**Supplemental digital content 10.** Correlation between cytokine levels and PD-1 expression in Effector CD4+ T and CD8+ T cells of HIV-infected patients with detectable viral load (HIV/DET), undetectable viral load (HIV/UND) and CONTROL groups

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **EFFECTOR CD4+ T cells\*** | | | | | | **EFFECTOR CD8+ T cells\*** | | | | | |
| **HIV/DET** | | **HIV/UND** | | **CONTROL** | | **HIV/DET** | | **HIV/UND** | | **CONTROL** | |
| **Cytokines** | **r** | **p** | **r** | **p** | **r** | **p** | **r** | **p** | **r** | **p** | **r** | **p** |
| ITAC | 0.116 | 0.720 | -0.216 | 0.389 | -0.089 | 0.638 | -0.045 | 0.903 | 0.033 | 0.920 | -0.261 | 0.164 |
| GM-CSF | 0.126 | 0.695 | 0.187 | 0.458 | -0.022 | 0.908 | -0.373 | 0.261 | 0.198 | 0.513 | 0.024 | 0.902 |
| Fractalkine | 0.413 | 0.182 | -0.201 | 0.423 | -0.172 | 0.364 | 0.082 | 0.818 | -0.231 | 0.448 | -0.252 | 0.179 |
| IFN gamma | 0.221 | 0.488 | 0.086 | 0.735 | -0.163 | 0.388 | -0.364 | 0.273 | 0.187 | 0.537 | -0.008 | 0.968 |
| IL-10 | -0.039 | 0.908 | 0.084 | 0.742 | -0.105 | 0.579 | -0.436 | 0.183 | 0.275 | 0.363 | 0.027 | 0.886 |
| MIP3 alpha | -0.249 | 0.433 | 0.005 | 0.984 | 0.069 | 0.718 | -0.291 | 0.386 | 0.330 | 0.271 | -0.040 | 0.835 |
| IL-12 | 0.118 | 0.713 | -0.334 | 0.175 | 0.030 | 0.874 | -0.187 | 0.579 | -0.204 | 0.502 | -0.013 | 0.944 |
| IL-13 | 0.354 | 0.256 | 0.062 | 0.807 | 0.080 | 0.675 | -0.369 | 0.263 | 0.000 | >0.999 | -0.044 | 0.815 |
| IL-17A | -0.147 | 0.645 | 0.020 | 0.938 | -0.105 | 0.581 | -0.469 | 0.147 | 0.203 | 0.505 | 0.069 | 0.715 |
| IL-1 beta | 0.312 | 0.320 | -0.268 | 0.283 | 0.009 | 0.962 | 0.059 | 0.865 | -0.337 | 0.260 | 0.109 | 0.565 |
| IL-2 | 0.091 | 0.778 | -0.116 | 0.645 | 0.095 | 0.619 | 0.109 | 0.755 | -0.056 | 0.857 | 0.126 | 0.508 |
| IL-21 | -0.231 | 0.466 | 0.144 | 0.570 | -0.056 | 0.768 | -0.282 | 0.402 | 0.165 | 0.591 | -0.229 | 0.223 |
| IL-4 | -0.032 | 0.925 | 0.103 | 0.683 | 0.085 | 0.654 | -0.229 | 0.499 | 0.278 | 0.355 | 0.106 | 0.577 |
| IL-23 | -0.084 | 0.795 | -0.079 | 0.754 | -0.281 | 0.132 | 0.091 | 0.796 | -0.060 | 0.849 | -0.368 | **0.045** |
| IL-5 | 0.336 | 0.283 | -0.075 | 0.766 | 0.222 | 0.239 | -0.236 | 0.485 | 0.055 | 0.863 | 0.143 | 0452 |
| IL-6 | 0.350 | 0.262 | -0.131 | 0.604 | -0.095 | 0.618 | -0.064 | 0.860 | -0.440 | 0.133 | 0.050 | 0.792 |
| IL-7 | 0.259 | 0.413 | -0.162 | 0.521 | -0.231 | 0.218 | 0.109 | 0.755 | 0.060 | 0.849 | -0.393 | **0.032** |
| IL-8 | -0.035 | 0.916 | 0.269 | 0.280 | 0.008 | 0.966 | 0.064 | 0.860 | 0.088 | 0.774 | -0.141 | 0.456 |
| MIP-1 alpha | 0.046 | 0.891 | -0.176 | 0.484 | -0.061 | 0.749 | -0.436 | 0.183 | 0.225 | 0.459 | -0.010 | 0.957 |
| MIP-1 beta | 0.025 | 0.943 | -0.059 | 0.817 | 0.027 | 0.889 | -0.400 | 0.225 | 0.154 | 0.617 | 0.122 | 0.521 |
| TNF alpha | 0.130 | 0.685 | -0.063 | 0.804 | -0.195 | 0.301 | -0.314 | 0.344 | -0.077 | 0.806 | -0.071 | 0.710 |
| \*Spearman’s rank correlation | | | | | | | | | | | | |