



# Stable Improvement in Depression 6 Years After ART Initiation During Acute HIV

Nothing to disclose

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WHERE **INNOVATION** MEETS **IMPLEMENTATION**

# Introduction

- Depression is common among people living with HIV (PLWH), and remains common despite suppressive antiretroviral therapy (ART).
- Individuals with acute HIV infection (AHI) also show high frequencies of clinically relevant depression (55.0%) and anxiety (65.8%) symptoms but improve by 6 months after prompt initiation of ART (Hellmuth et al. 2017).
- It is unclear if this improvement in mood symptoms is durable up to six years following ART started during AHI.
  - **Primary Outcome:** Longitudinal mood questionnaires outcomes up to week 288
  - **Secondary Outcome:** Relationship between depression symptoms and immunological recovery

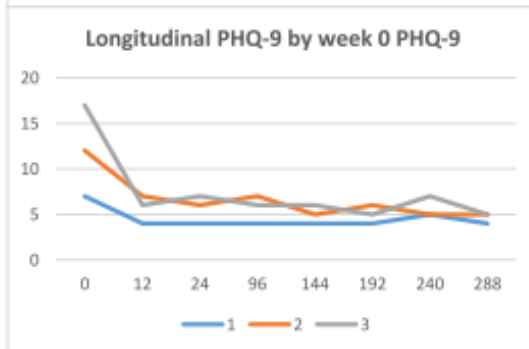
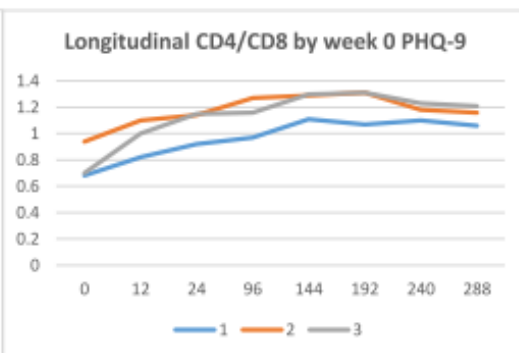
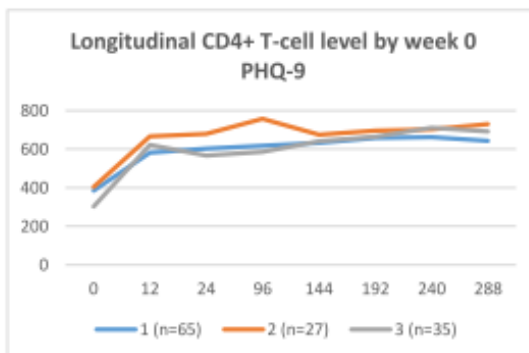


# Methods & Demographics at AHI (Baseline)

- **Participants:**
  - RV254 cohort participants initiated ART AHI diagnosis (Fiebig I-V)
- **Mood Questionnaires (pre-ART AHI (baseline), weeks 12, 24, 96 and every 48 weeks thereafter):**
  - Patient Health Questionnaire (PHQ-9) for depression symptoms (Score 0-27)
  - Distress Thermometer (DT) for anxiety/stress (Score 0-10)
- **Selection Criteria:**
  - Maintained suppressive ART over 288 weeks of follow-up
  - **Cognitive trajectories after treatment in acute HIV infection. *AIDS 2021***

	<b>N = 128</b>
Sex, male, n (%)	122 (95)
Age at enrollment, year	28 (23-33)
Fiebig Stage, n (%)	
I to II	58 (45)
III to V	70 (55)
Plasma VL, log <sub>10</sub> copies/ml	5.82 (5.30-6.84)
CD4+ T-cell level	376 (260-502)
CD8+ T-cell level	514 (314-886)
CD4/CD8 ratio	0.75 (0.43-1.10)
PHQ-9 total score	9 (6-16)
PHQ-9 ≥10 (mod depression), n (%)	62 (48)
PHQ-9 ≥15 (mod-severe depression), n (%)	35 (27)
Distress thermometer	6 (3.2-7.5)
Past Hx of Depression, n (%)	1 (1)
Depression AE within 288 weeks, n (%)	10 (8)
• Event start within 52 weeks of AHI, n	4
Median (IQR) are presented unless specified	

Week	0	12	24	96	144	192	240	288
PHQ-9 Score	9 (6-16)	5 (3-8)	5 (2-8)	5 (2-8)	5 (2-8)	4 (2-8)	5 (2-8)	4 (1-8)
PHQ-9 by Cat								
<10, n (%)	66 (52)	103 (82)	102 (81)	113 (90)	110 (88)	110 (88)	113 (88)	114 (89)
10-14, n (%)	27 (21)	13 (11)	19 (15)	11 (8)	13 (10)	12 (10)	12 (10)	9 (7)
15-27, n (%)	35 (27)	9 (7)	5 (4)	2 (2)	3 (2)	3 (2)	3 (2)	5 (4)
DT Score	6 (3.2-7.5)	2.5 (1.1-5)	2.4 (1-4.5)	2.1 (0.8-4.1)	2 (0.9-4.9)	1.6 (0.5-4.0)	2.1 (0.6-4.5)	2 (0.7-5.0)



Longitudinal PHQ-9, CD4+ T-cell level and CD4/CD8 ratio by PHQ-9 subgroups at untreated AH1

**Subgroup 1:** No depression/control (PHQ-9: 0-9)

**Subgroup 2:** Moderate depression (PHQ-9 :10-14)

**Subgroup 3:** Moderate-severe (PHQ-9 ≥15)

Factor correlated with Week 288 PHQ-9 score	
	p-value
<b>Factors at Baseline</b>	
Age	0.577
Female Sex	0.243
Fiebig (I & II)	0.091
ARS	0.587
<b>Plasma VL</b>	
CD4	0.051
CD8	0.776
CD4/CD8	0.336
DT score	0.105
PHQ-9 total score	<0.001
<b>Factors at week 288</b>	
CD4	0.631
CD8	0.569
CD4/CD8	0.750
DT score	<0.001

	Study Group (Maintained suppression)	*Participants lost to follow-up (n=45)	p-value
PHQ-9 at Week 0	9 (6-16)	8 (5-14)	0.274
Last PHQ-9	4 (1-8)	^#4 (2-10)	0.136

\*Included all participants who were lost to follow-up after week 24 (out of 661 participants); ^ n=39; # Lastly available PHQ-9 before loss to FU



## Conclusions

- In those who maintain viral suppression after ART initiation during AHI, depression symptoms remain stably improved at 6 years.
- PHQ-9 score at 6 years correlates with baseline score during AHI.
- The participants with moderate-severe depression symptoms during AHI do not portend durable depression symptoms or impaired immunologic recovery after long-term ART.



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