**SUPPLEMENTARY MATERIAL**

**SUPPLEMENTAL TABLES**

**Table S1. Characteristics at Entry Stratified by Sex**

|  |  |  |
| --- | --- | --- |
| *Variable* | *Women*  *(n=61)* | *Men*  *(n=263)* |
| Age, mean (SD) | 52.1 (6.9) | 51.9 (7.4) |
| Non-Hispanic Black1, % | 30 (49.2) | 63 (24.0)\*\* |
| Hispanic1, % | 15 (24.6) | 65 (24.7) |
| Efavirenz use, % | 25 (41.0) | 134 (51.0) |
| Nadir CD4+ T-cells/µl,  median (IQR) | 216 (42, 329) | 205 (78, 318) |
| HIV RNA <200 copies/ml, % | 56 (91.8) | 253 (96.9) |
| Anemia, % | 13 (22.0) | 21 (8.3)\*\* |
| HCV seropositive, % | 1 (1.6) | 12 (4.6) |
| ≥ 2 Comorbidities2, % | 26 (42.6) | 92 (35.0) |
| Neurocognitively impaired, % | 20 (32.8) | 62 (24.0) |

*Abbreviations: SD*, Standard Deviation; *IQR*, Interquartile Range; *HCV*, Hepatitis C Virus; *µl*, microliter

1Self-reported race or ethnicity

2Clinically significant comorbidities, *e.g.,* cancer, diabetes, cardiovascular disease, chronic kidney disease,

chronic HCV infection, bone fractures, prior transient ischemic attack, or stroke.

*Note:* No study participants reported active (current) substance use at entry or the time of neurocognitive assessment.

3Neurocognitive impairment status was missing for 5 individuals, due to incomplete test score information.

\*\**p*<0.01

**Table S2.**  Fth-1 and Ftl Associations with Anemia in People with HIV at Entry

|  |  |
| --- | --- |
| *Biomarker* | *Beta Estimate* (95% CI) |
| Fth-1 | All PWH: -0.836 (-1.088, -0.583)\*\*\*  Women: -1.593 (-2.100, -1.086)\*\*\*  Men: -0.372 (-0.663, -0.080)\* |
| Ftl | All PWH: -0.160 (-0.436, 0.116)  Women: -0.456 (-0.980, 0.067)1  Men: 0.032 (-0.307, -0.370) |

Unadjusted associations of anemia with log-transformed serum biomarker levels at entry are shown.

*Abbreviations:* *Fth-1*, ferritin heavy-chain-1; *Ftl*, ferritin light-chain; *95% CI*, 95% Confidence Interval; *PWH*,

people with HIV

\**p*=0.013

*\*\*\*p*<0.001

1*p*=0.086

**SUPPLEMENTAL FIGURES**

A graph of a number of men and women

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A graph with numbers and lines

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**Figure S1.** Forest plots of multivariable associations of (**A**) Ftl levels and (**B**) Fth-1 levels at entry with NCI in virally suppressed people with HIV (shown for all study participants and for men and women separately). Adjusted odds ratios (ORs) and their 95% confidence intervals are shown. *Lower* ORs (<1.0) indicate *less* likelihood of NCI. \**p*<0.05, \*\**p*<0.005. All *p*-values<0.05 are statistically significant.

A graph of a number of data

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**Figure S2.** Forest plots of multivariable associations of Ftl levels at entry with scores on neurocognitive domain tests: (**A**) Trail-Making-A (TMA), (**B**) Trail-Making-B (TMB), (**C**) Digit Symbol (DSY), and (**D**) the Hopkins Verbal Learning Test (HVLT). Adjusted *beta* estimates and 95% confidence intervals are shown for all study participants, men, and women, with *higher* values (>0) indicating *better* performance. \**p*<0.05, \*\**p*<0.005, \*\*\**p*<0.001. All *p*-values<0.05 are statistically significant.

A diagram of a graph

Description automatically generated with medium confidence

**Figure S3.** Forest plots of multivariable associations of Fth-1 levels at entry with scores on neurocognitive domain tests: (**A**) Trail-Making-A (TMA), (**B**) Trail-Making-B (TMB), (**C**) Digit Symbol (DSY), and (**D**) the Hopkins Verbal Learning Test (HVLT). Adjusted *beta* estimates and 95% confidence intervals are shown for all study participants, men, and women, with *higher* values indicating *better* performance. \**p*<0.05, \*\**p*<0.005, \*\*\**p*<0.001. All *p*-values<0.05 are statistically significant.

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**Figure S4.** Longitudinal regression models of predicted adjusted changes over time in global and selected neurocognitive domain test scores in people with HIV for ferritin-light-chain (Ftl) levels above *versus* below the median at baseline (entry). Results are shown for the NPZ-4 score in all study participants (**A**), in women (**B**), and in men (**C**); TMA score in women (**D**); DSY score in all study participants (**E**), in women (**F**), and in men (**G**). Models included the following covariates at entry: age, nadir CD4<200/μl, inflammation (IL-6, sTNFR-II, sCD163), anemia (yes/no), education, race, ethnicity, comorbidity burden, and (in non-sex-stratified models), sex. All *p*-values<0.05 are statistically significant.

A graph of a number of patients

Description automatically generated with medium confidence

**Figure S5.** Longitudinal regression models of predicted adjusted changes over time in the TMA test score in women with HIV for serum Ferritin-heavy-chain-1 (Fth-1) levels above *vs.* below the median at entry. Models included the following covariates at entry: age, nadir CD4<200/μl, inflammation (IL-6, sTNFR-II, sCD163), anemia, education, race, ethnicity, and comorbidity burden.

A *p-*value <0.05 is statistically significant.