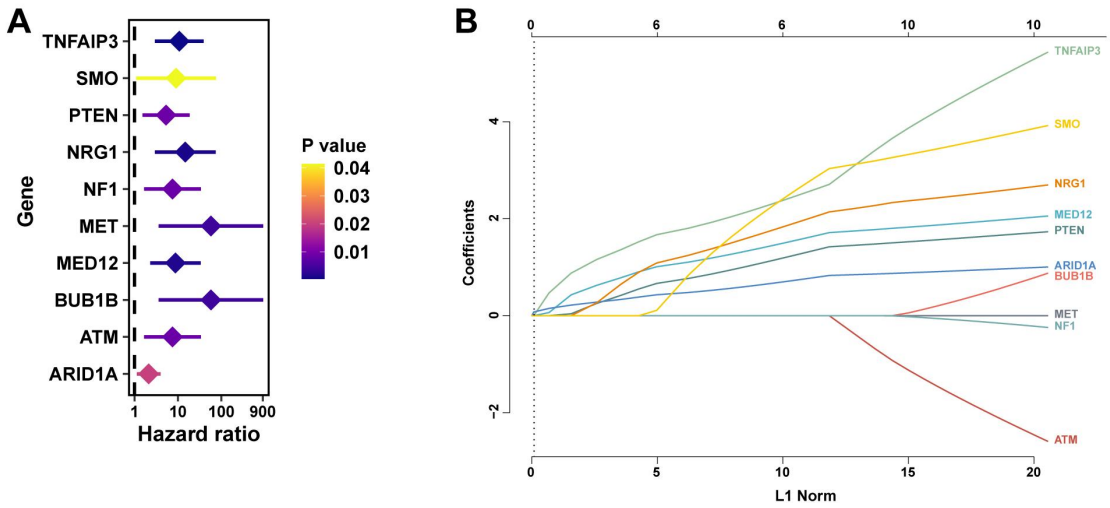

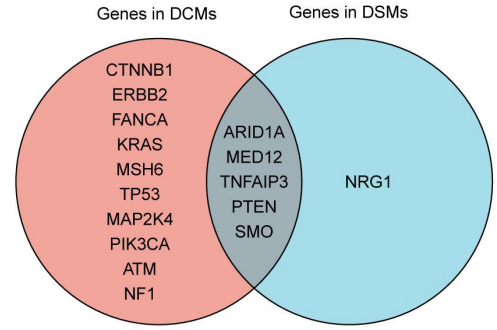

D

Dependent on DSMs	Independent on DSMs
ARID1A_MAP2K4	ERBB2_PIK3CA
ARID1A_PIK3CA	ERBB2_ATM
ARID1A_PTEN	FANCA_MSH6
CTNNB1_PTEN	TP53_ATM
FANCA_TNFAIP3	TP53_NF1
KRAS_SMO	
MED12_TP53	
MSH6_TNFAIP3	
TNFAIP3_TP53	
TNFAIP3_ATM	
TNFAIP3_NF1	

Supplementary Fig. S2. Identification of DSMs and their overlap with DCMs. A, Univariate Cox regression identifying DSMs associated with overall survival. B, LASSO regression selecting DSMs with the strongest prognostic effect. C, Overlap between DSM genes and DCM-related gene sets. D, Classification of DCMs based on their prognostic dependency on DSMs.