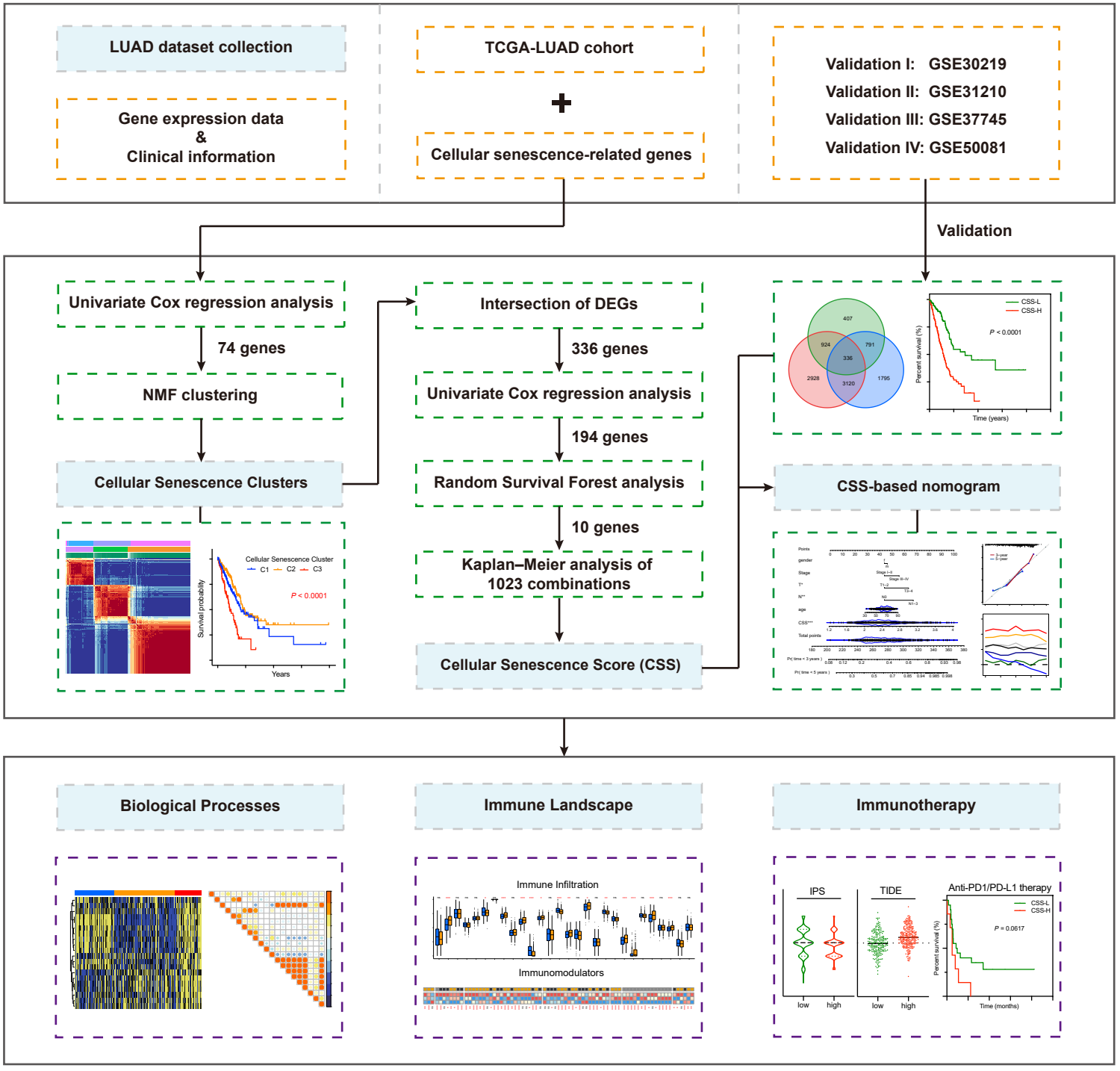
LUAD dataset collection
Gene expression data
&
Clinical information
TCGA-LUAD cohort
+
Cellular senescence-related genes
Validation I: GSE30219
Validation II: GSE31210
Validation III: GSE37745
Validation IV: GSE50081
Validation
Univariate Cox regression analysis
74 genes
NMF clustering
Cellular Senescence Clusters
Cellular Senescence Cluster
C1
C2
C3
P < 0.0001
Survival probability
Years
Intersection of DEGs
336 genes
Univariate Cox regression analysis
194 genes
Random Survival Forest analysis
10 genes
Kaplan–Meier analysis of
1023 combinations
Cellular Senescence Score (CSS)
407
924
791
336
2928
3120
1795
CSS-L
CSS-H
P < 0.0001
Percent survival (%)
Time (years)
CSS-based nomogram
Biological Processes
Immune Landscape
Immunotherapy
Immune Infiltration
Immunomodulators
IPS
TIDE
low
high
low
high
Anti-PD1/PD-L1 therapy
CSS-L
CSS-H
P = 0.0617
Percent survival (%)
Time (months)