

**a**

HC RA-MTX MS-OCR

HC T0vs.T1 HC T0vs.T3 RA T0vs.T1 RA T0vs.T3 MS T0vs.T1 MS T0vs.T3

$-\log_{10}(\text{adjusted P-value})$

$\log_2(\text{FC})$

**b**

HC RA-MTX MS-OCR

HC T0vs.T1 HC T0vs.T3 RA T0vs.T1 RA T0vs.T3 MS T0vs.T1 MS T0vs.T3

$-\log_{10}(\text{adjusted P-value})$

$\log_2(\text{FC})$

**c**

low high

ranking metric

% of parent

HC RA-MTX MS-OCR

T0 vs. T1 T0 vs. T3 T0 vs. T1 T0 vs. T3 T0 vs. T1 T0 vs. T3

CD8 Naive CD8 SCM CD8 EMRA CD8 EM CD8 CM

CD4 Naive CD4 SCM CD4 EMRA CD4 EM CD4 CM

Th1 Th1-like Th2 Th9 Th Other Treg Tfr

cTfh<sub>high</sub> cTfh<sub>high</sub> cTfh<sub>high</sub> cTfh<sub>high</sub> cTfh<sub>high</sub> cTfh<sub>high</sub>

B CD21<sup>+</sup> B CD21<sup>+</sup> B CD21<sup>+</sup> B CD21<sup>+</sup> B CD21<sup>+</sup> B CD21<sup>+</sup>

B CD19<sup>+</sup> B CD19<sup>+</sup> B CD19<sup>+</sup> B CD19<sup>+</sup> B CD19<sup>+</sup> B CD19<sup>+</sup>

B Translational B Translational B Translational B Translational B Translational B Translational

B GC emigrates B GC emigrates B GC emigrates B GC emigrates B GC emigrates B GC emigrates

B Memory B Memory B Memory B Memory B Memory B Memory

B Plasma cells B Plasma cells B Plasma cells B Plasma cells B Plasma cells B Plasma cells

B Plasmablast B Plasmablast B Plasmablast B Plasmablast B Plasmablast B Plasmablast

Eosinophils Eosinophils Eosinophils Eosinophils Eosinophils Eosinophils

Neutrophils Neutrophils Neutrophils Neutrophils Neutrophils Neutrophils

Non-classical Monocytes Non-classical Monocytes Non-classical Monocytes Non-classical Monocytes Non-classical Monocytes Non-classical Monocytes

Classical Monocytes Classical Monocytes Classical Monocytes Classical Monocytes Classical Monocytes Classical Monocytes