RESULTS (Continued)

2) Detailed immunovirological evolution in two patients with cancer treated with nivolumab

Nivolumab treated a favorable clinical outcome in our patients’ series (2 disease control – 3 Partial response and 4 Stabili), with no significant clinical side effects except 1 case of neurophylly, and with no or minimal effect on HIV viral load nor CD4/CD8 cell counts.

Nivolumab is successful at enhancing the capacities of HIV-specific CD8 cells to proliferate and to secrete cytokines expanding the PD-1+T cell subset, with promising results on HIV reservoirs.

DISCUSSION / CONCLUSION

Patient#1 immunovirological evolution

Patient#12 immunovirological evolution

Figure 3. CT scan thoracic findings before and after nivolumab treatment (Patient #8)

Figure 4. CT scan thoracic findings before and after nivolumab treatment (Patient #11)

Figure 1. CT scan thoracic findings before and after nivolumab treatment (Patient #8)

Figure 2. CD4 and CD8 cell count evolution before and after nivolumab injections

Nivolumab treatment had a favorable clinical outcome in our patients’ series (2 disease control – 3 Partial response and 4 Stabili), with no significant clinical side effects except 1 case of neurophylly, and with no or minimal effect on HIV viral load nor CD4/CD8 cell counts.

Nivolumab is successful at enhancing the capacities of HIV-specific CD8 cells to proliferate and to secrete cytokines expanding the PD-1+T cell subset. Those changes had no impact on HIV replication or reservoirs in one patient, but had drastic impact in another patient.

The transient increase in inflammation has not been reported before and might result either from the PD-1/PD-L1 pathway disruption in immune cells, or from a rapid HIV replication in tissues.

Those first results are encouraging and remain to be confirmed in other HIV-patients treated with anti-PD-1/PD-1 blocking antibodies.

REFERENCES


