

Outcome and Diagnosis of HIV-associated Pneumocystis Pneumonia in Cape Town, South Africa

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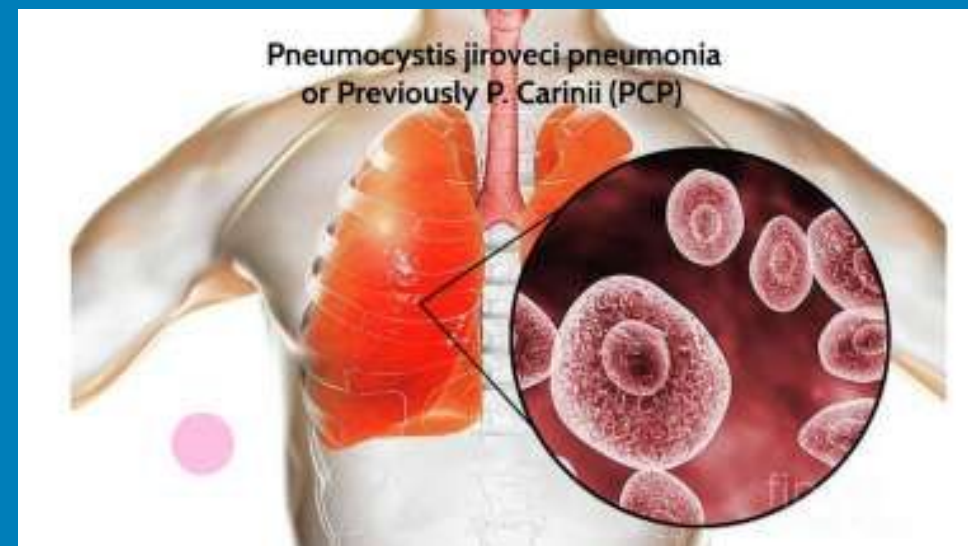
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Research Question: In this study, we seek to identify the clinical phenotype and pathogen characteristics specific to HIV-associated PCP in African populations.

BACKGROUND

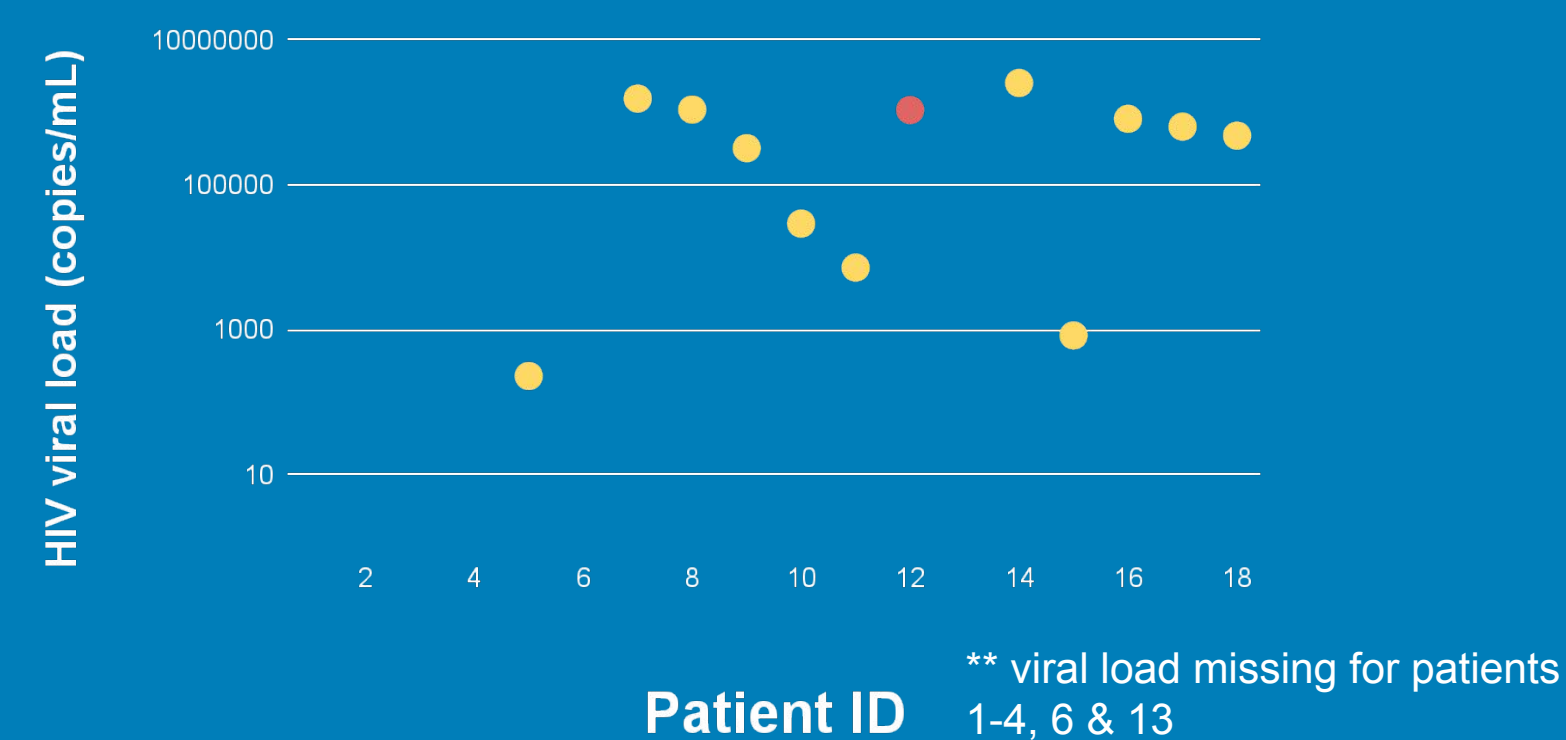
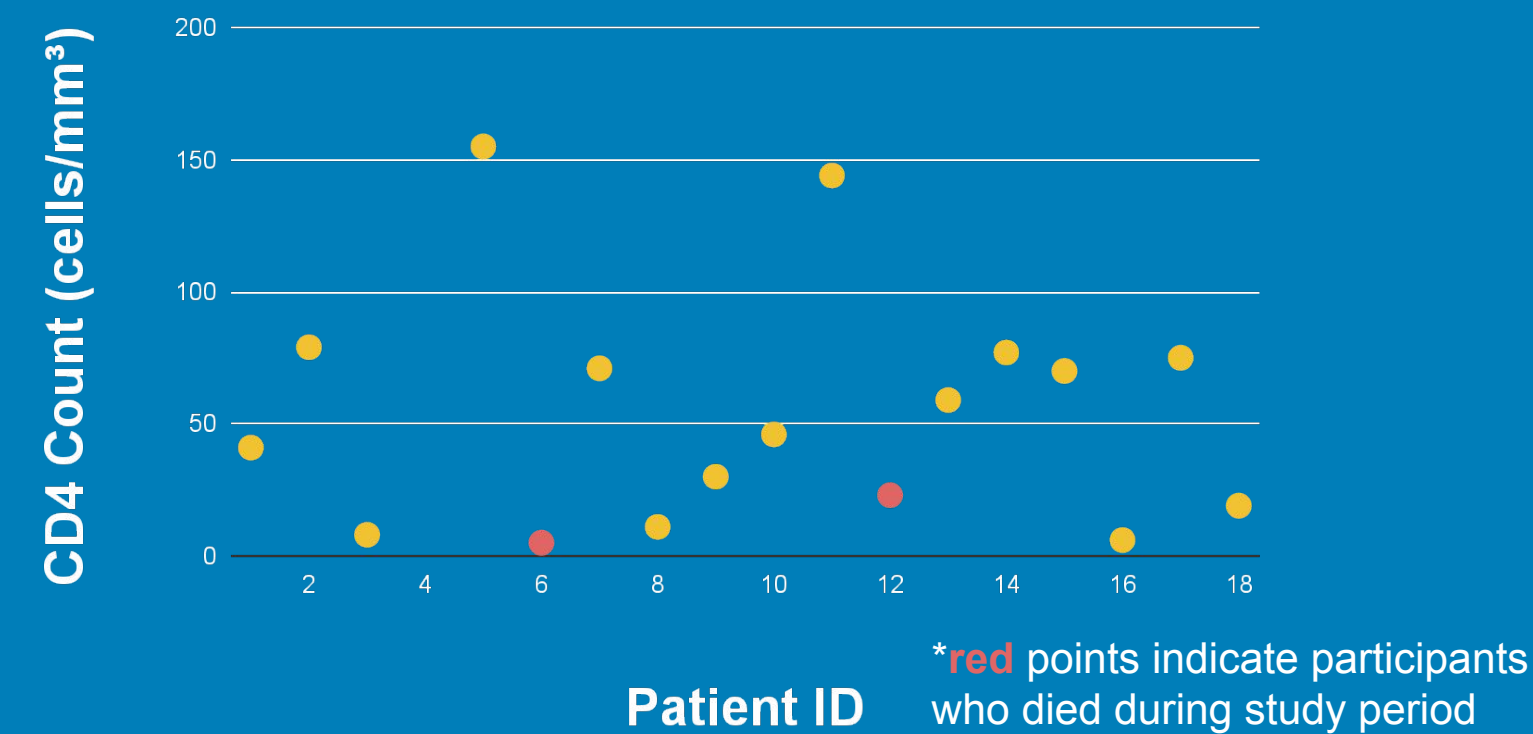
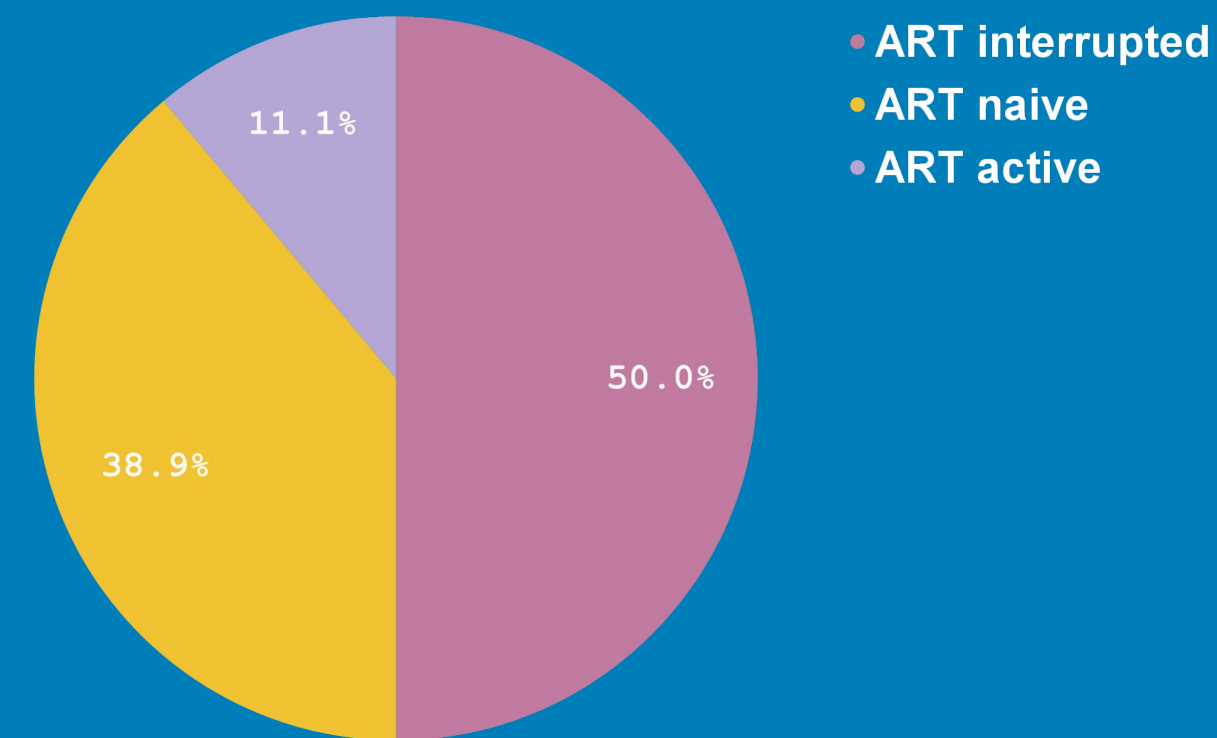
- *Pneumocystis jirovecii* pneumonia (PCP) is an opportunistic fungal infection that can cause severe respiratory illness
- PCP is one of the most common AIDS-defining illnesses and HIV-associated PCP is linked to poor outcomes, particularly in sub-Saharan Africa (1)
- There are significant gaps in the diagnosis and management in PCP, so this study aims to describe patient and pathogen characteristics in an African population



ORGANIZATIONAL SUPPORT

This study was conducted in conjunction with The Wellcome Centre for Infectious Diseases Research in Africa (CIDRI), University of Cape Town (UCT) and Khayelitsha District Hospital (KDH). CIDRI fosters collaboration among scientists seeking to combat infection, particularly HIV and TB, through research across Africa. UCT and KDH are medical and research centers that serve those living in Cape Town, South Africa.

FIGURES

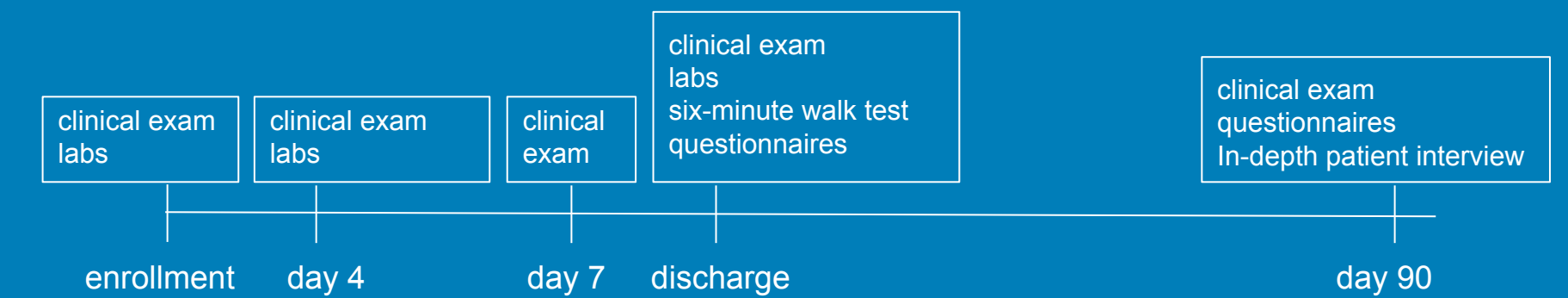


METHODS

- Study Population: HIV+ adult patients in Khayelitsha District Hospital with suspected PCP

◆ target sample size = 80

bronchoscopy at any point during hospitalization in which patient is stable



- 18 participants enrolled to date (8 male, 10 female), 3 died during the study period
- Median age: 38 y/o (range 20-53); median weight: 58.5 kg (range 34-90)
- At enrollment, only 2/18 were on ART, mean CD4 count was 54 cells/mm³ and all participants had a detectable HIV-1 viral load
- All patients had an elevated respiratory rate (mean = 29 bpm [range 20-48]) and most had low oxygen saturation (mean 92% [range 81-99])

DISCUSSION

- Patients coinfecting with HIV and PCP often present with advanced-stage HIV (low CD4 count and high viral load) and poor respiratory function
- As the study progresses, larger sample size, results from bronchoalveolar lavages and in-depth interviews will continue to provide insight into patient characteristics
- This data demonstrates who is most impacted by PCP in this region of South Africa and can inform treatment strategies for these individuals

REFERENCES

- (1) Wasserman S, Engel ME, Griesel R, Mendelson M. Burden of pneumocystis pneumonia in HIV-infected adults in sub-Saharan Africa: a systematic review and meta-analysis. BMC Infect Dis. 2016 Sep 9;16(1):482. doi: 10.1186/s12879-016-1809-3. PMID: 27612639; PMCID: PMC5018169.