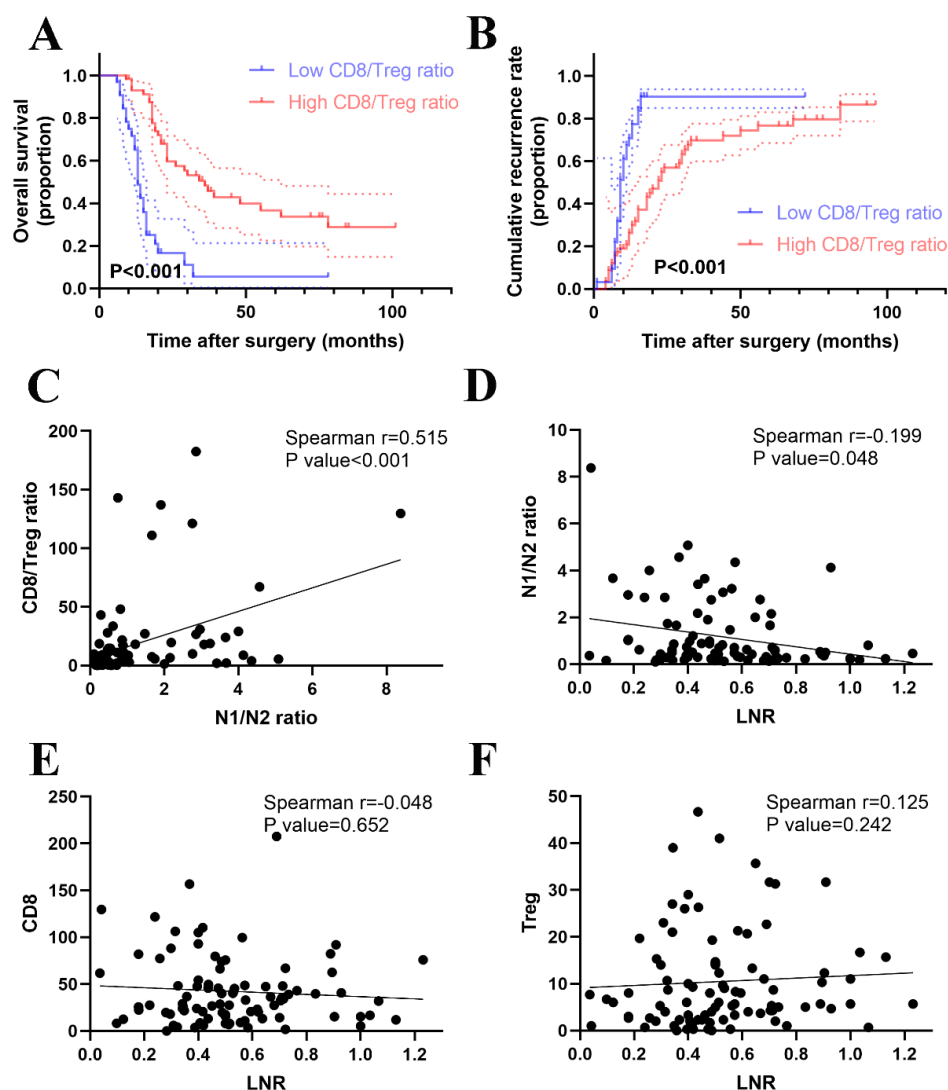
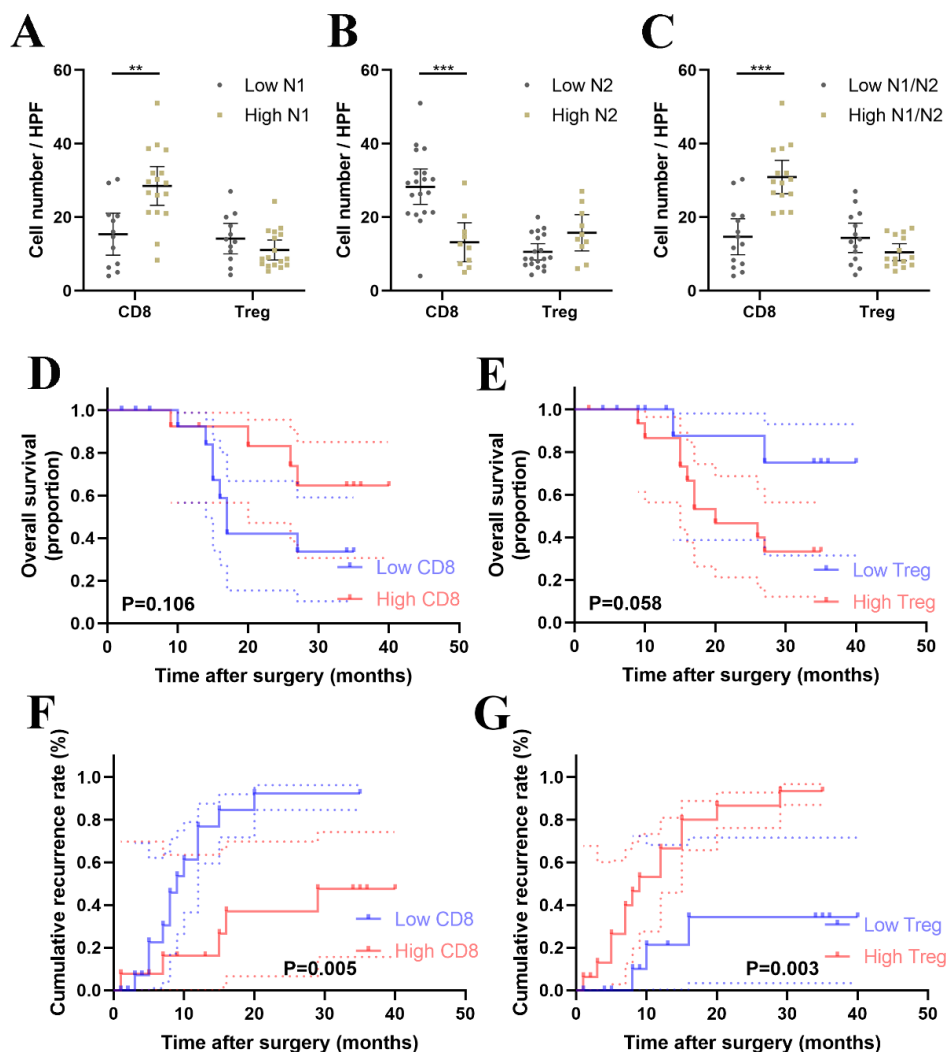


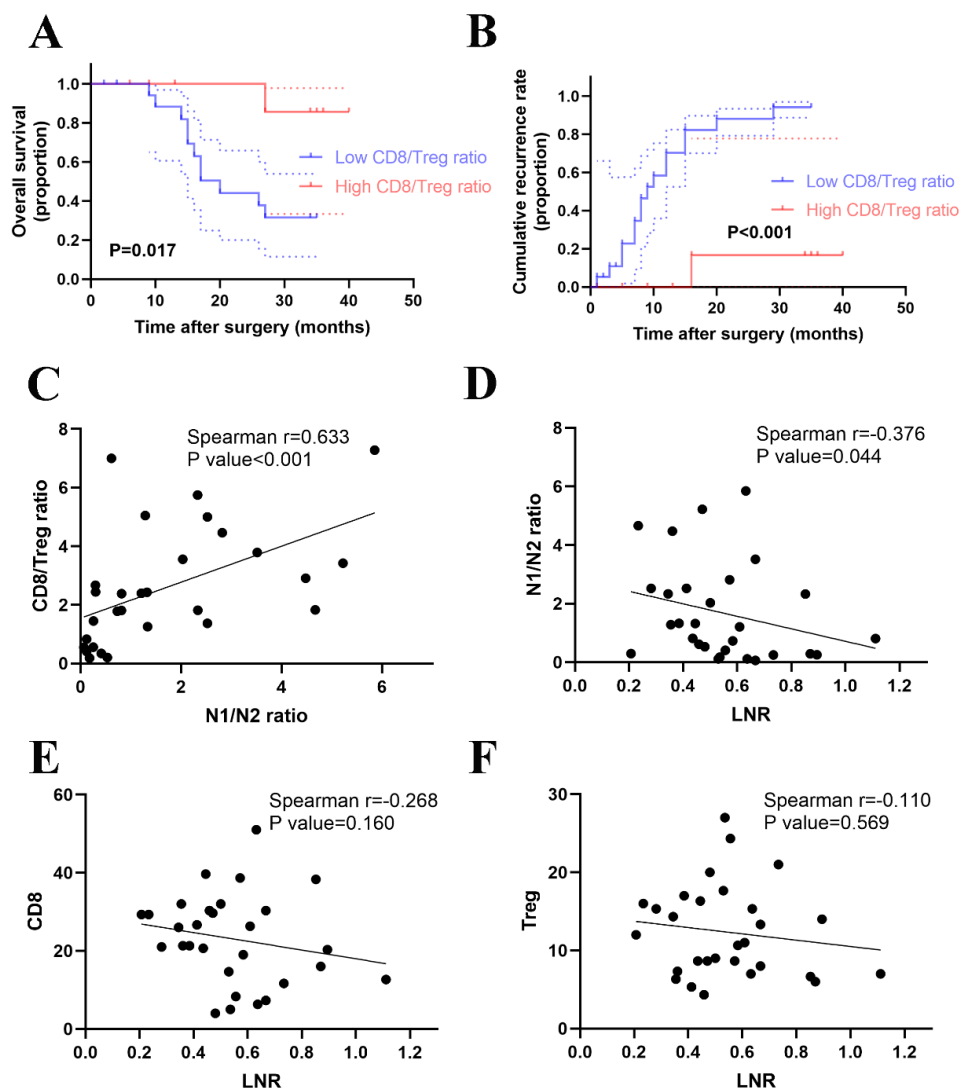
Supplementary Figure 1. Representative images of IF staining for tumor-associated N1 and N2 neutrophils. IF, immunofluorescence.



Supplementary Figure 2. Survival analysis by CD8/Treg ratio and correlation analysis in the primary cohort. (A-B) Kaplan-Meier plots for OS and RFS according to CD8/Treg ratio. (C) Correlation analysis between CD8/Treg ratio and N1/N2 ratio. (D) Correlation analysis between peripheral LNR and N1/N2 ratio. (E) Correlation analysis between peripheral LNR and tumor-infiltrating CD8⁺ T cells. (F) Correlation analysis between peripheral LNR and tumor-infiltrating Tregs. OS, overall survival; RFS, recurrence-free survival; LNR, lymphocyte to neutrophil ratio.



Supplementary Figure 3. Tumor-associated N1/N2 neutrophil plasticity along with immune infiltrations and survival in the validation cohort. (A-C) Comparison of tumor-infiltrating CD8⁺ T cell and Treg numbers within different N1, N2 and N1/N2 ratio groups. (D-E) Kaplan–Meier plots for OS according to the different density of tumor-infiltrating CD8⁺ T cells and Tregs. (F-G) Kaplan–Meier plots for RFS according to the different density of tumor-infiltrating CD8⁺ T cells and Tregs. OS, overall survival; RFS, recurrence-free survival.



Supplementary Figure 4. Survival analysis by CD8/Treg ratio and correlation analysis in the validation cohort. (A-B) Kaplan-Meier plots for OS and RFS according to CD8/Treg ratio. (C) Correlation analysis between CD8/Treg ratio and N1/N2 ratio. (D) Correlation analysis between peripheral LNR and N1/N2 ratio. (E) Correlation analysis between peripheral LNR and tumor-infiltrating CD8⁺ T cells. (F) Correlation analysis between peripheral LNR and tumor-infiltrating Tregs. OS, overall survival; RFS, recurrence-free survival; LNR, lymphocyte to neutrophil ratio.