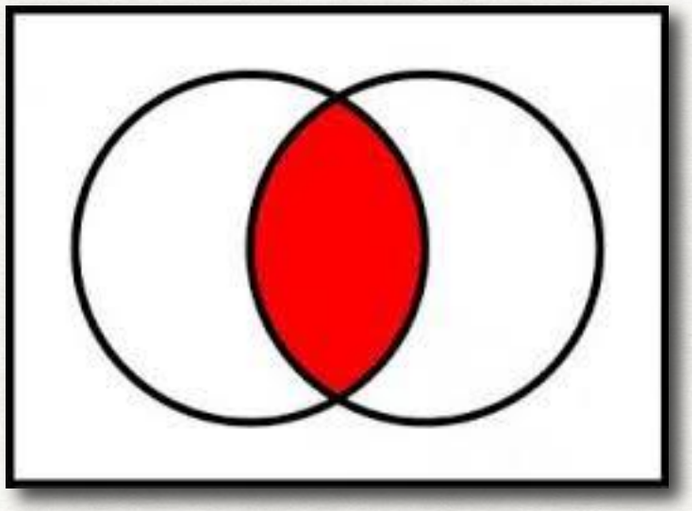
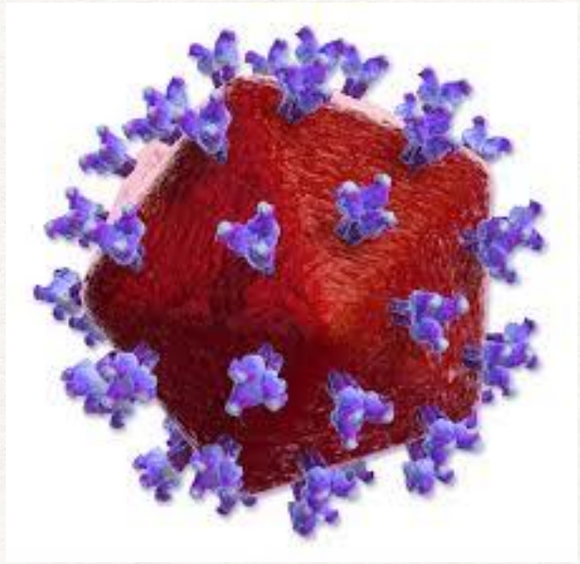
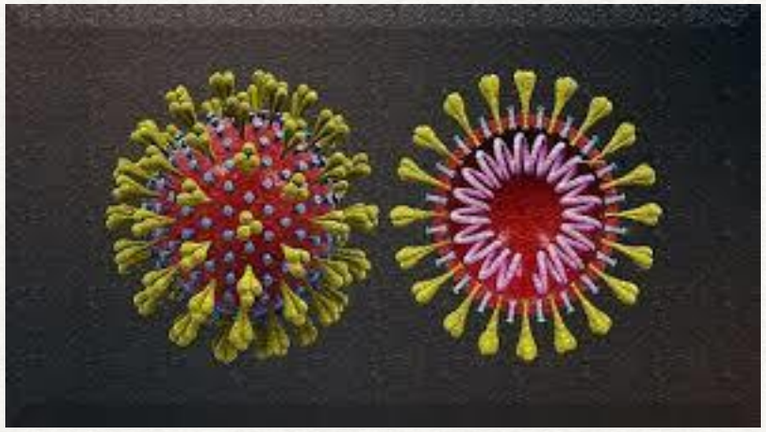
HIV E SARS-COV2







ALVARO F. COSTA
INFECTOLOGISTA
CRT/DST AIDS /HC-FMUSP
SUNINVESTIGADOR DA UNIDADE DE PESQUISA E MEDICAMENTOS-CRT
CRM108.207

CONFLITOS DE INTERESSE

- Atividades de pesquisa clínica: Abbvie, BMS, GSK, Gilead, Janssen, MSD
- Palestrante: Gilead, MSD;
- Apoio para atividades de educação médica: Gilead, Janssen, MSD

AGENDA

- Coronavírus e HIV : estudos pré-2019
- HIV e SARS-COV2 : epidemiologia global e Brasil
- Grupos vulneráveis para COVID-19 : os que sabemos.
- Antiretrovirais e ação anti-SARS-COV2: o que temos de evidência
- Relatos e séries de casos mundo da coinfecção e desfechos
- COVID e atendimentos de PVHIV : como fazer?
- Série de casos Brasil : estudo multicêntrico

DUAS PANDEMIAS ...

37.9 million

Globally, 37.9 million people living with HIV in 2018

23.3 million

23.3 million people were receiving antiretroviral treatment by end 2018

62%

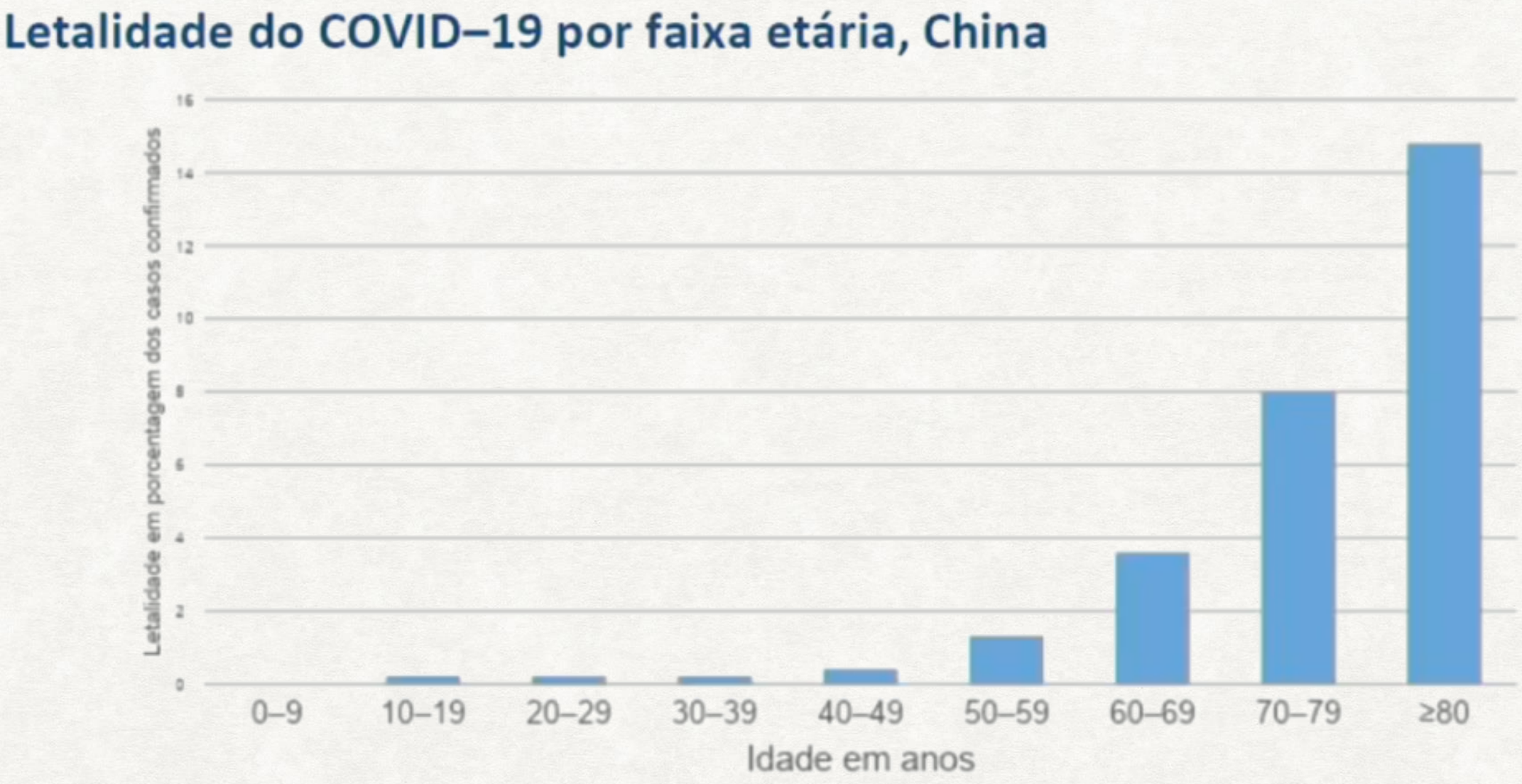
62% of people living with HIV were receiving antiretroviral treatment in 2018

Total ▾ Worldwide ▾

Confirmed	Recovered	Deaths
9,866,685	4,983,029	495,692
+177,012		+5,116

Location	Confirmed ↓	Recovered	Deaths

LETALIDADE X FAIXA ETÁRIA



Novel Coronavirus Pneumonia Emergency Response Epidemiology Team (2020), *China CDC Weekly*, 2(x), pp. 1–10. doi: 10.3760/cma.j.issn.0254-6450.2020.02.003.

ATHENA: PTS MAIS VELHOS TORNANDO-SE MAIS PREVALENTES NA POPULAÇÃO HIV

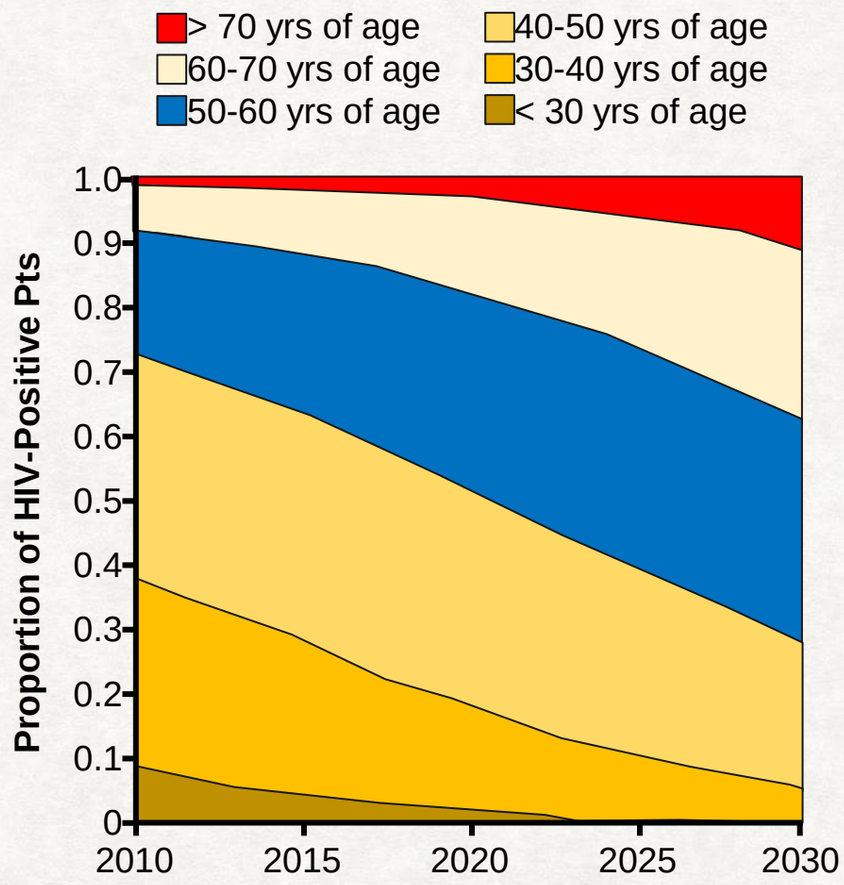
ATHENA: cohort observacional de 10278 pac HIV+ na Holanda

Proporção de pacientes com mais de 50 anos deverá aumentar de 28% em 2010 para 73% em 2030

•60 anos ou mais aumentará de 8% para 39%

• 70 anos ou aumentará de 8% a 12%

•Média de idade de pacientes HIV positivos em TARV aumentará de 43,9 anos em 2010 para 56,6 anos em 2030



Smit M, et al. Lancet Infect Dis. 2015;15:810-818.

MUITAS PERGUNTAS.....
ALGUMAS RESPOSTAS....
OUTRAS MALUQUIÇES..
SARS-COV2 / HIV

Nobel de Medicina francês causa polêmica ao dizer que coronavírus saiu de laboratório chinês

O professor explica ter analisado "nos mínimos detalhes" a sequência com seu colega matemático Jean-Claude Perrez: "Não fomos os primeiros, já que um grupo de pesquisadores indianos tentou publicar um estudo que mostra que o genoma completo desse coronavírus [possui] seqüências de outro vírus, o HIV, o vírus da AIDS", explicou.

COMMENT

OPEN ACCESS Check for updates

HIV-1 did not contribute to the 2019-nCoV genome

Chuan Xiao[a], Xiaojun Li [b], Shuying Liu[c], Yongming Sang[d], Shou-Jiang Gao[e] and Feng Gao [b,f]

[a]Department of Chemistry and Biochemistry, The University of Texas at El Paso, El Paso, TX, USA; [b]Department of Medicine, Duke University Medical Center, Durham, NC, USA; [c]NA BioTech Corp, M2D2 Incubator, University of Massachusetts Medical School, Worcester, MA, USA; [d]Department of Agricultural and Environmental Sciences, Tennessee State University, Nashville, TN, USA; [e]UPMC Hillman Cancer Center, Department of Microbiology and Molecular Genetics, University of Pittsburgh, Pittsburgh, PA, USA; [f]National Engineering Laboratory for AIDS Vaccine, School of Life Sciences, Jilin University, Changchun, People's Republic of China

ARTICLE HISTORY Received 4 February 2020; Accepted 4 February 2020

Emerging Microbes & Infections
2020, VOL. 9 https://doi.org/10.1080/22221751.2020.1727299

ANTES DO SARS-COV2.....
2002-2019

2002-2019 (ERA PRÉ-COVID19): 2004

Correspondence

AIDS 2004, **18**:829–835

Coronavirus infection in an AIDS patient

A 30-year-old Chinese man presented in April 2003 to a public hospital in Hong Kong for suspected severe acute respiratory syndrome (SARS). He had been living with HIV (currently at stage CIII) for 5 years and was on highly active antiretroviral therapy (HAART) comprising abacavir 300 mg twice a day, efavirenz 600 mg at night, Kaletra 4 capsules (each capsule contains lopinavir 133.3 mg and ritonavir 33.3 mg) and tenofovir 300 mg twice a day, plus standard *Pneumocystis carinii* pneumonia prophylaxis. He had been on the present HAART regimen since November 2002 and had good drug adherence. His CD4 cell count and viral load were 134 cells/μl and 470 copies/ml [by reverse transcriptase–polymerase chain reaction (PCR), Roche Amplicor], respectively, in February 2003.

severity of clinical disease [3]. The defective cellular immunity in HIV infection could paradoxically be a protective factor in some patients. The plausibility of these explanations has yet to be confirmed. On the other hand, it could be argued that if Kaletra was active against coronavirus, it should have prevented the infection in the first place. Finally, HIV and coronavirus co-infection may carry other deleterious consequences. The precipitation of tuberculosis by steroid is

DÚVIDAS JÁ COMEÇAM HÁ 16 ANOS ….
DÉFICIT IMUNOLÓGICO HIV PROTEGE?
ARV COM AÇÃO ANTI-CORONAVÍRUS

MERS/HIV

Case report

Successful recovery of MERS CoV pneumonia in a patient with acquired immunodeficiency syndrome: A case report

Sarah Shalhoub[a,*], Abdulwahab AlZahrani[b], Raed Simhairi[b], Adnan Mushtaq[a]

[a] King Fahad Armed Forces Hospital, P.O. Box 2231, Jeddah 21451, Saudi Arabia
[b] Molecular Laboratory, Medical Microbiology, King Fahad Armed Forces Hospital, Saudi Arabia

3. Other similar and contrasting cases in the literature

There have been no previously reported cases that describe MERS CoV infection in HIV positive patients.

ARV : SARS E MERS PRIMEIROS ESTUDOS

EXPEDITED ORIGINAL ARTICLE

Treatment of severe acute respiratory syndrome with lopinavir/ritonavir: a multicentre retrospective matched cohort study

以快利佳/諾億亞治療嚴重急性呼吸系統綜合症：多個中心的回顧性對照組別研究

RESPIRATORY INFECTION

Role of lopinavir/ritonavir in the treatment of SARS: initial virological and clinical findings

C M Chu, V C C Cheng, I F N Hung, M M L Wong, K H Chan, K S Chan, R Y T Kao, L L M Poon, C L P Wong, Y Guan, J S M Peiris, K Y Yuen, on behalf of the HKU/UCH SARS Study Group*

Thorax 2004;**59**:252–256. doi: 10.1136/thorax.2003.012658

Review > Presse Med. 2006 Jan;35(1 Pt 2):105-7. doi: 10.1016/s0755-4982(06)74531-6.

[Antiretroviral Drugs in Severe Acute Respiratory Syndrome]

[Article in French]

Yazdan Yazdanpanah [1], Benoît Guéry

Affiliations + expand

PMID: 16462674 PMCID: PMC7135377 DOI: 10.1016/s0755-4982(06)74531-6

E AS DÚVIDAS CONTINUAM…. PERGUNTAS …

Q&A on COVID-19, HIV and antiretrovirals

24 March 2020 | Q&A

Are people living with HIV at increased risk of being infected with the virus that causes COVID-19?

Can antiretrovirals be used to treat COVID-19?

Can antiretrovirals be used to prevent COVID-19 infection?

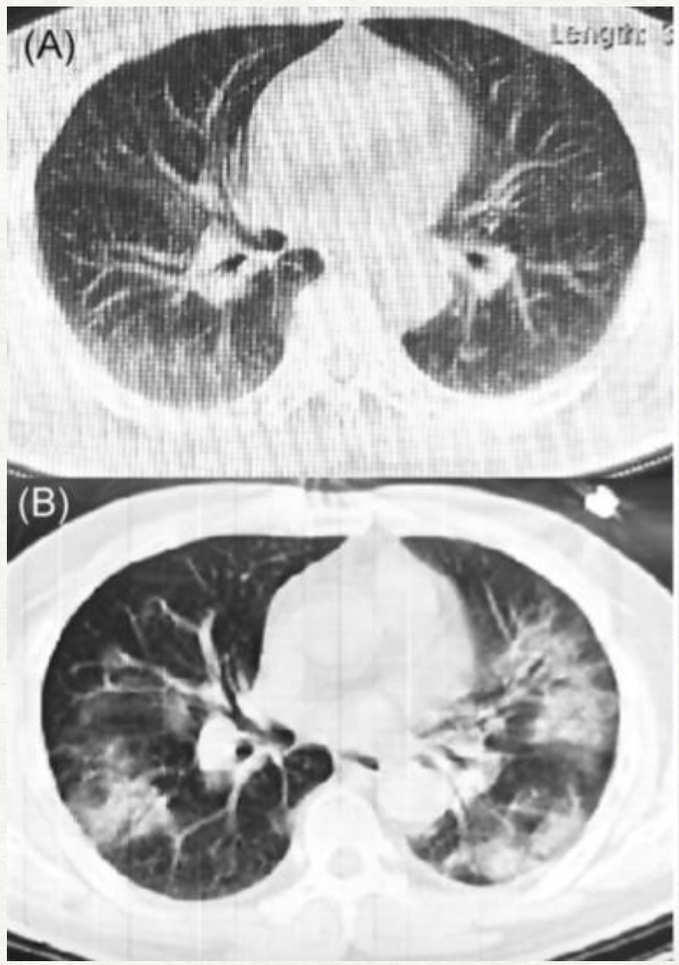
What studies on treatment and prevention of COVID-19 with antiretrovirals are being planned?

What is WHO's position on the use of antiretrovirals for the treatment of COVID-19?

PRIMEIRA PUBLICAÇÃO : WUHAN 2020 HIV/SARSCOV-2

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

On 28 January 2020, a 61-years-old male from Hankou district of Wuhan reported recurrent fever and dry cough for 2 days went to a local fever clinic, which was setup for screening the SARS-CoV-2-infected and suspected subjects. The patient was a heavy smoker of between 20 to 30 cigarettes a day. He had also been diagnosed with type II diabetes 2 year ago and received alogliptin co-administered with metformin. The body temperature was 37.5°C. The clinic physician ordered blood routine test and chest computed tomography (CT), and was confirmed to have a mild lymphopenia with a lymphocyte count of 1.1×10^9/L. The chest CT indicated the SARS-CoV-2 pneumonia with findings of multiple ground-glass opacities (GGO) in bilateral lungs (Figure 1A). He was kept in isolation at home and separated from his family members. Due to the shortage of the test kits, real-time reverse-transcriptase polymerase chain reaction (RT-PCR) assay for detection of coronavirus RNA was performed on his throat swabs on 3 February, which confirmed a positive result. From 1 to 4 February, apart from fever and cough, the patient developed shortness of breath. The follow-up Chest CT displayed progressive GGO and consolidation in lungs



EDITORIAIS..

Antonio Romanelli ORCID iD: 0000-0002-6895-6485

Could HIV infection alter the clinical course of SARS-CoV-2 infection? When less is better

Authors: Silvia Mascolo[1]; Antonio Romanelli (ORCID: 0000-0002-6895-6485) [2];

Maria Aurora Carleo [1]; Vincenzo Esposito [1]

O QUE PODERIA PROTEGER?

On the other hand, *defective cellular immunity in PLWH could paradoxically be protective for severe cytokine dysregulation*, which has been observed in patients with COVID-19. Moreover, some HIV *protease inhibitors (PI) are thought to inhibit the 3-chymotrypsin-like protease of coronaviruses.*

DROGAS (ANTIRETROVIRAIS) E COVID-19 : DO ‘IN VITRO’ PARA IN ‘VIVO’

REVIEW

Systematic review of the efficacy and safety of antiretroviral drugs against SARS, MERS or COVID-19: initial assessment

Nathan Ford[1,§], Marco Vitoria[1], Ajay Rangaraj[1], Susan L Norris[2], Alexandra Calmy[3,*] and Meg Doherty[1,*]

[§]**Corresponding author:** Nathan Ford, World Health Organization, Av. Appia 20, 1211 Geneva, Switzerland. Tel: +41 22 791 21 11. (fordn@who.int)
*These authors contributed jointly.

ESTUDOS OBSERVACIONAIS EM SUA MAIORIA (24)
2 ESTUDOS CONTROLADOS E RANDOMIZADOS
OBSERVACIONAIS : 3 (SARS), 6 (MERS) E 12 (COVID-19)

LPV/R RNA COVID19

LPV/r in patients with severe COVID-19

World Health Organization

ORIGINAL ARTICLE

A Trial of Lopinavir–Ritonavir in Adults Hospitalized with Severe Covid-19

B. Cao, Y. Wang, D. Wen, W. Liu, Jingli Wang, G. Fan, L. Ruan, B. Song, Y. Cai, M. Wei, X. Li, J. Xia, N. Chen, J. Xiang, T. Yu, T. Bai, X. Xie, L. Zhang, C. Li, Y. Yuan, H. Chen, Huadong Li, H. Huang, S. Tu, F. Gong, Y. Liu, Y. Wei, C. Dong, F. Zhou, X. Gu, J. Xu, Z. Liu, Y. Zhang, Hui Li, L. Shang, K. Wang, K. Li, X. Zhou, X. Dong, Z. Qu, S. Lu, X. Hu, S. Ruan, S. Luo, J. Wu, L. Peng, F. Cheng, L. Pan,

Table 3. Outcomes in the Intention-to-Treat Population.*

Characteristic	Total (N=199)	Lopinavir–Ritonavir (N=99)	Standard Care (N=100)	Difference†
Time to clinical improvement — median no. of days (IQR)	16.0 (15.0 to 17.0)	16.0 (13.0 to 17.0)	16.0 (15.0 to 18.0)	1.31 (0.95 to 1.80)‡
Day 28 mortality — no. (%)	44 (22.1)	19 (19.2)§	25 (25.0)	−5.8 (−17.3 to 5.7)
Earlier (≤12 days after onset of symptoms)	21 (23.3)	8 (19.0)	13 (27.1)	−8.0 (−25.3 to 9.3)
Later (>12 days after onset of symptoms)	23 (21.1)	11 (19.3)	12 (23.1)	−3.8 (−19.1 to 11.6)
Clinical improvement — no. (%)				
Day 7	8 (4.0)	6 (6.1)	2 (2.0)	4.1 (−1.4 to 9.5)
Day 14	75 (37.7)	45 (45.5)	30 (30.0)	15.5 (2.2 to 28.8)
Day 28	148 (74.4)	78 (78.8)	70 (70.0)	8.8 (−3.3 to 20.9)
ICU length of stay — median no. of days (IQR)	10 (5 to 14)	6 (2 to 11)	11 (7 to 17)	−5 (−9 to 0)
Of survivors	10 (8 to 17)	9 (5 to 44)	11 (9 to 14)	−1 (−16 to 38)
Of nonsurvivors	10 (4 to 14)	6 (2 to 11)	12 (7 to 17)	−6 (−11 to 0)
Duration of invasive mechanical ventilation — median no. of days (IQR)	5 (3 to 9)	4 (3 to 7)	5 (3 to 9)	−1 (−4 to 2)
Oxygen support — days (IQR)	13 (8 to 16)	12 (9 to 16)	13 (6 to 16)	0 (−2 to 2)
Hospital stay — median no. of days (IQR)	15 (12 to 17)	14 (12 to 17)	16 (13 to 18)	1 (0 to 2)
Time from randomization to discharge — median no. of days (IQR)	13 (10 to 16)	12 (10 to 16)	14 (11 to 16)	1 (0 to 3)
Time from randomization to death — median no. of days (IQR)	10 (6 to 15)	9 (6 to 13)	12 (6 to 15)	−3 (−6 to 2)

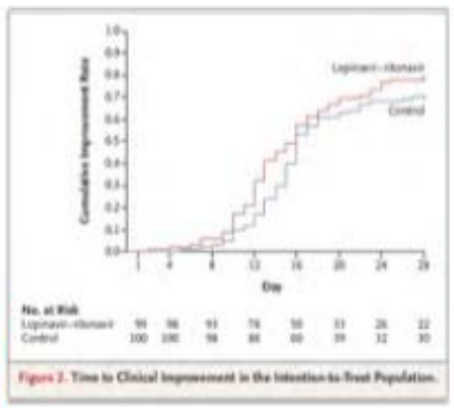


Figure 2. Time to Clinical Improvement in the Intention-to-Treat Population.

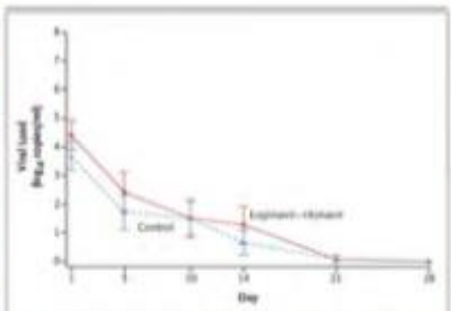


Figure 3. Mean Change from Baseline in SARS-CoV-2 Viral RNA Load by qPCR on Throat Swabs.

I bars indicate 95% confidence intervals. Results less than the lower limit of quantification of polymerase chain reaction (PCR) assay and greater than the limit of qualitative detection are imputed with 1 $\log_{10}$ copies per milliliter; results for patients with viral-negative RNA are imputed with 0 $\log_{10}$ copies per milliliter. Among the 199 patients, 130 (59 patients in the lopinavir–ritonavir group and 71 in the standard-care group) had virologic data that were used for viral load calculation, whereas the rest of the patients had undetectable viral RNA on throat swabs over the time.

Key findings:

- Open label (not blinded) - n= 199
- 1 hospital in Whuan (China)
- time to clinical improvement, 28 day mortality rate and throat viral RNA detectability were similar in both arms
- median time to clinical improvement was shorter by 1 day in LPV/r arm (modified ITT)
- Gastrointestinal adverse events were more common in LPV/r arm
- Continuous follow up planned

DARUNAVIR/R COVID19

- **A Janssen não possui evidência clínica ou farmacológica para embasar a inclusão de DRV/cobicistate nas diretrizes de tratamento para COVID-19 e não há dados publicados sobre o perfil de segurança e eficácia de DRV/cobicistate no tratamento de COVID-19.**
- **Não há estudos clínicos publicados que avaliaram a eficácia e a segurança de DRV, DRV/cobicistate ou DRV/cobicistate/entricitabina/tenofovir alafenamida para o tratamento do novo coronavírus.**
- **Além disso, não há estudos *in vitro* publicados com DRV e coronavírus. Com base em resultados preliminares, não publicados, de um experimento *in vitro* relatado anteriormente, não é provável que DRV terá atividade significativa contra SARS-CoV-2 quando administrado na dose segura e eficaz aprovada para o tratamento de infecção por HIV-1.***
- **Os resultados de um estudo aberto, randomizado e controlado realizado em um único centro – o Shanghai Public Health Clinical Center (SPHCC), na China, com darunavir e cobicistate (DRV/c) no tratamento de 30 pacientes com COVID-19 confirmados em laboratório mostraram que o DRV/c não foi eficaz.**
- **Além disso, análises estruturais demonstram muito poucas interações de DRV com o sítio ativo da protease de SARS-CoV-2.***

O QUE TEMOS ATÉ JUNHO 2020 PUBMED COVID 19+ CORONAVIRUS+ HIV : DESDE DEZ

13 publicações HIV e COVID:

- Relato isolado , dois casos, série de casos,alterações radiológicas PVHIV;

- Perpectivas epidemiológicas na resposta do sistema de atendimento/pandemia

NOVA YORK N=21

OUTCOMES AMONG HIV+ HOSPITALIZED W COVID19

- NY Langobe Health : março 2020 até abril 23 (só com PCR SARSCOV-2 + foram incluídos)
- Comparou 21 HIV + COVID+ vs 2617 iniciais para 42 HIV - COVID+ (algoritmo que pareou idade, IMC,sexo,HAS, asma, DM,DPOC, ICC)
- Tendência maior em admissão em UTI, VM, e mortalidade em PVHIV, porém sem significância estatística
- Marcadores inflamatórios : sem diferença entre grupos
- Sem diferenças em desfechos clínicos : eventos trombóticos, isquemia miocárdica
- Problemas : sem PVHIV controle virológico, sem dados de uso de classes de ARV, número pequeno , fatores de confusão na análise

MILÃO N=47

MILÃO ITÁLIA

Clinical features and outcomes of HIV patients with coronavirus disease 2019

Cristina Gervasoni[1,2], Paola Meraviglia[1], Agostino Riva[1], Andrea Giacomelli[1], Letizia Oreni[1],

Davide Minisci[1], Chiara Atzori[1], Annalisa Ridolfo[1], Dario Cattaneo[2,3]

- 47 HIV + fev/ abril 2020 , 45 (96% - recuperados, 2 óbitos)
- Restrospectivo, casos confirmados e suspeitos . Média de idade 51 anos (60
- 74% homens, 90% CV indect, 76% CD4 >500 (3% CD4 <200)
- 64% tinham alguma comorbidade ,ao menos uma (dislipidemia, HAS, hepatite B e C)
- 80 % em uso de esquema baseados em inibidores da integrase, 11 % IP
- 3 óbitos : obeso mórbido, câncer de pulmão e ICC.

Quase 50% usou : hidrocloroquina(17%), azitromicina(15%), LPV-r(11%), 1 tocilizumab, 1 remdesivir, 1 ambos)

Coorte mortalidade pequena vs 17% no hospital em homens,idade semelhante

ALEMANHA N=33

COVID-19 in people living with human immunodeficiency virus: a case series of 33 patients

Georg Härter[1] · Christoph D. Spinner[2] · Julia Roider[3,4] · Markus Bickel[5] · Ivanka Krznaric[6] · Stephan Grunwald[6] · Farhad Schabaz[7] · Daniel Gillor[8] · Nils Postel[9] · Matthias C. Mueller[10,11] · Markus Müller[12] · Katja Römer[13] · Knud Schewe[14] · Christian Hoffmann[14,15]

- 12 centros Alemanha (11 março/ 17 abril)
- Leve,severa e crítica (classificação COVID)
- 33 pacientes HIV+ , 3 óbitos (9%)
- 91 % se recuperaram e 76% foram considerados casos moderados
- 100 % em TARV e 22 /33 com TDF e 4/32 em IP(Darunavir/r)

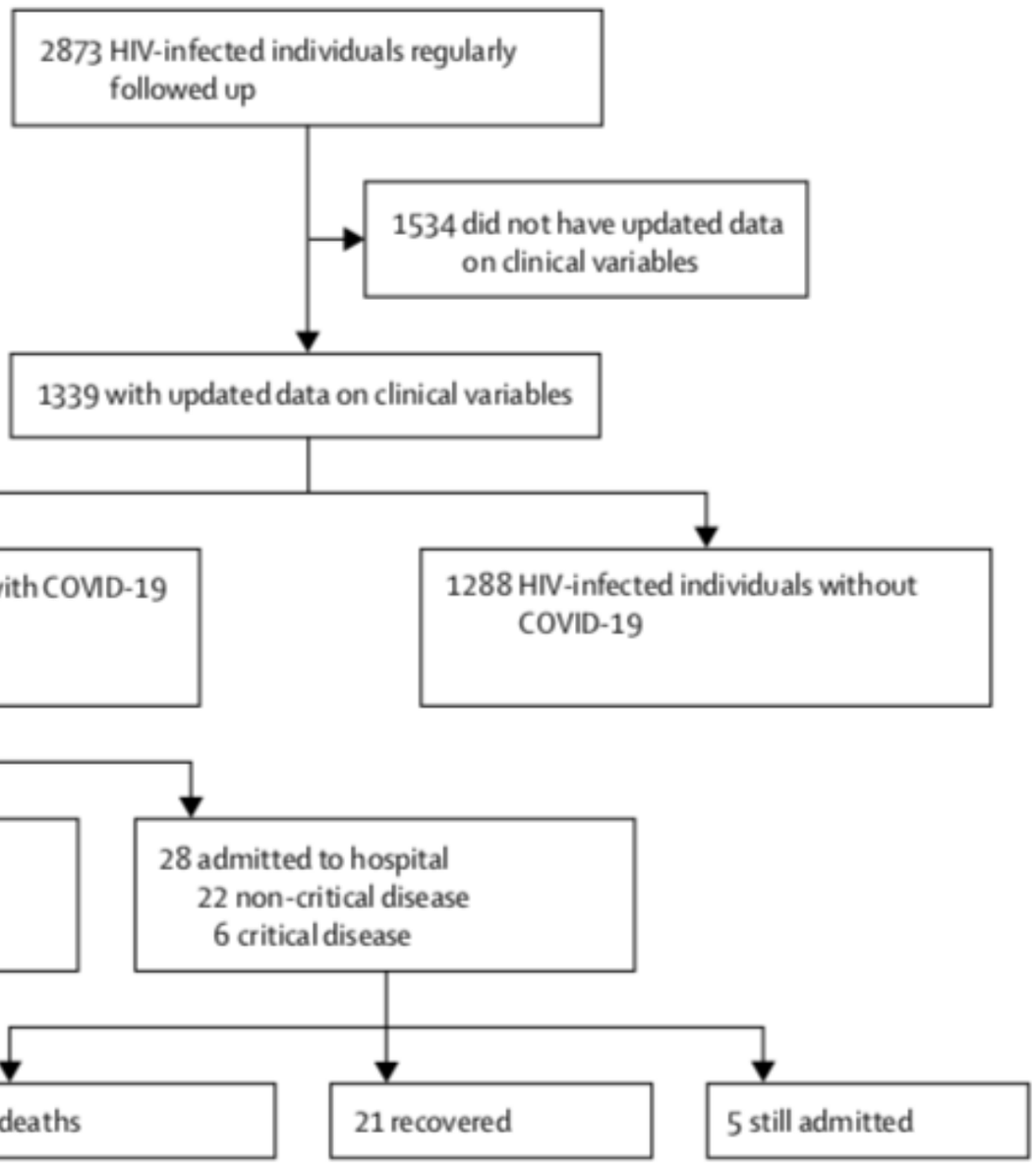
RESULTADOS

- 3 óbitos: 1- paciente 82 a e CV detec, 2- CD4 muito baixo?? 3-(DM, HAS e DPOC)
- Taxa 9% óbitos, Alemanha 3,7% : superestimada mortalidade??
- Características clínicas : igual a população não-HIV
- 2/33 IOT e VM : viremia positiva (blip? não retirou TARV, COVID?)
- Limitações : pequena, sem grupo controle, sem seguimento,sem assintomáticos,sem informações de esquema TARV, sem informações COVID)

MAIOR COORTE GLOBAL ATÉ JUNHO/2020 N=55

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

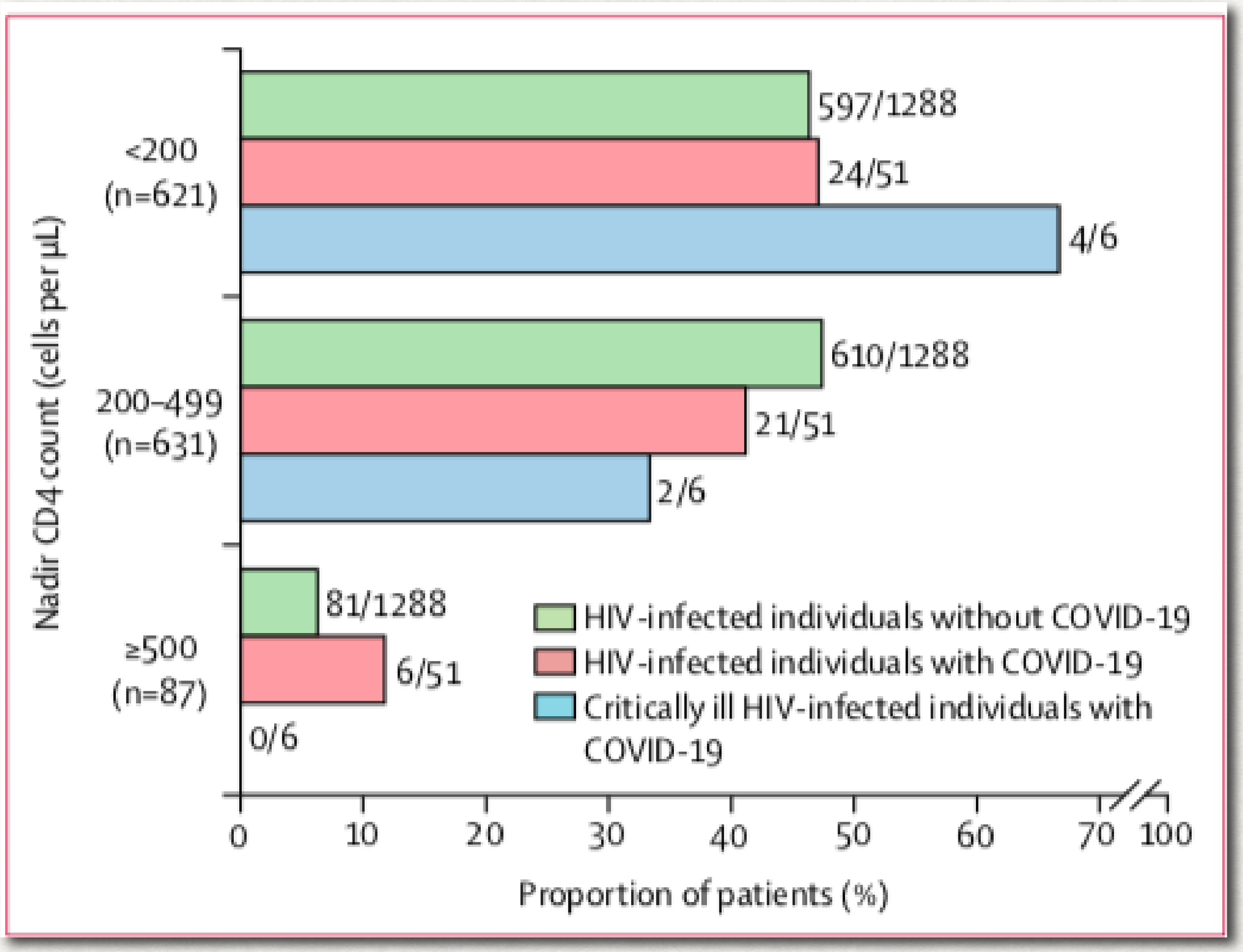
*Pilar Vizcarra, María J Pérez-Elías, Carmen Quereda, Ana Moreno, María J Vivancos, Fernando Dronda, José L Casado, on behalf of the COVID-19 ID Team**



COORTE PROSPECTIVA ESPANHA(RAMON Y CAJAL MADI LANCET 28 MAIO 2020

-Observacional, único centro, HIV+ ,> 18 anos
-Suspeito ou confirmado até 30/04
-Comparação com amostra HIV+ em seguimento ambulatorial antes pandemia
-Maior da literatura até agora
-Variáveis analisadas : ano do diagnóstico, CD4, CD8, CD4/CD8, CV , esquema ARV,comorbidades, e caracteristicas da COVID19
-Definição COVID-19: SARSCOV2 PCR+ ou achados clínicos radiológicos compatíveis , crítico (Pa02/Fi02< 300)
-2873 HIV+ sem seguimento : 51 COVID19 (1,8%)

CARACTERÍTICAS : DISTRIBUIÇÃO CD4 /COVID



IDADE, SEXO,IMC, CD4 : HIV COVID (51)/ HIV NCOVID(1288)

	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

www.thelancet.com/hiv Published online May 28, 2020

ESQUEMA ARV E COMORBIDADES HIV COVID/ HIV NCOVID

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

www.thelancet.com/hiv Published online May 28, 2020

COMORBIDADES : HIV COVID CONFIRMADOS/SUSPEITOS

	Total (n=51)	Confirmed (n=35)	Suspected (n=16)	p value
Comorbidities				
Any	32 (63%)	23 (66%)	9 (56%)	0·547
Hypertension	18 (35%)	15 (43%)	3 (19%)	0·122
Cardiovascular disease	14 (27%)	10 (29%)	4 (25%)	1·000
Diabetes	7 (14%)	6 (17%)	1 (6%)	0·410
Chronic kidney disease	6 (12%)	3 (9%)	3 (19%)	0·363
Chronic liver disease	24 (47%)	16 (46%)	8 (50%)	1·000
Chronic respiratory disease	13 (25%)	8 (23%)	5 (31%)	0·730
Antiretroviral therapy regimen before COVID-19				
Protease inhibitor	11 (22%)	7 (20%)	4 (25%)	0·723
NNRTI	8 (16%)	3 (9%)	5 (31%)	0·090
INSTI	41 (80%)	30 (86%)	11 (69%)	0·253
Tenofovir (TAF or TDF)	37 (73%)	24 (69%)	13 (81%)	0·503
COVID-19 treatment				
Any	39 (76%)	30 (86%)	9 (56%)	0·033
Hydroxychloroquine	30/39 (77%)	26/30 (87%)	4/9 (44%)	0·0017
Azithromycin	19/39 (49%)	15/30 (50%)	4/9 (44%)	0·350
Ritonavir-boosted lopinavir	14/39 (36%)	12/30 (40%)	2/9 (22%)	0·176
Tocilizumab	4/39 (10%)	4/30 (13%)	0	0·295
Systemic corticosteroids	15/39 (38%)	13/30 (43%)	2/9 (22%)	0·102

DISCUSSÃO

- 1,2 A 1,8% COVID/HIV , WUHAN (0,68 A 1,0%)
- PREVALÊNCIA DE COMORBIDADES : HAS, DM, IMC ALTO,IRC, E DOENÇA HEPÁTICA
- EVOLUÇÃO CLINICA E LABORATORIAL DA COVID :SIMILIAR A HIV NEGATIVA
- MORTALIDADE 4% (20% POPULAÇÃO GERAL EM MADRID)
- DOS QUE HIV + : 25 % FORMAS MAIS SEVERA, 12 % UTI (VS 17-21% E 3-5% UTI) : PIOR DESFECHO????
- COMORBIDADES E ASSOCIAÇÃO COM GRAVIDADE :COORTE PEQUENA, ALTA PREVALÊNCIA DE COMORBIDADES E FAIXA DE IDADE DOS PACIENTES HIV + NESSA COORTE
- CD4 MAIS BAIXO: FORMAS MAIS SEVERAS??, COORTE PEQUENA...
- ESQUEMA ARV : SEM DIFERENÇAS ENTRE OS GRUPOS COM RELAÇÃO A USO DE ITRN, INTEGRASE, E IP(MAIS A MAIORIA USOU TDF OU TAF)

LIMITAÇÕES

ESTUDO COM N PEQUENO
NÃO INCLUÍDOS FORMAS MAIS LEVES : RECOMENDAÇÕES LOCAIS SÓ GRAVES
PERDA DE PVHIV COM COVID QUE FORAM PARA OUTROS SERVIÇOS

CONCLUSÕES

TAXA DE INFECÇÃO SIMILIAR A N-HIV
COMORBIDADES RISCO
CD4 BAIXO SEM ASSOCIAÇÃO COM O DIAGNÓSTICO, MAS PARECE INFLUENCIAR GRAVIDADE
ARV: NEM ASSOCIAÇÃO

AFRICA HIV+ TB E SARSCOV-2

What predisposes to poor COVID-19 outcomes in South Africa?

Known risk factors from other setting

√ Older age
√ Male sex

√ Diabetes
√ Cardiac disease
√ Respiratory disease
√ Kidney disease
√ Liver disease
√ Overweight
√ Organ transplant
√ Recently diagnosed cancer

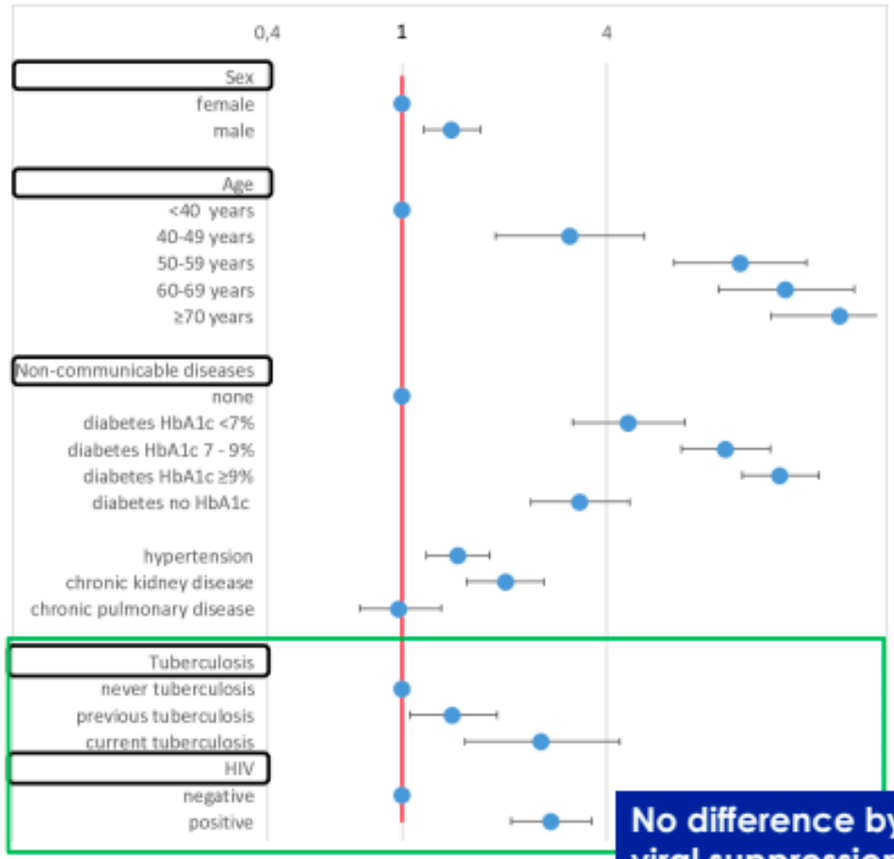
? Tuberculosis

? HIV

AFRICA HIV+ TB E SARSCOV-2

What are the chances of dying from COVID-19 for different risk factors?

Patient characteristics	Hazard ratio	95% Confidence Interval
Sex		
female		
male	1,40	1,16; 1,70
Age		
<40 years		
40-49 years	3,12	1,88; 5,17
50-59 years	9,92	6,34; 15,54
60-69 years	13,55	8,55; 21,48
≥70 years	19,53	12,20; 31,26
Non-communicable diseases		
none		
diabetes well controlled (HbA1c <7%)	4,65	3,19; 6,79
diabetes poorly controlled (HbA1c 7 - 9%)	8,99	6,65; 12,14
diabetes uncontrolled (HbA1c ≥9%)	13,02	10,06; 16,87
diabetes – no measure of control	3,34	2,39; 4,68
hypertension	1,46	1,18; 1,81
chronic kidney disease	2,02	1,55; 2,62
chronic pulmonary disease	0,98	0,75; 1,30
Tuberculosis		
never tuberculosis		
previous tuberculosis	1,41	1,05; 1,90
current tuberculosis	2,58	1,53; 4,37
HIV		
negative		
positive	2,75	2,09; 3,61



No difference by viral suppression

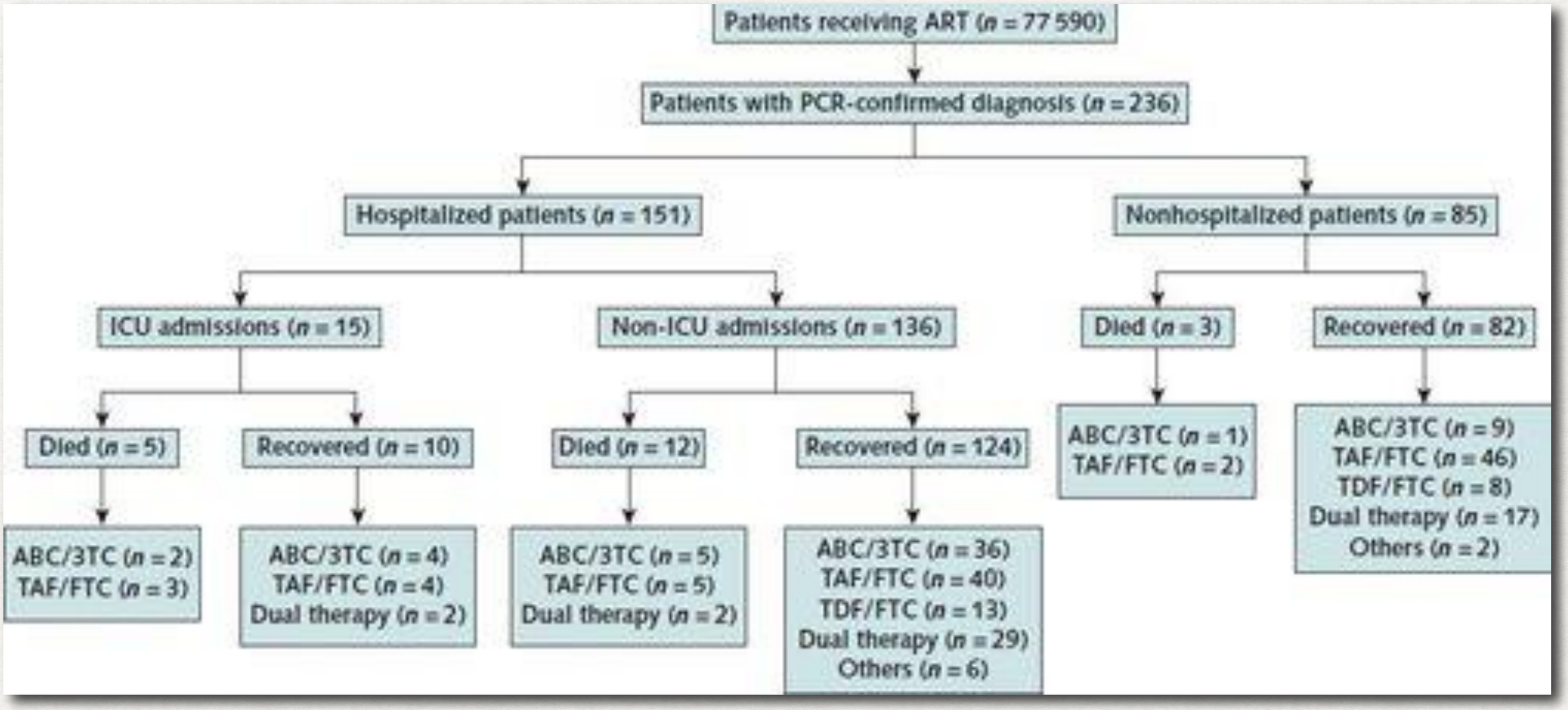
- **Older age and comorbidities increase risk of COVID-19 death**
- **Quantify effect of HIV & TB:**
  Modest 2 – 2.5 times risk of COVID-19 death associated with HIV and TB

Annals of Internal Medicine®

Original Research | 26 Jun 2020

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

A Cohort Study


Patients receiving ART (n = 77 590)
Patients with PCR-confirmed diagnosis (n = 236)
Hospitalized patients (n = 151)
Nonhospitalized patients (n = 85)
ICU admissions (n = 15)
Non-ICU admissions (n = 136)
Died (n = 3)
Recovered (n = 82)
Died (n = 5)
Recovered (n = 10)
Died (n = 12)
Recovered (n = 124)
ABC/3TC (n = 1)
TAF/FTC (n = 2)
ABC/3TC (n = 9)
TAF/FTC (n = 46)
TDF/FTC (n = 8)
Dual therapy (n = 17)
Others (n = 2)
ABC/3TC (n = 2)
TAF/FTC (n = 3)
ABC/3TC (n = 4)
TAF/FTC (n = 4)
Dual therapy (n = 2)
ABC/3TC (n = 5)
TAF/FTC (n = 5)
Dual therapy (n = 2)
ABC/3TC (n = 36)
TAF/FTC (n = 40)
TDF/FTC (n = 13)
Dual therapy (n = 29)
Others (n = 6)

CARACTERISTICAS

- 60 CLINICAS HIV ESPANHA FEV/ABRIL 2020
- ESQUEMAS ARV VS DESFECHOS
- 77950 HIV ART : 236 COVID-19
- 236 COVID: 151 HOSPITALIZADOS (MAIS HOMENS, E ACIMA DE 70A)
- RISCO DE HOSPITALIZAÇAO :
  - 20,3 (TAF/FTC)
  - 10,3 (TDF/FTC)
  - 23,4 (ABC/3TC)
  - 20,0(OUTROS ESQUEMAS)
- RISCO PARA DIAGNOSTICO:
  - 39,1(TAF/FTC)
  - 16,9(TDF/FTC)
  - 28,3(ABC/3TC)
  - 20,7(OUTROS)
- TDF/FTC : NENHUM MORREU OU FOI PARA UTI
- USUARIOS DE PREP??????

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**

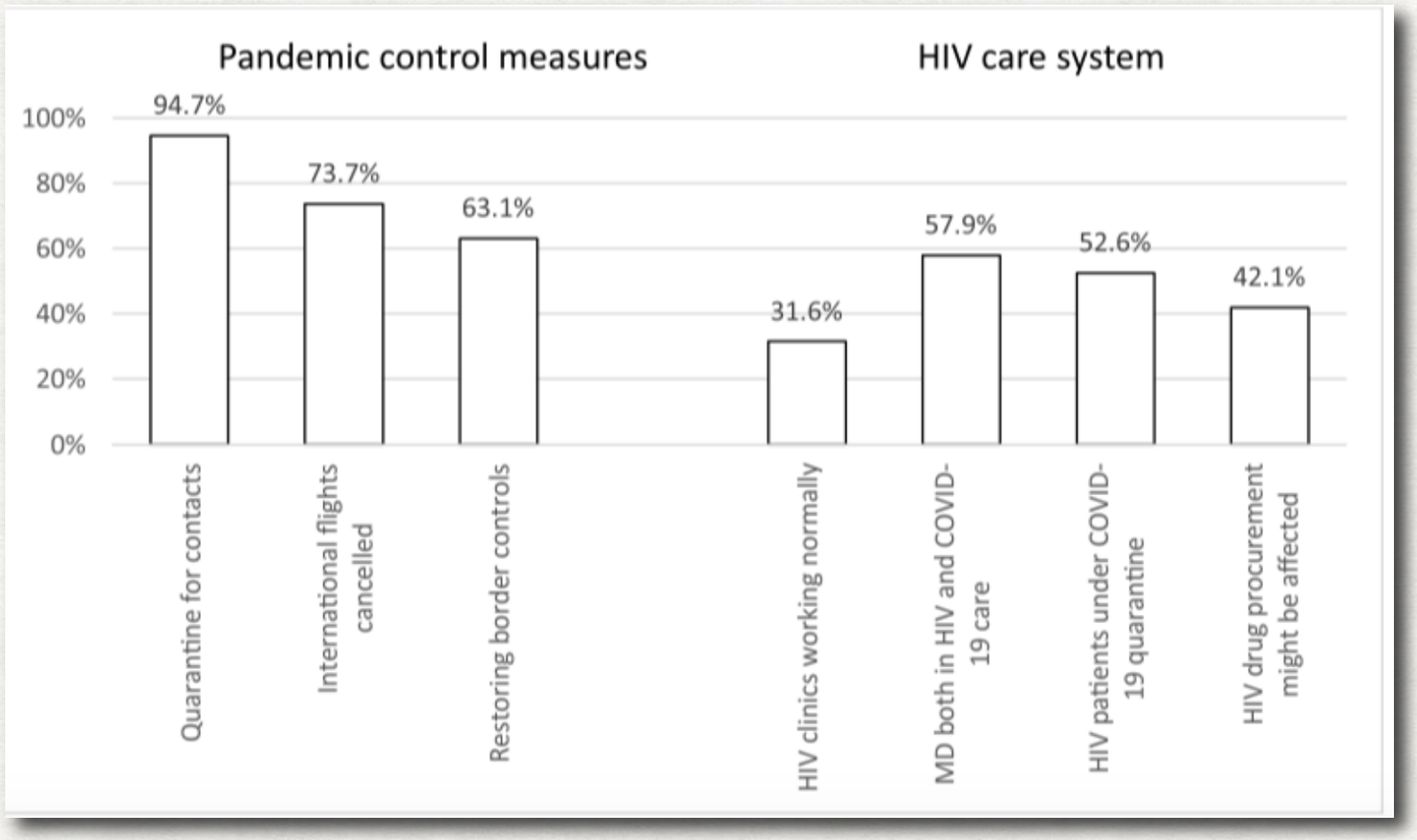
Characteristics	COVID-19 Diagnosis (95% CI)	COVID-19 Hospital Admission (95% CI)	COVID-19 ICU Admission (95% CI)	COVID-19 Death (95% CI)
Risk				
Overall	30.4 (26.7–34.6)	19.5 (16.5–22.8)	1.9 (1.1–3.2)	2.6 (1.6–4.0)
Standardized*	30.0 (29.8–30.2)	17.8 (17.7–18.0)	2.5 (2.4–2.6)	3.7 (3.6–3.8)
Sex				
Men	35.1 (30.4–40.3)	23.4 (19.6–27.7)	2.1 (1.1–3.6)	2.8 (0.6–4.5)
Women	16.4 (11.2–23.2)	7.7 (4.3–12.7)	1.5 (3–4.5)	2.1 (0.6–5.3)
Age, *y*				
20–39	28.3 (20.3–38.3)	10.3 (5.8–17.6)	0.7 (0–3.8)	0 (–2.9)†
40–49	27.9 (20.9–36.4)	20.1 (14.3–27.5)	0.5 (0–2.9)	1.0 (0.1–3.7)
50–59	26.3 (21.0–32.5)	16.7 (12.6–21.8)	2.2 (0.9–4.5)	2.2 (0.9–4.5)
60–69	38.8 (26.9–54.2)	27.4 (17.6–40.8)	4.6 (1.2–11.7)	4.6 (1.2–11.7)
70–79	83.7 (52.4–126.7)	72.3 (43.5–112.9)	7.6 (0.9–27.5)	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)

CUIDADO PVHIV NA ERA COVID19

Short Communication

HIV care in times of the COVID-19 crisis – Where are we now in Central and Eastern Europe?

J.D. Kowalska[a,*], A. Skrzat-Klapaczyńska[a], D. Bursa[a], T. Balayan[b], J. Begovac[c], N. Chkhartishvili[d], D. Gokengin[e], A. Harxhi[f], D. Jilich[g], D. Jevtovic[h], K. Kase[i], B. Lakatos[j], R. Matulionyte[k], V. Mulabdic[l], A. Nagit[m], A. Papadopoulos[n], M. Stefanovic[o], A. Vassilenko[p], M. Vasylyev[q], N. Yancheva[r], O. Yurin[s], A. Horban[a], for the ECEE Network Group



Most of the respondents were infectious disease physicians directly involved in HIV care (17/19). No country reported HIV clinic closures. HIV clinics were operating normally in only six countries (31.6%). In 11 countries (57.9%) physicians were sharing HIV and COVID-19 care duties. None of the countries expected shortage of ART in the following 2 weeks; however, five physicians expressed uncertainty about the following 2 months. At the time of providing responses, ten countries (52.6%) had HIV-positive persons under quarantine.

Int J Infect Dis 2020 May 11;96:311-314. doi: 10.1016/j.ijid.2020.05.013

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

Tuberculosis and HIV responses threatened by COVID-19

As the first cases of COVID-19 affect Nigeria's health-care workers, will the country's HIV and tuberculosis responses weather the pandemic? Paul Adepoju reports.

-QUARENTENA : ACESSO A TESTAGEM, TRATAMENTO (90-90-90)
-KITS PARA TESTAGEM: ESCASSEZ?
-INÍCIO DE TARV E MÁ ADESÃO, IDA AOS SERVIÇOS(LOCKDOWNS, RESTRIÇÕES)
-MEDO DE DESABASTECIMENTO : 32·6% DE DESCONTINUAÇÃO E 48·6% ONDE CONSEGUIR ARV NUM FUTURO RECENTE)

RESPOSTAS
CHINESE NATIONAL CENTER FOR AIDS/STD CONTROL : GARANTIU TARV CHINA, LISTA DE LOCAIS PARA OS USUÁRIOS
TAILÂNDIA : DISPENSAÇÃO POR 3-6 MESES
EUA : 30-90 DIAS DE TARV PREFERENCIALMENTE POR CORREIO
ORGANIZAÇÕES NÃO GOVERNAMENTAIS: CRUZ VERMELHA NA TAILÂNDIA ,

ESTUDOS RECRUTANDO OU EM ANDAMENTO...

☐	Not yet recruiting	Chloroquine Outpatient Treatment Evaluation for **HIV**-**Covid**-19	• **Covid**-19 • **HIV**	• Drug: Chloroquine or hydroxychloroquine
☐	Not yet recruiting	Clinical Characterisation Protocol for **COVID**-19 in People Living With **HIV**	• Adult Patients Living With **HIV** (PLWHIV) With Confirmed Infection With **SARS-CoV-2** Since 1st January 2020	• Biological: Biological collection (patients co infected **HIV** Sras-CoV-2) • Other: Auto-questionnaires (patients co infected **HIV** Sras-CoV-2) • Other: Qualitative interviews (in 40 patients : 20 with **COVID**-19 and 20 without **COVID**-19)
☐	Not yet recruiting	Impact of Long-term Protease Inhibitors in Patients Living With **HIV** on the Incidence of **COVID**-19 (COVIP)	• **HIV** Patients	• Other: No intervention

ESTUDOS RECRUTANDO OU EM ANDAMENTO...

☐	Not yet recruiting	COHIVE: Coronavirus (**COVID**-19) Outcomes in **HIV** Evaluation in Resource Limited Settings	• **HIV**-infection/Aids • Coronavirus Infection	
☐	Recruiting	**COVID**-19 in Patients With **HIV**	• **HIV**/AIDS • **COVID**-19 • **SARS-CoV-2**	• Other: No intervention
☐	Completed	**COVID**-19 Infection in Patients Infected With **HIV** and/or on PrEP	• **HIV** • Pre-exposure Prophylaxis	• Other: Data research, databas analysis
☐	Recruiting **NEW**	Characterizing **SARS-CoV-2**-specific Immunity in Individuals Who Have Recovered From **COVID**-19	• **SARS-CoV-2** • **COVID**-19	• Other: Sample collection

SP /BRA : MULTICÊNTRICO

Estudo multicêntrico para avaliação da COVID-19 em pacientes vivendo com HIV acompanhados em serviços de referência em São Paulo.

Instituição Proponente:

Centro de Referência e Treinamento DST/Aids (CRT-DST/Aids) - Secretaria de Estado da Saúde de São Paulo (SES/SP)

Pesquisador Responsavel:

Álvaro Furtado da Costa – CRT-DST/Aids

Instituições Participantes:

- Centro de Vigilância Epidemiológica – (CVE) – SES/SP
- Instituto de Infectologia Emílio Ribas (IIER) – SES/SP
- Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo – HC-FMUSP
- Hospital Heliópolis – SES/SP
- Faculdade de Medicina do ABC-Centro Universitário Saúde do ABC - FMABC
- Hospital São Paulo (HSP) – EPM/UNIFESP
- Hospital do Servidor Público Estadual de São Paulo – HSPE

DÚVIDAS : AS MESMAS

Apesar da grande quantidade de estudos publicados e em andamento, até o momento quase não há dados sobre a COVID-19 em PVHIV. Há, portanto, um enorme interesse em sabermos como se comporta a coinfecção SARS-CoV-2 / HIV. Dentro desse cenário temos vários questionamentos: qual é o risco dessa população na aquisição de SARS-CoV-2 e sua progressão para a doença COVID-19; os desfechos seriam de maior ou menor gravidade (imunosupressão como proteção?); qual seria o papel do uso terapêutico / profilático dos antirretrovirais em pessoas que já faziam uso desses medicamentos e, nesse último contexto, essas medicações poderiam ter um efeito protetor em PVHIV?

Assim, este estudo se propõe a coletar dados clínicos, epidemiológicos e laboratoriais e também avaliar a resposta imune em PVHIV, atendidos em serviços especializados no município de São Paulo e que procuraram os serviços ou neles foram internados desde o inicio da pandemia, com sintomas respiratórios e síndrome respiratória aguda grave (SRAG).

DESENHO E OBJETIVOS

Estudo de coorte retrospectiva e prospectiva, de PVHIV e que testaram positivo para SARS-CoV-2 ou com diagnóstico altamente provável de COVID-19. A inclusão dar-se-á enquanto houver pandemia ou epidemia em São Paulo.

2. OBJETIVOS:

- Analisar o perfil epidemiológico, clínico e o padrão de evolução da infecção pelo SARS-CoV-2 e da COVID-19 em PVHIV;

- Avaliar os pacientes quanto à sua parte imunológica e esquemas de tratamento para o HIV, no contexto da coinfecção;

- Avaliar desfechos e fatores associados ao prognóstico.

AIDS and Behavior
https://doi.org/10.1007/s10461-020-02869-3

Symptoms, Stress, and HIV-Related Care Among Older People Living with HIV During the COVID-19 Pandemic, Miami, Florida

Angel B. Algarin[1] · Emil Varas-Rodríguez[2] · Chelsea Valdivia[2] · Kristopher P. Fennie[3] · Linda Larkey[4] · Nan Hu[5] · Gladys E. Ibañez[2]

Brief communication

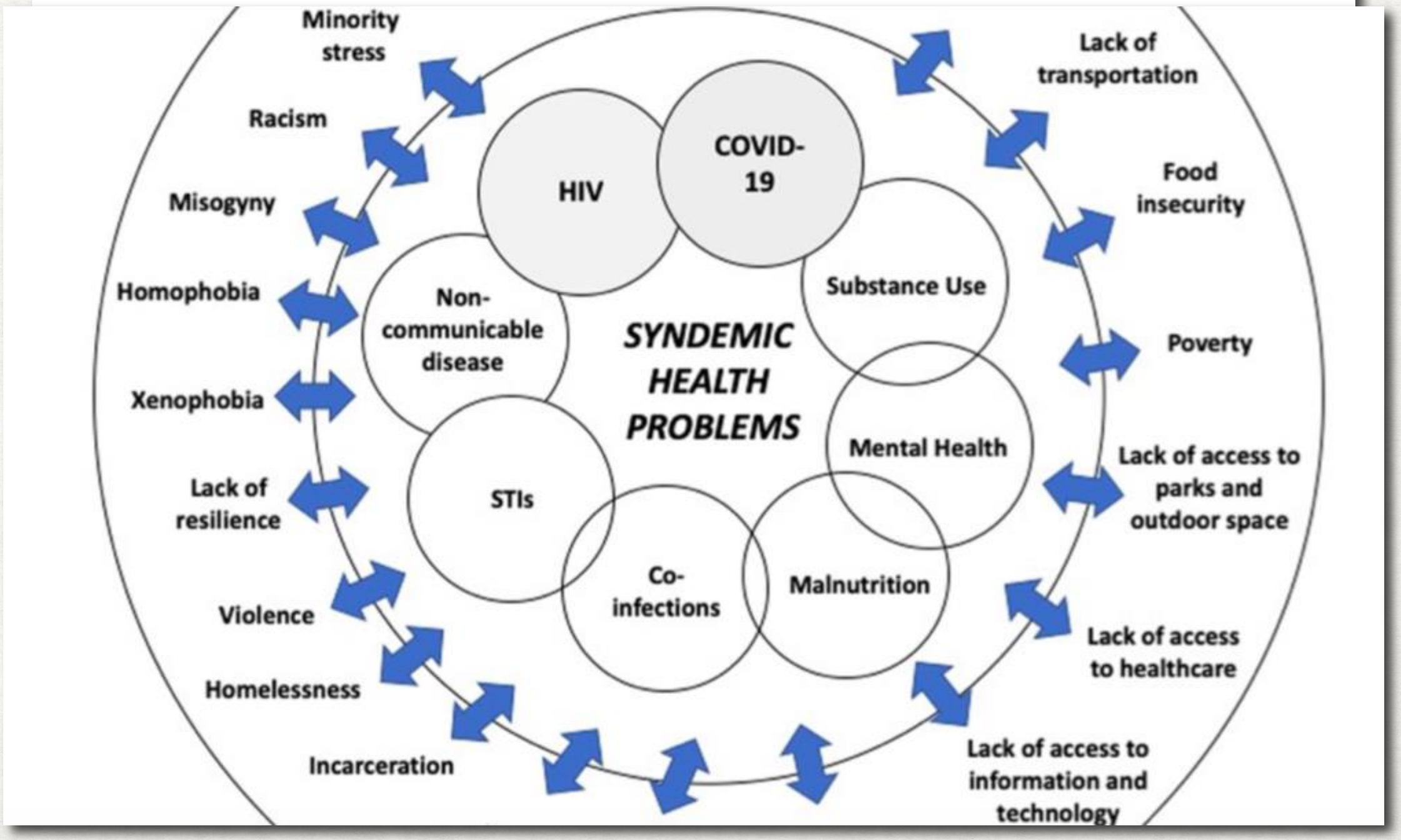
Telemedicine as a tool for PrEP delivery during the COVID-19 pandemic in a large HIV prevention service in Rio de Janeiro-Brazil

Brenda Hoagland [a,*], *Thiago S. Torres* [a], *Daniel R.B. Bezerra* [a], *Kim Geraldo* [a], *Cristina Pimenta* [b], *Valdilea G. Veloso* [a], *Beatriz Grinsztejn* [a]

[a] *Instituto Nacional de Infectologia Evandro Chagas, Fundação Oswaldo Cruz (INI-Fiocruz), Rio de Janeiro, RJ, Brazil*
[b] *Brazilian Ministry of Health, Brasilia, DF, Brazil*

Sindemia caracteriza a interação mutuamente agravante entre problemas de saúde em populações em seu contexto social e econômico.

The Burden of COVID-19 in People Living with HIV: A Syndemic Perspective



- -Contextualizar os desafios à saúde que emergirão dentro de uma estrutura sindêmica
- Para proteger a PVHIV do COVID-19 e de futuras pandemias, é imprescindível a programação para tratar do COVID-19 à luz dos múltiplos encargos de saúde que se reforçam mutuamente enfrentados pelo HIV: **os ônus e estressores psicossociais que diminuem o bem-estar dessas pessoas.**
- **Os encargos psicossociais que exacerbam a co-infecção e aumentam a probabilidade de mortalidade.**

OBRIGADO

OBRIGADO