

GEO, ArrayExpress, TCGA, and ICGC  
transcriptome profile of male cohort



MASLD: Training datasets (GSE48452, GSE61260,  
EMEXP3291) and Validation datasets (GSE89632)

Early HCC: Training datasets (GSE76427, TCGA,  
ICGC) and Validation datasets (GSE84005)



Differential expression analysis (DEA)  
and Robust rank aggregation (RRA)

Diagnosis prediction signatures for  
MASLD and early stage HCC



Elastic net and ROC curve analyses



Diagnosis prediction model  
for MASLD (DP.MASLD score)



Diagnosis prediction model for  
early stage HCC (DP.HCC score)



WGCNA and GSEA analyses

Molecular function and oncogenesis mechanism