**Supplementary Figure 1.** Differentially expressed genes in HIV-infected patients (HIV) with respect to healthy controls (HC). **A)** Univariate analysis: volcano plot of the differences of HIV-group with respect to HC-group calculated by a negative binomial generalized linear model, and p-values corrected by FDR. Red vertical lines represent the FC=2 (up, log2-FC ≥ 1, down log2-FC ≤ -1); Blue horizontal line indicates the limit of FDR=0.05; Black dots represent neither significant nor differentially expressed genes, orange dots represent differentially expressed but not significant genes and green dots represent significant and differentially expressed genes. **B)** Multivariate analysis: PLS-DA of biomarkers on T-cells and plasma, where orange and blue lines represent centroid calculated ellipses from HIV and HC individuals, respectively.

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**Supplementary Figure 2**. Heatmap and unsupervised clustering of differentially expressed genes between HIV-infected patients (HIV) and healthy controls (HC).Only genes filtered by*p*-value ≤0.05 and fold-change ≥1.5 are shown (147 genes). Each column represents one individual, while rows correspond to the differentially expressed gene. The RNA clustering tree is shown on the left, and the sample clustering tree is shown at the top. The color scale illustrates the scaled count values of genes, with green indicating a lower expression level, and red a higher expression level.

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**Supplementary Figure 3**: **Differences in T cell subpopulations and plasma biomarkers in HIV-infected patients (HIV) with respect to and healthy controls (HC).** **A)** Univariate analysis: volcano plot of the differences of HIV-group with respect to HC-group calculated by Mann-Whitney U test, and p-values corrected by FDR. Red vertical lines represent the fold change (FC) ≥2 (up, log2FC ≥1 and down, log2FC ≤-1); Blue horizontal line indicates the limit of FDR=0.05; Black dots represent neither significant nor differentially expressed biomarkers, orange dots represent not significantly but almost differentially expressed biomarkers (FC ≥ 1.5). **B)** Multivariate analysis: PLS-DA of biomarkers on T-cells and plasma, where orange and blue lines represent centroid calculated ellipses from HIV and HC individuals, respectively.

**d:\users\sresino\Dropbox\SRG\Datos\02. En CURSO\2020. GESIDA - RNAseq & HIV-control\Artículo\AIDS\Figure 3.tiff**

**Supplementary Table 1.** Summary of significant differentially expressed genes (*p*-value ≤0.05) in peripheral blood mononuclear cells of HIV-infected patients versus healthy controls.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gene symbol** | **log2-FC** | **log2-FC SE** | ***p*-value** | ***q*-value** |
| ***SRRM4*** | 2.425 | 0.388 | ≤0.001 | ≤0.001 |
| ***STAT6*** | 0.934 | 0.216 | ≤0.001 | 0.053 |
| ***DCLRE1A*** | -1.200 | 0.319 | ≤0.001 | 0.301 |
| ***FAM13A-AS1*** | 0.904 | 0.241 | ≤0.001 | 0.301 |
| ***FAM120A*** | 1.043 | 0.284 | ≤0.001 | 0.328 |
| ***IGLL5*** | 2.311 | 0.638 | ≤0.001 | 0.332 |
| ***HCFC1R1*** | 0.971 | 0.278 | ≤0.001 | 0.404 |
| ***HAND2-AS1*** | -1.182 | 0.367 | 0.001 | 0.624 |
| ***RNA28S5*** | 0.937 | 0.289 | 0.001 | 0.624 |
| ***NUTM2B-AS1*** | 0.999 | 0.314 | 0.001 | 0.648 |
| ***CRTAC1*** | 0.600 | 0.191 | 0.002 | 0.685 |
| ***PPIB*** | 0.827 | 0.269 | 0.002 | 0.770 |
| ***ST7L*** | -0.776 | 0.253 | 0.002 | 0.770 |
| ***A2M*** | -1.025 | 0.342 | 0.003 | 0.845 |
| ***FKBP1AP1*** | -0.891 | 0.299 | 0.003 | 0.845 |
| ***LINC00936*** | 1.329 | 0.444 | 0.003 | 0.845 |
| ***LOC645967*** | 0.646 | 0.218 | 0.003 | 0.845 |
| ***ARAF*** | 1.015 | 0.359 | 0.005 | 0.892 |
| ***DUS1L*** | 1.060 | 0.374 | 0.005 | 0.892 |
| ***EFEMP2*** | -0.705 | 0.246 | 0.004 | 0.892 |
| ***EIF1AX*** | 1.082 | 0.380 | 0.004 | 0.892 |
| ***LONP1*** | 0.725 | 0.251 | 0.004 | 0.892 |
| ***ORMDL1*** | 0.876 | 0.306 | 0.004 | 0.892 |
| ***RPL18A*** | 0.680 | 0.237 | 0.004 | 0.892 |
| ***RPL4*** | 0.658 | 0.226 | 0.004 | 0.892 |
| ***TTC7A*** | 0.967 | 0.334 | 0.004 | 0.892 |
| ***ACYP2*** | -0.854 | 0.307 | 0.005 | 0.893 |
| ***LOC100506071*** | 0.834 | 0.298 | 0.005 | 0.893 |
| ***MIR548AA1*** | -0.828 | 0.297 | 0.005 | 0.893 |
| ***TMEM44*** | 0.793 | 0.282 | 0.005 | 0.893 |
| ***LOC283038*** | 0.870 | 0.317 | 0.006 | 0.903 |
| ***OTULIN*** | 0.659 | 0.238 | 0.006 | 0.903 |
| ***NAGPA-AS1*** | 0.659 | 0.242 | 0.006 | 0.903 |
| ***IKZF1*** | 0.885 | 0.326 | 0.007 | 0.914 |
| ***KLRF1*** | -0.683 | 0.252 | 0.007 | 0.914 |
| ***THBS4*** | 0.592 | 0.219 | 0.007 | 0.924 |
| ***ARRDC2*** | 0.978 | 0.370 | 0.008 | 0.926 |
| ***C19orf84*** | -0.950 | 0.356 | 0.008 | 0.926 |
| ***DSE*** | 0.793 | 0.300 | 0.008 | 0.926 |
| ***GALNS*** | 0.901 | 0.343 | 0.009 | 0.926 |
| ***IFT22*** | -0.598 | 0.225 | 0.008 | 0.926 |
| ***MPHOSPH10*** | -0.958 | 0.359 | 0.008 | 0.926 |
| ***RPA3*** | 0.939 | 0.353 | 0.008 | 0.926 |
| ***RPS27A*** | 0.795 | 0.300 | 0.008 | 0.926 |
| ***ATP2B1*** | 0.602 | 0.256 | 0.019 | 0.941 |
| ***C19orf70*** | 0.742 | 0.306 | 0.015 | 0.941 |
| ***CARD19*** | -1.104 | 0.427 | 0.010 | 0.941 |
| ***CKAP2L*** | 0.907 | 0.367 | 0.014 | 0.941 |
| ***CLU*** | 0.622 | 0.255 | 0.015 | 0.941 |
| ***CTBP1-AS2*** | 0.991 | 0.417 | 0.017 | 0.941 |
| ***DDX6*** | 0.658 | 0.285 | 0.021 | 0.941 |
| ***DEAF1*** | 0.849 | 0.326 | 0.009 | 0.941 |
| ***DNAJC16*** | 0.614 | 0.249 | 0.014 | 0.941 |
| ***GEMIN7*** | -0.857 | 0.335 | 0.010 | 0.941 |
| ***H1F0*** | -0.968 | 0.397 | 0.015 | 0.941 |
| ***HOXA2*** | -0.634 | 0.273 | 0.020 | 0.941 |
| ***HPS4*** | 0.784 | 0.339 | 0.021 | 0.941 |
| ***IFI30*** | 0.718 | 0.286 | 0.012 | 0.941 |
| ***KMT2E-AS1*** | -0.987 | 0.389 | 0.011 | 0.941 |
| ***LETM2*** | -0.678 | 0.294 | 0.021 | 0.941 |
| ***LINC01569*** | -0.644 | 0.272 | 0.018 | 0.941 |
| ***MIEN1*** | -0.660 | 0.274 | 0.016 | 0.941 |
| ***NLRP3*** | -0.597 | 0.247 | 0.016 | 0.941 |
| ***NUB1*** | -0.675 | 0.274 | 0.014 | 0.941 |
| ***NUP85*** | -0.676 | 0.284 | 0.017 | 0.941 |
| ***PDPK1*** | 0.617 | 0.255 | 0.016 | 0.941 |
| ***PFDN1*** | -0.809 | 0.345 | 0.019 | 0.941 |
| ***PTMS*** | 0.780 | 0.322 | 0.015 | 0.941 |
| ***RASA4B*** | 0.915 | 0.384 | 0.017 | 0.941 |
| ***RNF169*** | 0.610 | 0.257 | 0.017 | 0.941 |
| ***RPL26*** | 0.598 | 0.235 | 0.011 | 0.941 |
| ***RPS21*** | 0.894 | 0.371 | 0.016 | 0.941 |
| ***SRL*** | -0.645 | 0.266 | 0.015 | 0.941 |
| ***SYT11*** | -0.783 | 0.324 | 0.016 | 0.941 |
| ***TES*** | 0.610 | 0.263 | 0.020 | 0.941 |
| ***TIAL1*** | 0.703 | 0.283 | 0.013 | 0.941 |
| ***TIPARP-AS1*** | 0.641 | 0.271 | 0.018 | 0.941 |
| ***TMEM175*** | 0.608 | 0.263 | 0.021 | 0.941 |
| ***TMF1*** | -0.865 | 0.372 | 0.020 | 0.941 |
| ***UBALD2*** | 0.703 | 0.282 | 0.013 | 0.941 |
| ***VCAN*** | 0.671 | 0.267 | 0.012 | 0.941 |
| ***WAS*** | 0.705 | 0.281 | 0.012 | 0.941 |
| ***YDJC*** | 0.596 | 0.258 | 0.021 | 0.941 |
| ***ACAN*** | 0.938 | 0.414 | 0.024 | 0.944 |
| ***ADGRE2*** | -0.757 | 0.365 | 0.038 | 0.944 |
| ***ANKRD6*** | -0.591 | 0.262 | 0.024 | 0.944 |
| ***ATXN2L*** | -0.663 | 0.306 | 0.030 | 0.944 |
| ***AZIN1*** | -0.781 | 0.369 | 0.034 | 0.944 |
| ***C19orf43*** | 0.755 | 0.353 | 0.032 | 0.944 |
| ***C3orf52*** | 0.715 | 0.313 | 0.022 | 0.944 |
| ***CDV3*** | 0.607 | 0.273 | 0.026 | 0.944 |
| ***CFL1*** | 0.799 | 0.362 | 0.028 | 0.944 |
| ***CHMP4B*** | 0.667 | 0.294 | 0.023 | 0.944 |
| ***CNEP1R1*** | -0.843 | 0.369 | 0.022 | 0.944 |
| ***DENND6B*** | 0.641 | 0.307 | 0.037 | 0.944 |
| ***DPCD*** | 0.622 | 0.277 | 0.025 | 0.944 |
| ***DVL3*** | 0.709 | 0.340 | 0.037 | 0.944 |
| ***EMBP1*** | 1.026 | 0.452 | 0.023 | 0.944 |
| ***FAM84B*** | -0.634 | 0.300 | 0.035 | 0.944 |
| ***FBXO33*** | 0.678 | 0.312 | 0.030 | 0.944 |
| ***GGA1*** | 0.642 | 0.294 | 0.029 | 0.944 |
| ***HEMK1*** | 0.723 | 0.348 | 0.038 | 0.944 |
| ***HLA-A*** | 0.841 | 0.399 | 0.035 | 0.944 |
| ***JDP2*** | -0.857 | 0.390 | 0.028 | 0.944 |
| ***LINC01209*** | 0.780 | 0.346 | 0.024 | 0.944 |
| ***MAFB*** | 0.746 | 0.341 | 0.029 | 0.944 |
| ***MEPCE*** | -0.822 | 0.386 | 0.033 | 0.944 |
| ***MFSD9*** | -0.728 | 0.344 | 0.034 | 0.944 |
| ***NPHP3*** | -0.695 | 0.321 | 0.030 | 0.944 |
| ***OSGEPL1-AS1*** | -0.769 | 0.337 | 0.023 | 0.944 |
| ***PASK*** | 0.837 | 0.365 | 0.022 | 0.944 |
| ***PVT1*** | 0.736 | 0.348 | 0.034 | 0.944 |
| ***RAB41*** | -0.590 | 0.275 | 0.032 | 0.944 |
| ***RPL8*** | 0.732 | 0.341 | 0.032 | 0.944 |
| ***SMIM19*** | 0.826 | 0.383 | 0.031 | 0.944 |
| ***STYX*** | -0.597 | 0.270 | 0.027 | 0.944 |
| ***TCEANC2*** | -0.607 | 0.271 | 0.025 | 0.944 |
| ***TCF12*** | 0.720 | 0.347 | 0.038 | 0.944 |
| ***TCIRG1*** | 0.631 | 0.297 | 0.034 | 0.944 |
| ***TMEM132D*** | -0.637 | 0.297 | 0.032 | 0.944 |
| ***TRPA1*** | 0.913 | 0.408 | 0.025 | 0.944 |
| ***WDR74*** | -0.619 | 0.298 | 0.038 | 0.944 |
| ***ZC3H3*** | 0.710 | 0.321 | 0.027 | 0.944 |
| ***ZNF620*** | -0.649 | 0.291 | 0.026 | 0.944 |
| ***AMT*** | -0.715 | 0.355 | 0.044 | 0.957 |
| ***APOA1-AS*** | -0.679 | 0.338 | 0.045 | 0.957 |
| ***BPTF*** | 0.594 | 0.290 | 0.040 | 0.957 |
| ***C12orf77*** | 0.654 | 0.327 | 0.045 | 0.957 |
| ***C9orf3*** | 0.698 | 0.344 | 0.043 | 0.957 |
| ***GPR1*** | -0.689 | 0.344 | 0.045 | 0.957 |
| ***LINC00539*** | 0.616 | 0.299 | 0.040 | 0.957 |
| ***MIR7641-2*** | 0.698 | 0.340 | 0.040 | 0.957 |
| ***NTN1*** | -0.638 | 0.310 | 0.040 | 0.957 |
| ***OSGIN2*** | 0.646 | 0.322 | 0.045 | 0.957 |
| ***PAQR4*** | 0.723 | 0.352 | 0.040 | 0.957 |
| ***PEX11G*** | 0.649 | 0.322 | 0.044 | 0.957 |
| ***PIK3R5*** | 0.661 | 0.325 | 0.042 | 0.957 |
| ***PLCD1*** | 0.632 | 0.310 | 0.042 | 0.957 |
| ***RSAD2*** | -0.843 | 0.422 | 0.046 | 0.957 |
| ***SFR1*** | 0.626 | 0.308 | 0.042 | 0.957 |
| ***SLC16A6*** | 0.691 | 0.342 | 0.043 | 0.957 |
| ***TAOK3*** | -0.603 | 0.298 | 0.043 | 0.957 |
| ***TRIM68*** | 0.688 | 0.334 | 0.039 | 0.957 |
| ***GDF15*** | -0.683 | 0.347 | 0.049 | 0.971 |
| ***LINC00265*** | -0.619 | 0.312 | 0.047 | 0.971 |
| ***PICALM*** | -0.637 | 0.323 | 0.048 | 0.971 |
| ***RGS20*** | -0.708 | 0.360 | 0.049 | 0.971 |

**Statistics**: Values are expressed as log2 fold-change (log2-FC) and standard error (SE), which were calculated by the DESeq2 package. *P-values*, raw *p*-values; *q*-values, *p*-values corrected for multiple testing using the false discovery rate (*FDR*) with Benjamini and Hochberg procedure.

**Abbreviations**: HIV, human immunodeficiency virus.

**Supplementary Table 2**. Summary of values of variable importance in projection (VIP) scores for gene expression (*p*-value ≤0.05, fold-change ≥1.5) in peripheral blood mononuclear cells from HIV-infected patients versus healthy controls.

|  |  |
| --- | --- |
| **Gene Symbol** | **VIP score** |
| ***SRRM4*** | 1.867 |
| ***DCLRE1A*** | 1.443 |
| ***ACYP2*** | 1.315 |
| ***NUTM2B-AS1*** | 1.293 |
| ***MIR548AA1*** | 1.269 |
| ***RPL18A*** | 1.264 |
| ***NAGPA-AS1*** | 1.258 |
| ***STAT6*** | 1.243 |
| ***HPS4*** | 1.235 |
| ***HAND2-AS1*** | 1.226 |
| ***AMT*** | 1.223 |
| ***EFEMP2*** | 1.219 |
| ***TIPARP-AS1*** | 1.208 |
| ***VCAN*** | 1.207 |
| ***CRTAC1*** | 1.204 |
| ***ST7L*** | 1.204 |
| ***NUB1*** | 1.201 |
| ***RNA28S5*** | 1.200 |
| ***FAM120A*** | 1.195 |
| ***LOC283038*** | 1.194 |
| ***TTC7A*** | 1.194 |
| ***IFT22*** | 1.193 |
| ***ARAF*** | 1.186 |
| ***DEAF1*** | 1.181 |
| ***CTBP1-AS2*** | 1.181 |
| ***RPL26*** | 1.181 |
| ***RPS27*** | 1.169 |
| ***FKBP1AP1*** | 1.158 |
| ***TMEM44*** | 1.152 |
| ***LOC645967*** | 1.143 |
| ***GEMIN7*** | 1.143 |
| ***NPHP3*** | 1.142 |
| ***RPL4*** | 1.128 |
| ***ORMDL1*** | 1.119 |
| ***ZNF620*** | 1.117 |
| ***ZC3H3*** | 1.116 |
| ***PEX11G*** | 1.111 |
| ***YDJC*** | 1.108 |
| ***TES*** | 1.106 |
| ***OTULIN*** | 1.105 |
| ***FAM13A-AS1*** | 1.101 |
| ***TCEANC2*** | 1.085 |
| ***THBS4*** | 1.082 |
| ***WAS*** | 1.081 |
| ***SLC16A6*** | 1.077 |
| ***RPA3*** | 1.071 |
| ***RPS21*** | 1.069 |
| ***C9orf3*** | 1.066 |
| ***C19orf84*** | 1.065 |
| ***CLU*** | 1.058 |
| ***LINC00936*** | 1.057 |
| ***HCFC1R1*** | 1.056 |
| ***CHMP4B*** | 1.054 |
| ***CNEP1R1*** | 1.054 |
| ***TIAL1*** | 1.043 |
| ***PICALM*** | 1.042 |
| ***KLRF1*** | 1.038 |
| ***RPL8*** | 1.037 |
| ***GALNS*** | 1.035 |
| ***LONP1*** | 1.033 |
| ***ATP2B1*** | 1.027 |
| ***SRL*** | 1.026 |
| ***ARRDC2*** | 1.026 |
| ***A2M*** | 1.023 |
| ***ATXN2L*** | 1.018 |
| ***DVL3*** | 1.011 |
| ***EIF1AX*** | 1.010 |
| ***DNAJC16*** | 0.999 |
| ***RAB41*** | 0.996 |
| ***DSE*** | 0.992 |
| ***LETM2*** | 0.989 |
| ***RASA4B*** | 0.989 |
| ***NLRP3*** | 0.980 |
| ***GPR1*** | 0.973 |
| ***NUP85*** | 0.971 |
| ***CARD19*** | 0.971 |
| ***TRIM68*** | 0.970 |
| ***EMBP1*** | 0.969 |
| ***WDR74*** | 0.967 |
| ***FAM84B*** | 0.965 |
| ***STYX*** | 0.964 |
| ***LINC01569*** | 0.964 |
| ***DUS1L*** | 0.962 |
| ***DPCD*** | 0.956 |
| ***SYT11*** | 0.954 |
| ***PASK*** | 0.953 |
| ***MIEN1*** | 0.949 |
| ***DENND6B*** | 0.947 |
| ***PVT1*** | 0.944 |
| ***PPIB*** | 0.937 |
| ***NTN1*** | 0.936 |
| ***DDX6*** | 0.933 |
| ***MPHOSPH10*** | 0.929 |
| ***C19orf70*** | 0.928 |
| ***SFR1*** | 0.927 |
| ***ANKRD6*** | 0.926 |
| ***UBALD2*** | 0.925 |
| ***MIR7641-2*** | 0.921 |
| ***LOC100506071*** | 0.920 |
| ***IGLL5*** | 0.910 |
| ***TMF1*** | 0.910 |
| ***C12orf77*** | 0.909 |
| ***TMEM175*** | 0.901 |
| ***GGA1*** | 0.897 |
| ***MFSD9*** | 0.892 |
| ***RNF169*** | 0.886 |
| ***C19orf43*** | 0.884 |
| ***H1F0*** | 0.883 |
| ***TCF12*** | 0.875 |
| ***TMEM132D*** | 0.873 |
| ***TAOK3*** | 0.863 |
| ***LINC01209*** | 0.859 |
| ***C3orf52*** | 0.859 |
| ***FBXO33*** | 0.856 |
| ***PIK3R5*** | 0.854 |
| ***KMT2E-AS1*** | 0.833 |
| ***PDPK1*** | 0.826 |
| ***RGS20*** | 0.819 |
| ***PFDN1*** | 0.817 |
| ***OSGEPL1-AS1*** | 0.809 |
| ***PAQR4*** | 0.808 |
| ***IFI30*** | 0.803 |
| ***HOXA2*** | 0.800 |
| ***CFL1*** | 0.797 |
| ***OSGIN2*** | 0.784 |
| ***ADGRE2*** | 0.769 |
| ***BPTF*** | 0.759 |
| ***APOA1-AS*** | 0.758 |
| ***SMIM19*** | 0.756 |
| ***AZIN1*** | 0.753 |
| ***LINC00265*** | 0.751 |
| ***LINC00539*** | 0.743 |
| ***TCIRG1*** | 0.725 |
| ***PTMS*** | 0.717 |
| ***IKZF1*** | 0.685 |
| ***CDV3*** | 0.680 |
| ***GDF15*** | 0.661 |
| ***JDP2*** | 0.637 |
| ***CKAP2L*** | 0.637 |
| ***MEPCE*** | 0.597 |
| ***HEMK1*** | 0.590 |
| ***ACAN*** | 0.584 |
| ***PLCD1*** | 0.572 |
| ***MAFB*** | 0.567 |
| ***HLA-A*** | 0.542 |
| ***RSAD2*** | 0.527 |
| ***TRPA1*** | 0.512 |

**Statistics**: Values are expressed as variable importance in projection (VIP), which were calculated by a partial least squares discriminant analysis (PLS-DA).

**Supplementary Table 3**. Summary of markers of T cell subpopulation and plasma biomarkers in HIV-infected patients and healthy controls.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Biomarkers** | **HC** | **HIV** | ***p*-value** | ***q*-value** |
| **CD4+ naïve/memory/effector (%)** |  |  |  |  |
| CD4+CD45RA+CD28+ | 25.1 (40.7; 55.4) | 36 (45.5; 53.1) | 0.377 | 0.853 |
| CD4+CD45RA-CD28+ | 42.5 (49.2; 57.6) | 40.5 (51.8; 59.1) | 0.936 | 0.957 |
| CD4+CD45RA-CD28- | 1.1 (2.3; 8.4) | 0.5 (2.4; 3.5) | 0.417 | 0.853 |
| CD4+CD45RA+CD28- | 0.9 (2.3; 6.9) | 0.4 (1.1; 3.7) | 0.277 | 0.853 |
| **CD8+ naïve/memory/effector (%)** |  |  |  |  |
| CD8+CD45RA+CD28+ | 24 (36.3; 45.9) | 22.8 (34.4; 43.5) | 0.553 | 0.924 |
| CD8+CD45RA-CD28+ | 14.9 (21.6; 31.2) | 14.8 (20.2; 27.9) | 0.713 | 0.957 |
| CD8+CD45RA-CD28- | 2.4 (9.5; 14.1) | 9.5 (13.4; 20.8) | 0.089 | 0.700 |
| CD8+CD45RA+CD28- | 20.3 (27.5; 38.6) | 21.2 (26.8; 35.3) | 0.936 | 0.957 |
| **Activated T-cells (%)** |  |  |  |  |
| CD4+CD38+ | 4.3 (3.1; 6.6) | 2.8 (2.1; 4.3) | 0.071 | 0.700 |
| CD8+CD38+ | 7.3 (5.7; 10.3) | 6.3 (4; 9.4) | 0.377 | 0.853 |
| **Senescent CD8+ T-cells (%)** |  |  |  |  |
| CD8+CD57+ | 22.9 (15.2; 37.6) | 24.2 (12.9; 36.1) | 0.911 | 0.957 |
| CD8+CD57+CD28- | 20 (13.2; 32.4) | 19.8 (10; 34) | 0.936 | 0.957 |
| **Regulatory CD4+ T-cells (%)** |  |  |  |  |
| CD4+CD25+CD127-/low | 4.6 (3.1; 5.3) | 6.1 (4.6; 7.4) | **0.006** | 0.126 |
| **Bacterial translocation** |  |  |  |  |
| sCD14 (µg/mL) | 3.1 (2.4; 3.7) | 3.6 (2; 6.6) | 0.314 | 0.853 |
| FABP2 (ng/mL) | 0.5 (0.3; 0.7) | 0.7 (0.4; 1.4) | 0.109 | 0.700 |
| LPS (UE/mL) | 1.7 (1.1; 11) | 1.2 (0.9; 1.6) | 0.135 | 0.762 |
| LBP (µg/mL) | 0.8 (0.2; 1.5) | 0.8 (0.2; 1.2) | 0.832 | 0.957 |
| **Pro-inflammatory/enhancer** |  |  |  |  |
| IP-10 (pg/mL) | 28.7 (19.3; 99) | 29.8 (24.6; 43.7) | 0.911 | 0.957 |
| MCP-1 (pg/mL) | 14.6 (9.7; 18.1) | 27.4 (21.3; 37.6) | **0.004** | 0.126 |
| IL-8 (pg/mL) | 1.2 (1.2; 3.6) | 1.2 (1.2; 2.7) | 0.772 | 0.957 |
| IL-1β (pg/mL) | 0.4 (0.4; 1.9) | 0.9 (0.4; 1) | 0.909 | 0.957 |
| IL-18 (pg/mL) | 90 (49.9; 148.2) | 125.3 (71; 207.5) | 0.240 | 0.853 |
| IL-6 (pg/mL) | 3.1 (1.6; 4.7) | 3.5 (2.5; 4) | 0.559 | 0.924 |
| TNF-α (pg/mL) | 1.8 (0.8; 3.5) | 2 (1.1; 2.7) | 0.846 | 0.957 |
| IFN-γ (pg/mL) | 5 (3.8; 17.1) | 6.6 (3.8; 9.8) | 0.685 | 0.957 |
| IL-12p70 (pg/mL) | 1.4 (1; 3.1) | 2.2 (1.3; 2.7) | 0.603 | 0.936 |
| IL-2 (pg/mL) | 3.6 (1; 3.7) | 2.6 (1; 4.5) | 0.921 | 0.957 |
| IL-17A (pg/mL) | 1.4 (0.5; 1.9) | 1.7 (1.3; 2.3) | 0.107 | 0.700 |
| sPD-1 (pg/mL) | 42 (32.2; 63.7) | 52.6 (44.6; 66.5) | 0.211 | 0.853 |
| sRANKL (pg/mL) | 11.1 (10; 13.6) | 14.3 (8.9; 16.7) | 0.516 | 0.924 |
| **Anti-inflammatory/suppressor** |  |  |  |  |
| OPG (pg/mL) | 5.9 (5; 10.5) | 6.4 (5.2; 7.8) | 0.846 | 0.957 |
| sPD-L1 (pg/mL) | 10.9 (9.1; 14.7) | 14.5 (9.1; 20.2) | 0.322 | 0.853 |
| IL-1RA (pg/mL) | 156.1 (105.7; 219.4) | 170.6 (137.4; 262.7) | 0.290 | 0.853 |
| IL-10 (pg/mL) | 0.5 (0.4; 1.3) | 1.1 (0.6; 1.8) | 0.183 | 0.853 |
| IL-4 (pg/mL) | 2.9 (1.8; 6.8) | 3.6 (2.8; 4.8) | 0.709 | 0.957 |
| TGF-β (ng/ml) | 26.5 (21.2; 50.4) | 42.5 (28; 58.8) | 0.203 | 0.853 |
| **Endothelial dysfunction** |  |  |  |  |
| sVCAM-1 (ng/mL) | 331.7 (117.6; 488.9) | 320.9 (207.5; 420.7) | 0.987 | 0.987 |
| sICAM-1 (ng/mL) | 416.9 (107.7; 954.2) | 538.2 (179.1; 896.5) | 0.672 | 0.957 |
| sTNFR-1 (ng/mL) | 1.6 (0.5; 2.5) | 1.3 (0.2; 2.1) | 0.503 | 0.924 |
| **Coagulopathy** |  |  |  |  |
| D-Dimer (ng/mL) | 22.3 (11.8; 88.5) | 42.3 (19.1; 61.3) | 0.413 | 0.853 |
| PAI-1 (ng/mL) | 5.6 (3.9; 14.8) | 6.8 (5.3; 8.2) | 0.575 | 0.924 |
| **Metabolism** |  |  |  |  |
| Insulin (pg/mL) | 861 (696.4; 1211.8) | 957.2 (785.5; 1143) | 0.505 | 0.924 |
| Leptin (pg/mL) | 1267.1 (517.8; 1914.6) | 967.3 (617.7; 1206.8) | 0.395 | 0.853 |
| **Angiogenesis/Fibrosis** |  |  |  |  |
| VEGF-A (pg/mL) | 928.9 (766.1; 1974.4) | 1271.7 (879.2; 1412.2) | 0.381 | 0.853 |
| sVEGF-R1 (pg/mL) | 296.6 (263.8; 445.1) | 401.4 (360.4; 520.3) | **0.016** | 0.244 |

**Statistics**: Values expressed as median (interquartile range). *P*-values were calculated by Mann-Whitney tests. *P-values*, raw *p*-values; *q*-values, *p*-values corrected for multiple testing using the false discovery rate (*FDR*) with Benjamini and Hochberg procedure. The statistically significant differences are shown in bold.

**Abbreviations**: HIV, human immunodeficiency virus; CD, cluster of differentiation; sCD14, soluble CD14; LPS, lipopolysaccharide; FABP2, fatty acid-binding protein 2; LBP, lipopolysaccharide binding protein; IP-10, IFN-γ-inducible protein 10; MCP-1, monocyte chemoattractant protein-1; IL, interleukin; TNF-α tumor necrosis factor alpha; IFN-γ, Interferon gamma; IL-1RA, interleukin-1 receptor antagonist; TGF-β1, transforming growth factor beta 1; OPG, osteoprotegerin; sRANKL, soluble receptor activator of nuclear factor- kappaB ligand; sPD-L1, Soluble programmed cell death ligand 1; sPD-1, soluble programmed death protein 1; sVCAM-1, soluble vascular cell adhesion molecule 1; sICAM-1, soluble intercellular cell adhesion molecule 1; sTNFR-1, soluble tumor necrosis factor receptor 1; PAI-1, plasminogen activator inhibitor-1; VEGF-A; vascular endothelial growth factor A; sVEGF-R1, soluble receptors for vascular endothelial growth factor.