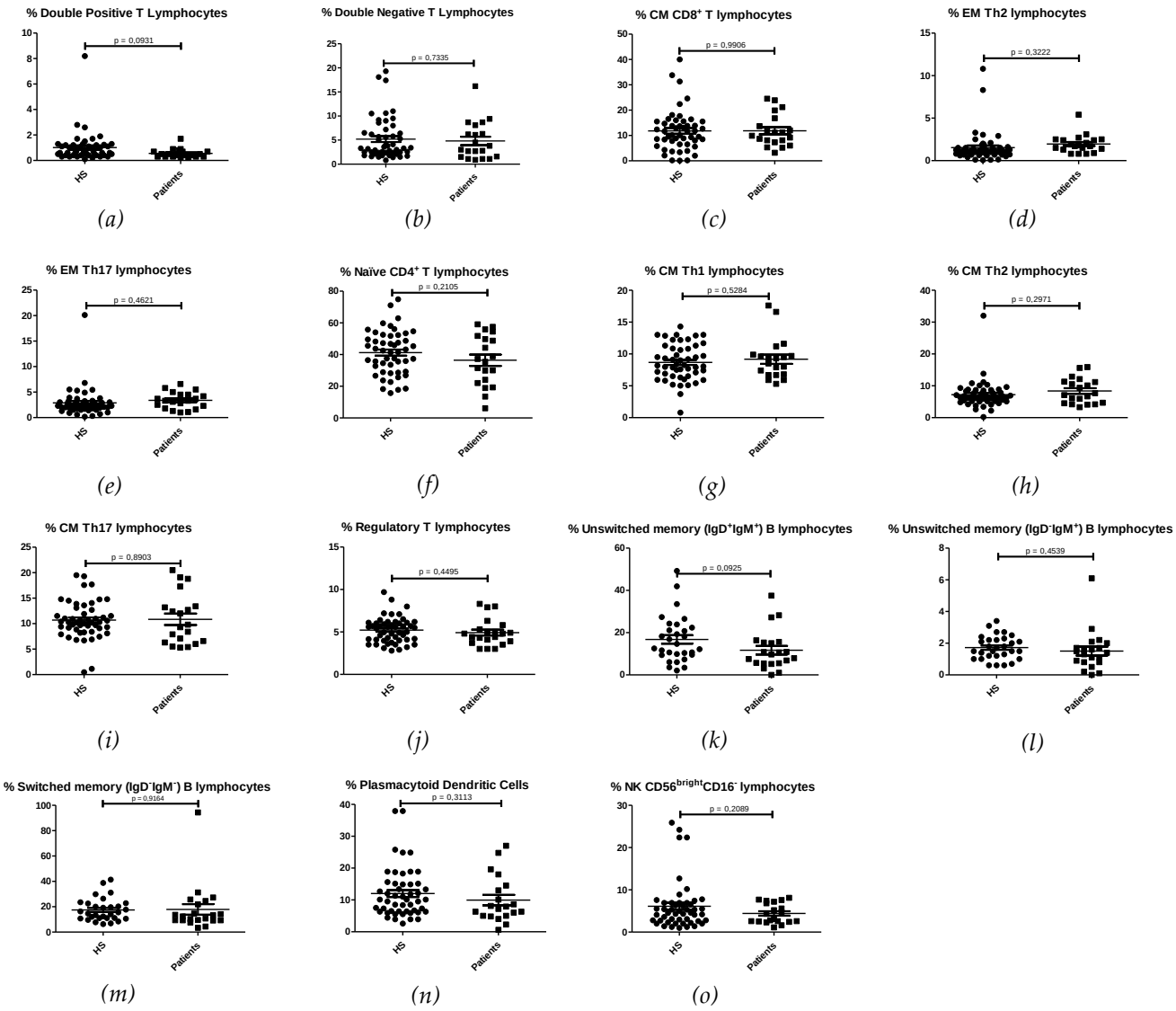
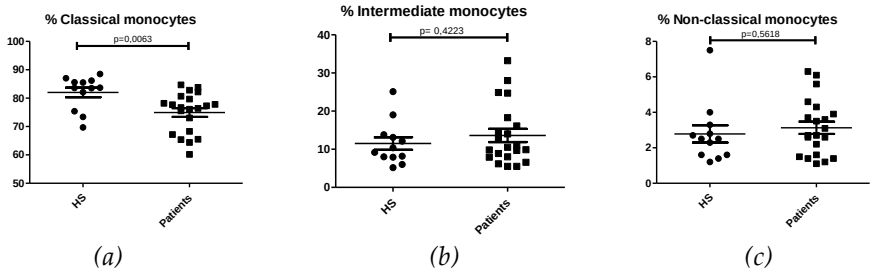


Figure S1: Comparison of percentages of leukocyte subpopulations in peripheral blood between IgAN patients (N=22) and HS (N=50). **(a)** Double positive ($CD4^+CD8^+$) T lymphocytes; **(b)** Double negative ($CD4^-CD8^-$) T lymphocytes; **(c)** CM $CD8^+$ T lymphocytes ($CCR7^+CD45RA^-$); **(d)** EM Th2 lymphocytes ($CD3^+CD4^+CXCR3^-CCR6^-CCR7^-CD45RA^-$); **(e)** EM Th17 lymphocytes ($CD3^+CD4^+CXCR3^-CCR6^+CCR7^-CD45RA^-$); **(f)** Naïve $CD4^+$ T lymphocytes ($CD3^+CD4^+CCR7^+CD45RA^+$) **(g)** CM Th1 lymphocytes ($CD3^+CD4^+CXCR3^+CCR6^-CCR7^+CD45RA^-$); **(h)** CM Th2 lymphocytes ($CD3^+CD4^+CXCR3^-CCR6^-CCR7^+CD45RA^-$); **(i)** CM Th17 lymphocytes ($CD3^+CD4^+CXCR3^-CCR6^+CCR7^+CD45RA^-$); **(j)** Regulatory T lymphocytes; **(k)** unswitched memory B lymphocytes ($CD19^+CD27^+IgD^+IgM^+$); **(l)** unswitched memory B lymphocytes ($CD19^+CD27^+IgD^-IgM^+$); **(m)** switched memory B lymphocytes ($CD19^+CD27^+IgD^-IgM^-$); **(n)** plasmacytoid dendritic cells ($HLA\text{-}DR^+CD11c^-CD123^+$); **(o)** NK $CD56^{bright}CD16^-$ lymphocytes



(a) *(b)* *(c)*

Figure S2: Comparison of monocyte subsets distribution between IgAN patients (N=22) and HS (N=12). (a) Percentages of classical monocytes ($CD14^{+}CD16^{-}$); **(b)** percentages of intermediate monocytes ($CD14^{+}CD16^{+}$); **(c)** percentages of non-classical monocytes ($CD14^{low}CD16^{++}$)

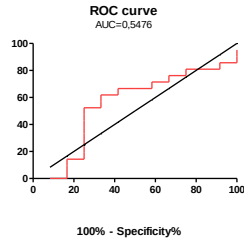
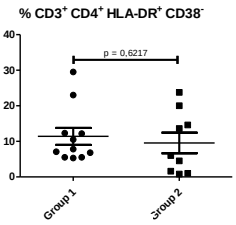


Figure S3: Discriminatory capacity of CD89 MFI on non-classical monocytes ($CD14^{low}CD16^{++}$). The optimal cut-off was 4000; AUC: Area Under the Curve



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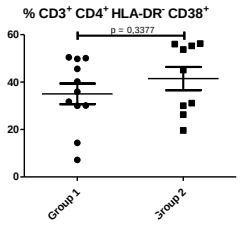

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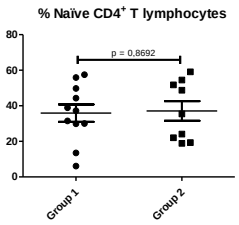

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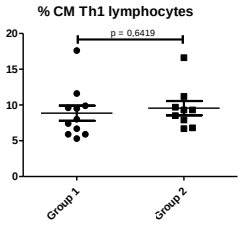

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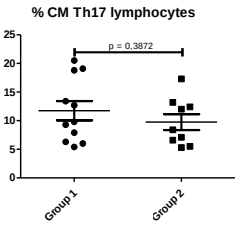

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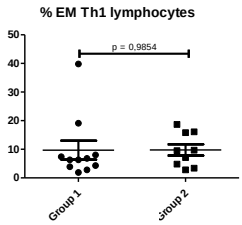

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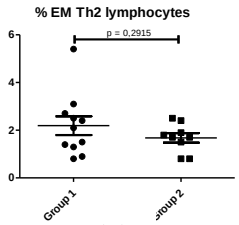

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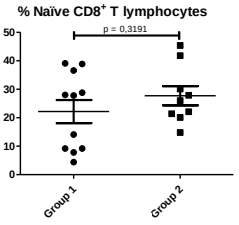

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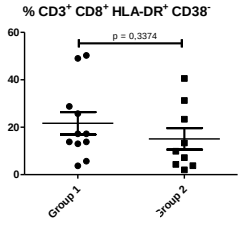

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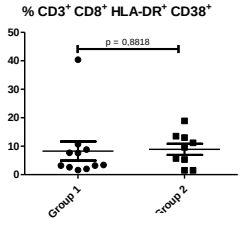

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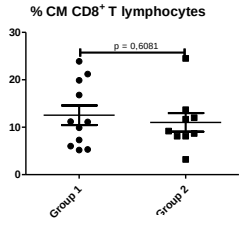

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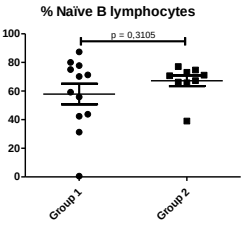

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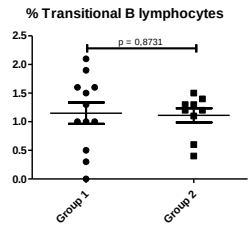

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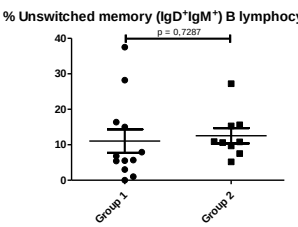

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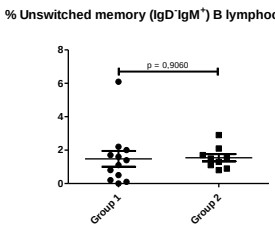

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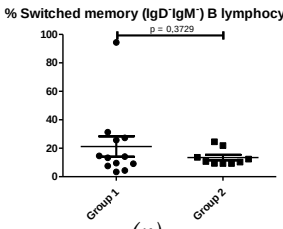

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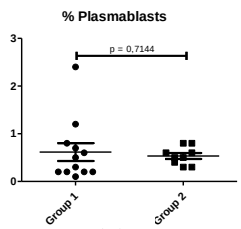

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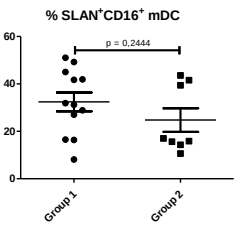

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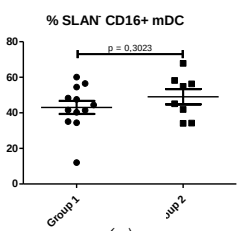

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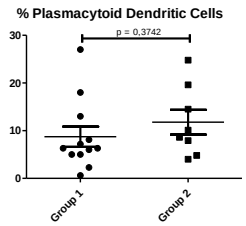

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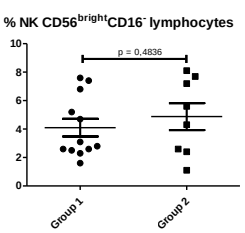

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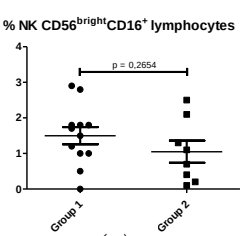

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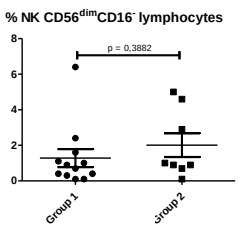

(w)

Figure S4: Comparison of percentage of leukocyte subpopulations between the two groups of patients according to CD89^{high} MFI in non-classical monocytes (CD14^{low}CD16^{++}): group 1 with CD89^{high} MFI < 4000 (N=13); group 2 with CD89^{high} MFI > 4000 (N=9). **(a)** Activated CD4^{+} T lymphocytes (CD3^{+}CD4^{+}HLA-DR^{+}CD38^{-}); **(b)** Activated CD4^{+} T lymphocytes (CD3^{+}CD4^{+}HLA-DR^{-}CD38^{+}); **(c)** Naïve CD4^{+} T lymphocytes (CD3^{+}CD4^{+}CCR7^{+}CD45RA^{+}); **(d)** Central Memory (CM) Th1 lymphocytes (CD3^{+}CD4^{+}CXCR3^{+}CCR6^{-}CCR7^{+}CD45RA^{-}); **(e)** Central Memory (CM) Th17 lymphocytes (CD3^{+}CD4^{+}CXCR3^{-}CCR6^{+}CCR7^{+}CD45RA^{-}); **(f)** Effector Memory (EM) Th1 lymphocytes (CD3^{+}CD4^{+}CXCR3^{+}CCR6^{-}CCR7^{-}CD45RA^{-}); **(g)** Effector Memory (EM) Th2 lymphocytes (CD3^{+}CD4^{+}CXCR3^{-}CCR6^{-}CCR7^{-}CD45RA^{-}); **(h)** Naïve CD8^{+} T lymphocytes (CCR7^{+}CD45RA^{+}); **(i)** Activated CD8^{+} T lymphocytes (CD3^{+}CD8^{+}HLA-DR^{+}CD38^{-}); **(j)** Activated CD8^{+} T lymphocytes (CD3^{+}CD8^{+}HLA-DR^{+}CD38^{+}); **(k)** Central Memory (CM) CD8^{+} T lymphocytes (CCR7^{+}CD45RA^{-}); **(l)** Naïve B lymphocytes (CD19^{+}CD27^{-}IgD^{+}IgM^{+}); **(m)** Transitional B lymphocytes (CD19^{+}CD27^{-}CD24^{high}CD38^{high}); **(n)** Unswitched memory B lymphocytes (CD19^{+}CD27^{+}IgD^{+}IgM^{+}); **(o)** Unswitched memory B lymphocytes (CD19^{+}CD27^{+}IgD^{-}IgM^{+}); **(p)** Switched memory B lymphocytes (CD19^{+}CD27^{+}IgD^{-}IgM^{-}); **(q)** Plasmablasts (CD19^{+}CD27^{+}CD20^{-}CD38^{high}); **(r)** SLAN^{+}CD16^{+} myeloid Dendritic Cells (mDC); **(s)** SLAN^{-}CD16^{+} myeloid Dendritic Cells (mDC); **(t)** Plasmacytoid Dendritic Cells (HLA-DR^{+}CD11c^{-}CD123^{+}); **(u)** NK CD56^{bright}CD16^{-} Lymphocytes; **(v)** NK CD56^{bright}CD16^{+} lymphocytes; **(w)** NK CD56^{dim}CD16^{-} lymphocytes

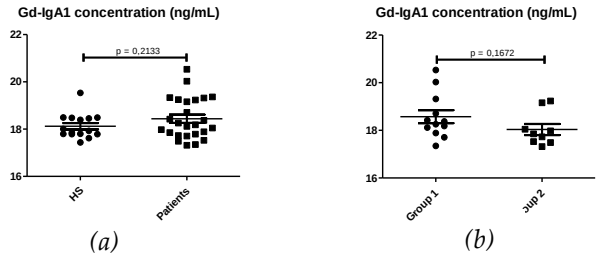

Figure S5: Comparison of serum Gd-IgA1 concentration (ng/mL). (a) Between HS (N=12) and patients (N=22); **(b)** Between the two groups of IgAN patients according to CD89^{high} MFI on non-classical monocytes (CD14^{low}CD16^{++}), group 1 MFI of CD89^{high} on non-classical monocytes<4000; Group 2 CD89^{high} MFI on non-classical monocytes>4000

Figure S6: Gating strategy for monocyte subpopulations analysis and CD89 expression.