

Figure S1. Distribution of risk scores and survival times for the prognostic model in various datasets. Risk scores and survival times in (A) The Cancer Genome Atlas cohort and the (B) GSE8894, (C) GSE31201, (D) GSE30219, and (E) GSE42127.

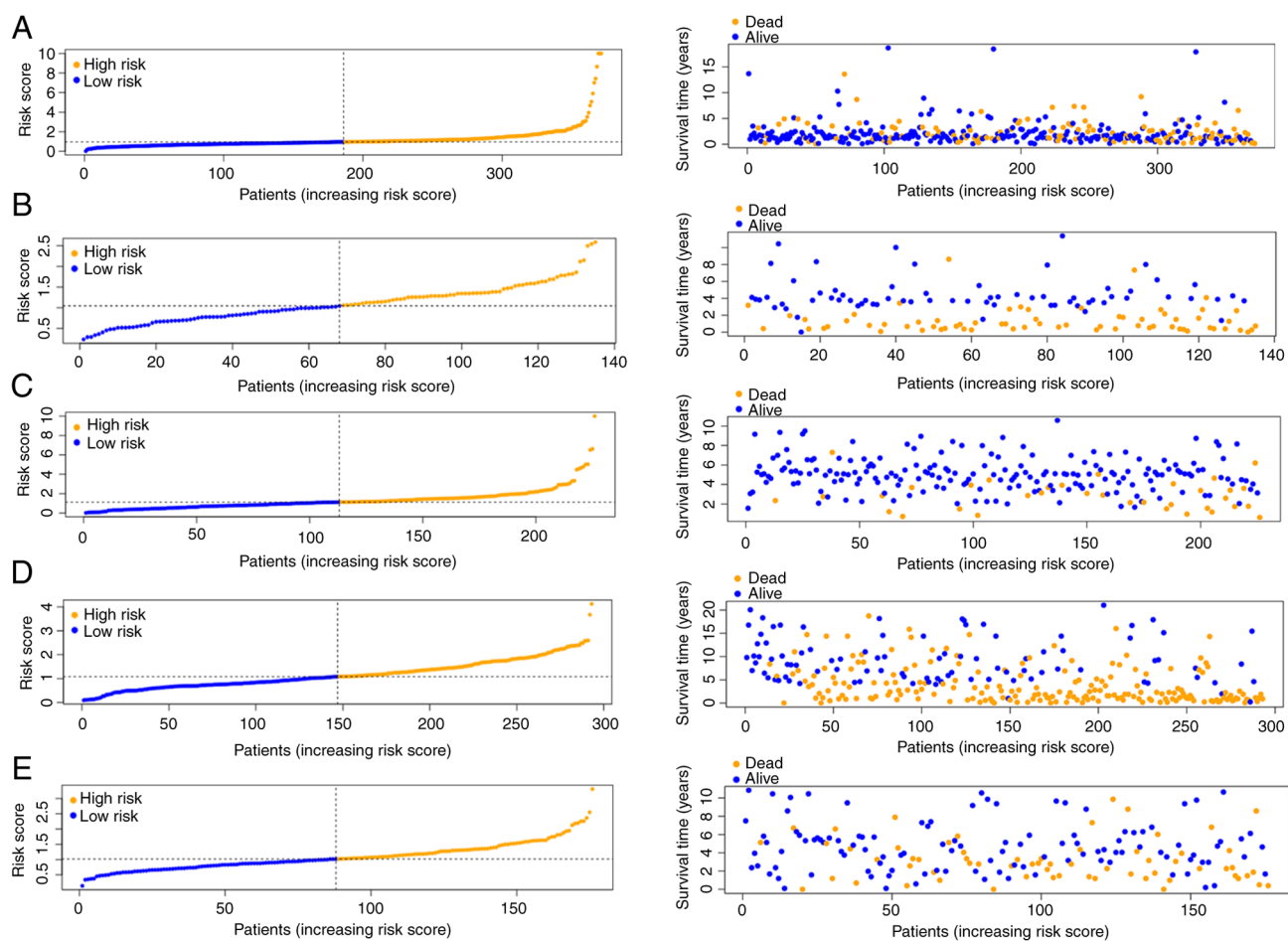


Figure S2. Correlation networks between immune cell subtypes and gene expression. In each network, the horizontal and vertical axes represent different immune cell subtypes, while the colored arcs indicate the associations between genes and immune cells. Each square in the grid corresponds to the correlation between a specific cell type and a gene, with the color intensity indicating the strength of the correlation. Positive correlations are shown in blue, while negative correlations are in red. The colored lines from the gene to the grid represent significant strong (orange lines) or weak (green lines) correlations, with the line thickness indicating the correlation strength. Abs (Cor), absolute value of the correlation coefficient; BDNF, brain-derived neurotrophic factor; GPER1, G protein-coupled estrogen receptor 1; ADRB2, adrenergic receptor b2; MAP6, microtubule associated protein 6; ANGPTL4, angiopoietin-like protein 4; LAMB3, laminin b3; RMSE, root mean square error.

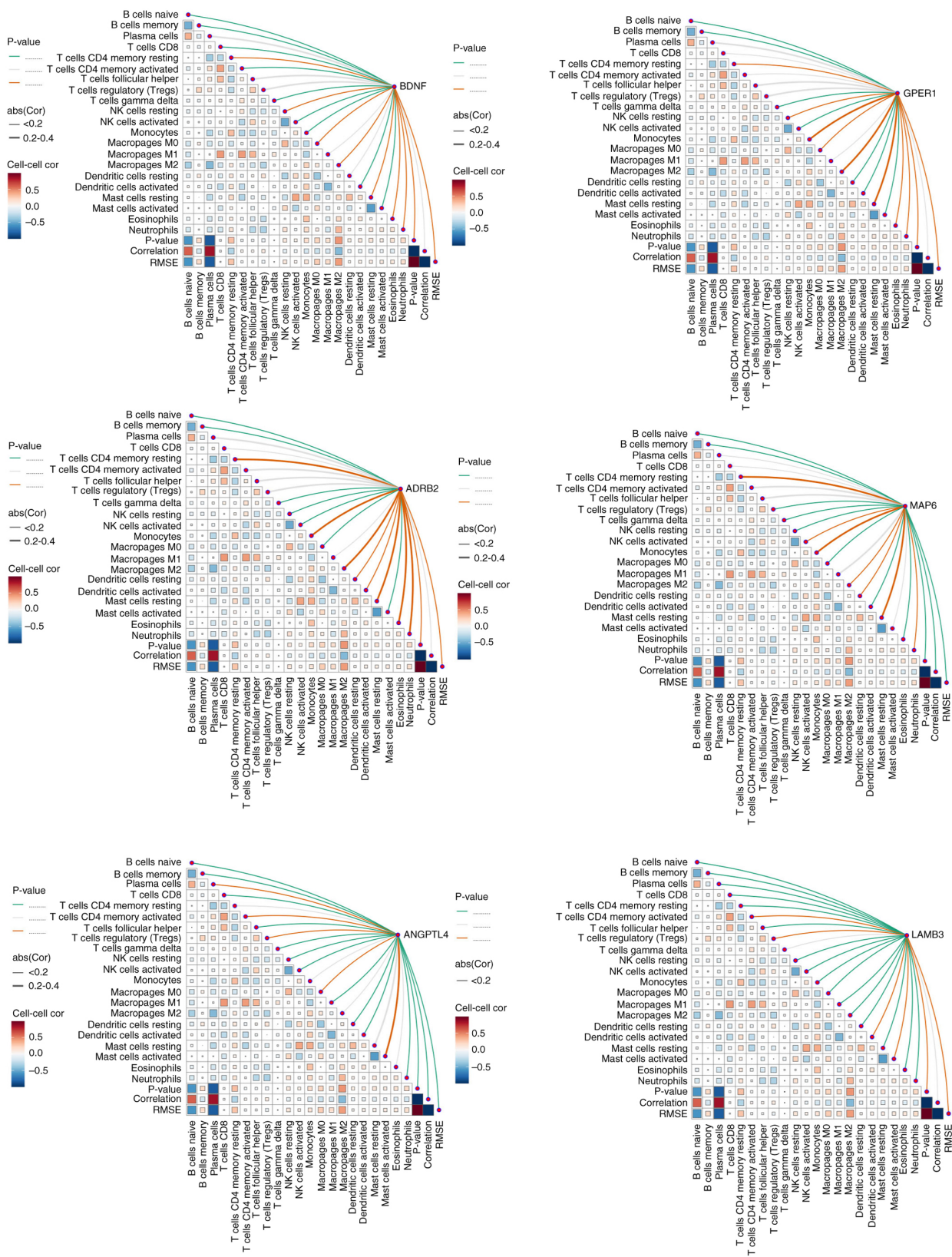


Figure S3. Immunotherapy validation cohorts. (A) Progression-free survival in the GSE135222 dataset. Differences in BDNF between responders and non-responders in the (B) GSE126044, (C) GSE111414 and (D) GSE207422 datasets. *** $P < 0.001$. BDNF, brain-derived neurotrophic factor.

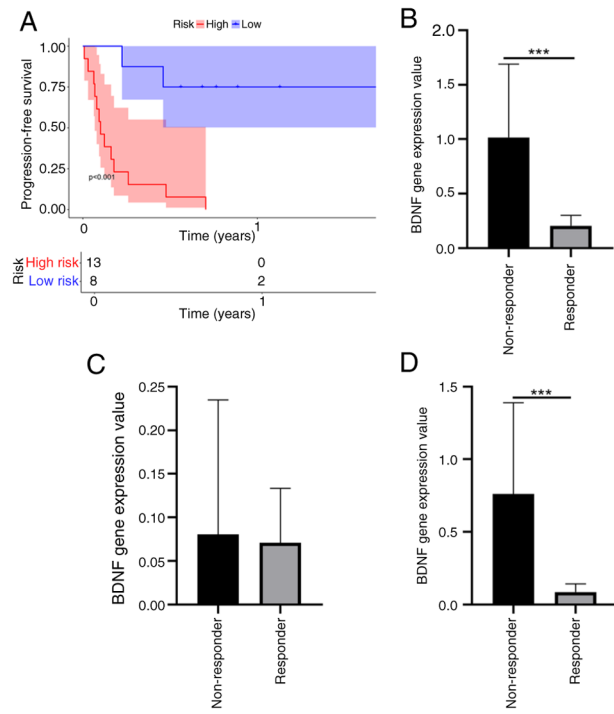


Figure S4. Sulforhodamine B assay results for A549 cells treated with Hon and/or Taxol showing an inhibitory effect of Hon on cell growth. Hon, honokiol.

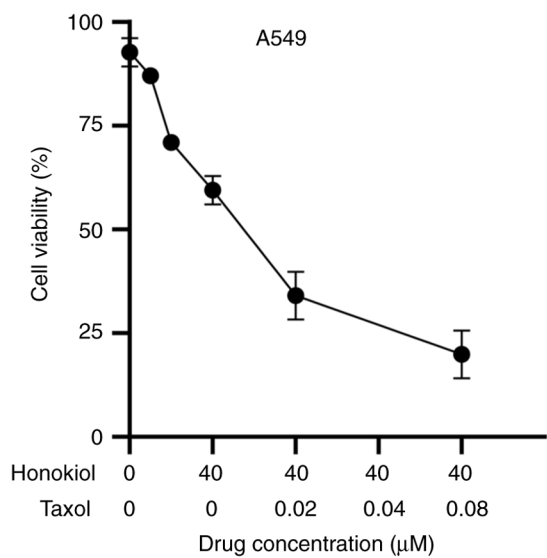
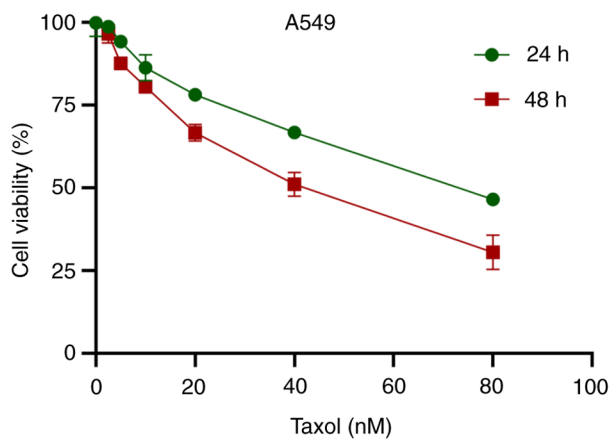
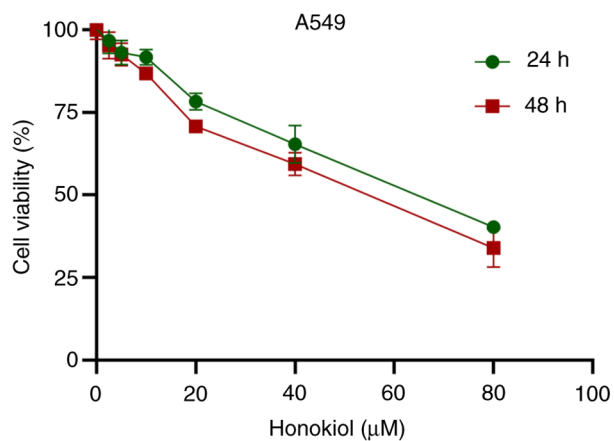


Figure S5. JC-1 staining assay results for A549 cells treated with Hon and/or Taxol. ***P<0.001 and ****P<0.0001. Hon, honokiol.

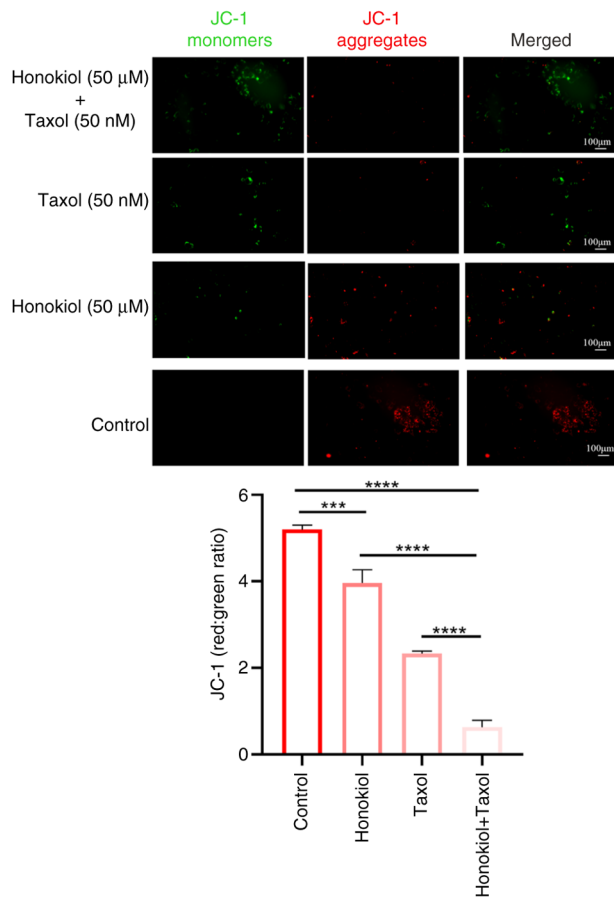


Figure S6. Western blotting results showing the effect of BDNF-knockdown on Lewis lung carcinoma cells. **P<0.01 and ***P<0.0001. BDNF, brain-derived neurotrophic factor; si, small interfering RNA; NC, negative control; p, phosphorylated; RIPK1, receptor-interacting protein kinase 1; CASP, caspase.

