

# Monitoring quality of life in PLWH using a patient reported outcomes (PRO) and screening tools for emotional and cognitive vulnerability

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## Introduction

- The achievements in treatments of people living with HIV (PLWH), have prolonged life expectancy, simplified clinical management and extended time interval between follow-up visits
- Nevertheless, some real-life needs remain undetected during routine attendance, particularly those related to somatic, emotional and cognitive well-being
- Patients still deal with anxiety and depression symptoms and cognitive vulnerability and impairment
- Using Patient Reported Outcomes Measures (PROm) in clinic routine can improve health outcomes and Quality of Life (QoL) in PLWH.

## Study Design

To optimize the retention-in-care of PLWH a screening protocol was planned, to intercept early signs of somatic, emotional and cognitive vulnerability and impairment. Following screening tools were selected with this purpose:

- The Italian version of the **Hospital Anxiety and Depression Scale (HADS)**, to detect anxiety and depression vulnerability during last week. Scores equal or above of 8 indicate high level of vulnerability
- A **PRO derived from ISS-Quality of Life (ISSQoL)** to measure frequency and intensity of somatic symptoms during previous month
- The Italian version of **Montreal Cognitive Assessment (MoCA)** to screen cognitive functions in seven different domains. Scores under cut-off of 26/30 are suggestive of Mild Cognitive Impairment (MCI)

These screening tools are easy and take little time to administer in routine care.

## Methods

From January to March 2024, screening was proposed to all consecutive patients PLWH attending HIV/STI Unit of San Gallicano Dermatological Institute in Rome, Italy

The screening procedure took place at the follow-up consultation with the attending physician to undergo routine examinations and visits. Every screening lasted 10 to 15 minutes per patient.

## References

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- Kolson, D. L. (2022). Developments in neuroprotection for HIV-associated neurocognitive disorders (HAND). *Current HIV/AIDS Reports*, 19(5), 344-357.
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## Results 1

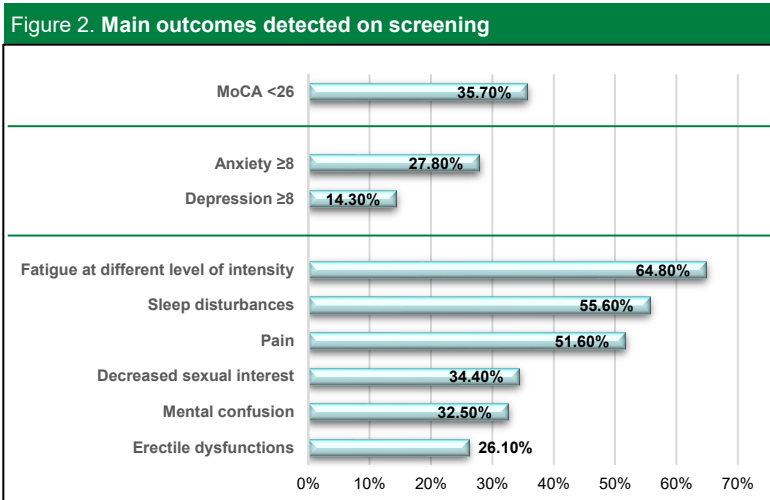
126 PLWH on Antiretroviral Treatment (ART) were screened. 52% were on Integrase Inhibitor (INI), followed by 32% on Non-Nucleoside Reverse Transcriptase Inhibitor (NNRTI), 12.7% on Protease Inhibitor (PI) and 3.2% on INI+NNRTI. The 88.9% were men (median age: 53, IQR=43.25-58.75) and 11.1% were women (median age: 47, IQR=38-58.25). Demographic and clinical characteristics are reported in **Tab. 1**. Almost the totality of patients was virologically suppressed and immunologically reconstituted **Fig. 1**

Table 1. Demographic and clinical characteristics of 126 PLWH screened for emotional, somatic and cognitive disturbances.

	N= 126	(%)
<b>Gender</b>		
Men	112	(88.9)
Women	14	(11.1)
<b>Education in years</b>		
<13	28	(22.2)
≥13	98	(77.8)
<b>Marital status</b>		
Married	41	(32.5)
Unmarried	85	(67.5)
<b>Employment</b>		
Unemployed	23	(18.2)
Employed	103	(81.8)
<b>Time from HIV diagnosis (years)</b>		
<10	43	(34.1)
≥10	83	(65.9)
<b>Last recorded HIV-1 RNA</b>		
Detectable (>30 copies/mL)	9	(7.2)
Undetectable (<30 copies/mL)	117	(92.8)
<b>Last recorded CD4 T-cell count, cells/mm<sup>3</sup></b>		
<200	3	(2.4)
≥200	123	(97.6)
<b>CD4 T-cell count nadir (n=118)*, cells/mm<sup>3</sup></b>		
<200	32	(27.1)
≥200	86	(72.9)
<b>cART classes</b>		
INI	66	(52.4)
NNRTI	40	(31.7)
PI	16	(12.7)
INI+NNRTI	4	(3.2)

## MAIN OUTCOMES DETECTED ON SCREENING

Overall, 35.7% have a MoCA score below cut-off of the 26/30. 27.77% and 14.28% reported anxiety and depression levels above the cut-off score, respectively. At the PRO, 64.8% of the patients declared different levels of fatigue, 55.6% sleep disturbances, 51.6% pain, 34.4% decreased sexual interest, 32.5% mental confusion, and 26.1% erectile dysfunctions **Fig.2**

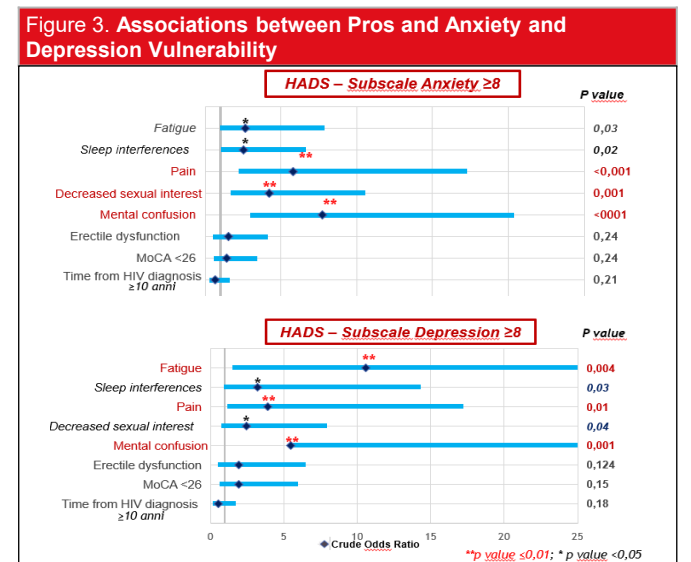


## Results 2

Poor performances at MoCA screening were not significantly associated with the time of infection adjusted for age (AOR=1.53;95%CI=0.66-3.55; p=0.08) or with emotional vulnerability (Anx: p=0.41, Dep: p=0.59) (data non shown)

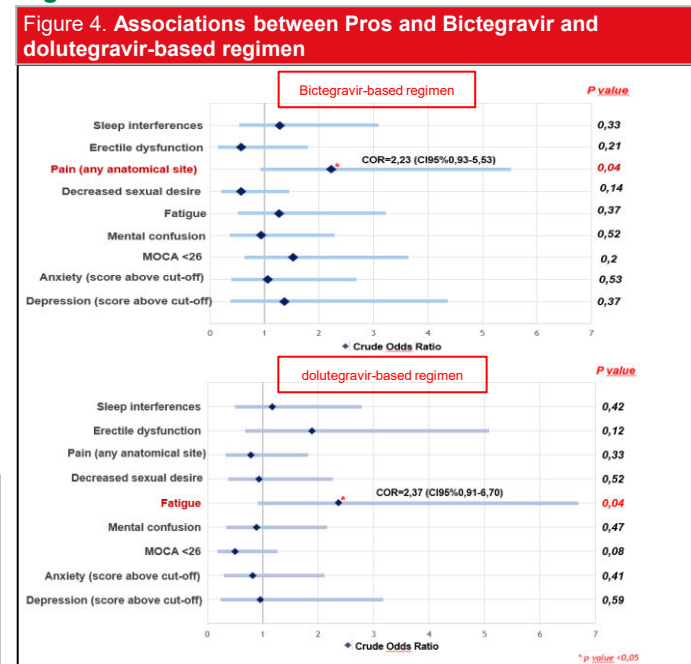
## ASSOCIATIONS BETWEEN PROs AND ANXIETY AND DEPRESSION VULNERABILITY

Several reported symptoms were associated with emotional vulnerability for anxiety and depression, particularly **fatigue, mental confusion and pain Fig. 3**



## ASSOCIATIONS BETWEEN PROs AND BICTEGRAVIR AND DOLUTEGRAVIR-BASED REGIMEN

Fatigue and pain tended to be reported from patients on dolutegravir and bictegravir-base regimen respectively **Fig. 4**



## Conclusions

A high proportion of PLWH reports somatic symptoms associated with a measurable vulnerability for anxiety and depression. Over a third of the patients need a deeper neurocognitive assessment. These preliminary results suggest the value of screening tools to intercept measurable QoL discomforts among viro-immunologically reconstituted PLWH