

Supplementary Materials

Figure S1. Flowchart of patient selection for this study.

EBV, Epstein-Barr virus; sCAEBV, systemic chronic active Epstein-Barr virus disease;

Figure S2. Relationship between sex and anti-EBV antibody titers.

A. Samples of anti-EBNA antibody classified into six groups by age group and sex. Green indicates children, blue indicates AYA, and red indicates adults. The number of available samples is shown at the top of the graphs.

B. Samples of anti-EBNA antibody classified into six groups by age group and sex, and comparison of anti-EBNA antibody titers carried out using the Kruskal–Wallis test with post-hoc analysis.

C-D. Samples of anti-VCA-IgG and anti-EA-IgG antibody classified by sex, and comparison of each antibody titer carried out using the Kruskal–Wallis test with post-hoc analysis.

AYA, adolescent and young adult; EBNA, EBV nuclear antigen; VCA, viral capsid antigen; EA, anti-early antigen;

Figure S3. Relationship between age and anti-EBV antibody titers.

Samples of five anti-EBV antibodies classified into three groups by age group, and comparison of anti-EBV antibodies titers performed using the Kruskal–Wallis test with post-hoc analysis.

AYA, adolescent and young adult; EA, anti-early antigen; EBNA, EBV nuclear antigen; EBV, Epstein-Barr virus; VCA, viral capsid antigen

Figure S4. Relationship between EBV-infected cell types and anti-EBV antibody titers.

Samples of five anti-EBV antibodies classified into two groups by EBV-infected cell types (T-cell type and NK-cell type), and comparison of anti-EBV antibodies titers performed using the Kruskal–Wallis test with post-hoc analysis. T-cell type include CD4, CD8, $\gamma\delta$ T, and others (CD4 + CD8, CD8 + $\gamma\delta$ T). NK-cell type include CD56 and others (CD56 + CD56 (-)).

EA, anti-early antigen; EBNA, EBV nuclear antigen; EBV, Epstein-Barr virus; VCA, viral capsid antigen

Figure S5. Distributions of some anti-EBV antibody titers were used to determine the cutoff values for survival analysis.

Histograms showing the distributions of five anti-EBV antibody titers: anti-VCA-IgG, anti-VCA-IgA, anti-EBNA, anti-EA-IgG, and anti-EA-IgA.

EA, anti-early antigen; EBNA, EBV nuclear antigen; EBV, Epstein-Barr virus; VCA, viral capsid antigen

Figure S6. Relations between the patients' survival and some anti-EBV antibody titers when we set other cutoff values.

A–B. The relation between patient survival and anti-EBNA antibody titers using the survival curve derived using GraphPad Prism 8. We established a cutoff value of 10 to determine positivity or negativity and 160 to classify patients into two groups (high and low). The red line represents the positive/high group, while the blue line represents the negative/low group.

C–D. The relation between patient survival and anti-EA-IgG antibody titers using the survival curve derived using GraphPad Prism 8. We established cutoff values of 160 and 320. The red line indicates the high group, while the blue line indicates the low group.

E. The relation between patient survival and anti-EA-IgA antibody titers using survival curves derived using GraphPad Prism 8. We established a cutoff value of 10. The red and blue lines represent the positive and negative groups, respectively.

EA, anti-early antigen; EBNA, EBV nuclear antigen; EBV, Epstein-Barr virus; VCA, viral capsid antigen

Figure S1

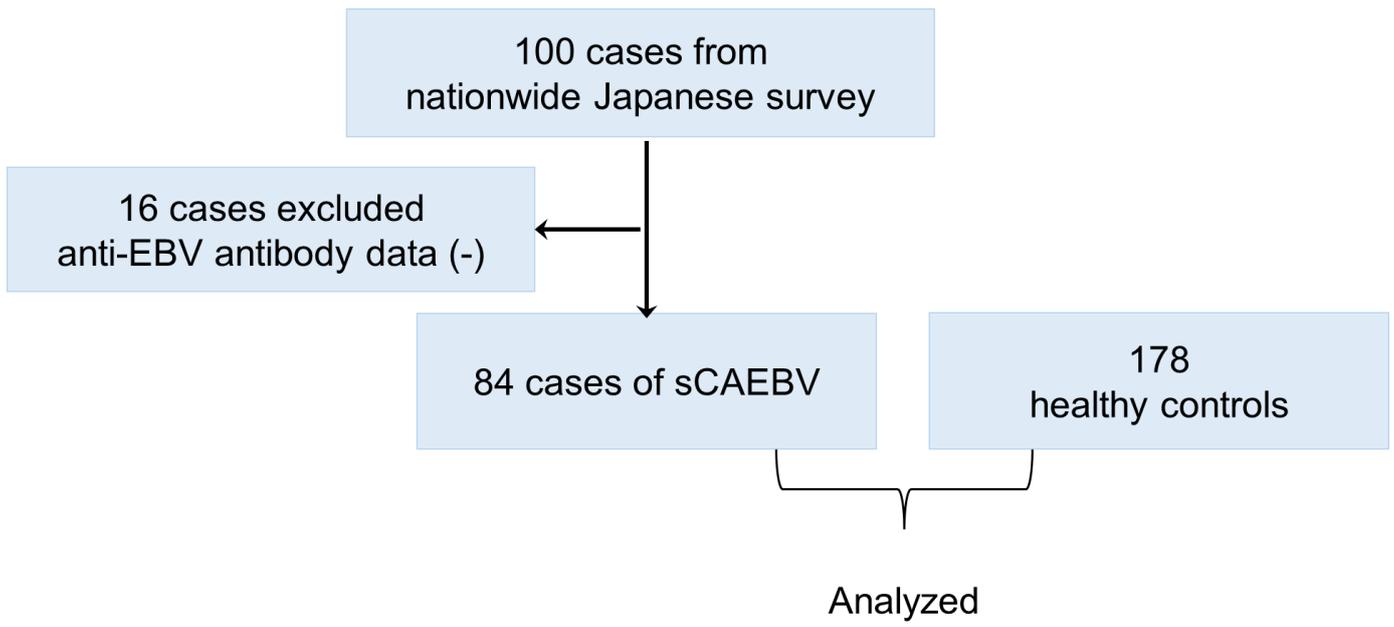


Figure S2

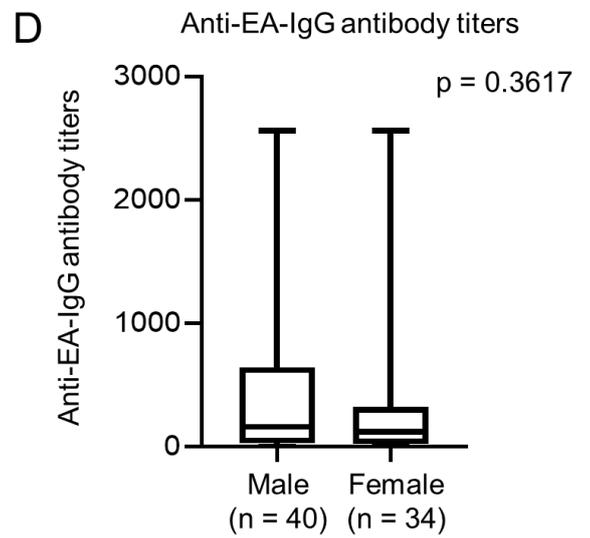
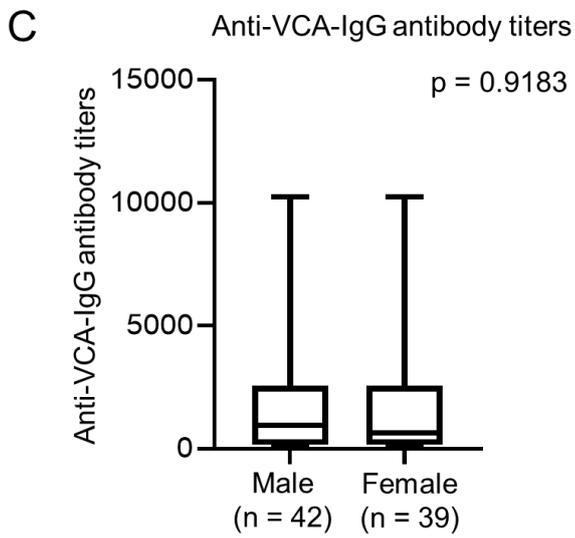
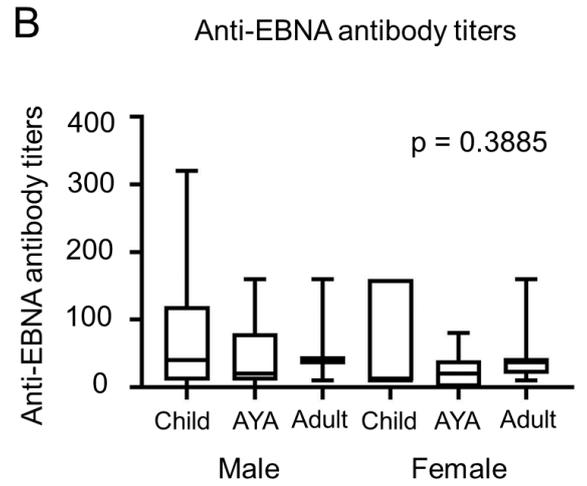
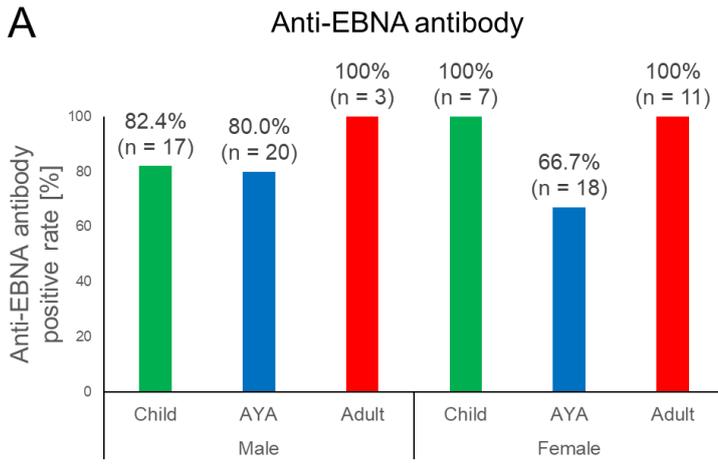


Figure S3

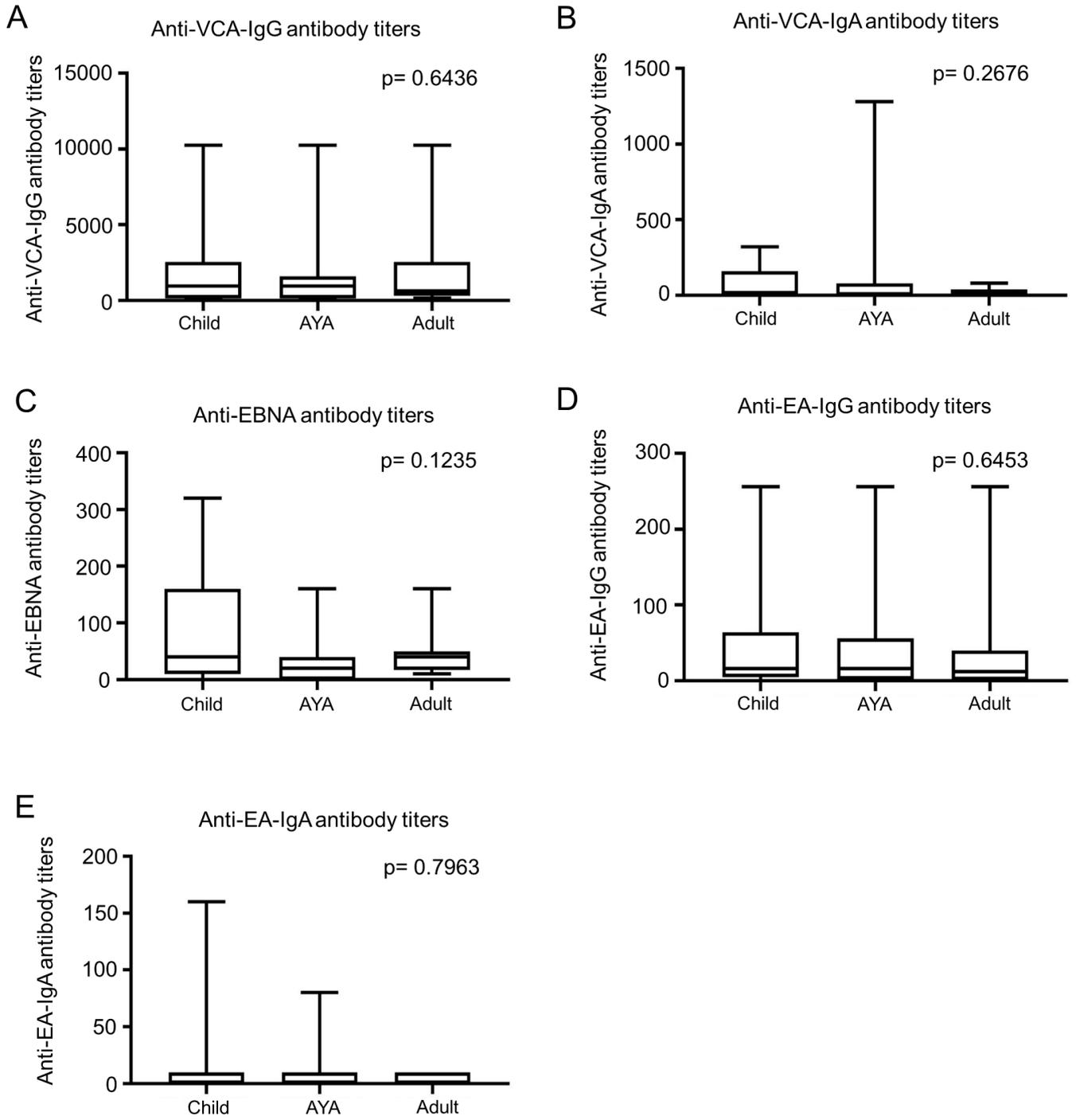
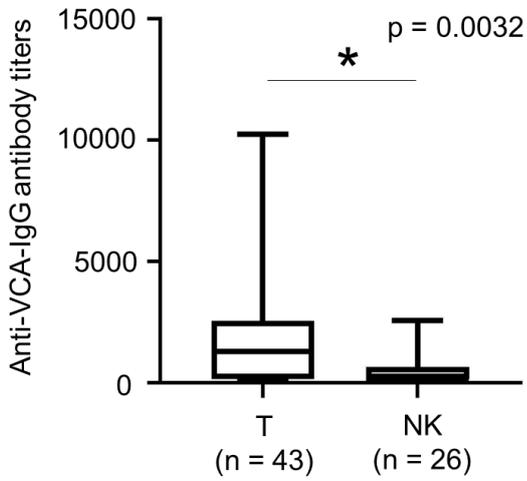
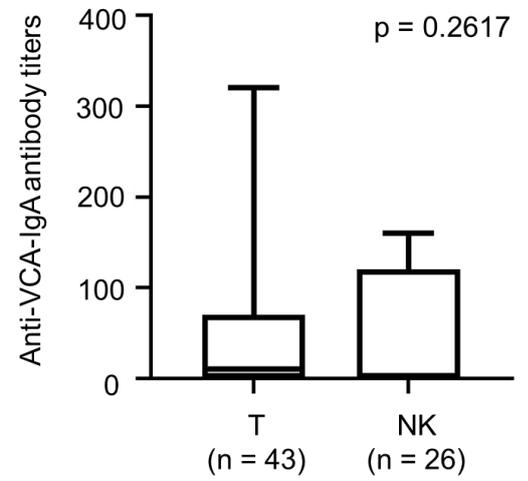


Figure S4

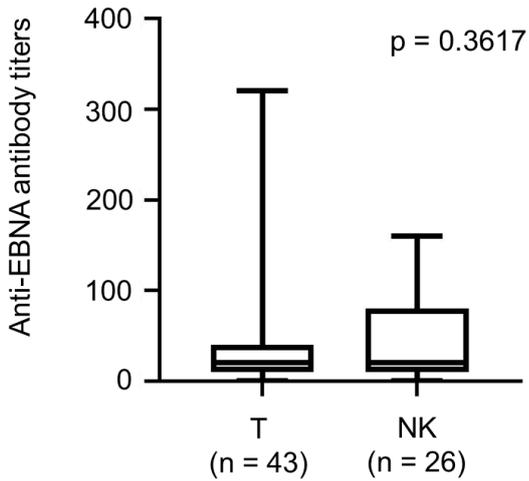
F Anti-VCA-IgG antibody titers



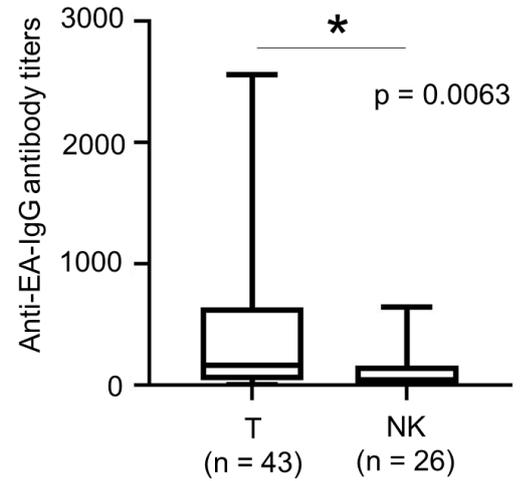
G Anti-VCA-IgA antibody titers



I Anti-EBNA antibody titers



J Anti-EA-IgG antibody titers



K Anti-EA-IgA antibody titers

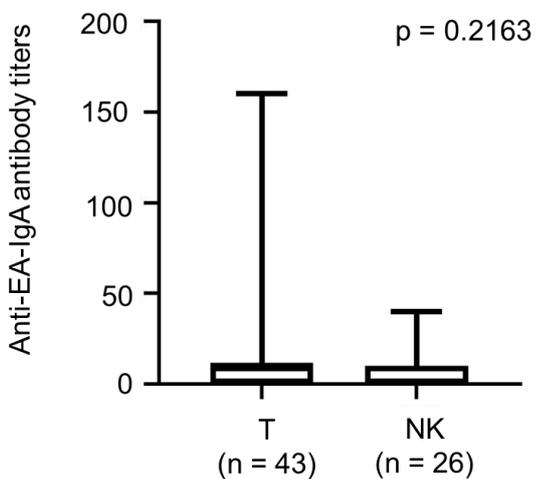
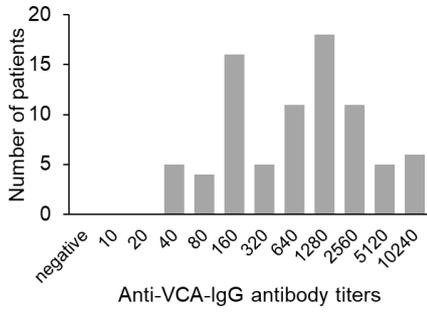
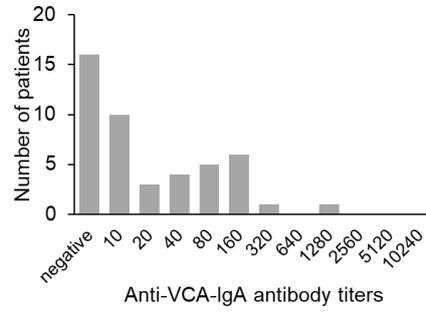


Figure S5

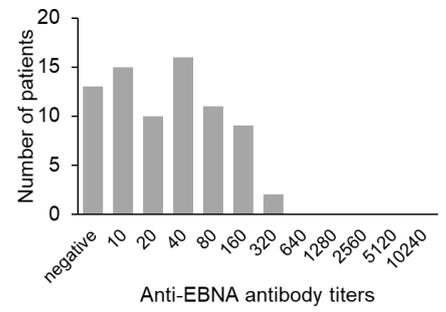
A Anti-VCA-IgG antibody



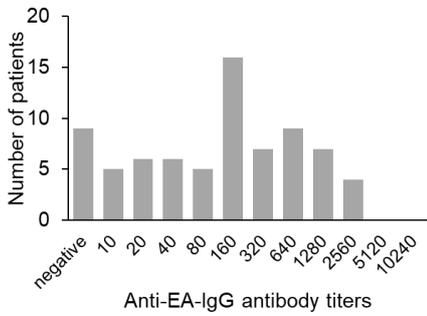
B Anti-VCA-IgA antibody



C Anti-EBNA antibody



D Anti-EA-IgG antibody



E Anti-EA-IgA antibody

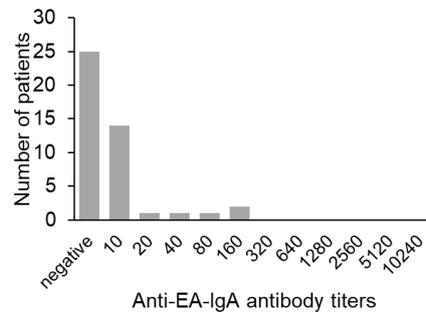


Figure S6

