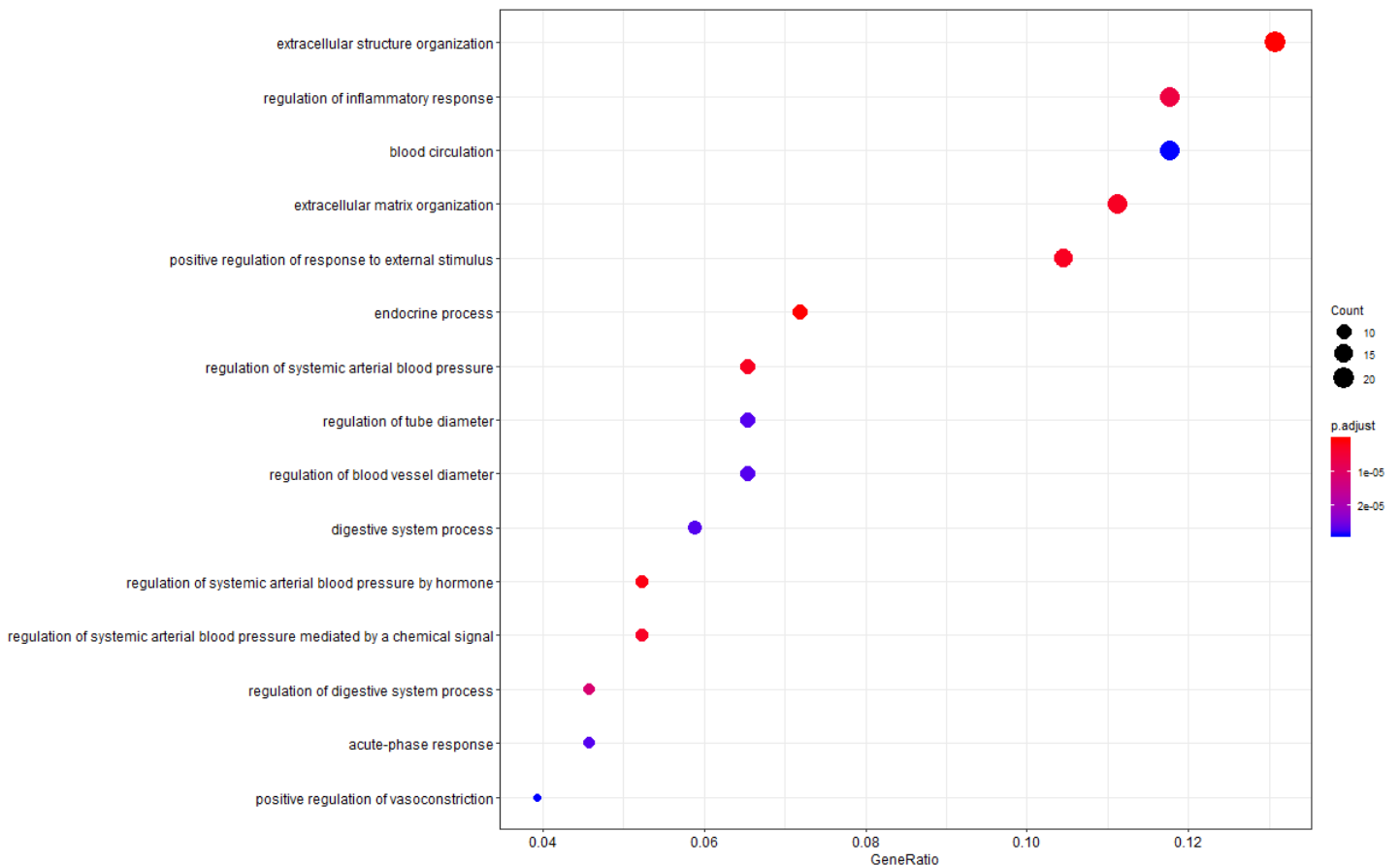
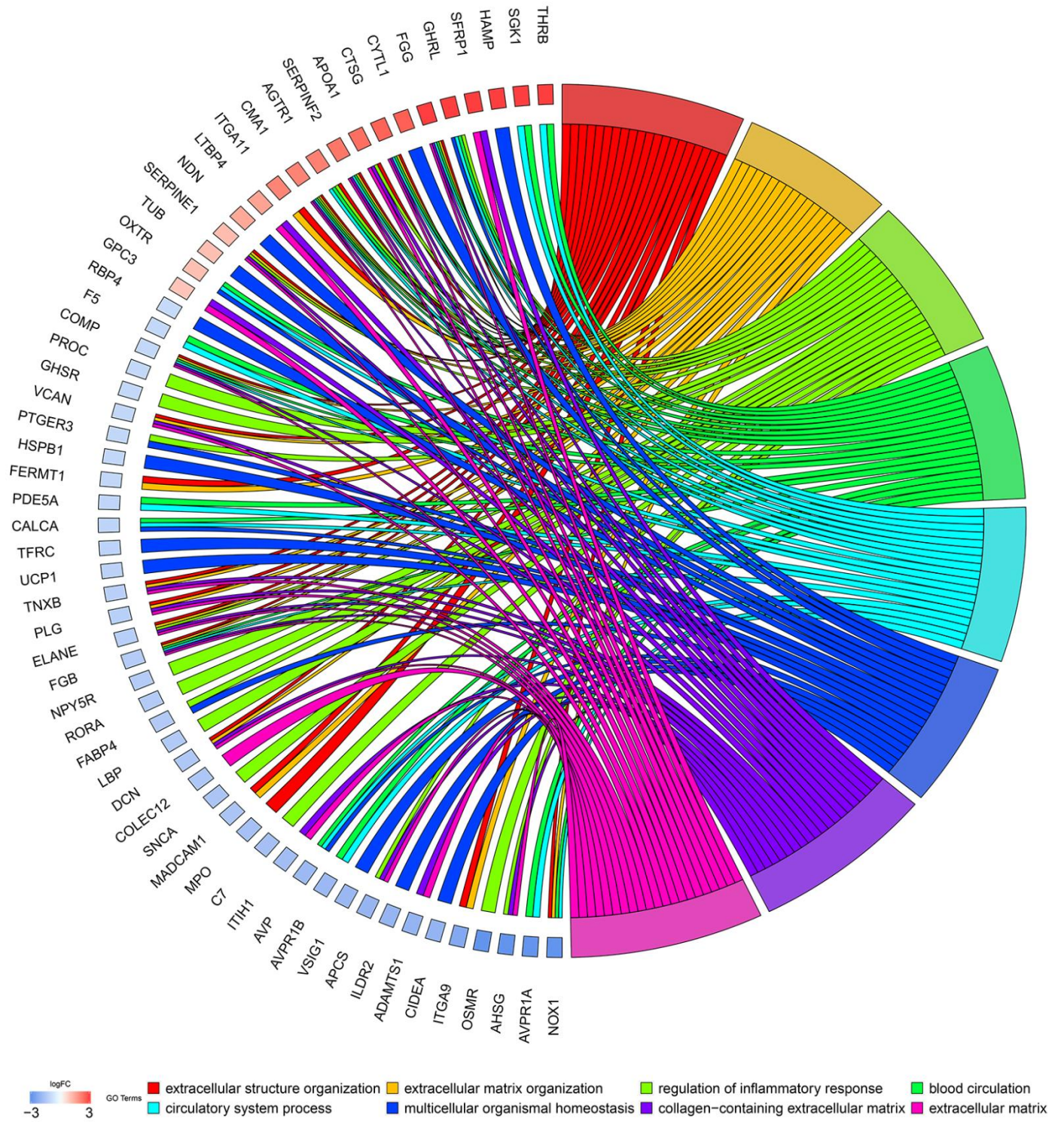


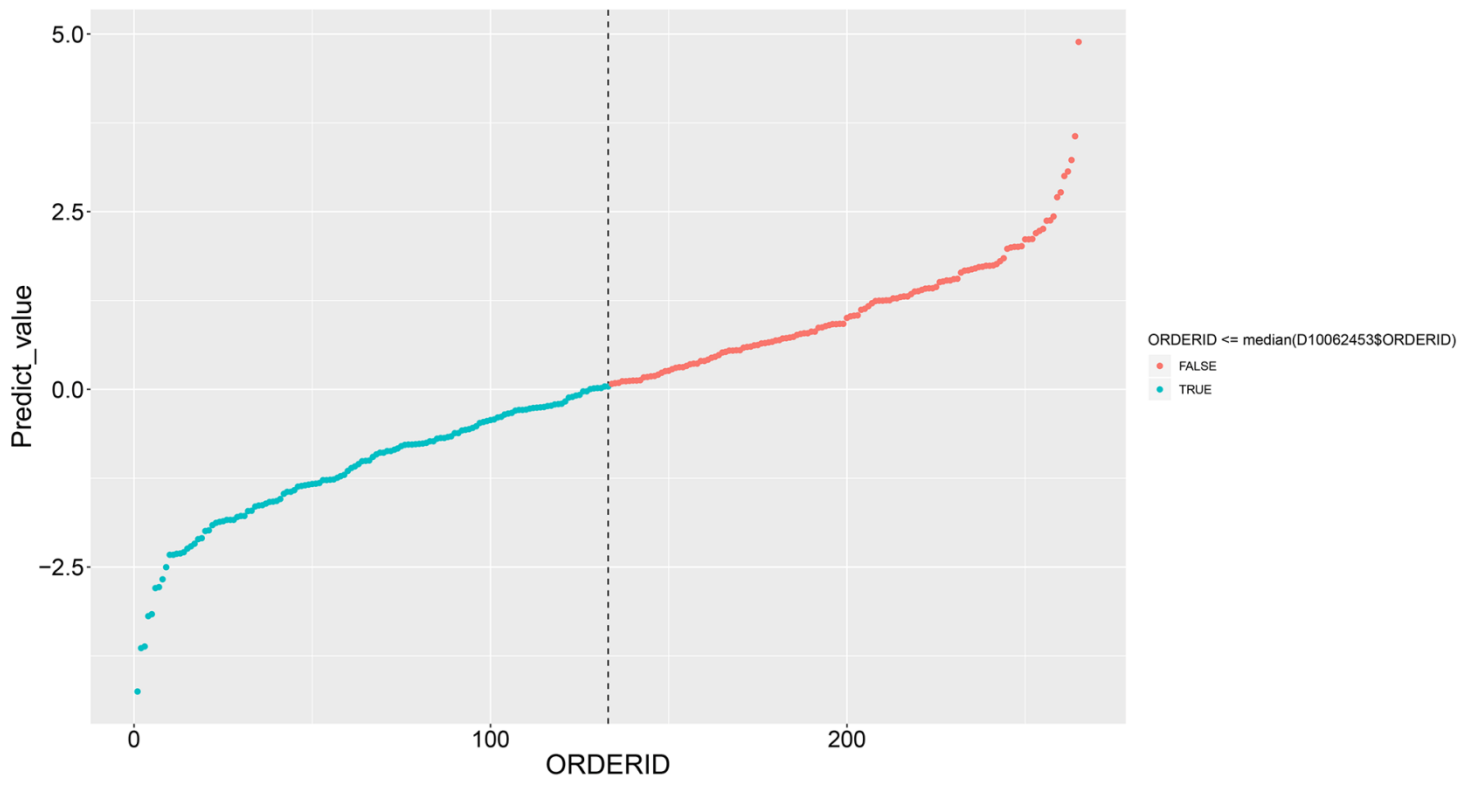
Supplementary Figure 1. Flow chart in current study



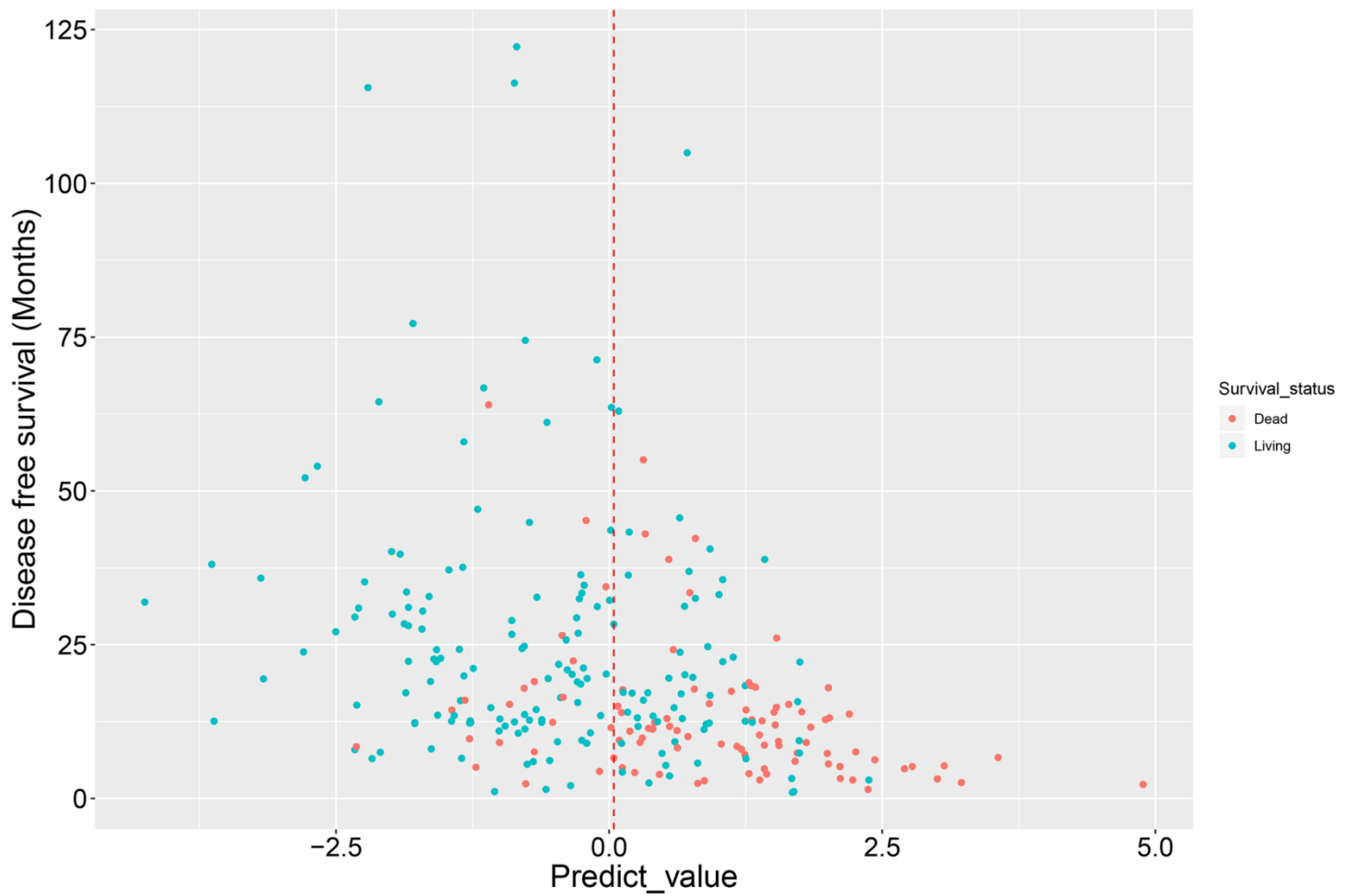
Supplementary Figure 2. Bubble chart of prognostic genes



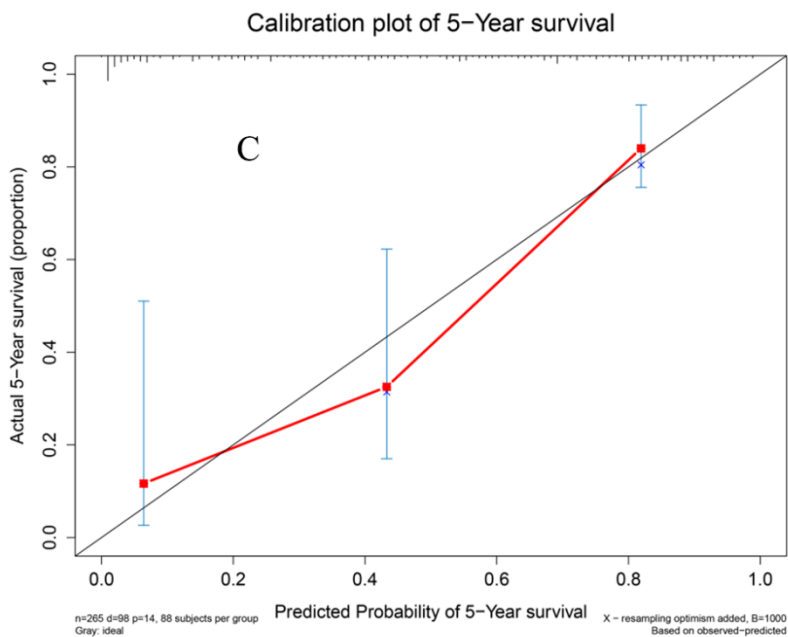
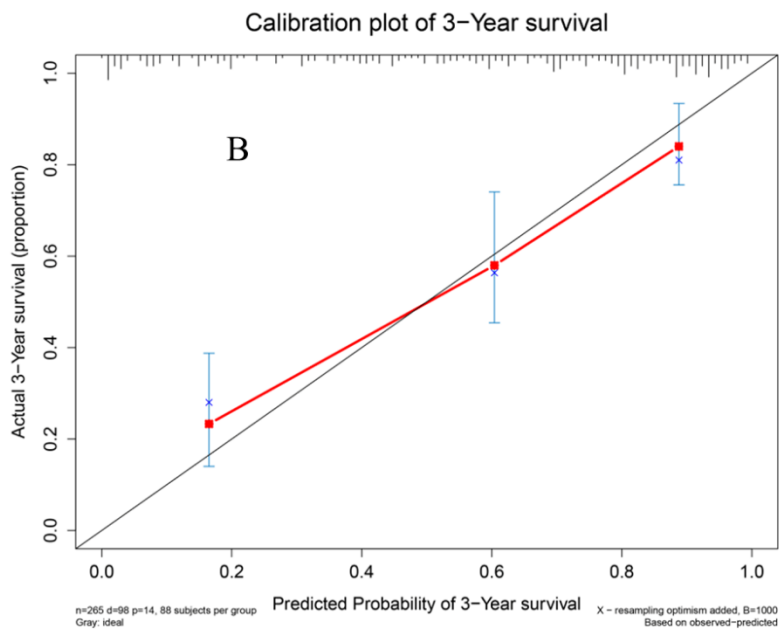
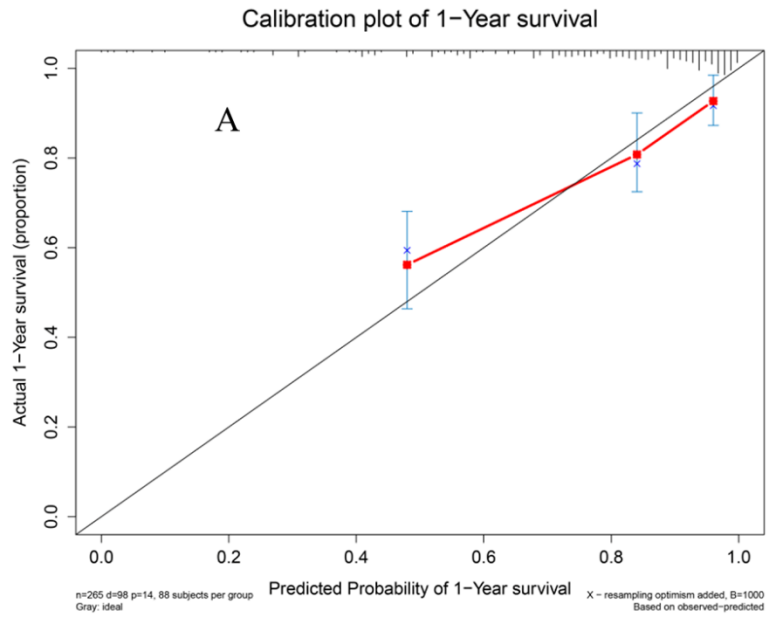
Supplementary Figure 3. Chord chart of prognostic genes



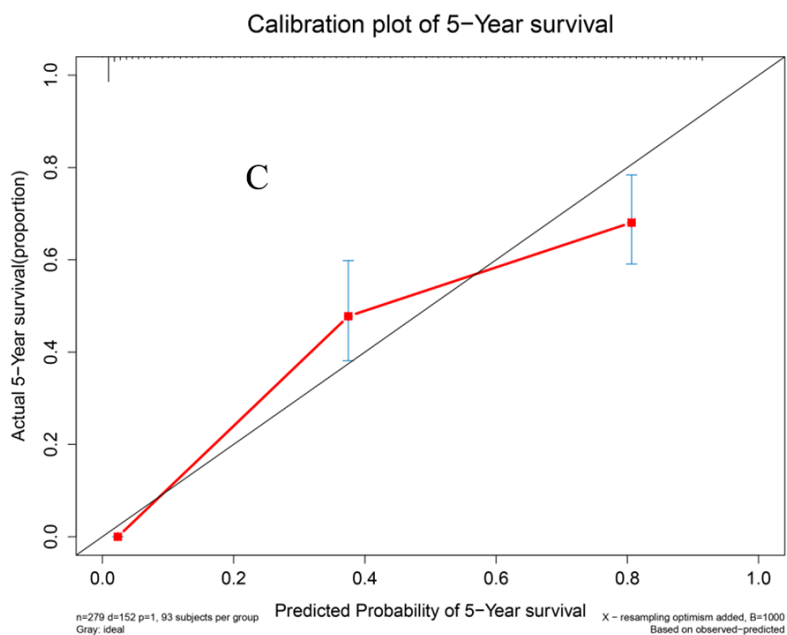
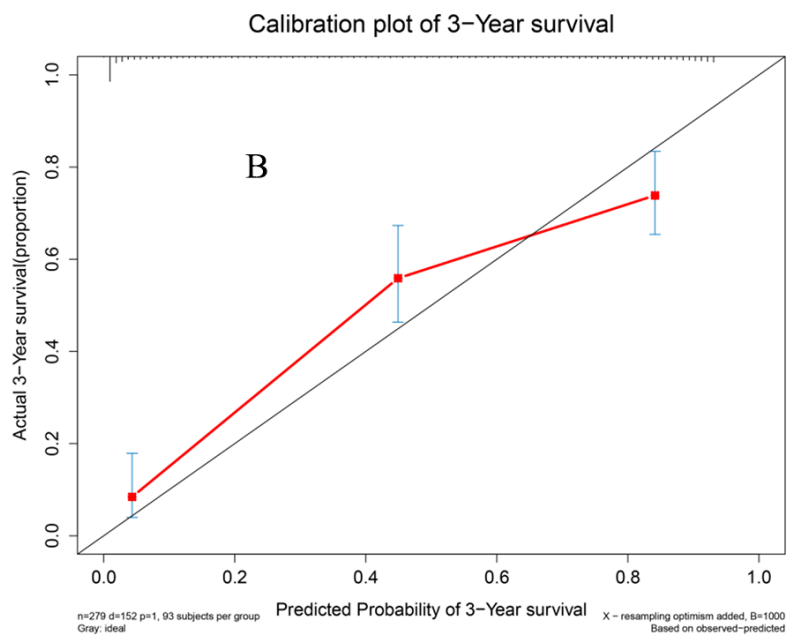
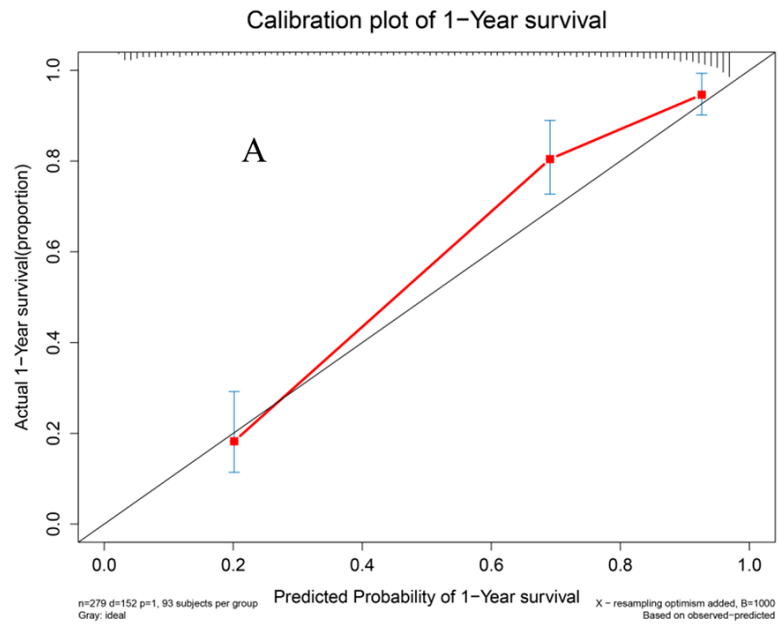
Supplementary Figure 4. Predictive value distribution chart



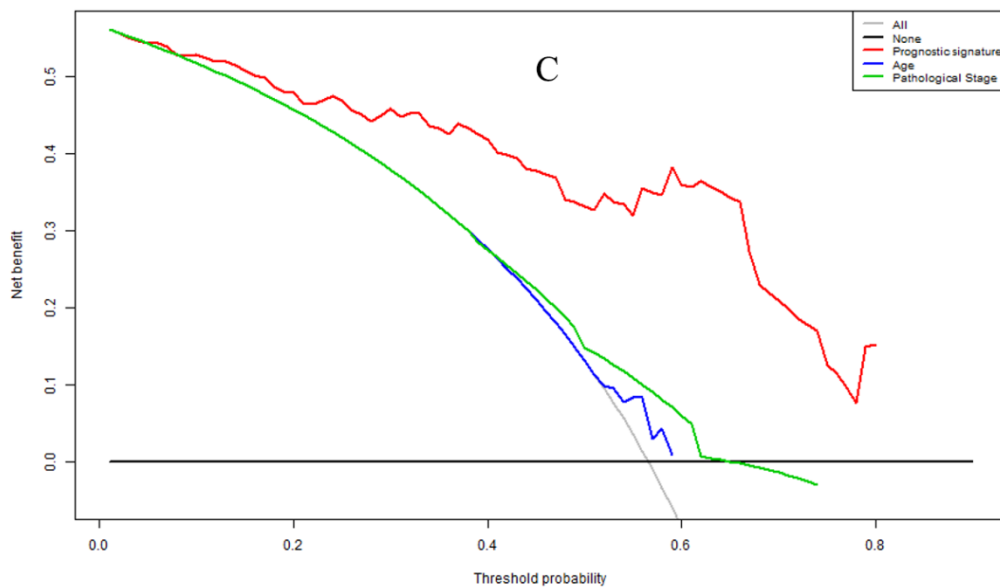
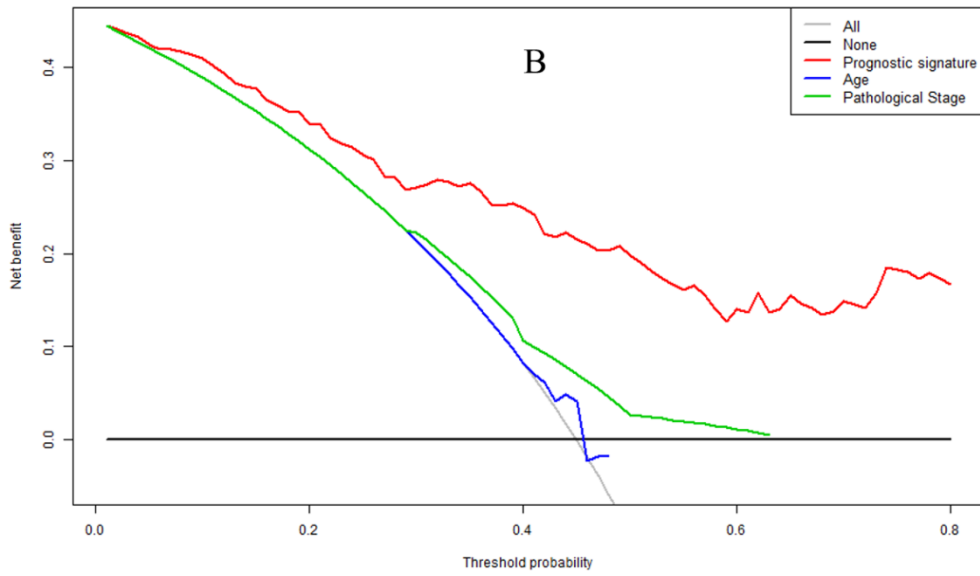
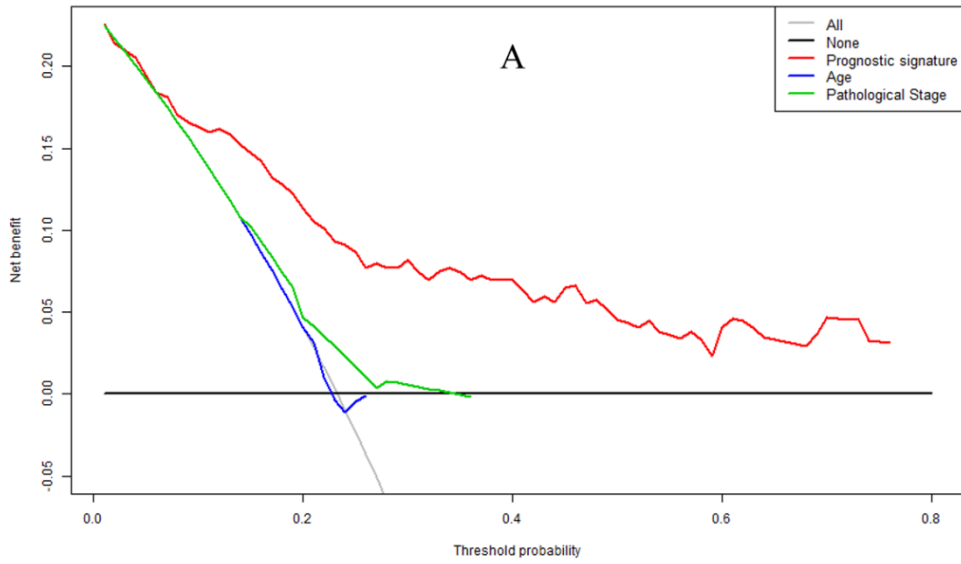
Supplementary Figure 5. Survival status scatter plot



Supplementary Figure 6. Calibration curves for model cohort: (A) Calibration curve for 1-year survival; (B) Calibration curve for 3-year survival; (C) Calibration curve for 5-year survival

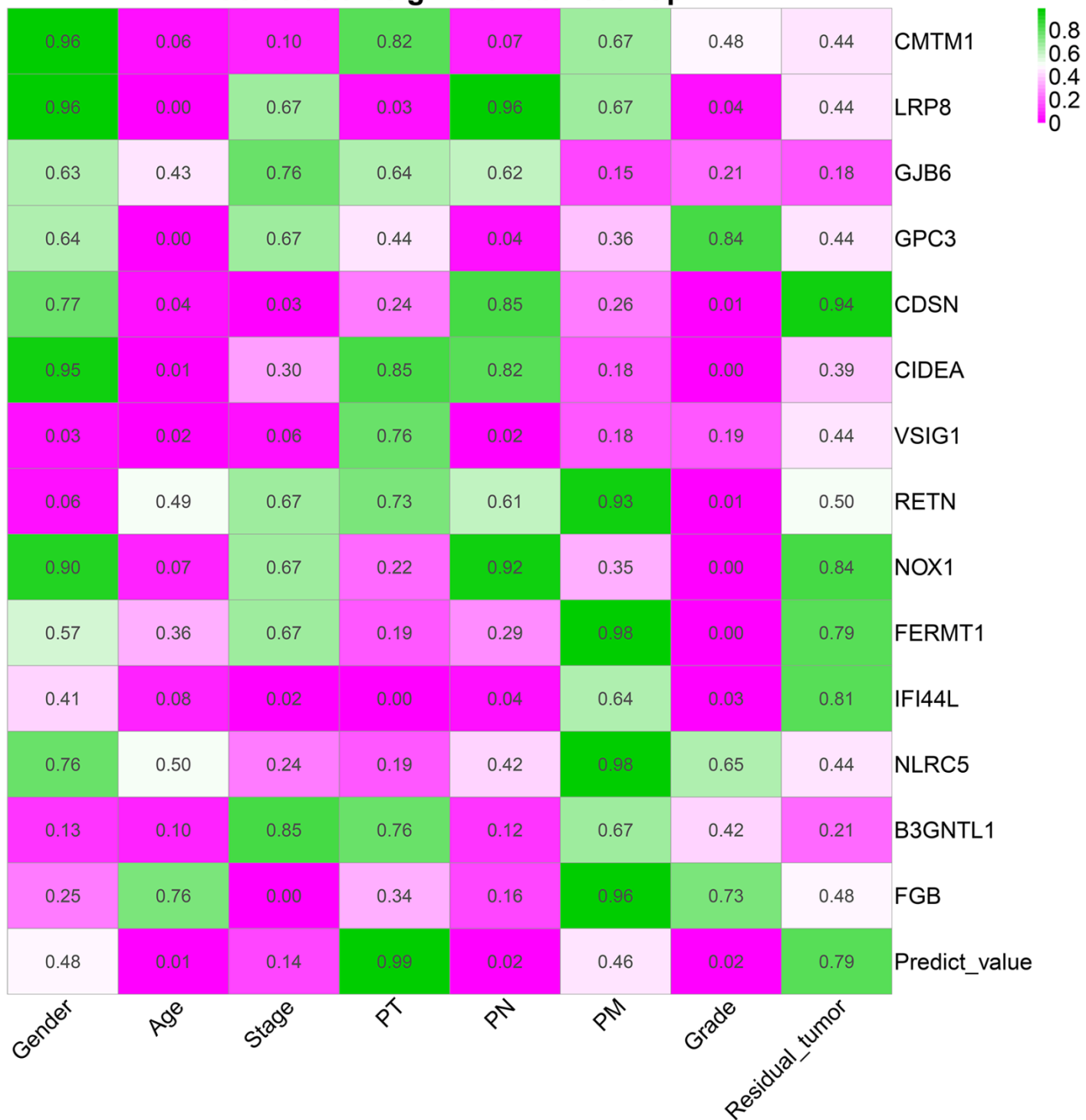


Supplementary Figure 7. Calibration curves for validation cohort: (A) Calibration curve for 1-year survival; (B) Calibration curve for 3-year survival; (C) Calibration curve for 5-year survival



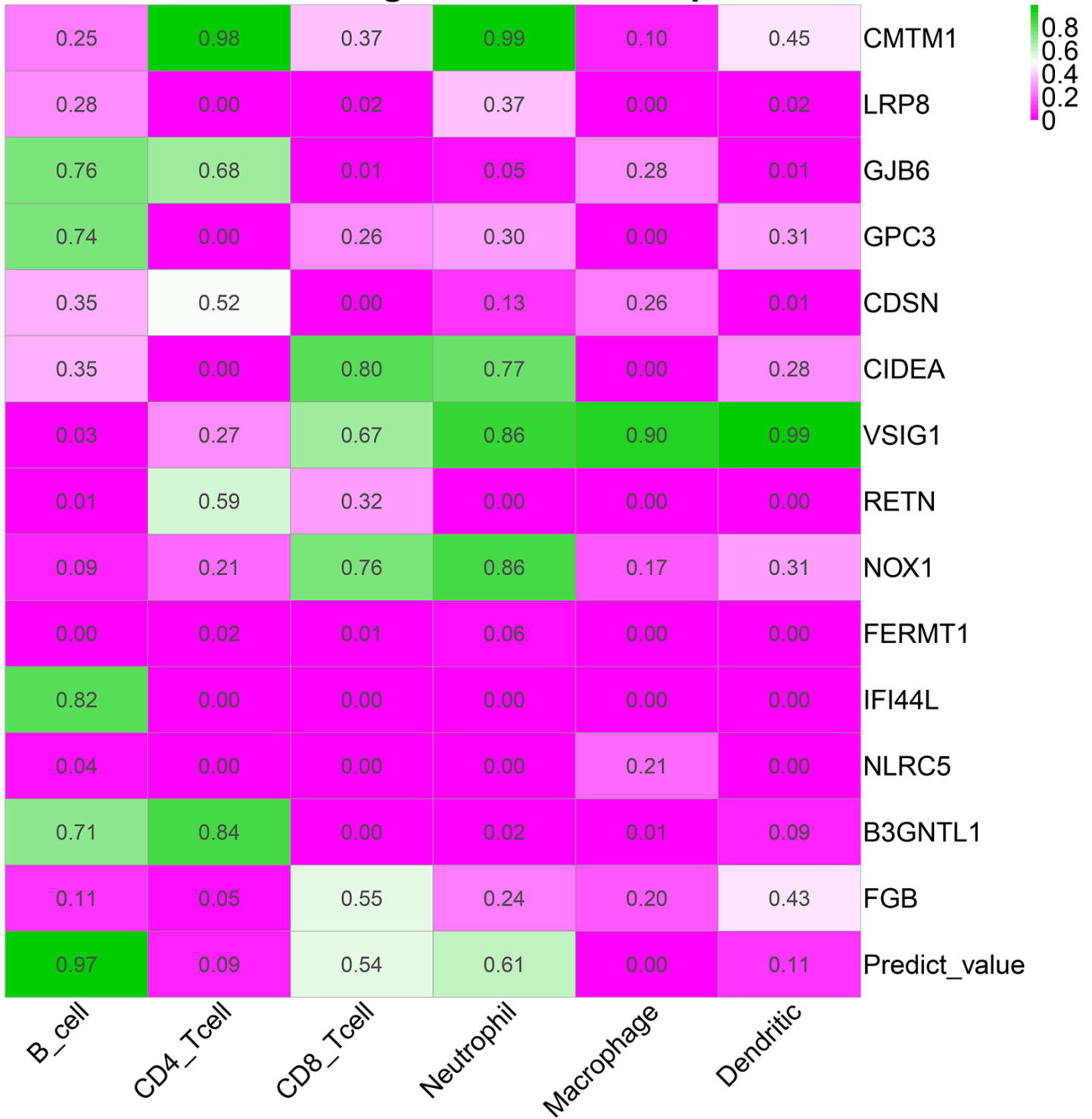
Supplementary Figure 8. Decision curve chart: (A) Decision curve chart for 1-year survival; (B) Decision curve chart for 3-year survival; (C) Decision curve chart for 5-year survival

**Correlation significance heatmap**



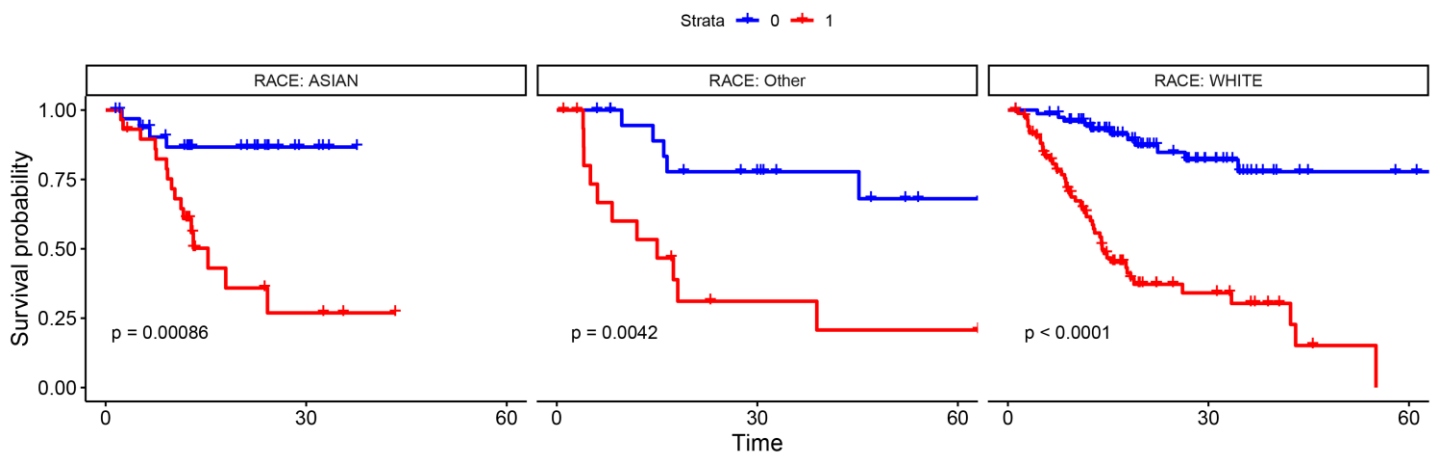
Supplementary Figure 9. Clinical variable correlation significance heatmap

## Correlation significance heatmap



Supplementary Figure 10. Immune gene correlation significance heatmap





Supplementary Figure 11. Subgroup analyses among different races