XI Jornadas de formación y sensibilización en VIH y VHC

ConVIHve 2020

GENERALITAT VALENCIANA
CONSELLERIA DE SANITAT

La Fe Hospital Universitari i Politècnic

La infección por SARS-CoV-2 en los pacientes con infección por VIH: ¿qué datos tenemos en la actualidad?

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Unidad de Enfermedades Infecciosas

Hospital Universitario y Politécnico La Fe

22 de octubre de 2020

Conflicto de intereses

He recibido compensaciones económicas por actividades educativas y consultorías de:

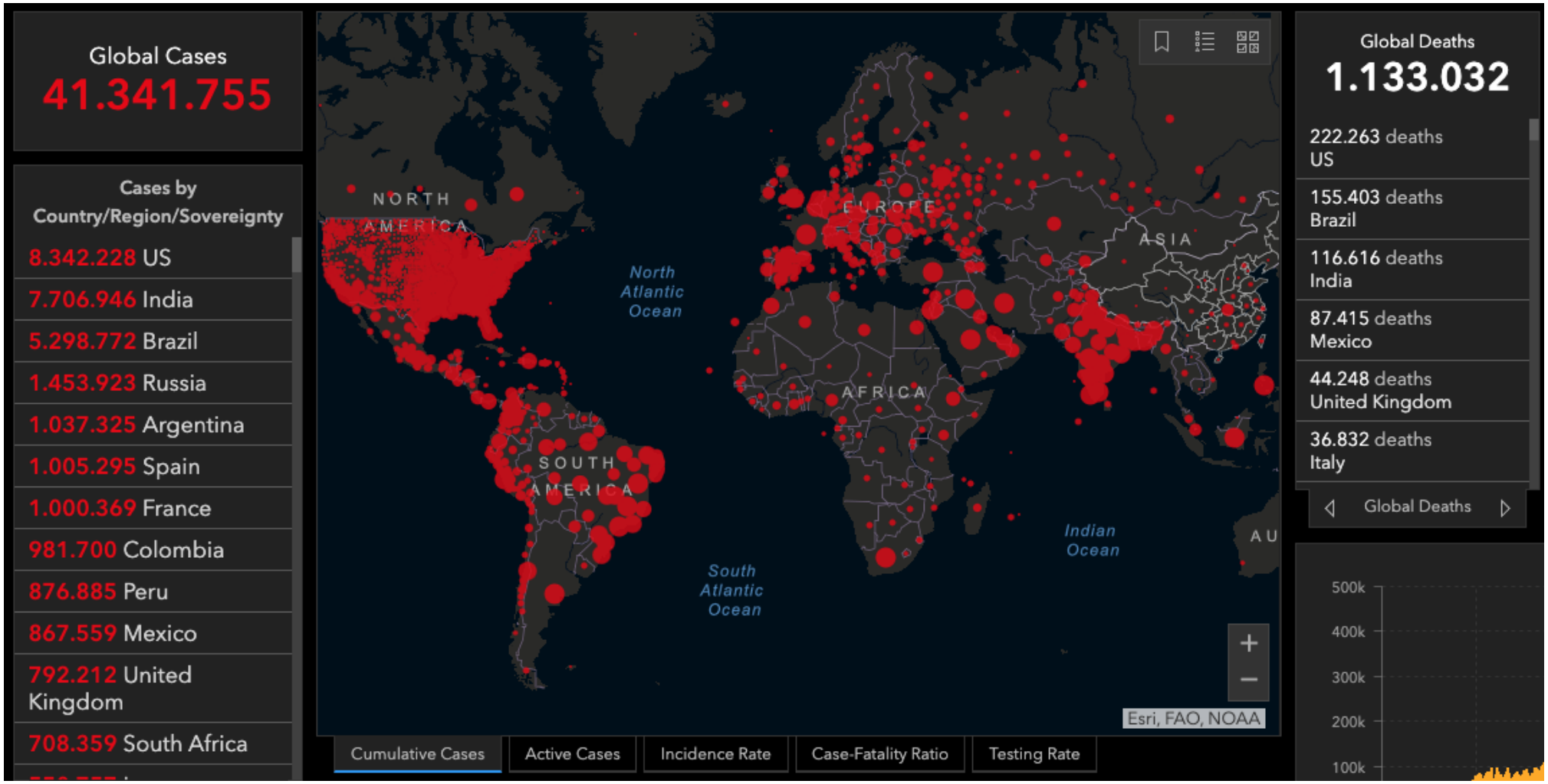
- ViiV Healthcare
- Gilead Sciences
- Merck Sharp & Dohme
- Janssen-Cilag
- ABBvie

Esquema de la charla

1. Epidemiología e impacto del COVID-19 en el VIH.
2. Datos de infección por SARS-CoV-2 en pacientes con infección por VIH.
3. Recomendaciones de las Guías en pacientes VIH con COVID-19.
4. Conclusiones-reflexiones.

1. Epidemiología e impacto del COVID-19 en el VIH

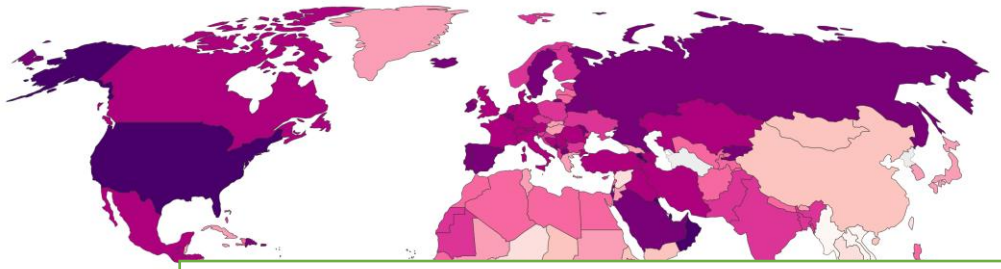
Datos en el mundo….



[COVID-19 Map - Johns Hopkins Coronavirus Resource Center]

COVID19 y VIH: Historia de dos pandemias

Total COVID-19 Cases per 1 million, 08/04/20[1]



Age-standardized HIV prevalence (per 1000), 2017[2]

Papel de los determinantes sociales de la salud (acceso a la atención, educación, empleo, vivienda, discriminación, competencia cultural, calidad de la atención, etc.)

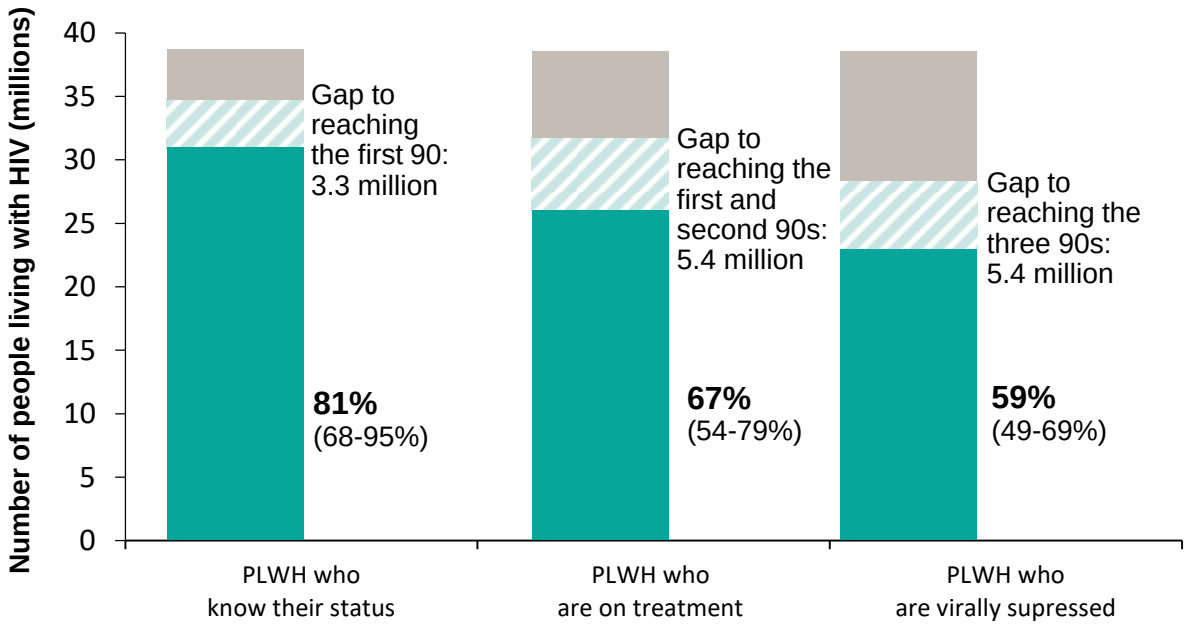
Potencial impacto de la pandemia de COVID-19 en países de ingresos bajos y medianos de todo el mundo

- Las interrupciones en la prestación de servicios han afectado al 85% de los programas de VIH en 106 países[3]
- Bloqueos y cierres fronterizos pueden afectar la producción de ARV genéricos y su distribución (10% -25% + coste de de ARV genéricos exportados desde India) [4]
- La OMS predice que una interrupción del TAR durante seis meses + 500.000 muertes adicionales en África por enfermedades sida[4]
- Las áreas de mayor incidencia de coronavirus pueden superponerse con áreas de mayor incidencia y prevalencia del VIH.

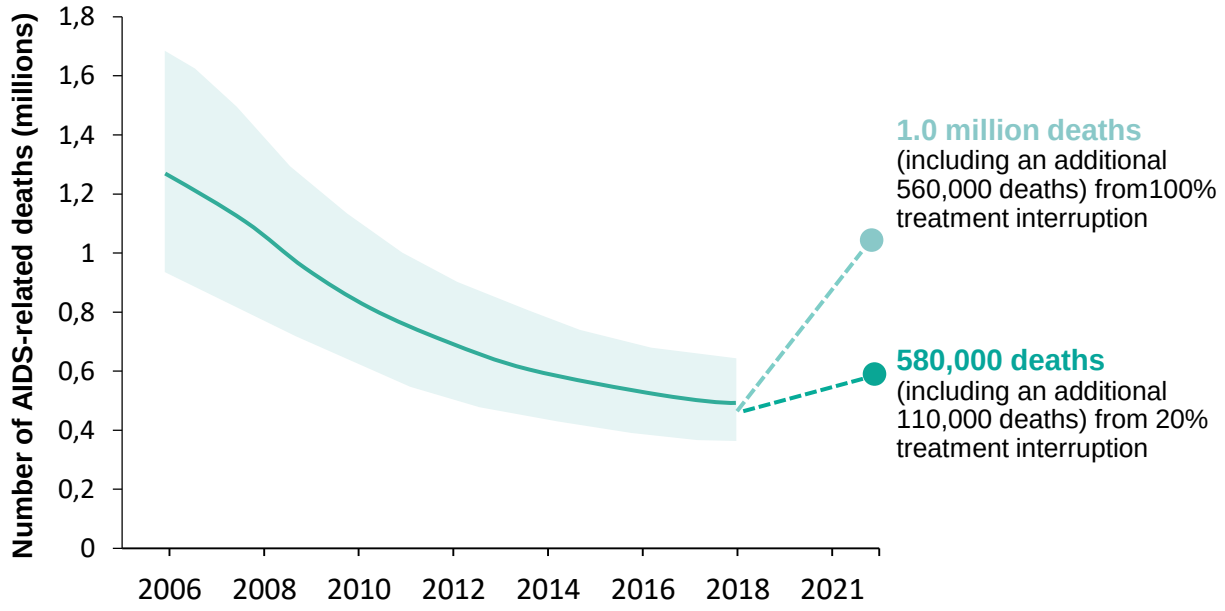
https://ourworldindata.org/grapher/total-confirmed-cases-of-covid-19-per-million-people: accessed August 4, 2020; **2**. GBD 2017 HIV collaborators. The Lancet HIV 2019;6:e831-e859; **3.** The Global Fund Survey, June 17, 2020; **4.** UNAIDS. Global HIV & AIDS statistics - 2020 fact sheet; **5.** Millett G. AIDS 2020. Casualties on the road to ending HIV: Context matters in addressing HIV disparities.

Objetivos de VIH ONUSIDA 90-90-90 y COVID-19

HIV Testing and Treatment Cascade, Global, 2019



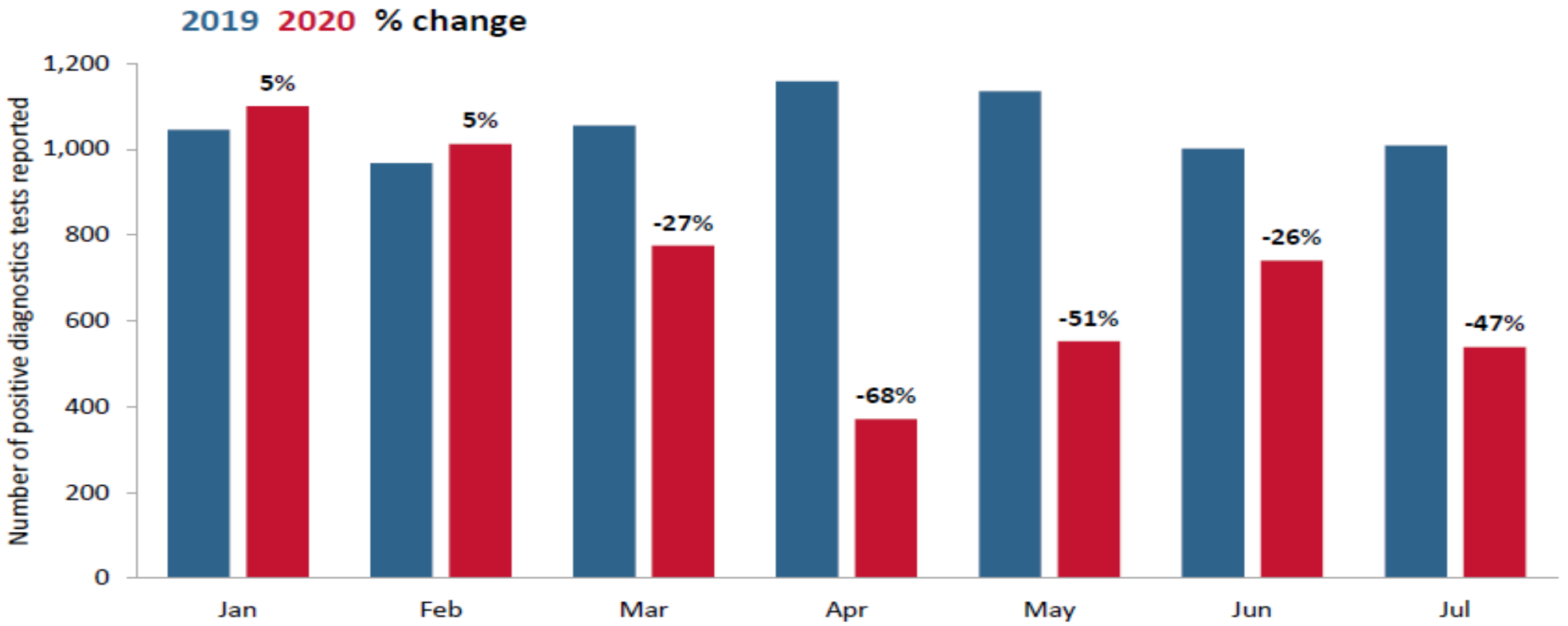
Impact of six months treatment interruption due to COVID-19 on AIDS-related deaths, sub-Saharan Africa, 2020–2021



- A finales de 2019, solo 14 países han alcanzado las metas 90-90-90.
- El incumplimiento de los objetivos 90–90–90 de tratamiento del VIH ha dado lugar a 3,5 millones más de infecciones por el VIH y 820 000 más muertes relacionadas con el sida de lo que hubiera sucedido si se hubieran cumplico los objetivos de ONUSIDA.
- La respuesta podría retrasarse aún más, en 10 años o más, debido a que la pandemia de COVID-19 provoca graves interrupciones en los servicios de VIH.

Seizing The Moment – Global AIDS Update 2020; https://aids2020.unaids.org/report/; Accessed 7/28/2020
Ending The AIDS Epidemic – UNAIDS Fact Sheet; https://www.unaids.org/en/resources/fact-sheet; Accessed 7/28/2020

Diagnósticos de VIH en NYC 2019-2020



[1]Includes HIV Ag/Ab tests only. Positive tests are not necessarily indicative of a newly identified person with HIV.
*Due to data reporting lag, data for July 2020 are incomplete.
Data reported to the New York City Department of Health and Mental Hygiene by August 10, 2020.

2. Datos de infección por SARS-CoV-2 en pacientes con infección por VIH

LETTER TO THE EDITOR

JOURNAL OF MEDICAL VIROLOGY WILEY

Co-infection of SARS-CoV-2 and HIV in a patient in Wuhan city, China

Zhu, Cao, Xu, Zhou. J Med Virol 2020;92:529-530

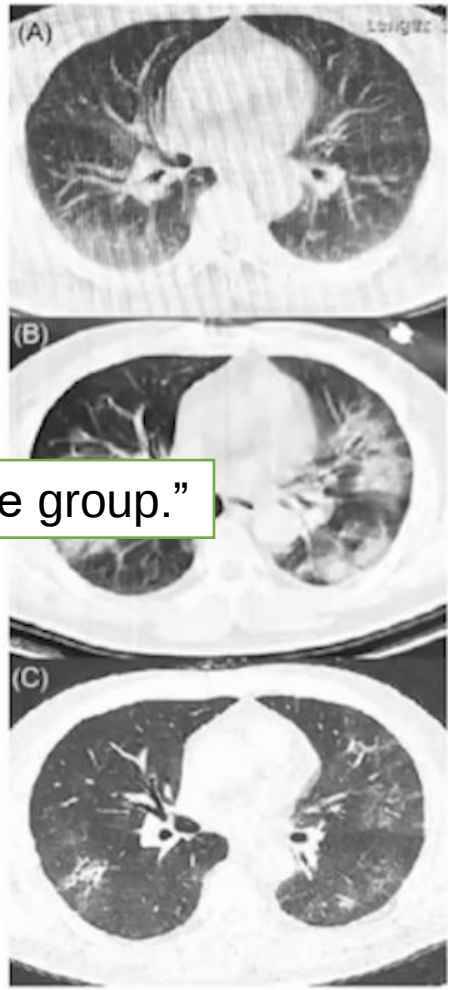
The first case of HIV and SARS-CoV-2 infection:

- A 61-years-old male.
- 20-30 cigarrillos/día
- **No previous HIV. No ARV at hospital admission.**
- Type II DM and mild lymphopenia (lymphocyte count of 1.1 × 109/L) → **HIV+ CD4 ???**

"Immunocompromised patients, such as HIV infections….vulnerable group."

- Treatment for SARS-CoV-2: LPV/r + moxifloxacin + γ-globulin (400 mg/kg once daily for 3 days) + methylprednisolone (0.8 mg/kg once daily for 3 days).

- **CT showed different abnormalities from those of conventional COVID-19, and a faster absorption of pulmonary lesions.**



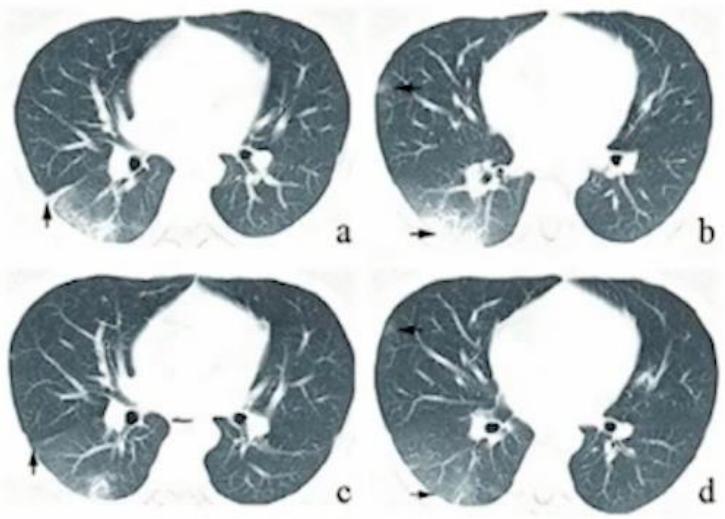
Zhu, Cao, Xu, Zhou. J Med Virol2020;92:529-530

Computed Tomography Imaging of an HIV-infected Patient with Coronavirus Disease 2019 (COVID-19)

Jiaxiang Chen[1,2], Xinge Cheng[3], Rongpin Wang[2], Xianchun Zeng[2,4]

J Med Virol. 2020 Apr 14. doi: 10.1002/jmv.25879.

- A 24-year-old HIV-infected man
- TDF + 3TC+ EFV for 2 years
- CD4 ??
- Non-severe COVID-19 pneumonia



The quick absorption of lesions may be related to the ART before SARS-CoV-2 infection. As a component of ART, the tenofovir has been proven effective against SARS-CoV-2 by binding its RNA polymerase.

Early virus clearance and delayed antibody response in a case of COVID-19 with a history of co-infection with HIV-1 and HCV

Juanjuan Zhao,[1,*] Xuejiao Liao,[1,*] Haiyan Wang,[1] Lanlan Wei,[1] Mingzhao Xing,[2] Lei Liu,[1,2,†] Zheng Zhang[1,2,†]

CID 2020, accepted

- A 38-year-old man
- **Co-infection of HIV and HCV**, → 3TC + TDF + efavirenz
- **CD4 216 cells/mm3**
- Chest CT showed right lower pneumonia
- Hospital admission: 5 days

- Persistently negative SARS-CoV-2
- Delayed antibody response in the plasma.

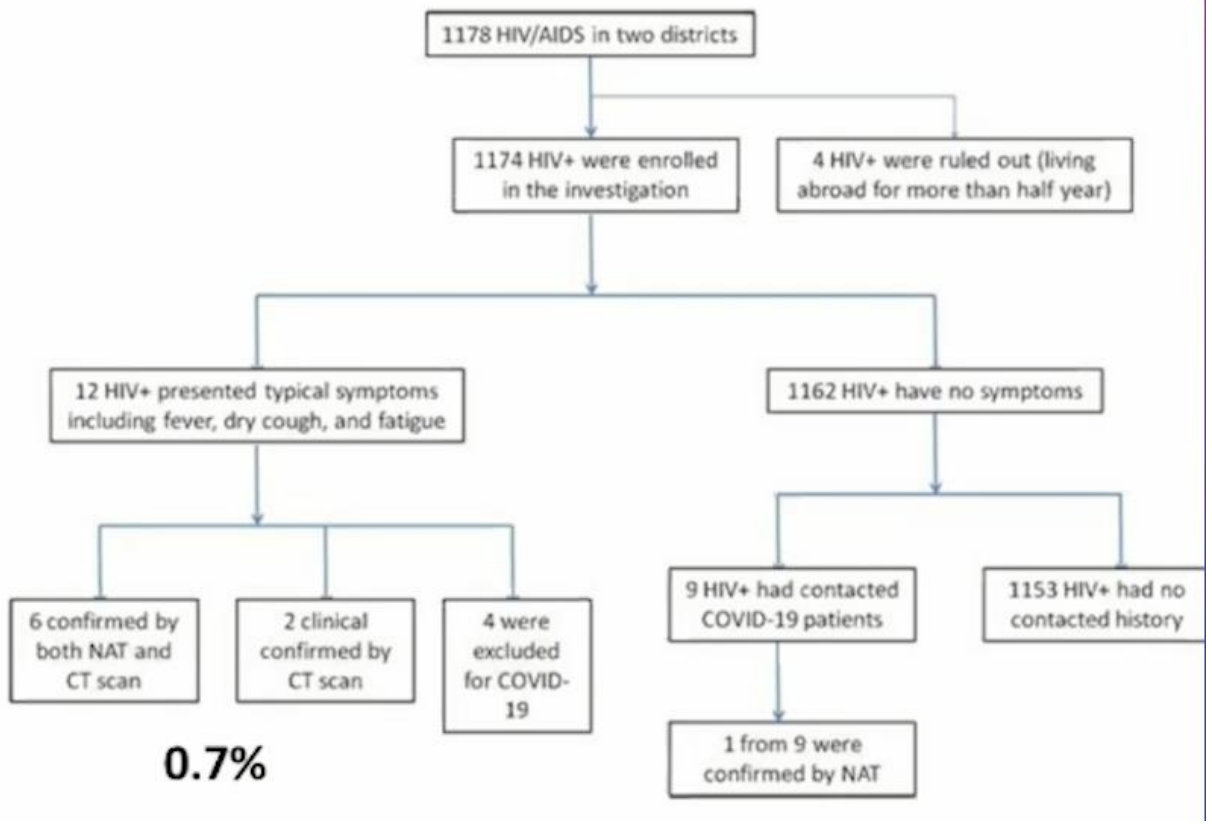
A Survey for COVID-19 among HIV/AIDS Patients in Two Districts of Wuhan, China

--Manuscript Draft--

Manuscript Number:	THELANCET-D-20-02926

Guo W. et al. https://ssrn.com/abstract=3550029.

The distribution of patients with COVID-19 and patients with HIV/AIDS in Wuchang and Qingshan districts, Wuhan



A Survey for COVID-19 among HIV/AIDS Patients in Two Districts of Wuhan, China
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Manuscript Number:	THELANCET-D-20-02926

Guo W. et al. https://ssrn.com/abstract=3550029.

Table 1*. Comparison of characteristics between HIV/AIDS individuals with COVID-19 or not

	Total enrolled HIV/AIDS (n=1174)	COVID-19 (n=8)	Without COVID-19 (n=1166)	P
Age (years)	36.0(30.0-51.0)	57.0(47.5-61.5)	36.0(30.0-51.0)	0.010
Gender				
Male	1052(90%)	7(88%)	1045(90%)	0.585
Female	122(10%)	1(13%)	121(10%)	
CD4 counts (cells/μl)	477.0(334.0-648.0)	546.0(294.5-708.5)	476.0(334.0-647.0)	0.799
⩽100	41(3%)	0(0%)	41(4%)	1.000
101-350	290(25%)	2(25%)	288(25%)	
>350	843(72%)	6(75%)	837(72%)	
Viral load (copies/ml)				
<20	879(75%)	8(100%)	871(75%)	0.213
⩾20	295(25%)	0(0%)	295(25%)	
ART regimen				
NRTI+NNRTI	947(81%)	8(100%)	939(81%)	0.820
LPV/r-based	119(10%)	0(0%)	119(10%)	
DTG-based	59(5%)	0(0%)	59(5%)	
EVG/c-based	15(1%)	0(0%)	15(1%)	
RAL or BIC-based	6(1%)	0(0%)	6(1%)	
None	28(2%)	0(0%)	28(2%)	

El compromiso de la inmunidad podría ser la razón por la que los pacientes con VIH / SIDA no presentaban cambios inflamatorios y síntomas clínicos tan marcados, lo que respalda el uso temprano de corticosteroides en el tratamiento de COVID-19. Al mismo tiempo, el uso de LPV / r potencialmente puede ayudar a prevenir o tratar COVID-19

COVID-19 in patients with HIV: clinical case series

*Jose L Blanco, Juan Ambrosioni, Felipe Garcia, Esteban Martínez, Alex Soriano, Josep Mallolas, *Jose M Miro, on behalf the COVID-19 in HIV Investigators†*
jmmiro@ub.edu

Blanco JL et al. Lancet HIV. 2020 Apr 15

	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
Demographics and baseline HIV status					
Age (years)	40	49	29	40	31
Gender	Transgender	Male	Male	Male	Transgender
HIV-risk factor and exposure	MSM, gym worker	Bisexual man, health-care worker	MSM, sexual worker participant in ChemSex session 6 days before	MSM, dinner 5 days before with another person who was COVID-19 positive	MSM, sexual worker
Comorbidities*	None	Hypothyroidism	None	Asthma	None
HIV status					
Year of HIV diagnosis	2007	2003	2013	2003	2020
Last CD4 cell count (cells per µL)	616	445	604	1140	13
Last CD4:CD8 ratio	0·8	0·46	1·1	1·2	0·1
HIV viral load at or before admission (copies per mL)	<50	<50	<50	<50	45 500
ART-regimen before admission	Tenofovir alafenamide, emtricitabine, and darunavir-boosted cobicistat	Abacavir, lamivudine, and dolutegravir	Tenofovir alafenamide, emtricitabine, and darunavir-boosted cobicistat	Abacavir, lamivudine; and dolutegravir	No ART: current diagnosis is late presenter

Blanco, et al. Lancet HIV 2020;7:e314-e316

COVID-19 in patients with HIV: clinical case series

Clinical findings on admission					
Duration of symptoms, days	2	5	2	3	7
Diagnosis	Upper respiratory tract infection	Lower respiratory tract infection	Upper respiratory tract infection	Lower respiratory tract infection	Lower respiratory tract infection
Symptoms and vital signs					
Temperature	Fever (38·7°C)	Fever (39°C)	Fever (39·5°C)	Fever (39·5°C)	Fever (38·5°C)
Symptoms	Cough, malaise, headache	Cough	Cough, malaise, headache, dyspnoea	Cough, malaise, headache, dyspnoea	Cough, dyspnoea
Blood pressure (mm Hg)	140/90	110/70	129/69	115/76	127/56
Respiratory rate (breaths per min)	14	28	16	24	20
Heart rate (beats per min)	90	94	78	103	121
Chest x-ray findings	Normal	Bilateral ground-glass opacities	Normal	Right basal interstitial infiltrate	Right basal pneumonia with pleural effusion
O_2 saturation in ambient air	SpO_2 100%	SpO_2 <90%	SpO_2 97%	SpO2 94%	SpO2 <90%
PaO_2/FiO_2 ratio	ND	182	ND	ND	230
Laboratory results					
White blood cell count (cells per 10^6/L)	7840	29 160	6730	6140	14 670
Lymphocyte (cells per 10^6/L)	2700	1170 (4%)	1500	1600	900
Platelets (cells per 10^6/L)	345 000	135 000	124 000	186 000	309 000
LDH (U/L)	ND	316	256	465	1149
C-reactive protein (mg/dL)	ND	30	0·72	0·43	40
D-dimer (ng/mL)	ND	>10 000	400	300	ND
Ferritin (ng/mL)	ND	1020	ND	1044	866
Procalcitonin (ng/mL)	ND	ND	<0·03	ND	ND
Severity of the infection at admission	Mild	Severe	Mild	Moderate	Severe

Blanco, et al. Lancet HIV 2020;7:e314-e316

COVID-19 in patients with HIV: clinical case series

Treatment and outcomes					
ART†	ART at admission maintained	Tenofovir disoproxil fumarate, and emtricitabine plus lopinavir-boosted ritonavir (on going)	Tenofovir disoproxil fumarate, and emtricitabine plus lopinavir-boosted ritonavir (for 3 days)	Tenofovir disoproxil fumarate, and emtricitabine plus lopinavir-boosted ritonavir (for 14 days)	Tenofovir alafenamide, emtricitabine, and darunavir-boosted cobicistat (on going)
Other antiviral treatments	No	Interferon beta-1b (for 7 days), hydroxychloroquine (for 7 days)	Hydroxychloroquine (for 5 days)	Hydroxychloroquine (for 5 days)	Interferon beta-1b (for 4 days), hydroxychloroquine (for 5 days)
Other antibiotics	No	Meropenem (for 16 days), linezolid (for 14 days)	Azithromycin (for 5 days)	Azithromycin (for 5 days), cefixime (for 5 days)	Azithromycin (for 5 days), ceftaroline fosamil (for 7 days), co-trimoxazole (for 21 days, followed by secondary prophylaxis)
Admitted to an intensive care unit	No	Yes	No	No	Yes
Invasive or non-invasive mechanical ventilation	No	Invasive	No	No	Non-invasive
Corticosteroids or tocilizumab	No	Tocilizumab, 400 mg one single dose (on day 10)	No	Inhaled corticosteroids	Corticosteroids
Length of hospital stay (days)	1	21	3	4	12
Length of home hospitalisation (days)‡	13	..	..	10	..
Outcomes	Cured	Still at hospital	Cured	Cured	Cured
Additional comments	..	Extracorporeal membrane oxygenation since day 13 (on going)	..	..	Concomitant *Pneumocystis jiroveci* and bacterial pneumonia treatment

Blanco, et al. Lancet HIV 2020;7:e314-e316

COVID-19 en población VIH vs población general: Cohorte VACS (Veterans Aging Cohort Study)

‡

De 1/marzo a 21/junio 2020

Datos demográficos

	PLWH		HIV Neg	
	SARS-CoV-2 Pos N=253	SARS-CoV-2 Neg N=2,346	SARS-CoV-2 Pos N=504	SARS-CoV-2 Neg N=4,473
Age ≥60, %	55	55	73	68
Male, %	99	96	97	97
Non-Hispanic White, %	22	30	21	29
Non-Hispanic Black, %	62	51	61	55
Hispanic, %	8	9	10	9
Current smoker, %	44	54	38	54
BMI, %				
Overweight	31	34	29	31
Obese	39	30	45	42
CD4 <200, %	9	11		
HIV RNA ≤40, %	78	71		
ARV, Yes, %	81	78		
NNRTI/PI/INSTI, Yes, %	15/16/40	17/16/38		
NRTI, Yes, %	95	93		

* Odds ratio (OR): PLWH vs uninfected, adjusted for age, race/ethnicity, sex, BMI, alcohol consumption, and smoking

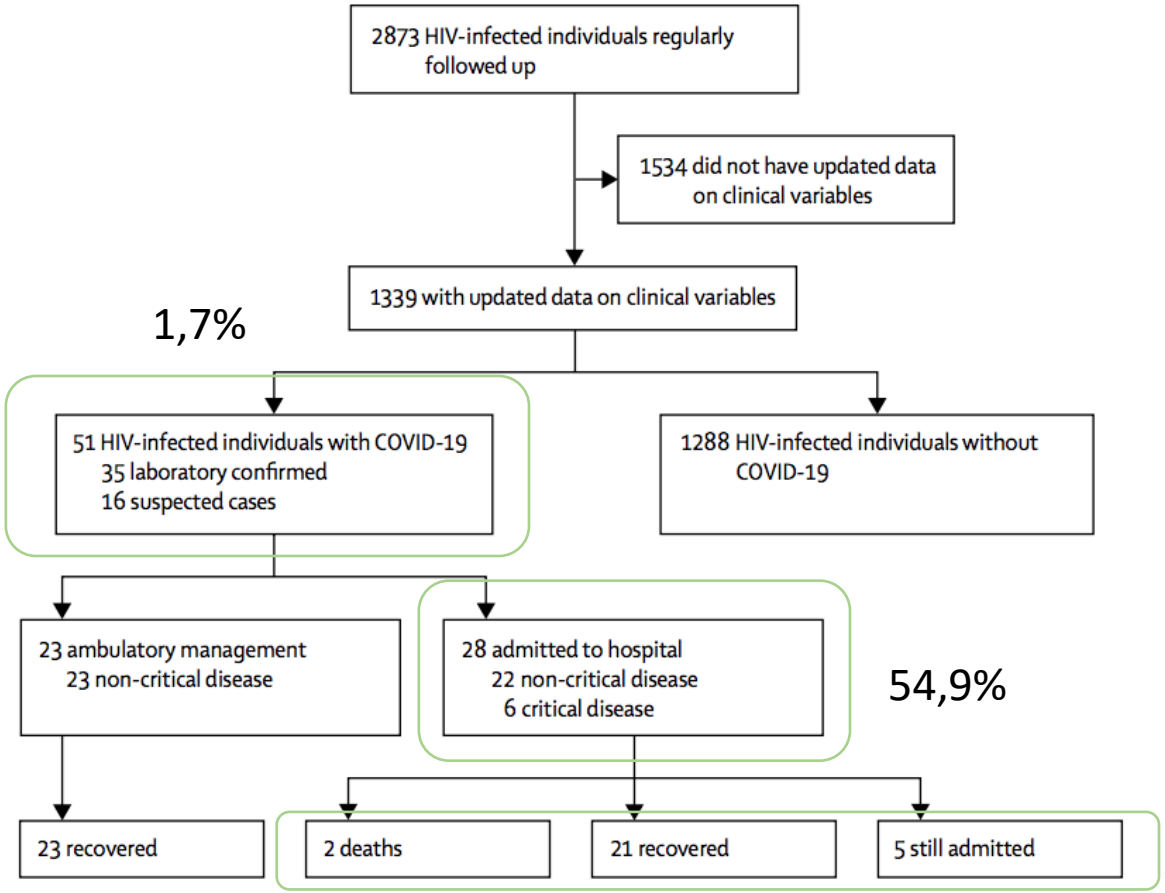
	PLWH		HIV-uninfected			
	N	%	N	%	OR/HR	95% CI
Alive in 2020	30,948		76,618			
Tested for COVID-19	1486	4.8%	2735	3.6%	**1.39**	(1.30, 1.49)
COVID-19 +	189	0.6%	380	0.5%	**1.39**	(1.16, 1.66)
Outcomes						
ICU admission	32	16.0%	72	18.9%	**0.94**	(0.51, 1.73)
intubation	15	7.9%	35	9.2%	**0.99**	(0.65, 1.49)
death	18	9.5%	47	12.4%	**0.96**	(0.56, 1.67)

Se realizaron más pruebas a la población VIH que a población general pero no hubo evidencia de más positivos ni mayor riesgo de formas más graves

Park LS, et al. AIDS 2020. LBPE11066

Description of COVID-19 in HIV-infected individuals: a single-centre, prospective cohort

*Pilar Vizcarra, María J Pérez-Elías, Carmen Quereda, Ana Moreno, María J Vivancos, Fernando Dronda, José L Casado, on behalf of the COVID-19 ID Team**



Lancet HIV 2020 (epub5/28/20)

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Características de los pacientes VIH ingresados con COVID-19

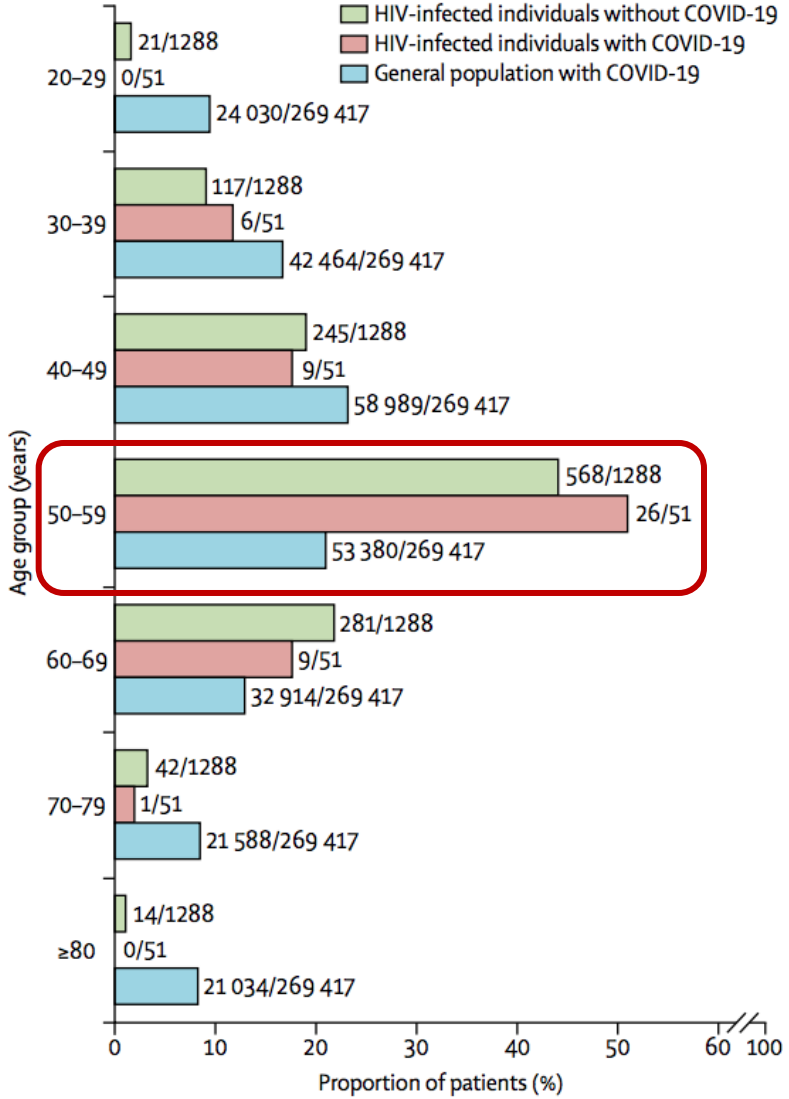
	HIV-infected individuals with COVID-19 (n=51)	HIV-infected individuals without COVID-19 (n=1288)	p value
Age, years	..	..	0·915
Mean (SD)	53·3 (9·5)	53·5 (10·2)	..
Range	31–75	23–91	..
Gender	..	..	0·240
Female	8 (16%)	299 (23%)	..
Male	43 (84%)	989 (77%)	..
Race	..	..	0·163
White	45 (88%)	1155 (90%)	..
Black	0	31 (2%)	..
Asian	1 (2%)	4 (<1%)	..
Latin American	5 (10%)	98 (8%)	..
Body-mass index, kg/m²	25·5 (22·1–28·0)	23·7 (21·5–26·0)	0·021
<18·5	2 (4%)	32 (2%)	0·715
18·5–24·9	22 (43%)	518 (40%)	0·019
≥25·0	27 (53%)	311 (24%)	0·024
Time since HIV infection diagnosis, years	19·5 (9·3–28·6)	22·6 (13·5–28·7)	0·186
Nadir CD4 count, cells per µL	224 (120–437)	212 (91–330)	0·182
<200	24 (47%)	597 (46%)	1·000
200–499	21 (41%)	610 (47%)	0·396
≥500	6 (12%)	81 (6%)	0·138
Antiretroviral therapy			
Any	51 (100%)	1284 (>99%)	1·000
Protease inhibitors	11 (22%)	175 (14%)	0·578
NNRTI	8 (16%)	269 (21%)	0·054
INSTI	41 (80%)	707 (55%)	0·410
Tenofovir (TAF or TDF)	37 (73%)	487 (38%)	0·0036
Comorbidities			
Any	32 (63%)	495 (38%)	0·00059
Hypertension	18 (35%)	102 (8%)	<0·0001
Diabetes	7 (14%)	38 (3%)	0·0011
Chronic kidney disease	6 (12%)	17 (1%)	0·00014
Chronic liver disease	24 (47%)	419 (33%)	0·034

- Presentación clínica similar a población general.
- VIH no es un factor protector de la infección severa por COVID-19.
- El tratamiento debe ser como el de la población general.

Lancet HIV 2020 (epub5/28/20)

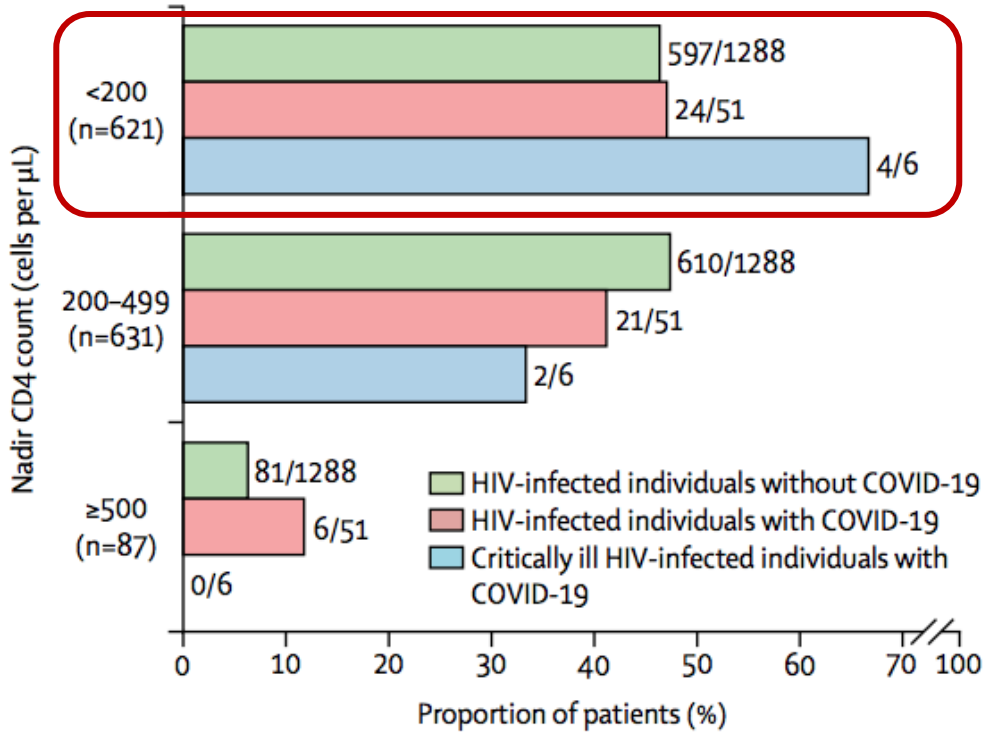
Características de los pacientes VIH con y sin COVID-19, y la población general en la Comunidad de Madrid

Edad de los pacientes > en VIH



Nadir CD4 e infección por COVID

50% VIH + COVID19 CD4 < 200



JAMA | Original Investigation

Presenting Characteristics, Comorbidities, and Outcomes Among 5700 Patients Hospitalized With COVID-19 in the New York City Area

Safiya Richardson, MD, MPH; Jamie S. Hirsch, MD, MA, MSB; Mangala Narasimhan, DO; James M. Crawford, MD, PhD; Thomas McGinn, MD, MPH; Karina W. Davidson, PhD, MASc; and the Northwell COVID-19 Research Consortium

	No. (%)
Demographic information	
Total No.	5700
Age, median (IQR) [range], y	63 (52-75) [0-107]
Sex	
Female	2263 (39.7)
Male	3437 (60.3)
Race[a]	
No.	5441
African American	1230 (22.6)
Asian	473 (8.7)
White	2164 (39.8)
Other/multiracial	1574 (28.9)
Ethnicity[a]	
No.	5341
Hispanic	1230 (23)
Non-Hispanic	4111 (77)
Preferred language non-English	1054 (18.5)
Insurance	
Commercial	1885 (33.1)
Medicaid	1210 (21.2)
Medicare	2415 (42.4)
Self-pay	95 (1.7)
Other[b]	95 (1.7)

Comorbidities	
Total No.	5700
Cancer	320 (6)
Cardiovascular disease	
Hypertension	3026 (56.6)
Coronary artery disease	595 (11.1)
Congestive heart failure	371 (6.9)
Chronic respiratory disease	
Asthma	479 (9)
Chronic obstructive pulmonary disease	287 (5.4)
Obstructive sleep apnea	154 (2.9)
Immunosuppression	
HIV	43 (0.8)
History of solid organ transplant	55 (1)
Kidney disease	
Chronic[c]	268 (5)
End-stage[d]	186 (3.5)
Liver disease	
Cirrhosis	19 (0.4)
Chronic	
Hepatitis B	8 (0.1)
Hepatitis C	3 (0.1)
Metabolic disease	
Obesity (BMI ≥30)	1737 (41.7)
No	41 (1)
Morbid obesity (BMI ≥35)	791 (19.0)
[illegible]	[illegible]
Diabetes[e]	1808 (33.8)

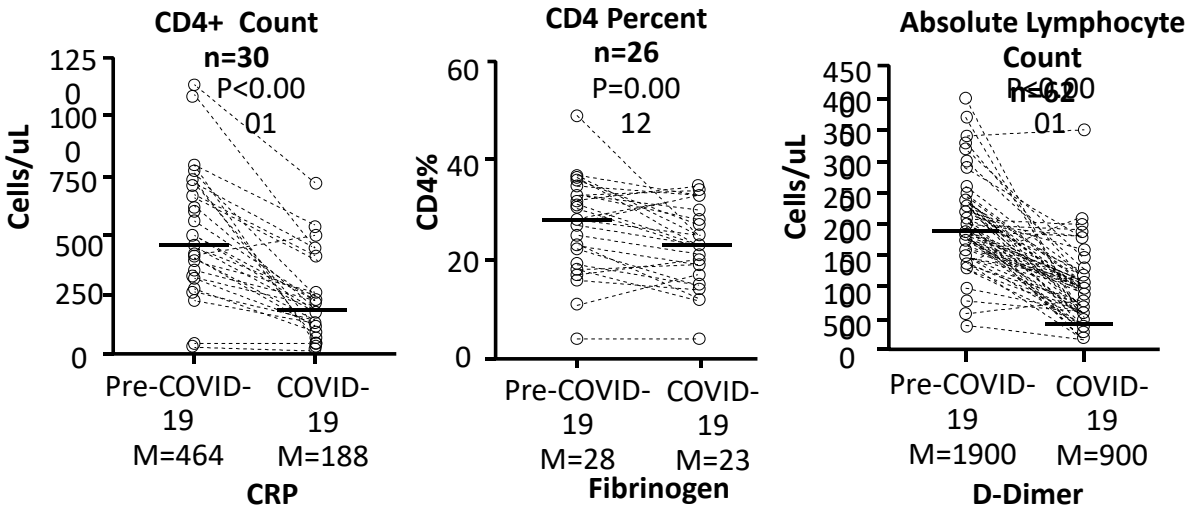
HTA
DM
Obesidad

JAMA 2020 Apr 22;323:2052-9

Estudio Retrospectivo de infección por COVID-19 en pacientes VIH de NYC entre 2/marzo a 15/abril de 2020

Characteristic	Patients (N = 93)
Median age, yrs	58
Male, %	72
African American, %	40.9
Latinx, %	31.2
Median HIV duration (n = 57), yrs	20
Median nadir CD4+ cell count (n = 81), cells/mm^3	320
HIV-1 RNA < 50 c/mL (n = 68), %	83.8
Documented previous OI, %	24.7
Receiving ART, %	95.7
□ TAF- or TDF-containing ART	69.6
□ PI-containing ART	13.5

Perfil inmunológico de los pacientes VIH con COVID-19



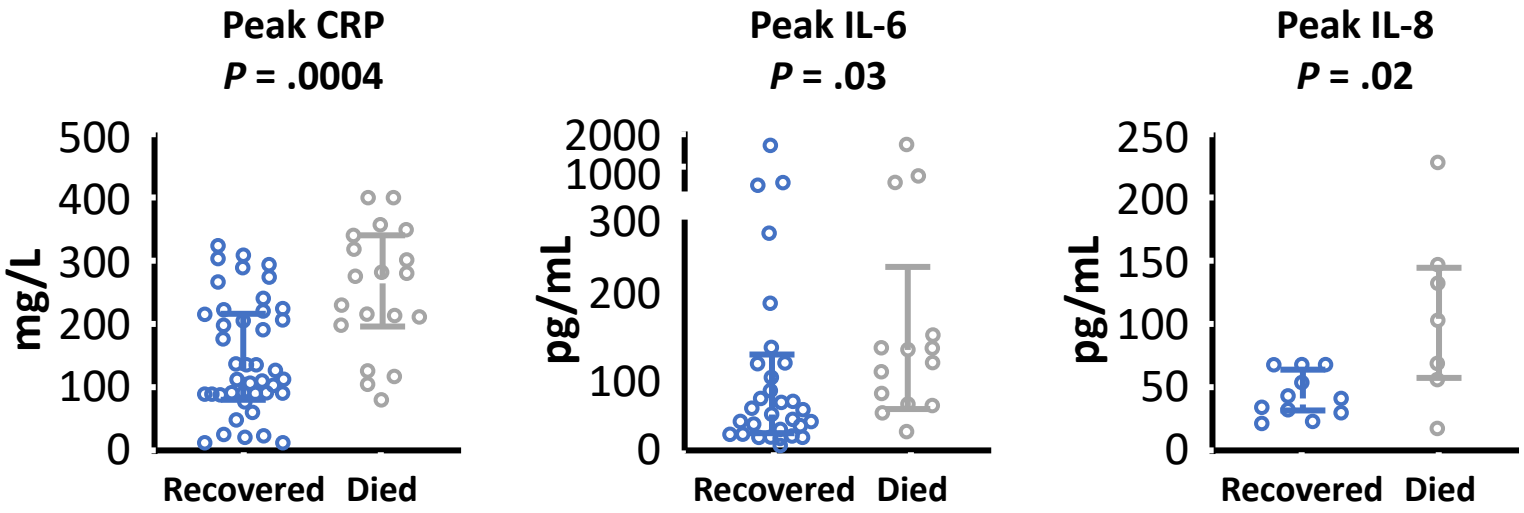
- Mediana CD4 y linfocitos pre y al inicio de la infección COVID-19
  - CD4+ (n = 30): 188 vs 464 (*P* < .0001)
  - CD4% (n = 26): 23 vs 28 (*P* = .0012)
  - Linfocitos (n = 62): 900 vs 1900 (*P* < .0001)

Ho. AIDS 2020. Abstr OAXLB01. Ho. J Infect Dis. 2020;[Epub].

COVID-19 en VIH: Diferencias entre pacientes fallecidos y recuperados tras COVID-19

- 77,4% (72/93) hospitalizados; 26% (19/93) fallecidos; 74% (53/93) recuperados
- **Pacientes que fallecen vs los que se recuperan tiene cifras más bajas de nadir de linfocitos absolutos (*P* = .0005) y linfocitos finales (*P* = .002), y niveles más altos de PCR, IL-6 e IL-8 (sin diferencias significativas en fibrinógeno, D-dímeros y TNF-alpha**)

Marker	No. Assessed	Elevated (> ULN), %
CRP	69	100
Fibrinogen	43	85
D-dimer	64	89
IL-6	48	98
IL-8	22	100
TNF-alfa	22	50
IL-1b	21	0



Ho. AIDS 2020. Abstr OAXLB01. Ho. J Infect Dis. 2020;[Epub].

Evolución en pacientes VIH con COVID-19

Outcome	With HIV (n = 100)	Without HIV (n = 4513)	P Value
Intubation, %	21	14	.051
Death in hospital, %	[illegible]	[illegible]	[illegible]
Length of stay, median days (IQ	[illegible]	[illegible]	[illegible]

Outcome		P Value
Time to intubati	[illegible]	[illegible]
Time to death	1.15 (0.74-1.80)	.53
Time to discharge	1.01 (0.80-1.28)	.91

No hay diferencias significativas en IRA según el estado serológico del VIH

Outcome	HIV Unsuppressed (n = 15)	HIV Suppressed (n = 81)	P Value
Intubation, %	0	26	.04
[illegible]	[illegible]	[illegible]	.02
[illegible]	[illegible]	[illegible]	.40

Outcome		P Value
Time to death	[illegible]	[illegible]
Time to discharge	1.58 (0.97-2.55)	.06

*Adjusted for sex, age, race/ethnicity, history of lung disease, BMI, calendar time.

- Cifra de CD4 antes del ingreso se asocia con un mayor riesgo de intubación (adjusted HR: 1.14 per 100 CD4+ cells/mm^3 increase; *P* = .005)
- El estado de VIH no se asoció significativamente con mayor intubación, mortalidad, IRA o duración de la estancia.
- No hubo diferencias en intubación o muerte entre pacientes VIH suprimidos y no suprimidos.

Patel. AIDS 2020. Abstr OABLB0102

Annals of Internal Medicine ORIGINAL RESEARCH

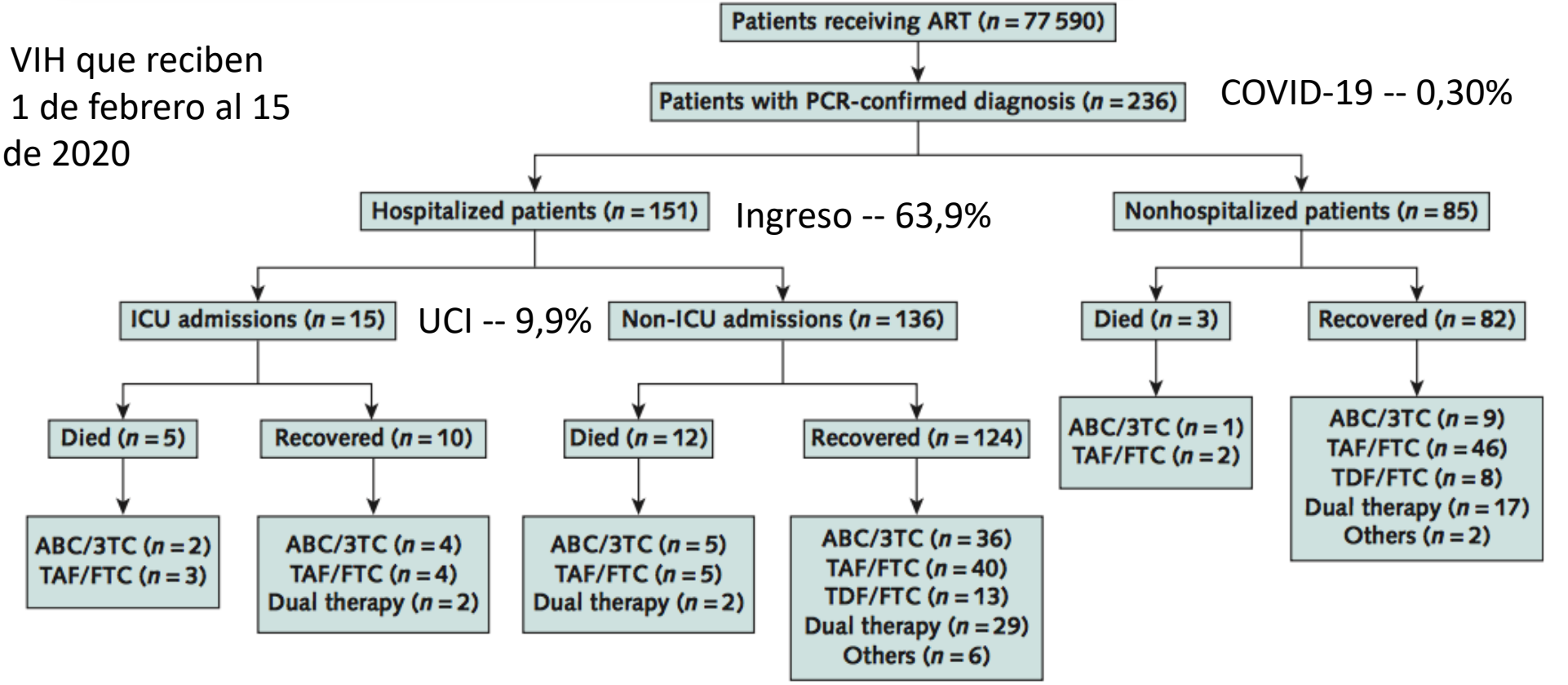
Incidence and Severity of COVID-19 in HIV-Positive Persons Receiving Antiretroviral Therapy

A Cohort Study

Julia del Amo, MD, PhD; Rosa Polo, MD, PhD; Santiago Moreno, MD, PhD; Asunción Díaz, MD, PhD; Esteban Martínez, MD, PhD; José Ramón Arribas, MD, PhD; Inma Jarrín, PhD; and Miguel A. Hernán, MD, DrPH; for The Spanish HIV/COVID-19 Collaboration*

77.590 personas VIH que reciben TAR en España del 1 de febrero al 15 de abril de 2020

Fallecen 11,2%



3TC = lamivudine; ABC = abacavir; ART = antiretroviral therapy; FTC = emtricitabine; ICU = intensive care unit; PCR = polymerase chain reaction; TAF = tenofovir alafenamide; TDF = tenofovir disoproxil fumarate.

Ann Intern Med. 2020 Jun 26 : M20-3689.

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Table 2. Risk per 10 000 Persons for PCR-Confirmed COVID-19 Diagnosis, Hospital Admission, ICU Admission, and Death Among 77 590 HIV-Positive Persons Receiving ART, 1 February to 15 April 2020, Spain

Characteristic	COVID-19 Diagnosis (95% CI)	COVID-19 Hospital Admission (95% CI)	COVID-19 ICU Admission (95% CI)	COVID-19 Death (95% CI)
Risk				
Overall	30.4 (26.7-34.6)	19.5 (16.5-22.8)	1.9 (1.1-3.2)	2.6 (1.6-4.0)
Standardized*	30.0 (29.8-30.2)	17.8 (17.7-18.0)	2.5 (2.4-2.6)	3.7 (3.6-3.8)
Sex				
Men				2.8 (0.6-4.5)
Women				2.1 (0.6-5.3)
Age				
20-39 y				0 (-2.9)†
40-49 y				1.0 (0.1-3.7)
50-59 y				2.2 (0.9-4.5)
60-69 y				4.6 (1.2-11.7)
70-79 y				26.6 (10.7-54.9)
NRTI				
TDF/FTC	16.9 (10.5-25.9)	10.5 (5.6-17.9)	0 (-2.9)†	0 (-2.9)†
TAF/FTC	39.1 (31.8-47.6)	20.3 (15.2-26.7)	2.7 (1.1-6.5)	3.9 (1.9-7.2)
ABC/3TC	28.3 (21.5-36.7)	23.4 (17.2-31.1)	3.0 (1.1-6.5)	4.0 (1.7-7.8)
Other regimens	29.7 (22.6-38.4)	20.0 (14.2-27.3)	1.0 (0.1-3.7)	1.0 (0.1-3.7)

3TC = lamivudine; ABC = abacavir; ART = antiretroviral therapy; COVID-19 = coronavirus disease 2019; FTC = emtricitabine; ICU = intensive care unit; NRTI = nucleos(t)ide reverse transcriptase inhibitor; PCR = polymerase chain reaction; TAF = tenofovir alafenamide; TDF = tenofovir disoproxil fumarate.

* Standardized to the age and sex of the general population of Spain aged 20 to 79 y.

† One-sided 97.5 CI.

Riesgo de diagnóstico de COVID-19 **no** es mayor en personas VIH positivas que en la población general. Los pacientes VIH que recibieron TDF / FTC tenían un riesgo menor de COVID-19 y hospitalización relacionada que otros pacientes VIH positivos

Ann Intern Med. 2020 Jun 26 : M20-3689.

3. Recomendaciones de las Guías en pacientes VIH con COVID-19

DHHS HIV Guidelines: Guidance for All Persons with HIV

- Help persons with HIV maintain adequate supply of ART and concomitant medications.
- Influenza and pneumococcal vax should be kept up to date.
- Persons with HIV should follow all applicable recommendations of the U.S. CDC to prevent COVID-19, such as social distancing and proper hand hygiene.
- CDC also provides information about COVID-19 prevention during pregnancy and for children.

www.aidsinfo.nih.gov

U.S. CDC

People with the following conditions **might be at an increased risk** for severe illness from COVID-19:

- Asthma (moderate-to-severe)
- Cerebrovascular disease (affects blood vessels and blood supply to the brain)
- Cystic fibrosis
- Hypertension or high blood pressure
- Immunocompromised state (weakened immune system) from blood or bone marrow transplant, immune deficiencies, **HIV**, use of corticosteroids, or use of other immune weakening medicines
- Neurologic conditions, such as dementia
- Liver disease
- Pregnancy
- Pulmonary fibrosis (having damaged or scarred lung tissues)
- Smol
- Thala
- Type

Recomendaciones OMS/IAS:

• **Los pacientes con inmunodeficiencias severas** normalmente tienen **mayor riesgo** de complicaciones por enfermedades infecciosas.

• Los casos de enfermedad por CoV son de leves a moderados independientemente de si hay inmunodeficiencia severa. Todos los casos se han recuperado.

• PLWHIV con bajos CD4 y COVID ha tenido la misma evolución que los NO HIV.

• Se plantea que una inmunidad celular defectiva en la infección por HIV podría ser un factor protector.

• No ha habido casos de SARS en los pacientes HIV hospitalizados en unidades compartidas (Chan, 2003) ¿podría haber un efecto protector de ARVs?

World Health Organization. Regional Office for the Western Pacific. (2020). Information note on HIV and COVID-19. https://apps.who.int/iris/handle/10665/331919

EACS European AIDS Clinical Society

BHIVA, DAIG, EACS, GESIDA & Polish Scientific AIDS Society
Statement on risk of COVID-19 for people living with HIV (PLWH)

Recomendaciones en pacientes con VIH respecto al COVID-19

Recomendaciones generales:

- Seguir las recomendaciones generales sobre medidas de distancia social, uso de mascarilla e higiene de manos
- Mantener un estilo de vida saludable
- Mantener ocupaciones mentales que resulten gratificantes
- Asegurar el contacto social (familia, amigos, compañeros de trabajo,…)
- Evitar sobre-información sobre COVID. Elegir fuentes fiables

Recomendaciones específicas:

- Mantener misma pauta de TAR si es eficaz y bien tolerada
- Asegurar la disponibilidad de TAR para evitar interrupciones
- Vacunación correcta de gripe y *St pneumoniae*
- Realizar seguimiento preferiblemente por teleconsultas:
  - Visita presencial si enfermedad VIH avanzada, pacientes naïve, no suprimidos o con mal control clínico-virológico, inicios o cambios recientes de TAR
- Evaluar estado emocional
- Facilitar vías de comunicación ágiles en caso de urgencia

En caso de COVID-19:

- Revisar interacciones con FAR
- Considerar en caso de VM TAR en fórmulas líquidas o con dispensación por SNG
- **El tratamiento del COVID-19 debe ser exactamente igual que población general**

4. Reflexiones-conclusiones

- La infección por COVID-19 en población VIH:
  - Afectan todas las edades.
  - Se realizan más pruebas pero no hay más positivos que en población general.
  - La incidencia se relaciona más con la presencia de comorbilidades que con la infección por VIH.
  - El cuadro clínico y radiológico es similar a población general.
  - Datos evolutivos controvertidos: la cifra basal de CD4 sí parece correlacionarse con mayor gravedad pero en general la evolución es similar a población general.
  - Datos controvertidos del impacto del tipo de TAR en la incidencia y en la evolución.
  - Mantener misma pauta de TAR si es eficaz y bien tolerada
  - El tratamiento del COVID-19 debe ser exactamente igual que población general.
  - Se necesita generar más evidencia de calidad.

Gracias por vuestra atención