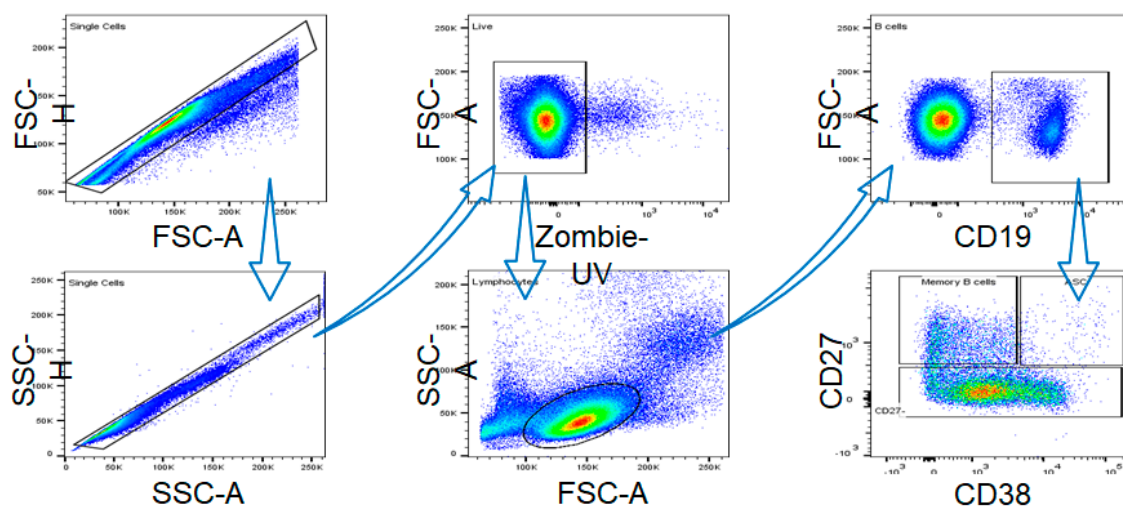
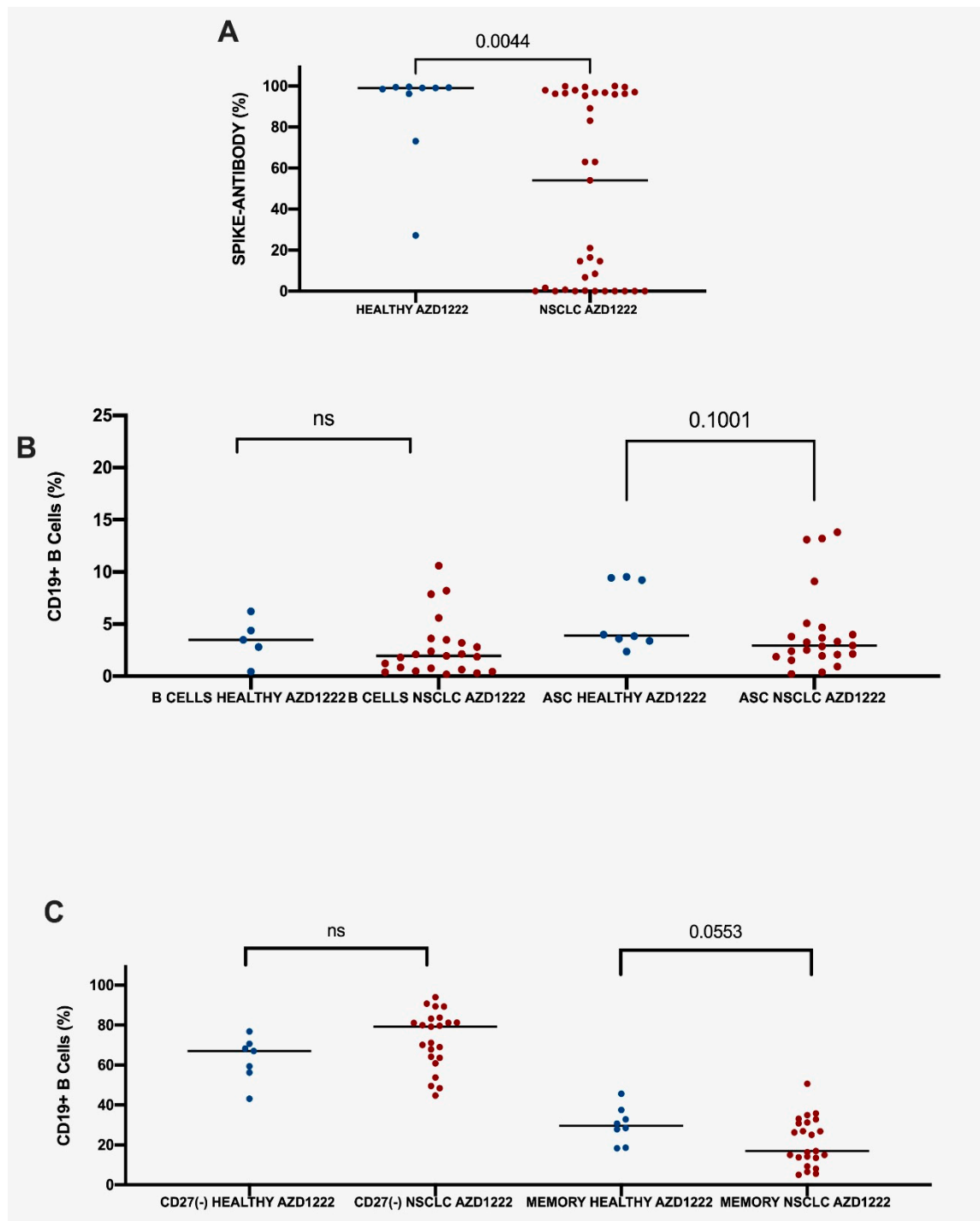


**Supplementary material.**



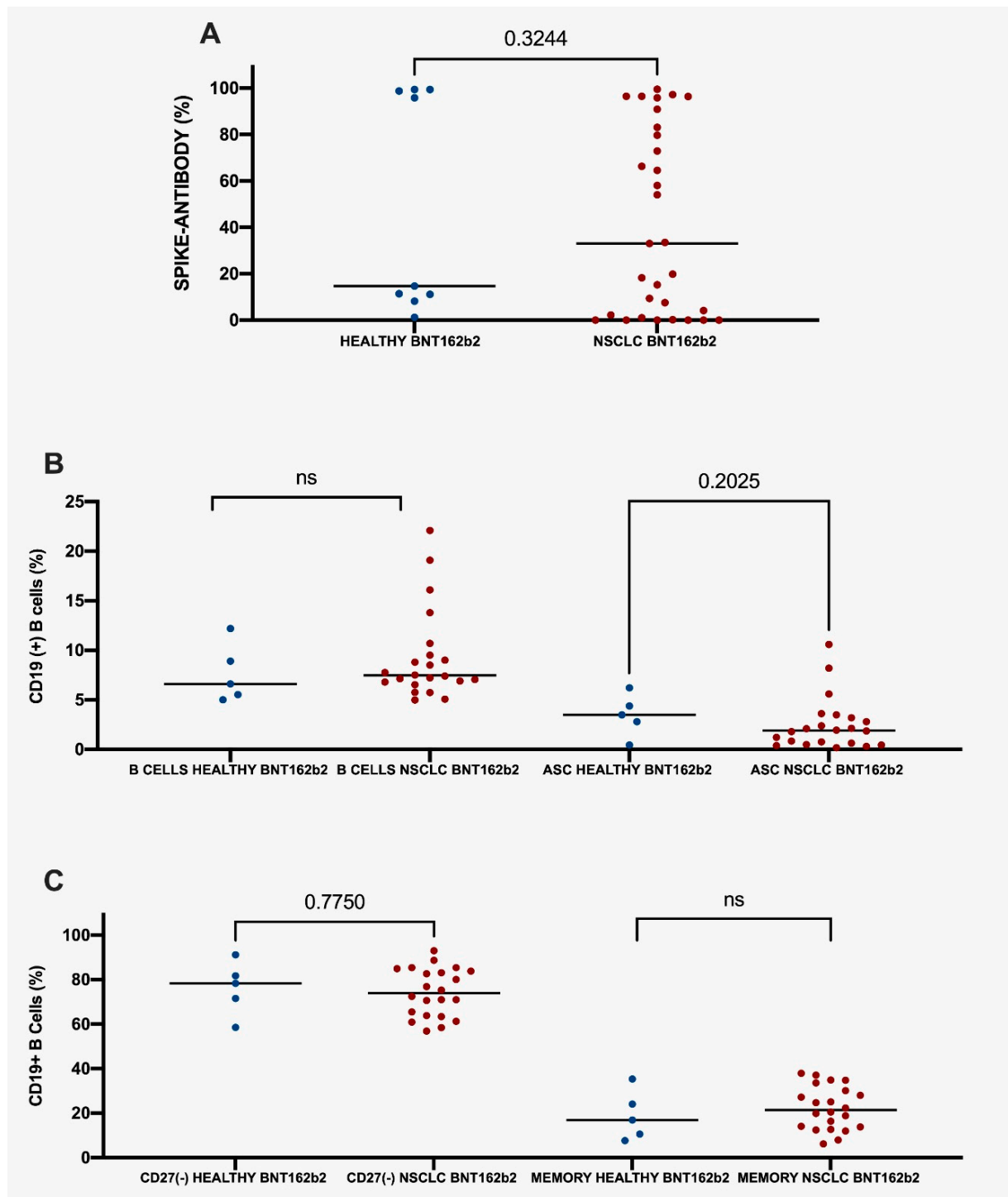
Antibody/reagent	Emission peak	Marker Type
APC anti-human CD19	660 nm	Pan B cell
PE anti-human CD27	574 nm	Memory B, Plasmablast, Plasma cell
FITC anti-human CD38	525 nm	Immature B, Germinal Center, Plasmablast, Plasma cell
Zombie-UV	465 nm	Fixable Viability Dye

**Figure S1.** Flow Cytometry-Based Population Analysis and Corresponding Population Marker Emission Peaks.



**Figure S2.** Percentage of spike-antibodies between healthy and NSCLC groups that received AZD1222 vaccine. **(A)** Percentage of spike-antibodies between all healthy and NSCLC patients. **(B)** Percentage of CD19+ B cells and ASC between healthy and NSCLC groups. **(C)** CD27(-) and memory CD19+ B cells between healthy and NSCLC groups.

Statistical significance:  $p$  value  $\leq 0.05$ . NSCLC, Non-Small Cell Lung Cancer. ASC, Antibody-Secreting Cells. Ns, non-significant. AZD1222, Oxford-Astra Zeneca vaccine.



**Figure S3.** Percentage of spike-antibodies between healthy and NSCLC groups that received BNT162b2 vaccine. **(A)** Percentage of spike-antibodies between all healthy and NSCLC patients. **(B)** Percentage of CD19+ B cells and ASC between healthy and NSCLC groups. **(C)** CD27(-) and memory CD19+ B cells between healthy and NSCLC groups. Statistical significance:  $p$  value  $\leq 0.05$ . NSCLC, Non-Small Cell Lung Cancer. ASC, Antibody-Secreting Cells. BNT162b2, BioNTech-Pfizer vaccine.