

## **Supplemental Information**

### **Monocytic Myeloid-Derived Suppressor Cells Underpin Resistance to Adoptive T Cell Therapy in Nasopharyngeal Carcinoma**

**Richard Hopkins, Wenwei Xiang, Damien Marlier, Veonice Bijin Au, Qianting Ching, Lynn Xue Wu, Rujun Guan, Bernett Lee, Whay-Kuang Chia, Who-Whong Wang, Joseph Wee, Joanna Ng, Rachael Cheong, Shuting Han, Axel Chu, Chit Lai Chee, Timothy Shuen, Michael Podinger, Alexander Lezhava, Han Chong Toh, and John E. Connolly**

## **Supplementary Appendix**

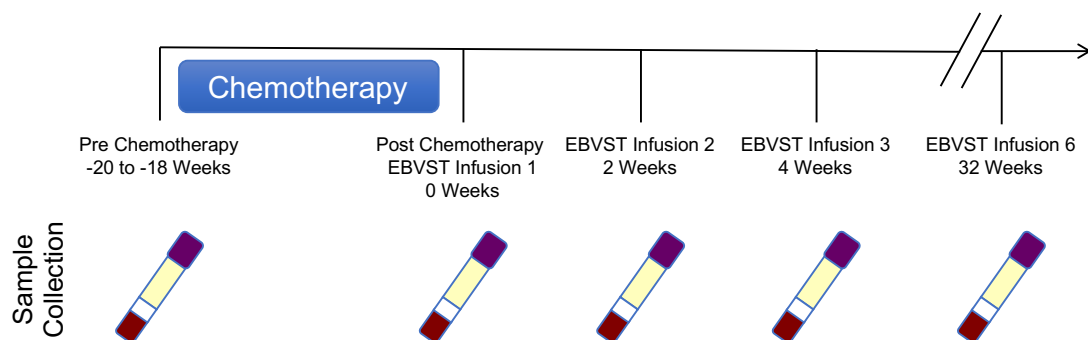
Supplement to:

### **Monocytic Myeloid Derived Suppressor Cells Underpin Resistance to Adoptive T-Cell Therapy in Nasopharyngeal Carcinoma**

#### **Table of Contents**

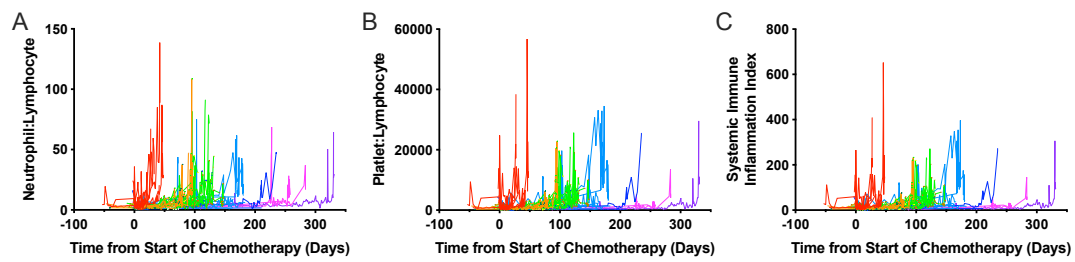
Supplementary Figures 1-5	page 2
---------------------------	--------

## SUPPLEMENTARY FIGURES



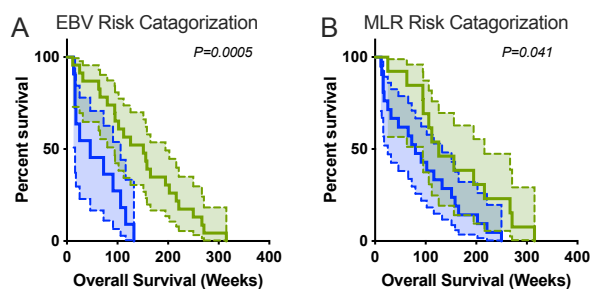
**Figure S1.**

Research Blood Collection Schedule. Peripheral blood mononuclear cells were collected from patients at indicated timepoints. Patients underwent 4 cycles of gemcitabine and carboplatin, before receiving 6 infusions of Epstein-Barr Virus Specific T-cells (EBVSTs). Timing of therapy and blood draw is indicated. In all instances, blood draw occurred before administration of therapy.



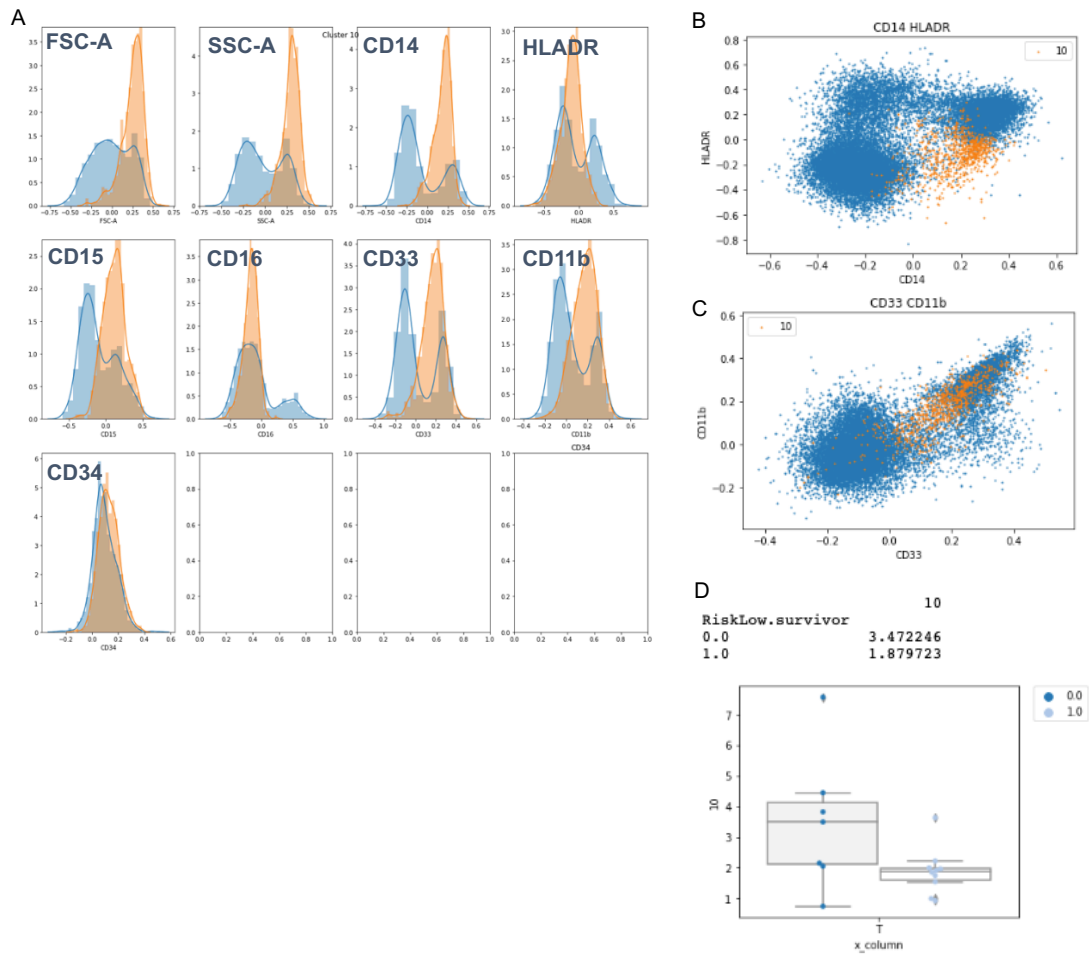
**Figure S2.**

Longitudinal patient leukocyte ratios. **A**, Neutrophil to lymphocyte ratios. **B**, Platelet to lymphocyte ratios. **C**, Systemic Immune-Inflammation Index (SII), was calculated by  $(\text{Platelet count} \times \text{neutrophil count} / \text{lymphocyte count})$ . All results calculated from clinical complete blood counts. Coloured line sets represent different intervals of overall survival, with each patient indicated as a single line. Overall survival in weeks for the colours are as follows, red <50, orange >50,<100, green >100,<150, light blue >150,<200, dark blue >200,<250, pink >250,<300, purple >300, n=34.



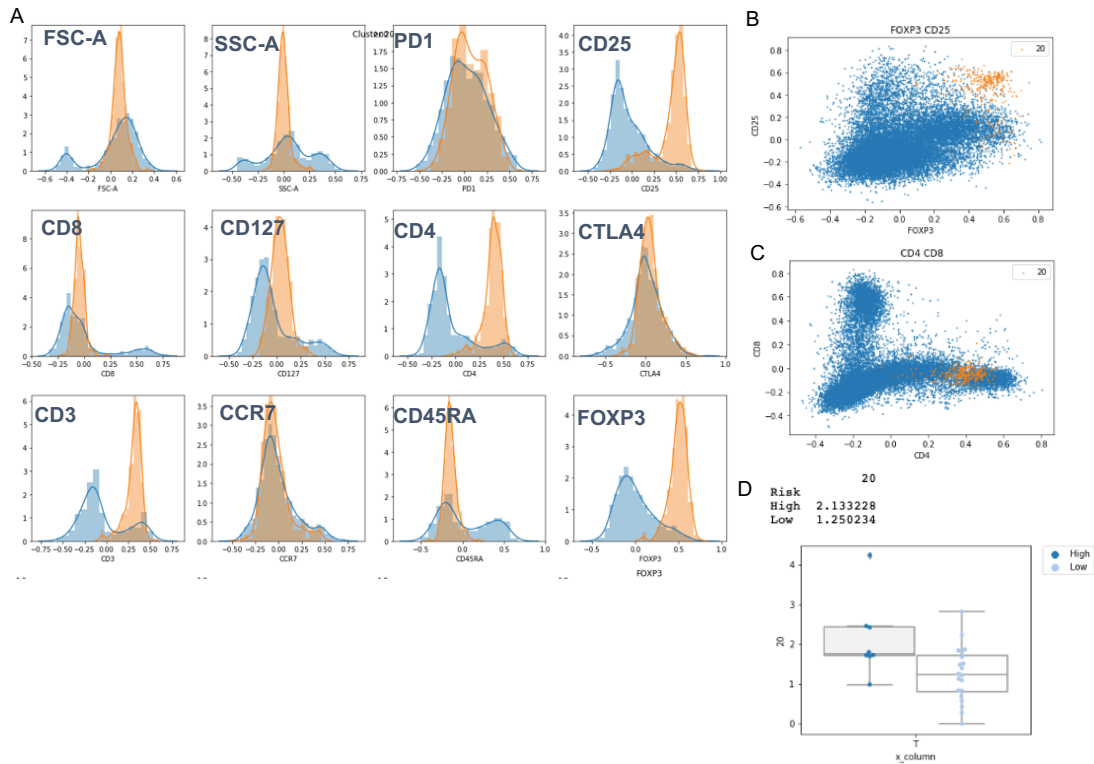
**Figure S3.**

Survival plot of patients with univariate biomarker. **A**, Stratification of patient's overall survival using  $\text{Log}_{10}(\text{EBV DNA plasma concentration}+1) > 3.05$ .  $n < 3.05 = 23$  (green line),  $n > 3.05 = 11$  (blue line). **B**, Stratification of patient's overall survival using  $\text{monocyte:lymphocyte} > 0.5$ .  $n < 0.5 = 13$  (green line),  $n > 0.5 = 21$  (blue line). Gehan-Breslow-Wilcoxon test, 95% CI shown between dashed lines.



**Figure S4.**

Example output of Flowpip pipeline from myeloid cell flow panel analysis. **A**, Histograms of surface marker expression from total leukocyte population (blue histogram), and from “Cluster 10” (orange histogram). **B**, Expression of CD14 and HLADR surface markers of total leukocyte population (blue dots), and from “Cluster 10” (orange dots). **C**, Expression of CD11b and CD33 surface markers of total leukocyte population (blue dots), and from “Cluster 10”. **D**, Box and whisker plot of “Cluster 10” between high risk (0.0) and low risk (1.0) individuals. Frequency of population as a total of live cells is indicated on the y-axis.



**Figure S5.**

Example output of Flowpip pipeline from T-cell flow panel analysis. **A**, Histograms of surface marker expression from total leukocyte population (blue histogram), and from “Cluster 20” (orange histogram). **B**, Expression of CD25 and FOXP3 markers of total leukocyte population (blue dots), and from “Cluster 20” (orange dots). **C**, Expression of CD4 and CD8 surface markers of total leukocyte population (blue dots), and from “Cluster 20”. **D**, Box and whisker plot of “Cluster 10” between high risk (0.0) and low risk (1.0) individuals. Frequency of population as a total of live cells is indicated on the y-axis.