

# HIV Patients with COVID-19 Hospitalized in a Tertiary Care Center in Mexico City

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## BACKGROUND

- The main risk factors for severe COVID-19 described are diabetes, hypertension, cardiovascular disease, obesity, chronic lung and renal disease. HIV infection has not been found to be an independent factor for severe COVID-19, however, only small case series of HIV and COVID-19 have been reported.
- The aim of this study is to describe clinical characteristics and outcomes of HIV positive patients with COVID-19 hospitalized in a tertiary care hospital in Mexico City.

## METHODS

- A single-center review of HIV-infected patients diagnosed with COVID-19 was performed using medical records from March 1st, 2020 to September 15th, 2020. We describe the clinical characteristics and outcomes.

## RESULTS

- A total of 26 people living with HIV were diagnosed with COVID-19, only 13 were hospitalized and are described here. One died and 12 were discharged.
- Overall, the median age was 43 years, all males and most (9/13) were on integrase inhibitor-based antiretroviral regimen and undetectable HIV viral load (13/13), with a median of CD4 counts of 429 cell/mm<sup>3</sup>.
- 10/13 had at least one comorbidity, the most frequent are chronic kidney disease (CKD) 4/13 and hypertension 3/13. 9/13 had body mass index >25. 10/13 had moderate to severe lung disease, evidenced by computed tomography (CT).
- The disease severity during hospitalization was moderate (Pneumonia and SpO<sub>2</sub> ≥ 90) in 8 and severe (Pneumonia plus one of the following: RR >30 breaths/min, severe respiratory distress, or SpO<sub>2</sub> < 90) in 5 patients.
- 4/13 required invasive mechanical ventilation, and all were successfully extubated.
- The results are shown in figures and tables.

TABLE 1. DEMOGRAPHIC, CLINICAL AND LABORATORY DATA

	Hospitalized patients n=13
<b>Demographics</b>	
Age, median (IQR)	43 (37 – 59)
Male, %	13 (100)
<b>HIV status</b>	
Last CD4, median (IQR)	429 (346 – 702)
Last HIV viral load before admission, n (%)	40 (100)
Antiretroviral regimen before admission, n (%)	
Integrase inhibitor	9 (69)
Non-nucleoside	2 (15)
Protease inhibitor	2 (15)
<b>Comorbidities, n (%)</b>	
One	4 (30)
Two or more	6 (46)
<b>Invasive Mechanical ventilation (IMV), n (%)</b>	4 (30)
<b>Laboratory, median (IQR)</b>	
PaO <sub>2</sub> /FiO <sub>2</sub> ratio	257 (219 – 277)
Total lymphocytes	827 (732 – 1129)
Platelet count (K/uL)	165 (125 – 268)
Fibrinogen (mg/dL)	615 (398 – 871)
D-Dimer (ng/mL)	479 (285 – 901)
Serum ferritin (ng/mL)	419 (139 – 888)
High-sensitivity C-reactive protein (mg/dL)	17 (2 – 18)

\* IQR denotes interquartile range. Percentage is represented by %.

FIGURE 1. COMORBIDITIES

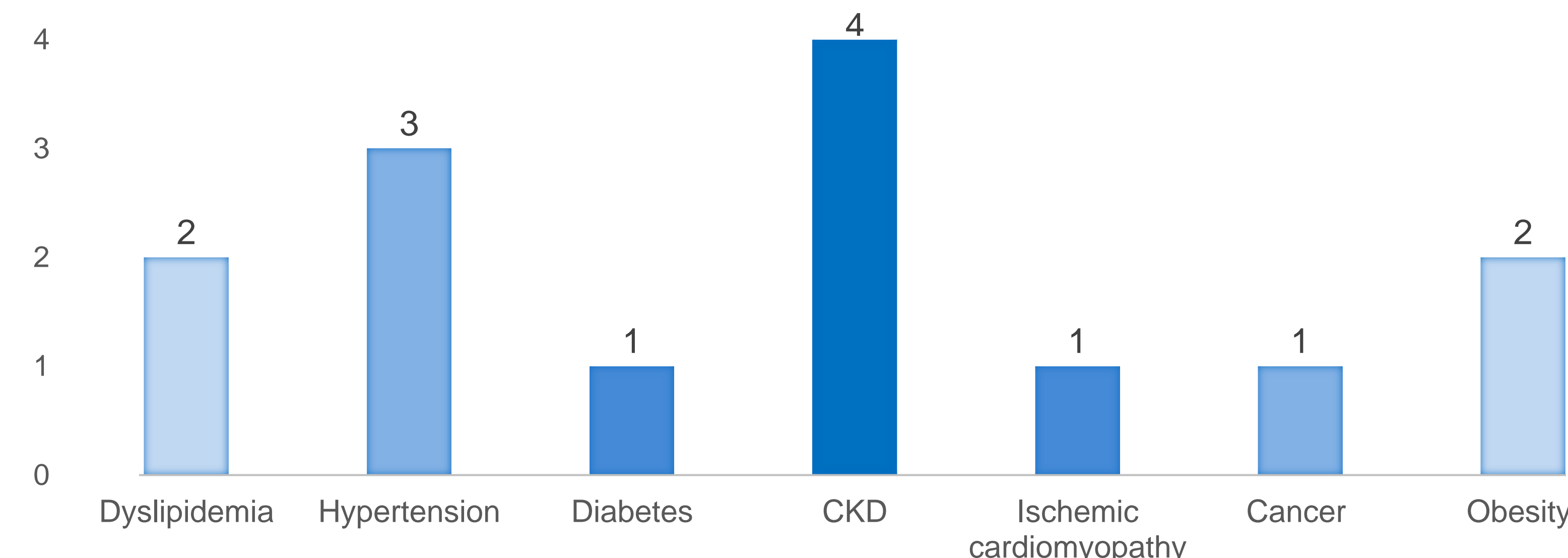


FIGURE 2. SEVERITY OF CT IMAGING

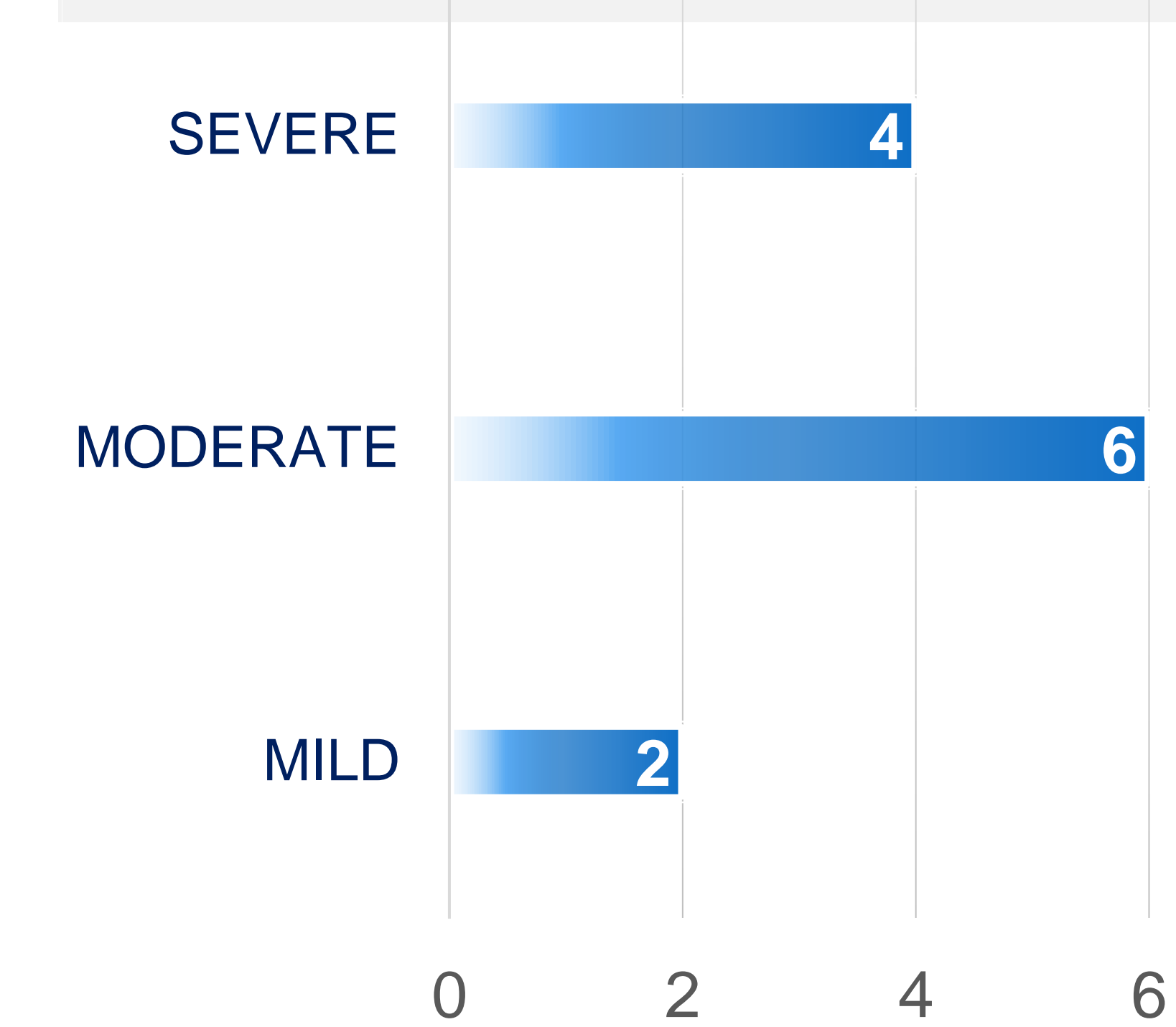
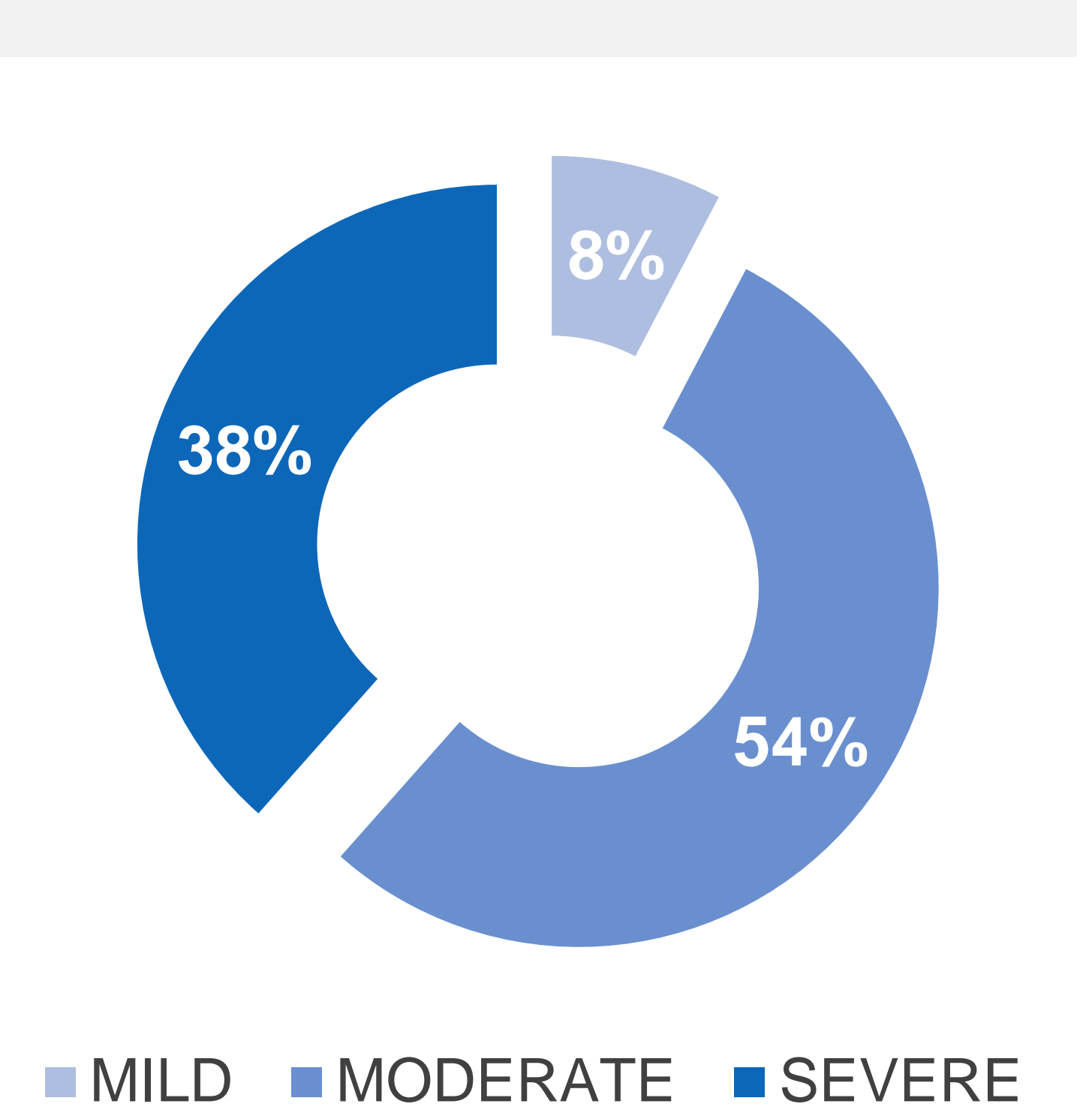


FIGURE 3. DISEASE SEVERITY



## CONCLUSION

- Most of the HIV patients who required hospitalization due to COVID-19 had at least one comorbidity.
- In spite of severity of disease and critical presentations, most patients have recovered.
- Outcomes appear no different from those seen for non-HIV infected patients, however larger studies to determine the risk that HIV infection confers to COVID-19 outcomes are needed.

## PERSPECTIVES

- A subsequent analysis will be carried out to identify the total active patients in our clinic who were diagnosed by COVID19 in other clinics, in addition to those who had suggestive symptoms but without a diagnostic test.

## ACKNOWLEDGEMENTS

- Patients and staff members of the HIV Clinic.