Supplementary Figures

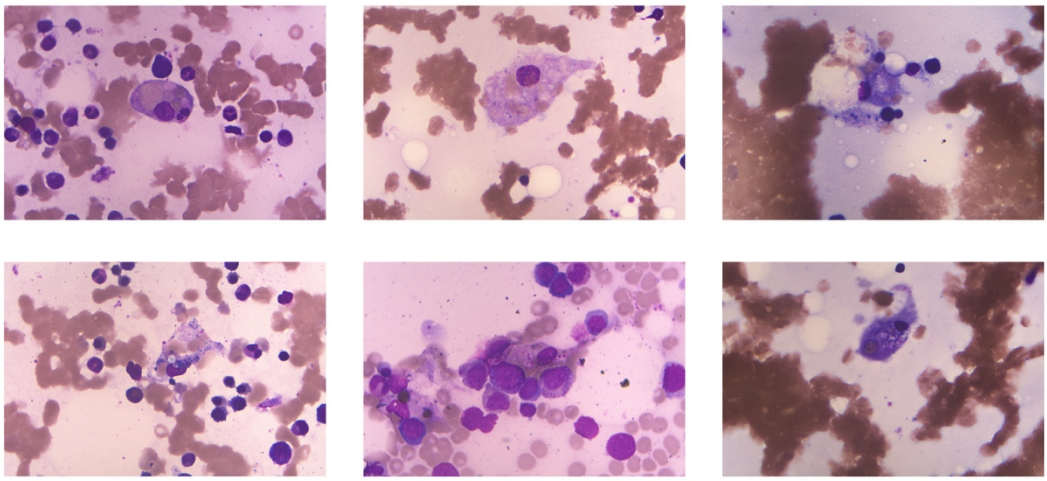

FIGURE S1. The results of bone marrow smear for several typical patients with hemophagocytic syndrome.

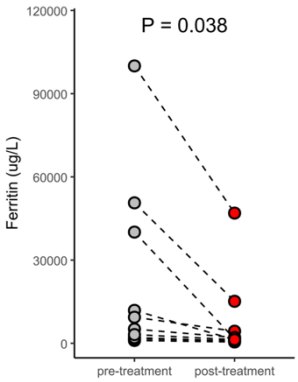

FIGURE S2. The changes in ferritin levels in several patients with hemophagocytic lymphohistiocytosis pre- and post-treatment.

The results of the paired t-test showed that the level of ferritin decreased significantly after treatment, which proved that our treatment was effective.

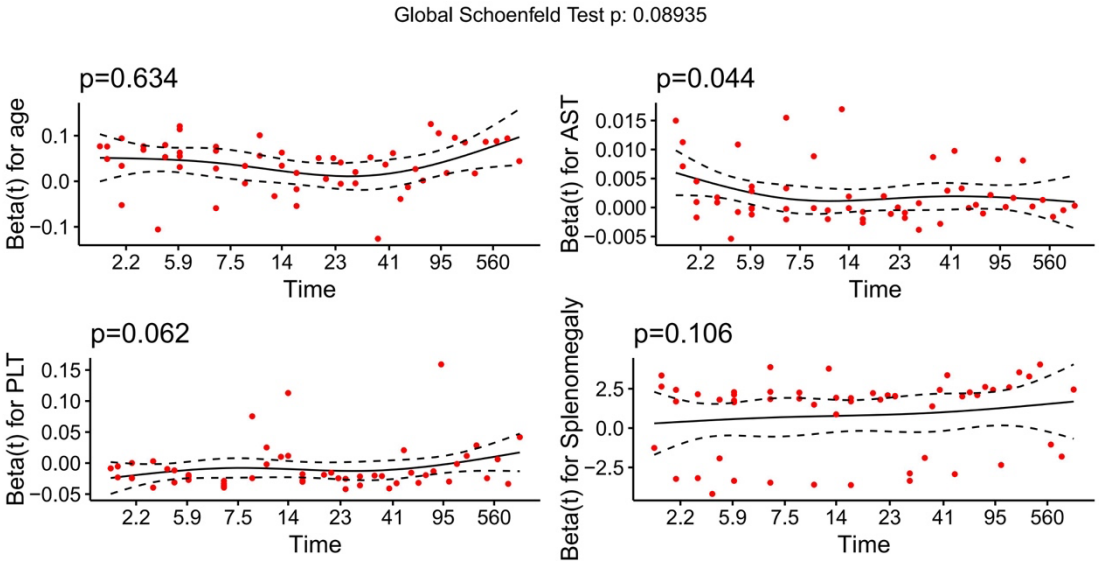

FIGURE S3. Global test of the final Cox proportional hazards model.

The dashed line represents the smoothed trend, and a non-significant p-value > 0.05 indicates no strong evidence against the proportional hazards assumption for the model overall. The non-significant p-values and the random scatter of residuals around zero (solid line) confirm that the proportional hazards assumption holds for the age, PLT and Splenomegaly over the entire study period. Schoenfeld residual plot for AST over the entire study period (p = 0.044) suggests a time-varying effect. PLT, platelets; AST, aminotransferase.

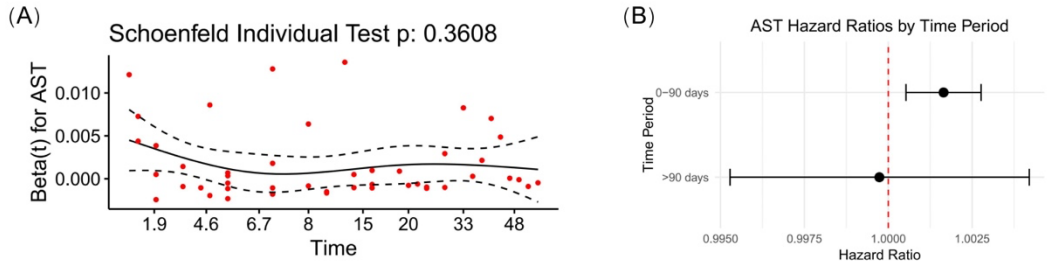

FIGURE S4. This precisely validates AST's temporal relevance for our specific prediction target.

(A) Schoenfeld residual plot for AST specifically within the 90-day timeframe. The non-significant p-value ($p = 0.36$) and random pattern of residuals confirm that the proportional hazards assumption is met for the primary prediction horizon of our model. (B) A time-stratified Cox analysis reaffirmed a strong, statistically significant association between AST levels and 90-day mortality (HR: 1.002, 95% CI: 1.001–1.003, p = 0.004), which diminished beyond 90 days (p = 0.907). PLT, platelets; AST, aminotransferase.