

Supplementary Table 1. Association of plasma immune checkpoint proteins at baseline with the development of metabolic events during the follow-up time in HIV/HCV-coinfected patients.

Marker	Un-adjusted			Adjusted		
	AMR (95%CI)	<i>p</i> -value	<i>q</i> -value	aAMR (95%CI)	<i>p</i> -value	<i>q</i> -value
BTLA	0.72 (0.53–0.97)	0.033	0.229	0.69 (0.50–0.95)	0.027	0.193
CD137(4-1BB)	0.82 (0.56–1.19)	0.292	0.689	0.82 (0.55–1.22)	0.337	0.742
CD152(CTLA4)	1.04 (0.73–1.48)	0.826	0.895	1.03 (0.74–1.44)	0.867	0.961
CD27	0.91 (0.74–1.12)	0.394	0.787	0.80 (0.63–1.02)	0.074	0.347
CD28	1.00 (0.79–1.26)	0.971	0.971	0.97 (0.75–1.24)	0.795	0.961
CD80	0.76 (0.53–1.09)	0.135	0.472	0.94 (0.62–1.42)	0.763	0.961
GITR	0.91 (0.64–1.30)	0.619	0.787	0.91 (0.62–1.35)	0.646	0.961
HVEM	1.08 (0.85–1.39)	0.527	0.787	1.14 (0.85–1.52)	0.379	0.742
IDO	1.06 (0.60–1.87)	0.831	0.895	1.28 (0.70–2.32)	0.424	0.742
LAG-3	0.74 (0.58–0.94)	0.014	0.203	0.71 (0.54–0.92)	0.011	0.159
PD-1	0.82 (0.57–1.18)	0.295	0.689	0.99 (0.66–1.49)	0.961	0.961
PD-L1	0.95 (0.80–1.13)	0.580	0.787	1.01 (0.83–1.22)	0.923	0.961
PD-L2	0.81 (0.64–1.04)	0.100	0.469	0.82 (0.63–1.07)	0.147	0.515
TIM-3	0.94 (0.76–1.15)	0.536	0.787	0.90 (0.73–1.12)	0.364	0.742

Statistics: Data were calculated by Generalized Linear Models (GLM) with a gamma distribution (log-link). Multivariable models were adjusted by age, gender, body mass index (BMI), HCV viral load, and time from baseline to metabolic event time, previously selected by a stepwise method (forward) (see **Results Section**). The *q*-values represent *p*-values corrected for multiple testing using the False Discovery Rate (FDR). Statistically significant differences are shown in bold.

Abbreviations: AMR, arithmetic mean ratio; aAMR, adjusted AMR; 95%CI, 95% of confidence interval; *p*, level of significance; *q*, corrected level of significance; BTLA, B and T lymphocyte attenuator; CD, cluster of differentiation; 137GITR, glucocorticoid-induced TNFR-related; HVEM, herpesvirus entry

mediator; IDO, indoleamine 2,3-dioxygenase; LAG-3, lymphocyte activation gene-3; PD-1, programmed cell death protein 1; PD-L1, programmed death-ligand 1; PD-L2, programmed death-ligand 2; TIM-3, T-cell immunoglobulin and mucin-domain containing-3.

Supplementary Table 2. Association of plasma immune checkpoint proteins at baseline with increased triglyceride and glucose index (TyG) at the end of follow-up in HIV/HCV-coinfected patients.

Marker	Un-adjusted			Adjusted		
	AMR (95%CI)	<i>p</i> -value	<i>q</i> -value	aAMR (95%CI)	<i>p</i> -value	<i>q</i> -value
BTLA	0.69 (0.51–0.94)	0.021	0.036	0.72 (0.53–0.96)	0.028	0.049
CD137(4-1BB)	0.62 (0.43–0.89)	0.011	0.031	0.62 (0.44–0.88)	0.010	0.029
CD152(CTLA4)	0.68 (0.49–0.95)	0.026	0.037	0.61 (0.45–0.84)	0.004	0.017
CD27	0.81 (0.68–0.97)	0.023	0.036	0.80 (0.67–0.95)	0.014	0.032
CD28	0.75 (0.60–0.93)	0.010	0.031	0.72 (0.58–0.89)	0.003	0.017
CD80	0.70 (0.49–1.00)	0.053	0.062	0.85 (0.57–1.27)	0.441	0.475
GITR	0.67 (0.49–0.93)	0.021	0.036	0.70 (0.50–0.98)	0.041	0.057
HVEM	0.72 (0.57–0.90)	0.006	0.030	0.72 (0.57–0.91)	0.008	0.028
IDO	0.93 (0.53–1.62)	0.800	0.800	1.11 (0.62–1.99)	0.729	0.729
LAG-3	0.71 (0.56–0.90)	0.006	0.030	0.70 (0.57–0.87)	0.002	0.017
PD-1	0.62 (0.45–0.87)	0.006	0.030	0.66 (0.48–0.92)	0.017	0.034
PD-L1	0.87 (0.74–1.03)	0.101	0.109	0.85 (0.73–0.99)	0.049	0.063
PD-L2	0.78 (0.62–0.98)	0.034	0.043	0.84 (0.68–1.04)	0.109	0.139
TIM-3	0.80 (0.67–0.96)	0.019	0.036	0.82 (0.68–0.99)	0.038	0.057

Statistics: Data were calculated by Generalized Linear Models (GLM) with a gamma distribution (log-link). Multivariable models were adjusted by age, gender, body mass index (BMI), total cholesterol, HCV viral load, triglyceride and glucose index (TyG), and time from baseline to the end of follow-up previously selected by a stepwise method (forward) (see **Results Section**). The *q*-values represent *p*-values corrected for multiple testing using the False Discovery Rate (FDR). Statistically significant differences are shown in bold.

Abbreviations: AMR, arithmetic mean ratio; aAMR, adjusted AMR; 95%CI, 95% of confidence interval; p, level of significance; q, corrected level of significance; BTLA, B and T lymphocyte attenuator; CD, cluster of differentiation; GITR, glucocorticoid-induced TNFR-related; HVEM, herpesvirus entry mediator; IDO, indoleamine 2,3-dioxygenase; LAG-3, lymphocyte activation gene-3; PD-1, programmed cell death protein 1; PD-L1, programmed death-ligand 1; PD-L2, programmed death-ligand 2; TIM-3, T-cell immunoglobulin and mucin-domain containing-3.