mayrhofer,<sup>1,2</sup> Markella V. Zanni,<sup>3</sup> Asya Lyass,<sup>4</sup> Radhika Barve,<sup>1</sup> Julia Karady,<sup>1</sup> Sara McCallum,<sup>3</sup> Tricia H. Burdo,<sup>5</sup> Kathleen V. Fitch,<sup>3</sup> Kayla Paradis,<sup>1</sup> Evelynne S. Fulda,<sup>3</sup> Marissa R. Diggs,<sup>3</sup> Gerald S. Bloomfield,<sup>6</sup> Carlos D. Malvestutto,<sup>7</sup> Carl J. Fichtenbaum,<sup>8</sup> Judith A. Aberg,<sup>9</sup> Judith S. Currier,<sup>10</sup> Heather J. Ribaldo,<sup>11</sup> Udo Hoffmann,<sup>12</sup> Michael T. Lu,<sup>1</sup> Pamela S. Douglas,<sup>13</sup> and Steven K. Grinspoon<sup>3</sup>



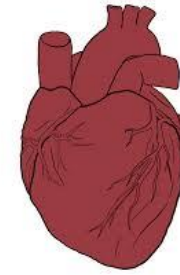
Clinical Infectious Diseases® 2023;77(12):1676–86



Sous étude 727  
participants  
REPRIEVE

Importance du tissu adipeux  
péricoronarien =

- corrélé significativement avec plaques coronariennes, calcifiées ou non, après ajustement sur tous les FDR « habituels »
- plus importante qu'une cohorte comparative de personnes non infectées par le VIH (Framingham)



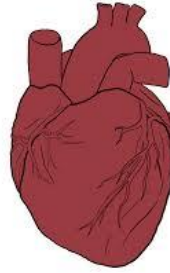
## Randomized Placebo-Controlled Trial to Evaluate Effects of Eplerenone on Myocardial Perfusion and Function Among Persons With Human Immunodeficiency Virus (HIV)—Results From the MIRACLE HIV Study

Clinical Infectious Diseases™

2023;77(8):1166–75

Suman Srinivasa,<sup>1,6</sup> Allie R. Walpert,<sup>1</sup> Teressa S. Thomas,<sup>1</sup> Daniel M. Huck,<sup>2</sup> Michael Jerosch-Herold,<sup>3</sup> Sabeeh Islam,<sup>3</sup> Michael T. Lu,<sup>4</sup> Tricia H. Burdo,<sup>5</sup> Christopher R. deFilippi,<sup>6</sup> Carolyn N. Dunderdale,<sup>1</sup> Meghan Feldpausch,<sup>1</sup> Sanjna Iyengar,<sup>1</sup> Grace Shen,<sup>1</sup> Stephen Baak,<sup>5</sup> Martin Torriani,<sup>7</sup> Gregory K. Robbins,<sup>8</sup> Hang Lee,<sup>9</sup> Raymond Kwong,<sup>3,6</sup> Marcelo DiCarli,<sup>2</sup> Gail K. Adler,<sup>10</sup> and Steven K. Grinspoon<sup>1</sup>

- Dysfonction microvasculaire → diminution perfusion myocardique, même si pas de coronaropathie et/ou de maladie cardiovasculaire symptomatique
  - Peut être évaluée par la réserve coronarienne (CFR par TEP), ou par perfusion myocardique de stress (sMBF par IRM)
  - Dans population générale = altération CFR = 5 fois plus de mortalité cardiovasculaire, facteur prédictif indépendant de la présence d'une coronaropathie obstructive
  - Hypothèse = système RA est le médiateur physiopathologique / le bloquer = bénéfique?
- ➔ **MIRACLE HIV (MIneralocorticoid Receptor Antagonism for CardiovascuLar hEalth in HIV) study**
- Essai randomisé contre placebo 20/20 patients VIH+ contrôlés virologiquement sans maladie cardiovasculaire connue, avec scores de risque CV à 10 ans équivalents
  - Eplerenone 50 mgx2/j vs placebo pendant 12 mois

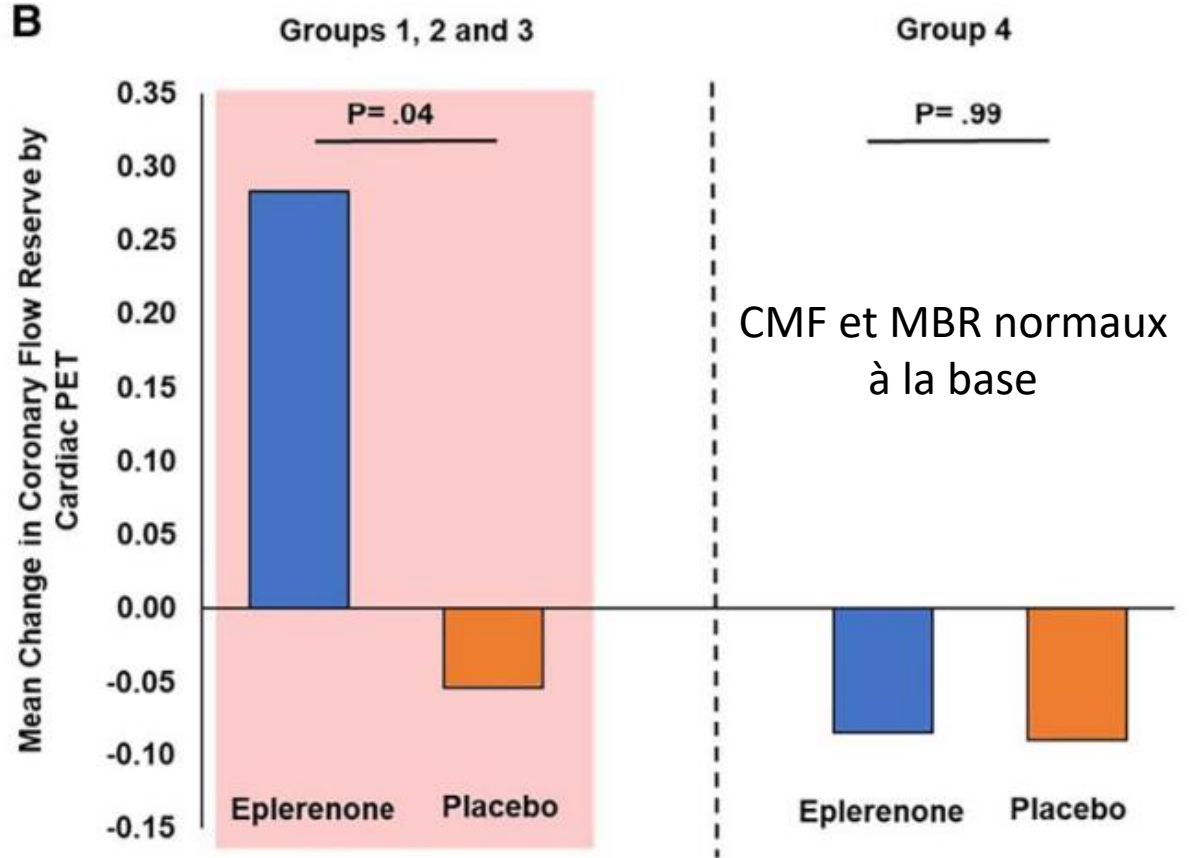
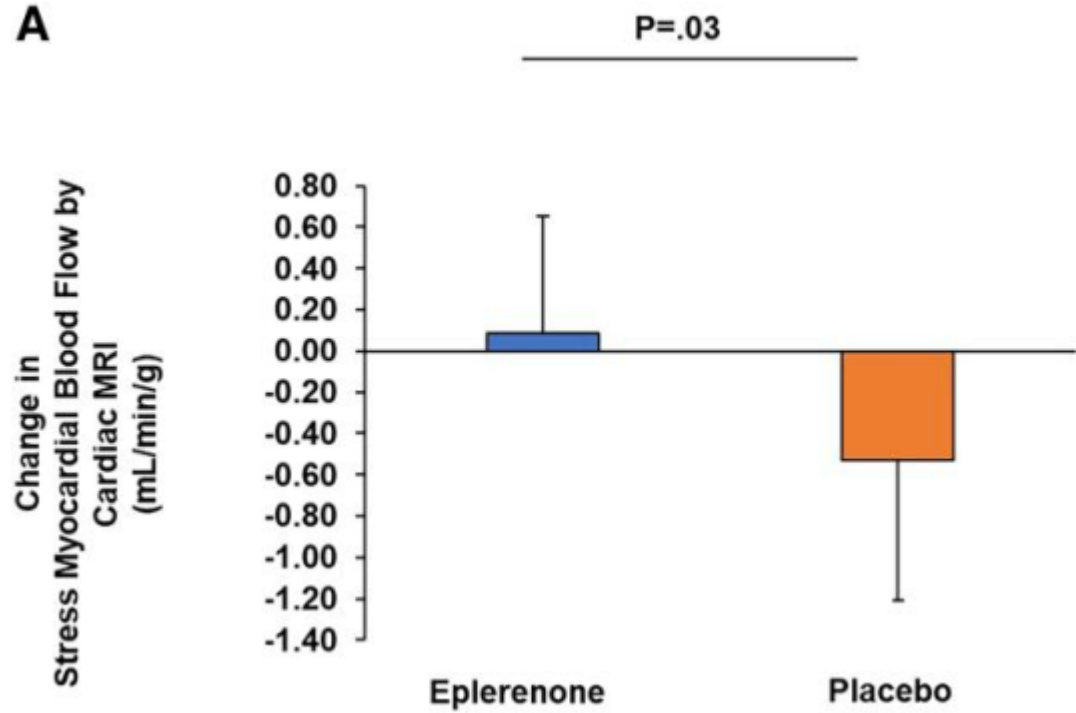


# Randomized Placebo-Controlled Trial to Evaluate Effects of Eplerenone on Myocardial Perfusion and Function Among Persons With Human Immunodeficiency Virus (HIV)—Results From the MIRACLE HIV Study

Suman Srinivasa,<sup>1,6</sup> Allie R. Walpert,<sup>1</sup> Teresa S. Thomas,<sup>1</sup> Daniel M. Huck,<sup>2</sup> Michael Jerosch-Herold,<sup>3</sup> Sabeeh Islam,<sup>3</sup> Michael T. Lu,<sup>4</sup> Tricia H. Burdo,<sup>5</sup> Christopher R. deFilippi,<sup>6</sup> Carolyn N. Dunderdale,<sup>1</sup> Meghan Feldpausch,<sup>1</sup> Sanjna Iyengar,<sup>1</sup> Grace Shen,<sup>1</sup> Stephen Baak,<sup>5</sup> Martin Torriani,<sup>7</sup> Gregory K. Robbins,<sup>8</sup> Hang Lee,<sup>9</sup> Raymond Kwong,<sup>3,6</sup> Marcelo DiCarli,<sup>2</sup> Gail K. Adler,<sup>10</sup> and Steven K. Grinspoon<sup>1</sup>

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2023;77(8):1166–75

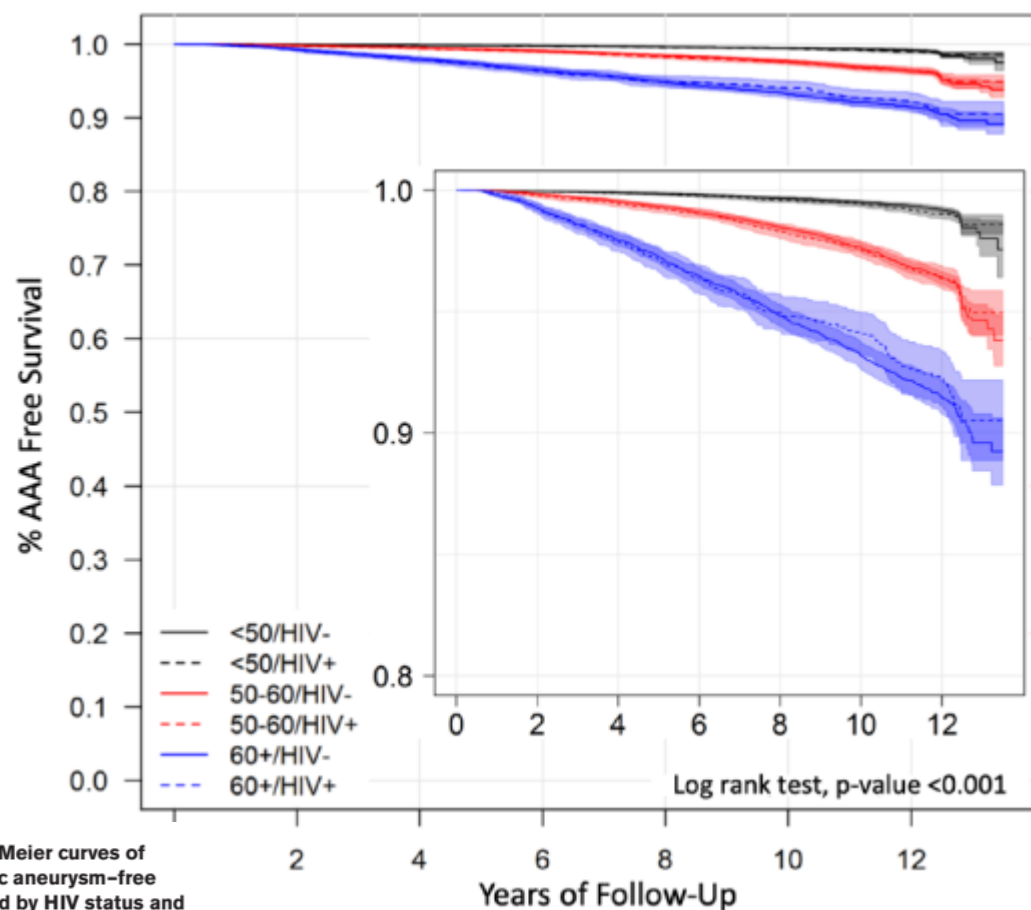


# Association of HIV Infection and Incident Abdominal Aortic Aneurysm Among 143 001 Veterans

*Circulation.* 2023;148:135–143.

*>143.000 personnes suivies prospectivement*

Alexandra M. Filipkowski, BS; Suman Kundu , DSc, MSc; Svetlana K. Eden, PhD; Charles W. Alcorn , MA; Amy C. Justice, MD, PhD; Kaku A. So-Armah, PhD; Hilary A. Tindle, MD, MPH; Quinn S. Wells , MD, PharmD, MSCI, MSc; Joshua A. Beckman , MD, MSc; Matthew S. Freiberg , MD, MSc; Aaron W. Aday , MD, MSc



**Figure.** Kaplan-Meier curves of abdominal aortic aneurysm-free survival stratified by HIV status and age.

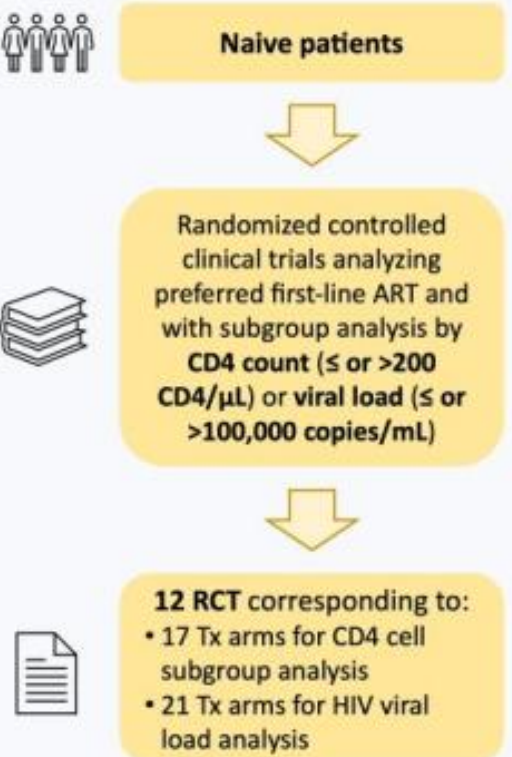
Stratification	AAA events/N*	Time-updated fully adjusted AAA risk (95% CI)‡
People without HIV	1790/99 235	1.00
PWH, CD4+ ≥ 500 cells/mm <sup>3</sup>	178/12 539	0.92 (0.81–1.05)
PWH, 200 ≤ CD4+ < 500 cells/mm <sup>3</sup>	214/14 725	1.07 (0.93–1.24)
PWH, CD4+ < 200 cells/mm <sup>3</sup>	103/8360	1.29 (1.02–1.65)
Stratified by HIV status and viral load		
People without HIV	1790/99 235	1.00
PWH, VL < 500 copies/mL	274/16 385	0.95 (0.85–1.07)
PWH, VL ≥ 500 copies/mL	224/19 202	1.29 (1.09–1.52)

# Contribution of Low CD4 Cell Counts and High Human Immunodeficiency Virus (HIV) Viral Load to the Efficacy of Preferred First-Line Antiretroviral Regimens for Treating HIV Infection: A Systematic Review and Meta-Analysis

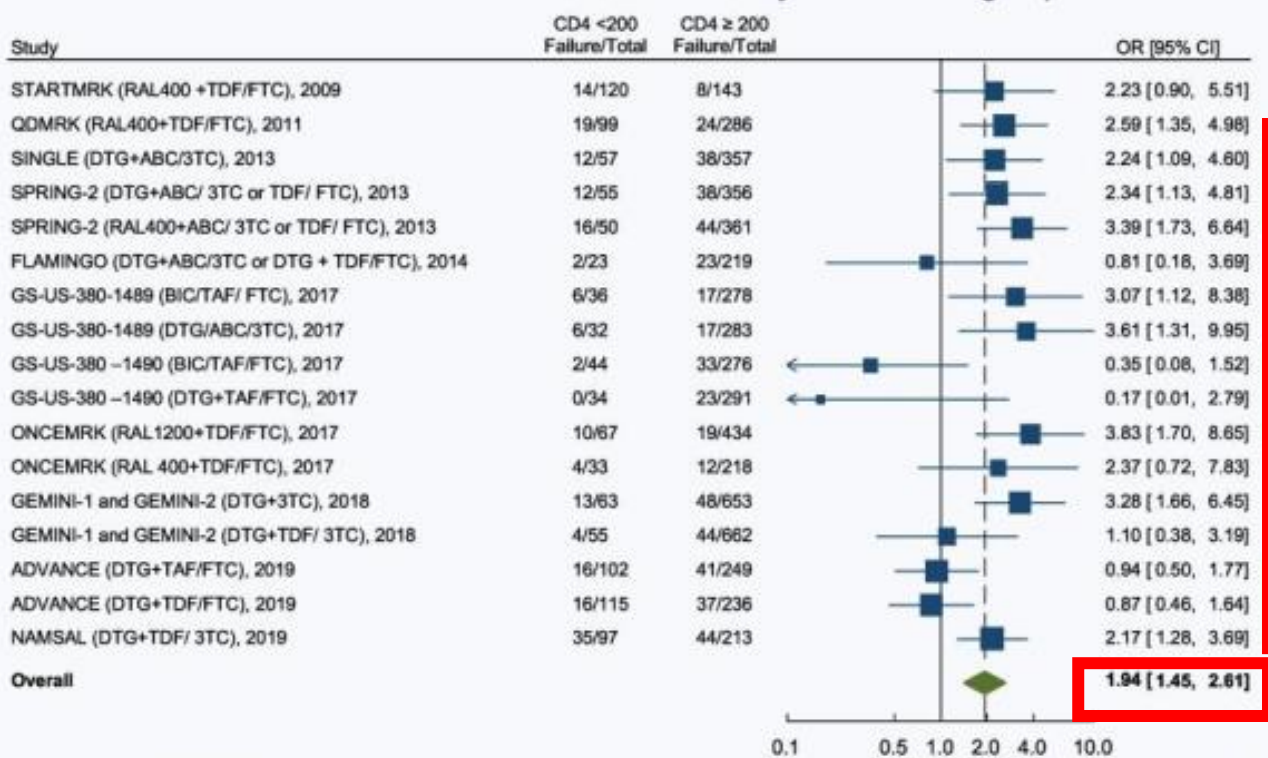
Jose A. Perez-Molina,<sup>1,2,3,6</sup> Clara Crespo-Andújar,<sup>1,2,3</sup> Javier Zamora,<sup>2,4,5,6</sup> Borja M. Fernández-Félix,<sup>2,4,5</sup> Andrea Gaetano-Gil,<sup>2,4,5</sup> Juan C. López-Bernaldo de Quirós,<sup>3,7,8</sup> Sergio Serrano-Villar,<sup>1,2,3</sup> Santiago Moreno,<sup>1,2,3</sup> Noelia Álvarez-Díaz,<sup>3</sup> and Juan Berenguer<sup>3,7,8</sup>

**! Late initiation of ART has detrimental effects on the prognosis and survival of PLHIV. How does low CD4 cell count or high HIV viral load impair ART response?**

**Sistematic review and meta-analysis**      **We computed the OR of treatment failure (TF) for each subgroup and individual treatment arm**



Pooled estimate of antiretroviral treatment failure rate by CD4 cell subgroups at 48 weeks

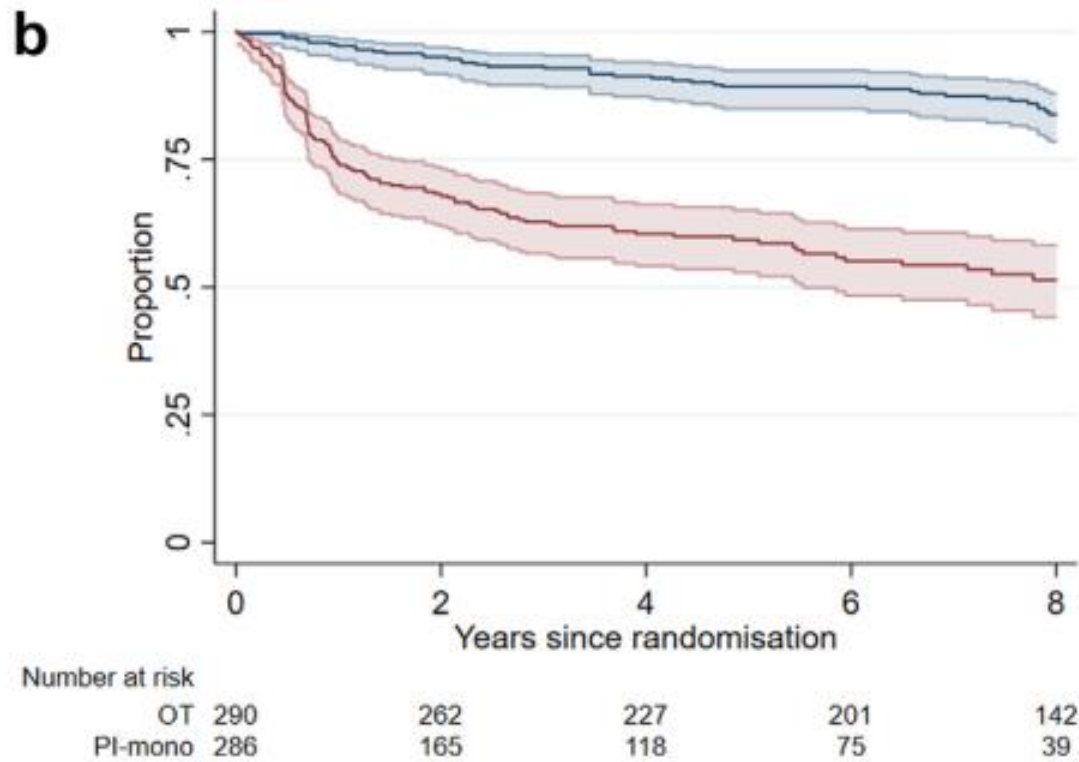


**Low CD4 cells (≤200/μL) and high HIV viral load (>100,000/mL) increase the risk of treatment failure at 48W and 96W across all the preferred regimens**

# Long-term efficacy and safety of a treatment strategy for HIV infection using protease inhibitor monotherapy: 8-year routine clinical care follow-up from a randomised, controlled, open-label pragmatic trial (PIVOT)

Nicholas I. Paton,<sup>a,b,\*</sup> Wolfgang Stöhr,<sup>a</sup> Alejandro Arenas-Pinto,<sup>a</sup> Amanda Clarke,<sup>c</sup> Ian Williams,<sup>d</sup> Margaret Johnson,<sup>e</sup> Chloe Orkin,<sup>f</sup> Fabian Chen,<sup>g</sup> Vincent Lee,<sup>h</sup> Alan Winston,<sup>i</sup> Mark Gompels,<sup>j</sup> Julie Fox,<sup>k</sup> Karen Sanders,<sup>a</sup> and David T. Dunn,<sup>a</sup> for the Protease Inhibitor monotherapy Versus Ongoing Triple therapy (PIVOT) Trial Team<sup>l</sup>

eClinicalMedicine  
2024;69: 102457



**Kaplan–Meier estimates of the proportion of participants who remained on the treatment allocated by randomization who did not experience viral failure.**

Participant	Drugs received during trial before date of resistance test	Reverse Transcriptase mutations	Protease mutations	Lost drug options
<b>OT group</b>				
1	ABC, 3TC, ATV	V118I, V179D, M184V	I84V	3TC, FTC, SQV, FPV, TPV
2	TDF, FTC, RPV, DRV	L100I, K103N, M184V	A71V	3TC, FTC, NVP, EFV, ETV, RPV
3	TDF, FTC, ETV, NVP, EFV	M184V/I, K65R, E138A, Y181C, H221Y, M230L	-	3TC, FTC, ABC, TDF, NVP, EFV, ETV, RPV
4	TDF, FTC, DRV	V106A	-	NVP <sup>b</sup> , EFV <sup>b</sup>
5	ZDV, 3TC, TDF, FTC, NVP, DRV	V179D, M184LV	-	3TC
6	DDI, 3TC, ABC, EFV, DRV	K103N	-	NVP, EFV
7	ZDV, TDF, 3TC, FTC, EFV	V106M, Y188HY	-	NVP, EFV, DOR
<b>PI-mono group</b>				
1	ATV	-	K20T, I50L/I, A71T	ATV
2	DRV	-	L90M	SQV <sup>a</sup>
3	DRV	-	A71T, L90M	SQV <sup>a</sup>
4	DRV	K103N	-	NVP <sup>b</sup> , EFV <sup>b</sup>
5	DRV	K103N	-	NVP <sup>b</sup> , EFV <sup>b</sup>
6	DRV	M41L, T215D	-	ZDV <sup>b</sup>

Years since randomisation	Number (%) with viral load $\geq 200$ copies/ml		P-value
	OT	PI-mono	
1	2/287 (0.7)	16/295 (5.4)	<0.001
2	3/284 (1.1)	6/290 (2.1)	0.51
3	2/293 (0.7)	3/287 (1.1)	1.00
4	3/261 (1.2)	7/250 (2.8)	0.21
5	3/243 (1.2)	8/219 (3.6)	0.13
6	3/230 (1.3)	3/213 (1.4)	1.00
7	1/217 (0.5)	3/206 (1.5)	0.36
8	4/214 (1.9)	1/196 (0.5)	0.37

Table 3: Proportion with HIV-1 RNA non-suppression ( $\geq 200$  copies/ml) at annual time points from randomisation.

# HIV treatment-as-prevention and its effect on incidence of HIV among cisgender gay, bisexual, and other men who have sex with men in Australia: a 10-year longitudinal cohort study

Lancet HIV 2023; 10: e385-93

Denton Callander, Hamish McManus, Richard T Gray, Andrew E Grulich, Andrew Carr, Jennifer Hoy, Basil Donovan, Christopher K Fairley, Martin Holt, David J Templeton, Siaw-Teng Liaw, James H McMahon, Jason Asselin, Kathy Petoumenos, Margaret Hellard, Alisa Pedrana, Julian Elliott, Phillip Keen, Jane Costello, Richard Keane, John Kaldor, Mark Stoové\*, Rebecca Guy\*

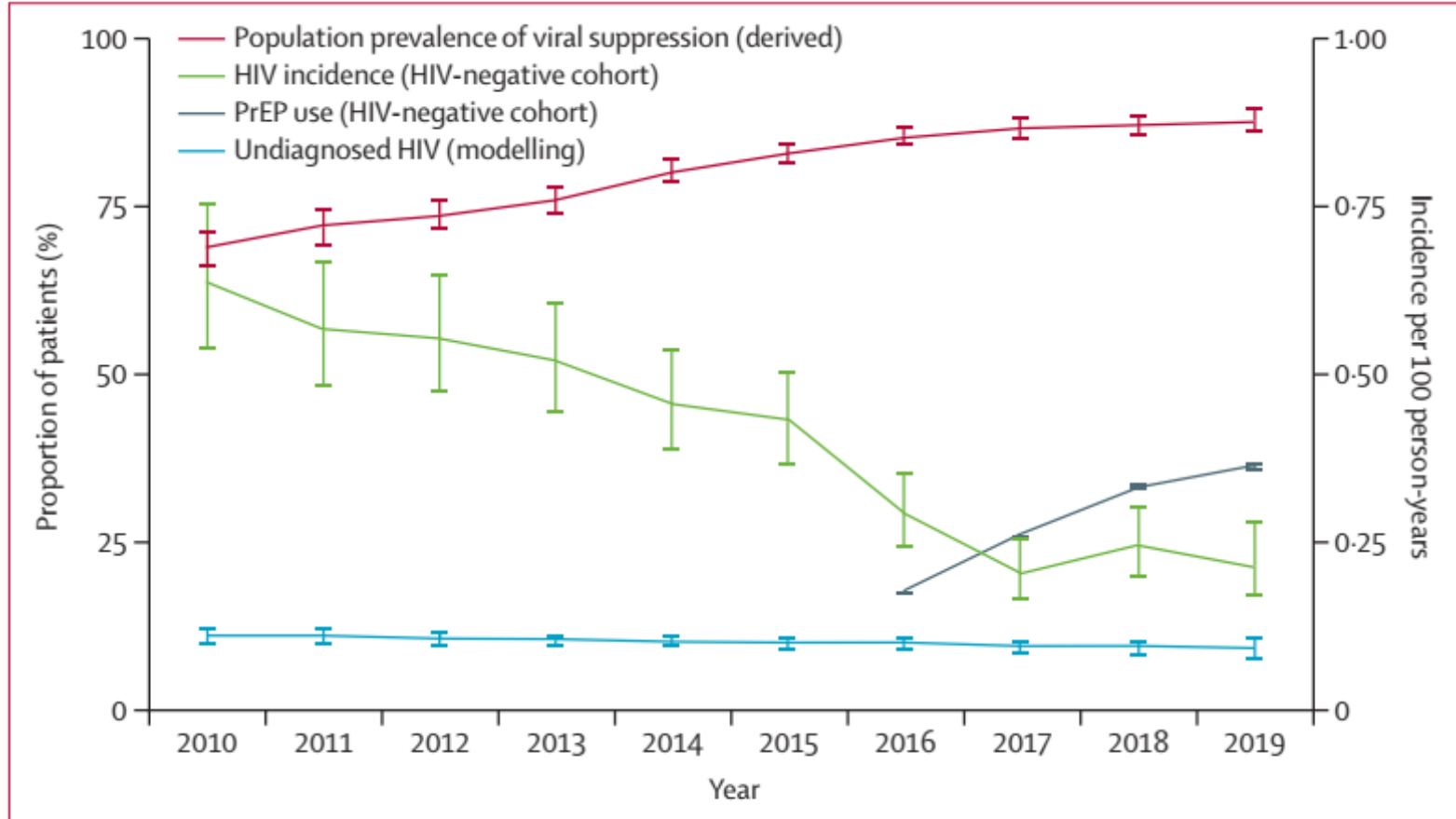
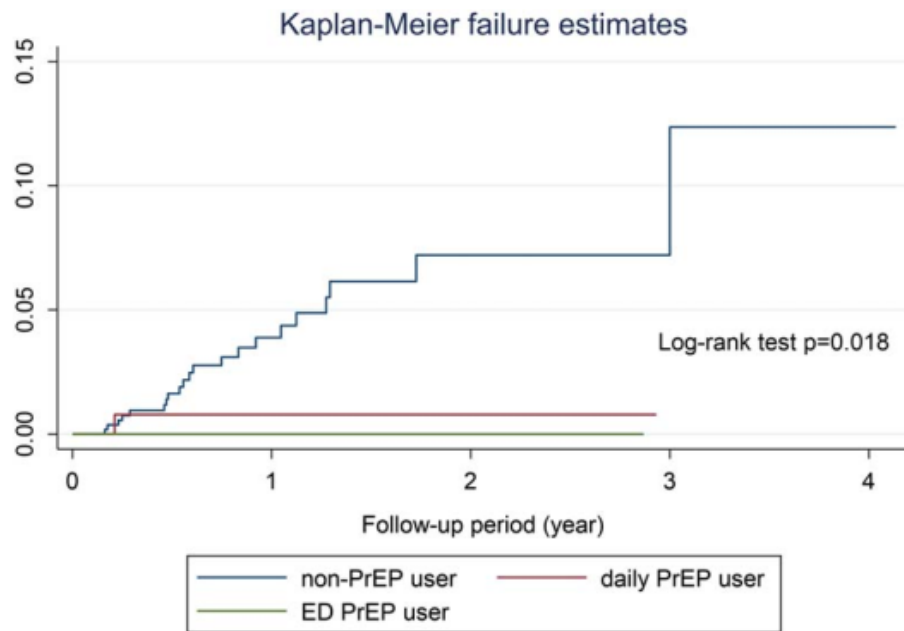


Figure 2: Population prevalence of viral suppression, HIV incidence, undiagnosed HIV, and PrEP uptake among GBM, by year, 2010-19

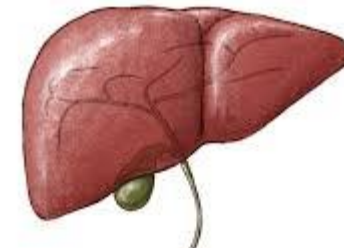
# Effect of tenofovir-based HIV pre-exposure prophylaxis against HBV infection in men who have sex with men

Daisuke Mizushima<sup>1</sup> | Misao Takano<sup>1</sup> | Takahiro Aoki<sup>1</sup> | Naokatsu Ando<sup>1</sup> | Haruka Uemura<sup>1</sup> | Yasuaki Yanagawa<sup>1</sup> | Koji Watanabe<sup>1</sup> | Hiroyuki Gatanaga<sup>1,2</sup> | Yoshimi Kikuchi<sup>1</sup> | Shinichi Oka<sup>1,2</sup>

786 HSH suivis de janvier 2018 à juin 2021



**FIGURE 2** Kaplan-Meier curve to estimates incidence of HBV infection among MSM with and without PrEP. Abbreviations: ED, event-driven; MSM, men who have sex with men; PrEP, pre-exposure prophylaxis.



*Hepatology*. 2023;77:2084–2092

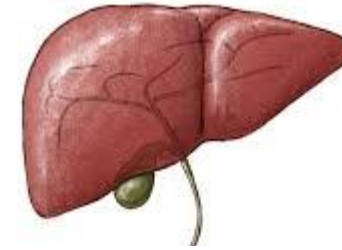
**TABLE 2** Factors associated with acute HBV infection in the univariate analyses

Variables	Univariate analysis		
	HR	95% CI	<i>p</i> <sup>a</sup>
Age, per year increase	0.94	0.883–0.996	0.037
Use of PrEP	0.13	0.017–0.938	0.043
Bacterial STI at enrollment	3.36	1.455–7.758	0.005
No. sexual partners at enrollment	1.01	1.001–1.010	0.011
Average rate of condom use at enrollment	1	0.988–1.015	0.855
Illicit drug abuse ever	0.78	0.183–3.353	0.742

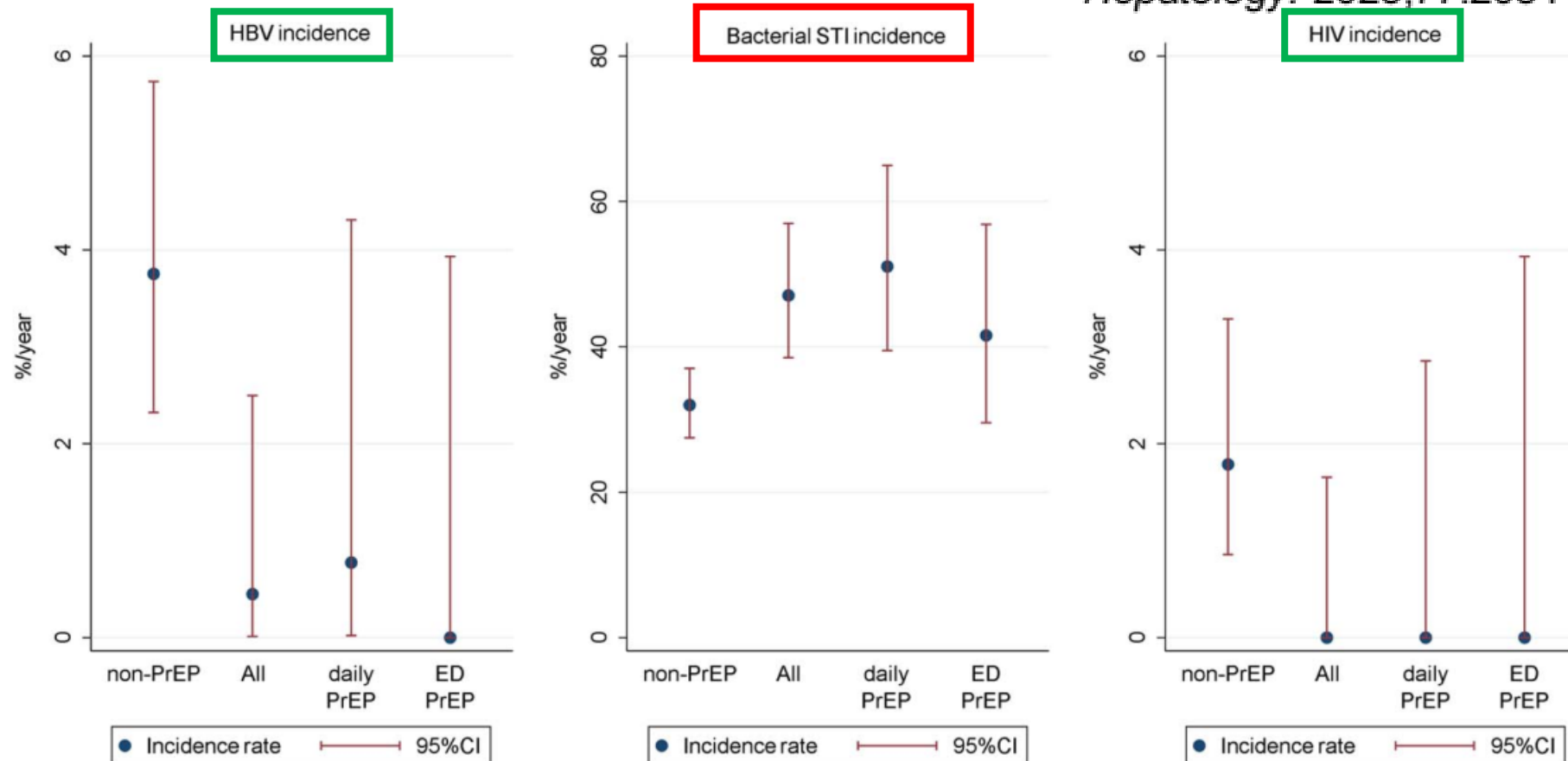


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Shinichi Oka<sup>1,2</sup>



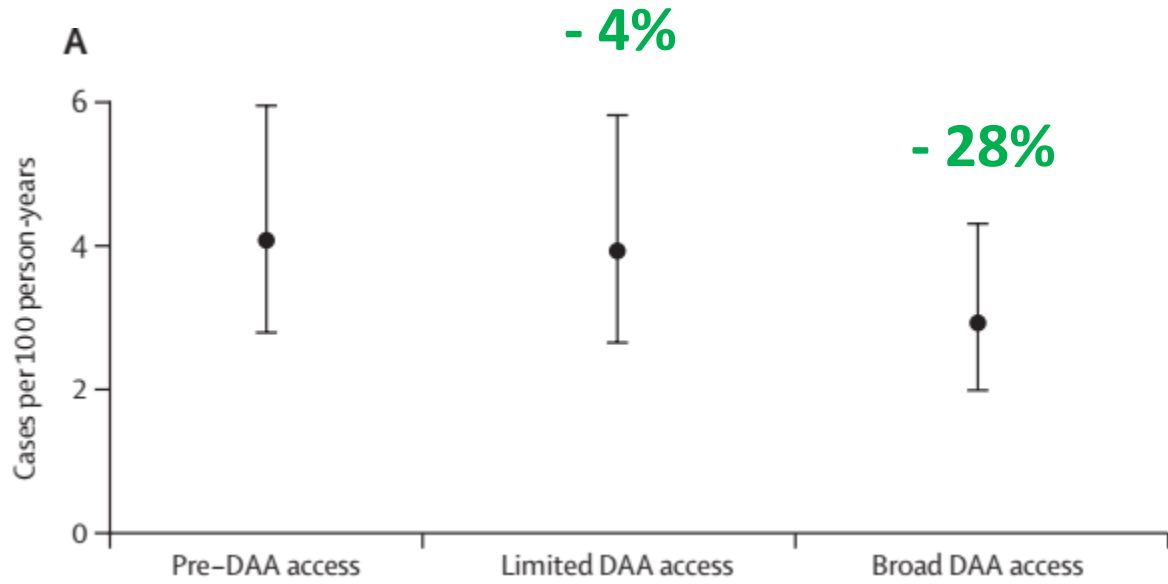
*Hepatology*. 2023;77:2084–2092



**FIGURE 3** Incidence rate of HBV, HIV, and bacterial STIs with and without PrEP use. Abbreviations: PrEP, pre-exposure prophylaxis; STI, sexually transmitted infection.

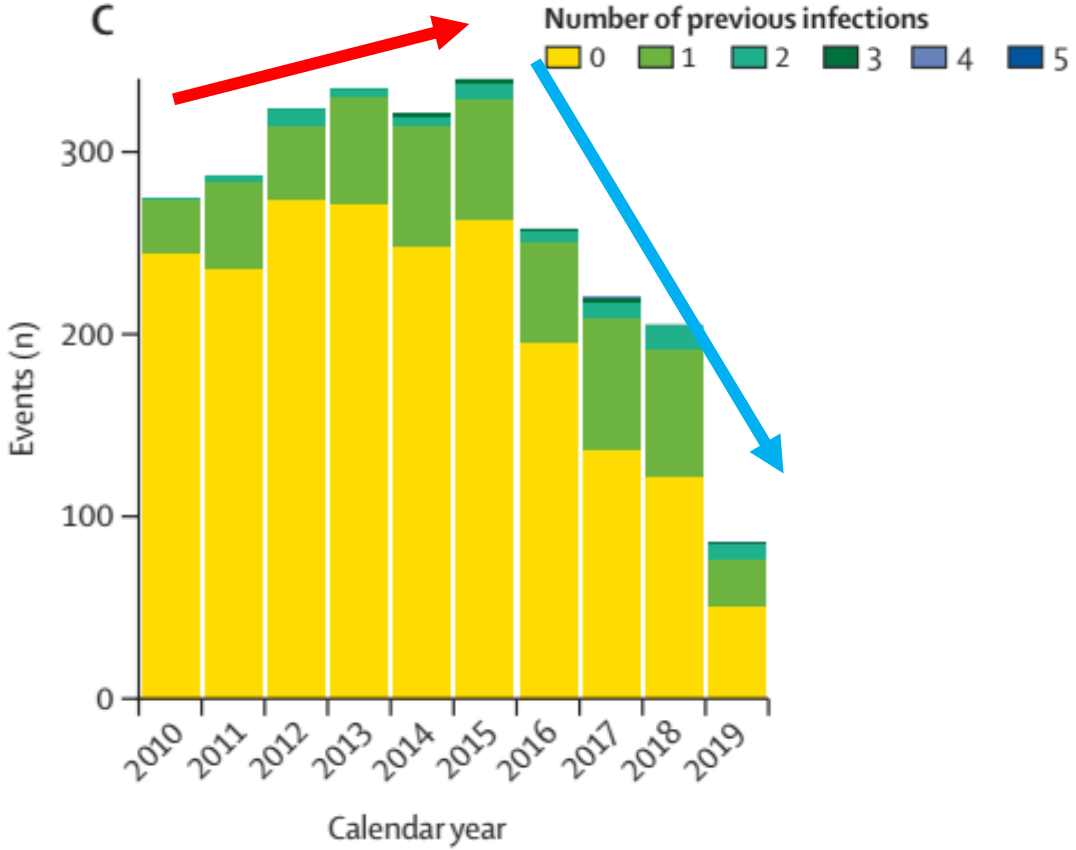
# Changes in incidence of hepatitis C virus reinfection and access to direct-acting antiviral therapies in people with HIV from six countries, 2010–19: an analysis of data from a consortium of prospective cohort studies

Rachel Sacks-Davis\*, Daniela K van Santen\*, Anders Boyd, Jim Young, Ashleigh Stewart, Joseph S Doyle, Andri Rauch, Catrina Mugglin, Marina Klein, Marc van der Valk, Colette Smit, Inmaculada Jarrin, Juan Berenguer, Karine Lacombe, Maria-Bernarda Requena, Linda Wittkop, Olivier Leleux, Fabrice Bonnet, Dominique Salmon, Gail V Matthews, Rebecca Guy, Natasha K Martin, Tim Spelman, Maria Prins, Mark Stoove, Margaret Hellard, on behalf of the InCHEHC Collaboration†



Predicted incidence of first HCV **reinfection** in 6144 participants of InCHEHC cohorts before and after the introduction of direct-acting antivirals

## Lancet HIV 2024



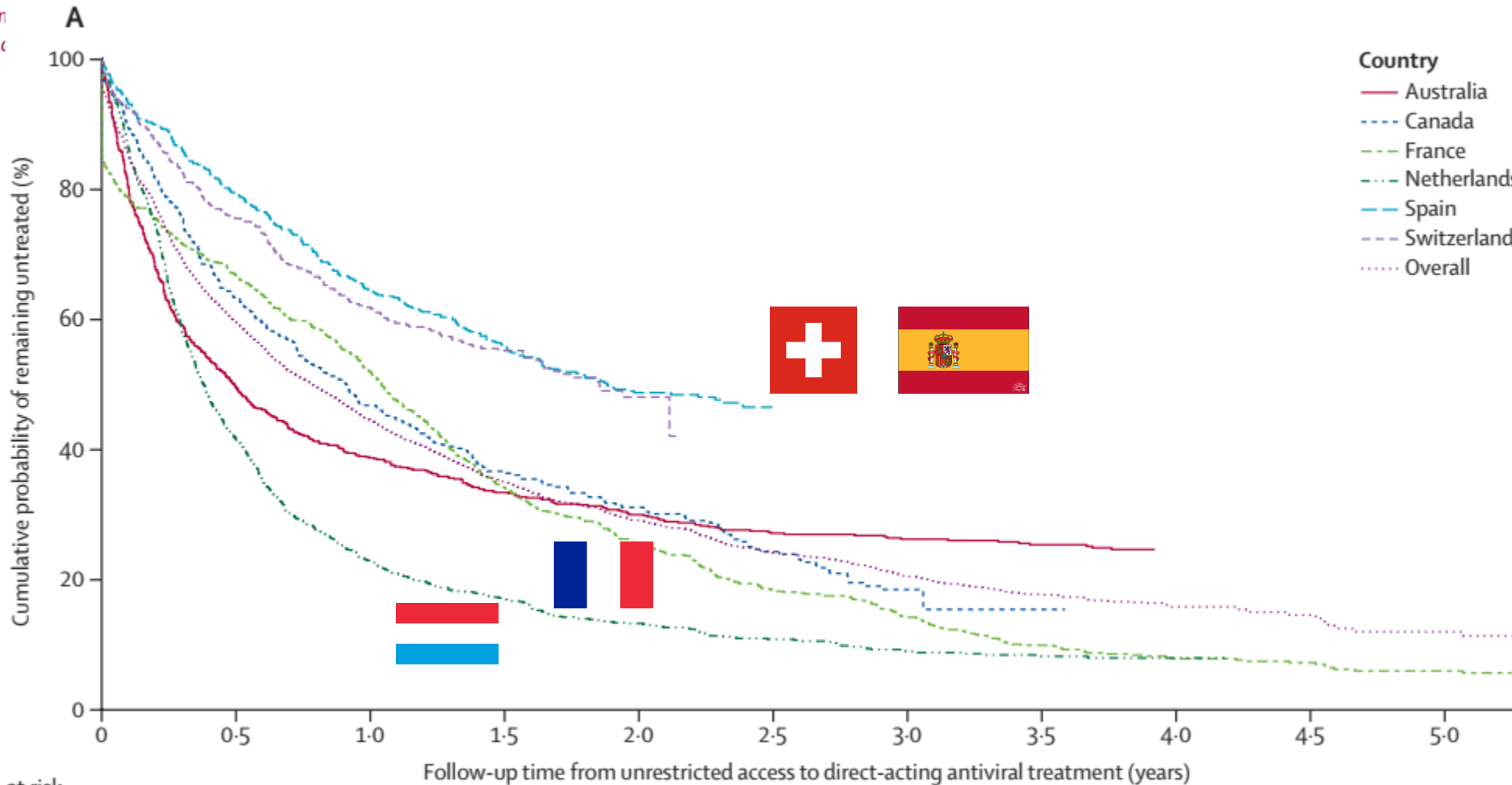
Combined HCV (**infection**) incidence among people with HIV by calendar year

# Reasons for not commencing direct-acting antiviral treatment despite unrestricted access for individuals with HIV and hepatitis C virus: a multinational, prospective cohort study

Lancet Public Health 2023;  
8: e294-304

Cas J Isfordink, Anders Boyd, Rachel Sacks-Davis, Daniela K van Santen, Colette Smit, Marianne Martinello, Mark Stoove, Juan Berenguer,

Lin  
Mc



- Un tiers des patients non traités
- Par rapport à HSH: femmes+++ et hétérosexuels plus à risque (+ être « bien » dans une filière de soin)

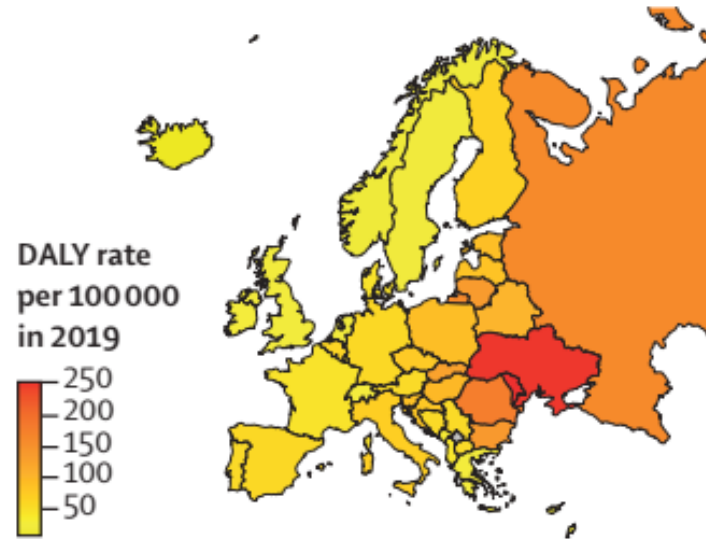
# Hepatitis B and C in Europe: an update from the Global Burden of Disease Study 2019

Lancet Public Health 2023;  
8: e701-16

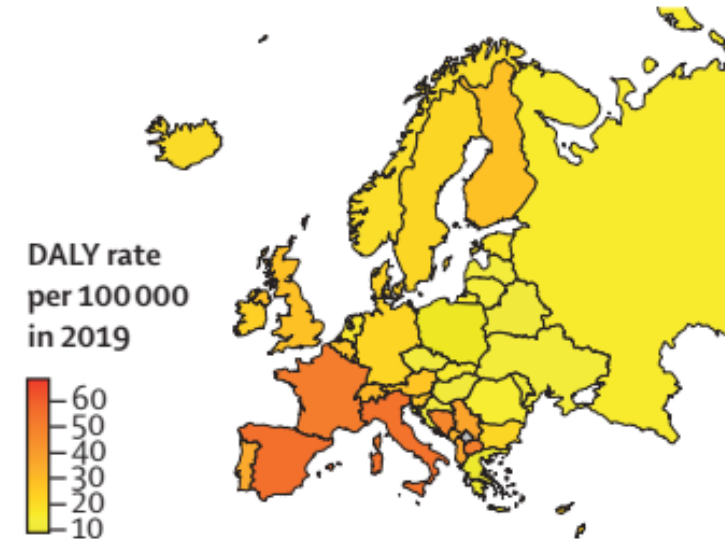
GBD 2019 Europe Hepatitis B & C Collaborators\*

VHC

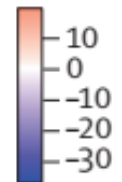
HCV-related cirrhosis and other chronic liver diseases



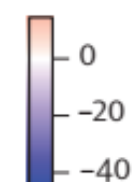
HCV-related liver cancer



Change in DALY rate from 2010 to 2019 (%)



Change in DALY rate from 2010 to 2019 (%)



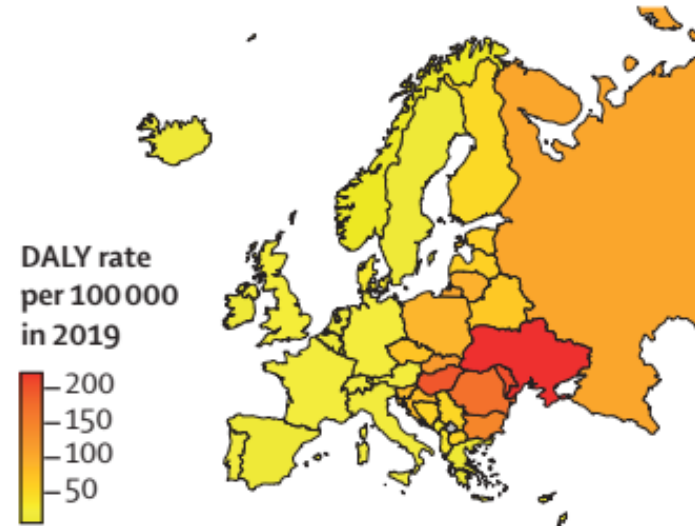
# Hepatitis B and C in Europe: an update from the Global Burden of Disease Study 2019

Lancet Public Health 2023;  
8: e701-16

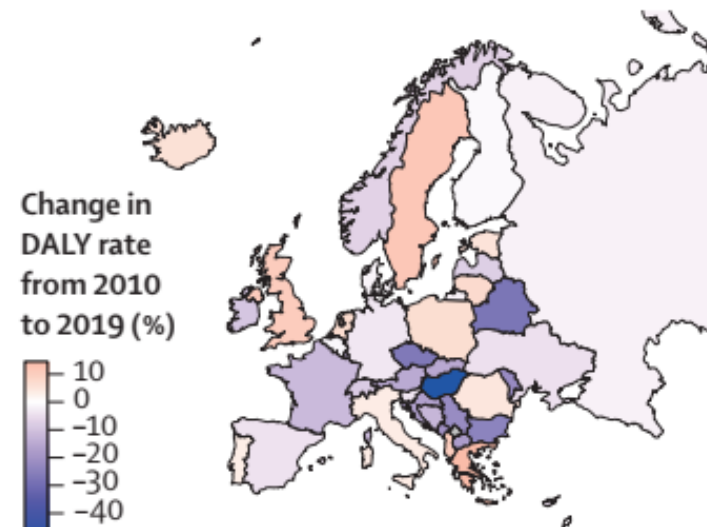
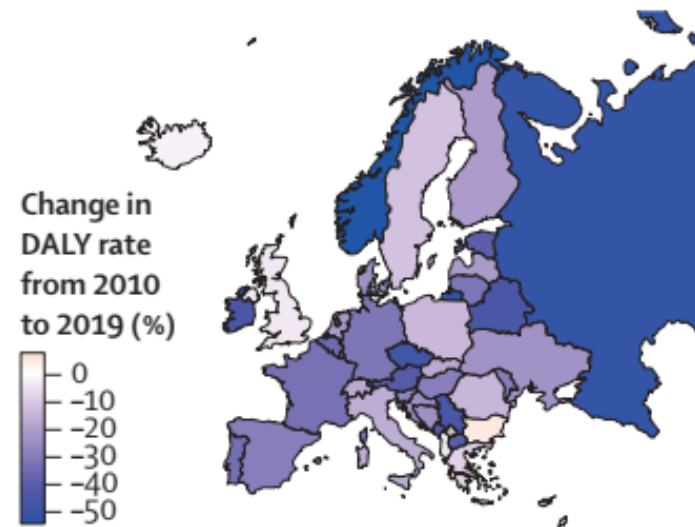
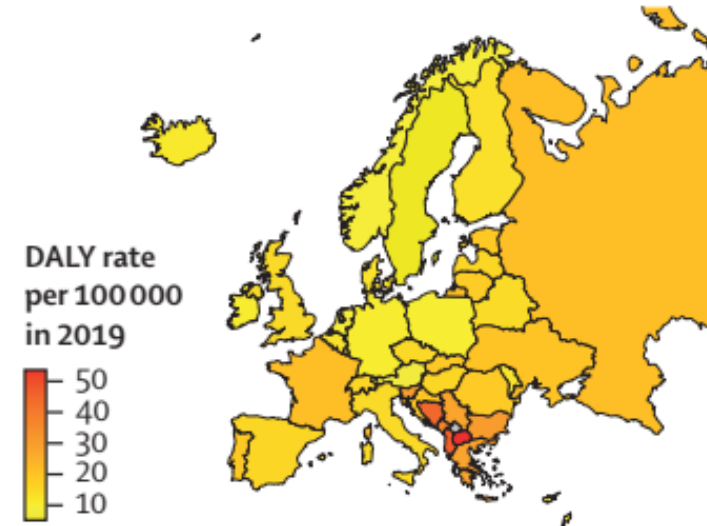
GBD 2019 Europe Hepatitis B & C Collaborators\*

VHB

HBV-related cirrhosis and other chronic liver diseases



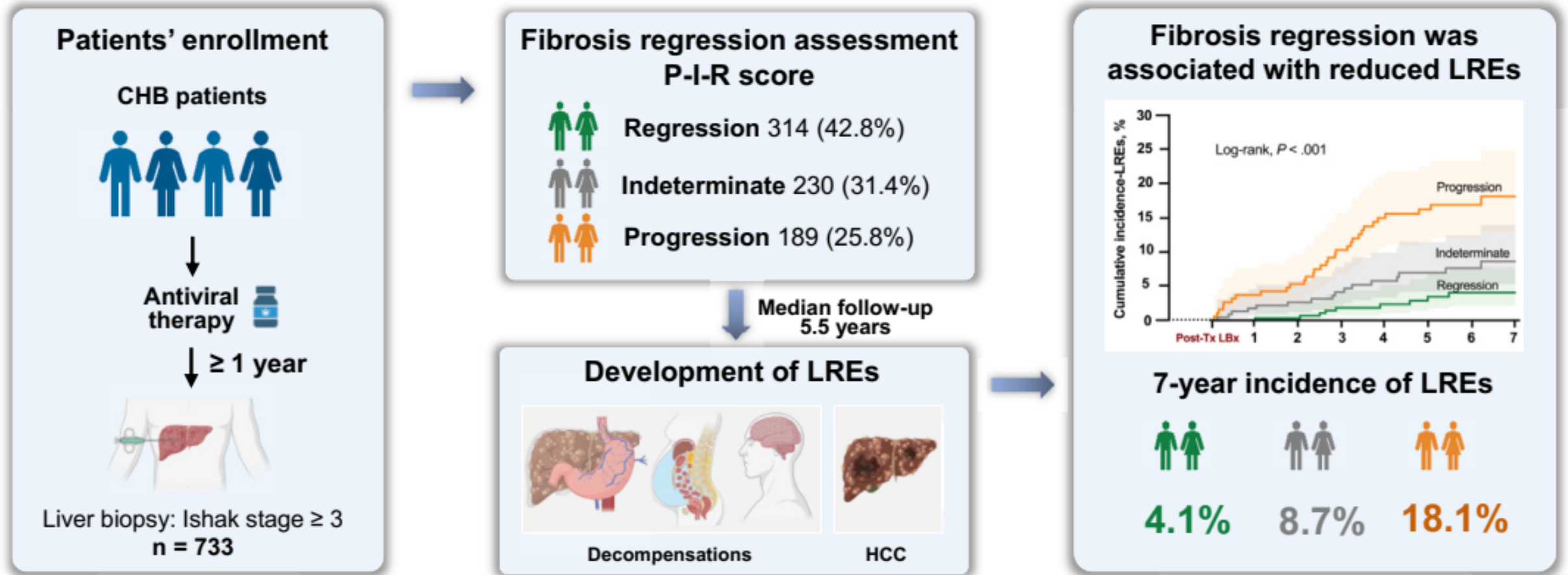
HBV-related liver cancer



# Regression of Liver Fibrosis in Patients on Hepatitis B Therapy Is Associated With Decreased Liver-Related Events

Yameng Sun,<sup>1,\*</sup> Wei Chen,<sup>2,\*</sup> Shuyan Chen,<sup>1,\*</sup> Xiaoning Wu,<sup>1</sup> Xinxin Zhang,<sup>3</sup> Lingyi Zhang,<sup>4</sup> Hong Zhao,<sup>5</sup> Mingyi Xu,<sup>6</sup> Yongpeng Chen,<sup>7</sup> Hongxin Piao,<sup>8</sup> Ping Li,<sup>9</sup> Lei Li,<sup>10</sup> Wei Jiang,<sup>11</sup> Xiaodong Li,<sup>12</sup> Huichun Xing,<sup>13</sup> Xudong Liu,<sup>14</sup> Yuxi Zhang,<sup>15</sup> Bingqiong Wang,<sup>1</sup> Jialing Zhou,<sup>1</sup> Tongtong Meng,<sup>1</sup> Xinyan Zhao,<sup>1</sup> Chen Shao,<sup>16</sup> Yuanyuan Kong,<sup>17</sup> Xinyu Zhao,<sup>17</sup> Xiaojuan Ou,<sup>1</sup> Chenghai Liu,<sup>18</sup> Jidong Jia,<sup>1</sup> and Hong You<sup>1</sup>

Clinical Gastroenterology and Hepatology 2024;22:591–601



# Hepatocellular carcinoma risk in patients with chronic hepatitis B receiving tenofovir- vs. entecavir-based regimens: Individual patient data meta-analysis

Won-Mook Choi, Terry Cheuk-Fung Yip, Grace Lai-Hung Wong, ..., Jung Woo Shin, Yao-Hsu Yang, Young-Suk Lim

J. Hepatol. 2023, 78, 534–542

## Objective

To compare the risk of HCC development associated with tenofovir disoproxil fumarate (TDF) vs. entecavir (ETV) treatment in patients with CHB, using individual patient data (IPD)

## Methods



Systematic literature review (SLR) of published SLRs, electronic databases and key congress proceedings

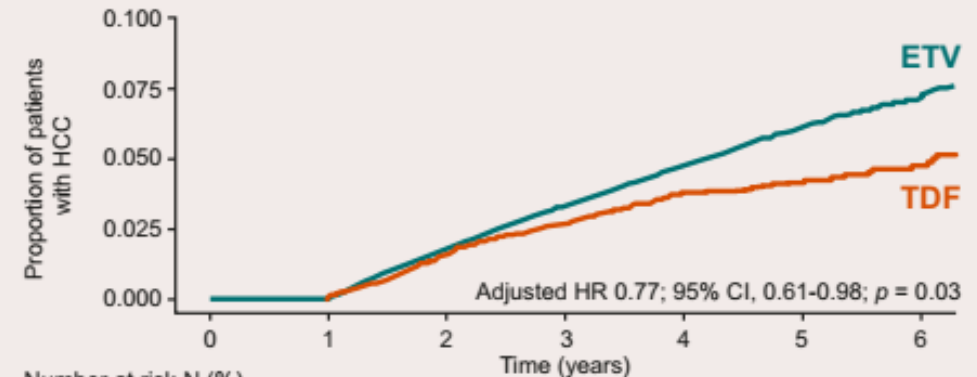
20 eligible studies identified; 11 studies from 3 countries contributed IPD to the meta-analysis



Meta-analysis performed using IPD from 42,939 eligible patients with CHB treated with TDF or ETV

## Findings

Patients receiving TDF had a significantly lower risk of developing HCC than those receiving ETV, with risk diverging after 2.5 years



	0	1	2	3	4	5	6
ETV	35,960 (100)	35,960 (100)	29,679 (83)	24,642 (69)	19,749 (55)	13,046 (36)	4,383 (12)
TDF	6,979 (100)	6,979 (100)	5,792 (83)	4,387 (63)	2,927 (42)	1,730 (25)	751 (11)

## Conclusions

Patients with CHB receiving treatment with TDF were significantly less likely to develop HCC than those receiving ETV

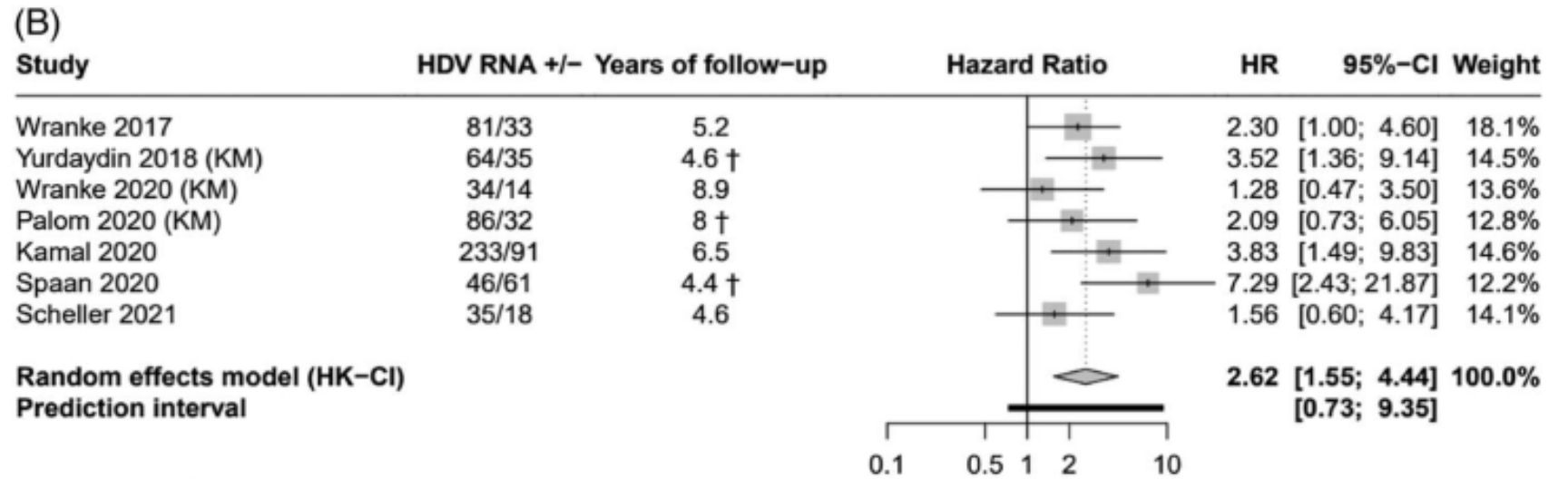
These findings should be considered in determining the treatment course to achieve the best long-term outcomes in patients with CHB

# Association of hepatitis delta virus with liver morbidity and mortality: A systematic literature review and meta-analysis

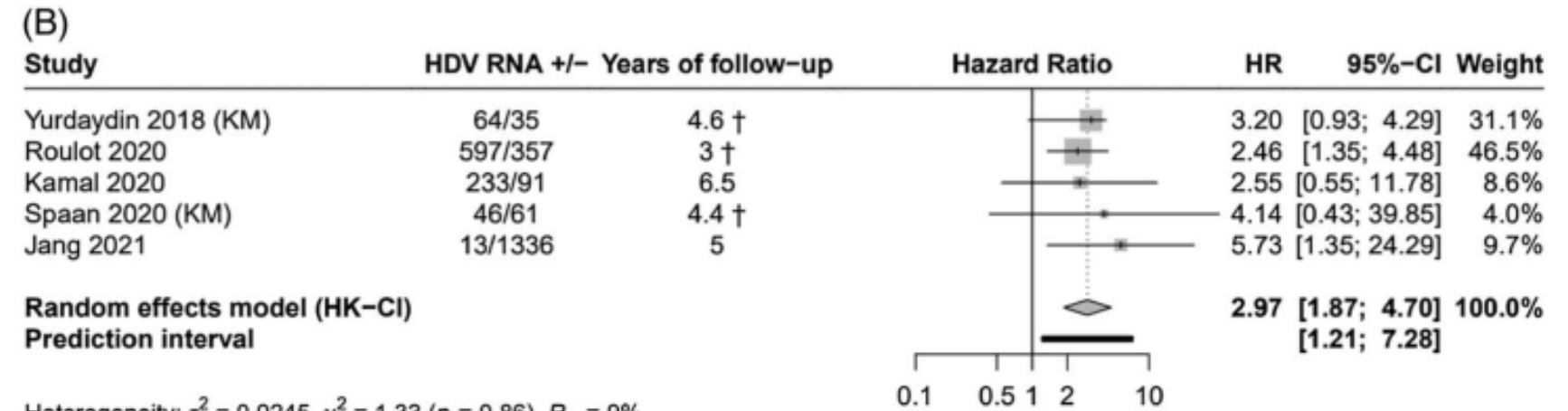
Robert G. Gish<sup>1</sup> | Robert J. Wong<sup>2</sup> | Gian Luca Di Tanna<sup>3</sup> | Ankita Kaushik<sup>4</sup> |  
 Chong Kim<sup>4</sup> | Nathaniel J. Smith<sup>5</sup> | Patrick T.F. Kennedy<sup>6</sup> 

*Hepatology*. 2024;00:000–000.

Risque  
évènement  
hépatique



Risque  
CHC



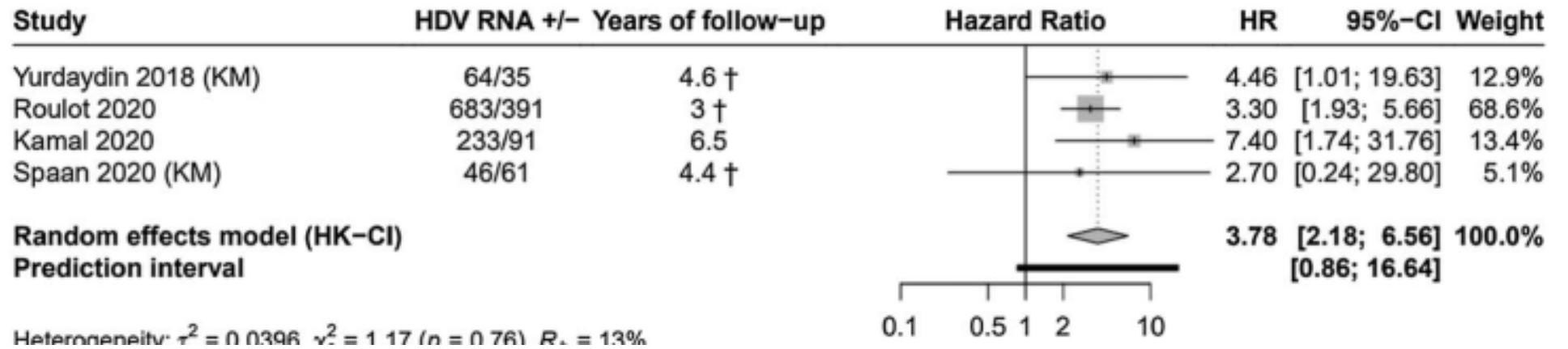


# Association of hepatitis delta virus with liver morbidity and mortality: A systematic literature review and meta-analysis

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Chong Kim<sup>4</sup> | Nathaniel J. Smith<sup>5</sup> | Patrick T.F. Kennedy<sup>6</sup> 

*Hepatology*. 2024;00:000–000.

Mortalité



Merci de votre attention