

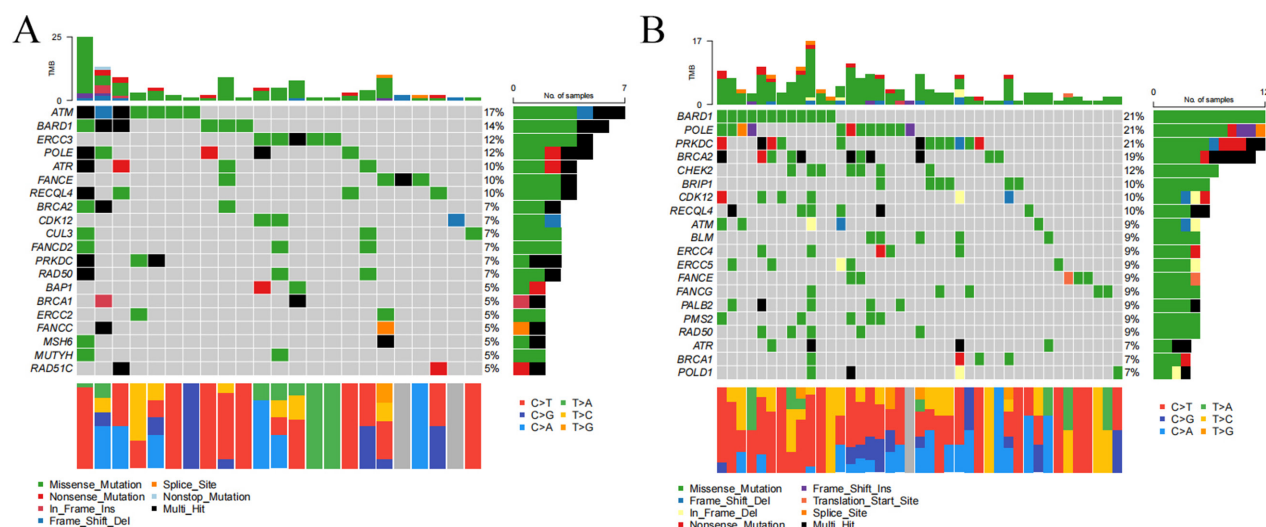


Figure S1 Mutation profile of 47 DNA damage and repair (DDR) genes in lung adenocarcinoma (A) and squamous lung cancer (B).

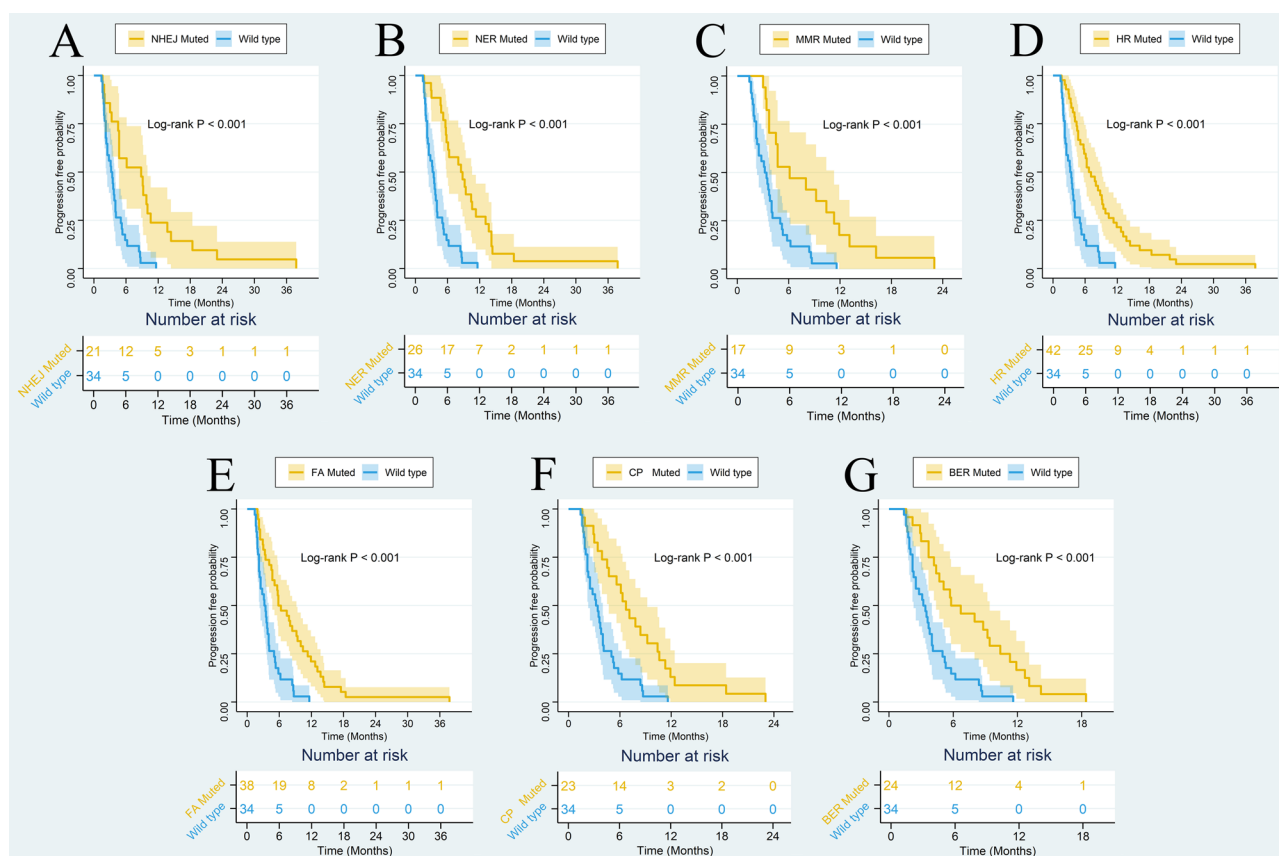


Figure S2 PFS of NSCLC patients with alteration in NHEJ (A), NER (B), MMR (C), HR (D), FA (E), CP (F), and BER (G) compared with DDRwt group. NHEJ, non-homologous end joining; NER, nucleotide excision repair; MMR, mismatch repair; HR, homologous recombination; FA, Fanconi anemia pathway; CP, cell-cycle checkpoint; BER, base excision repair.

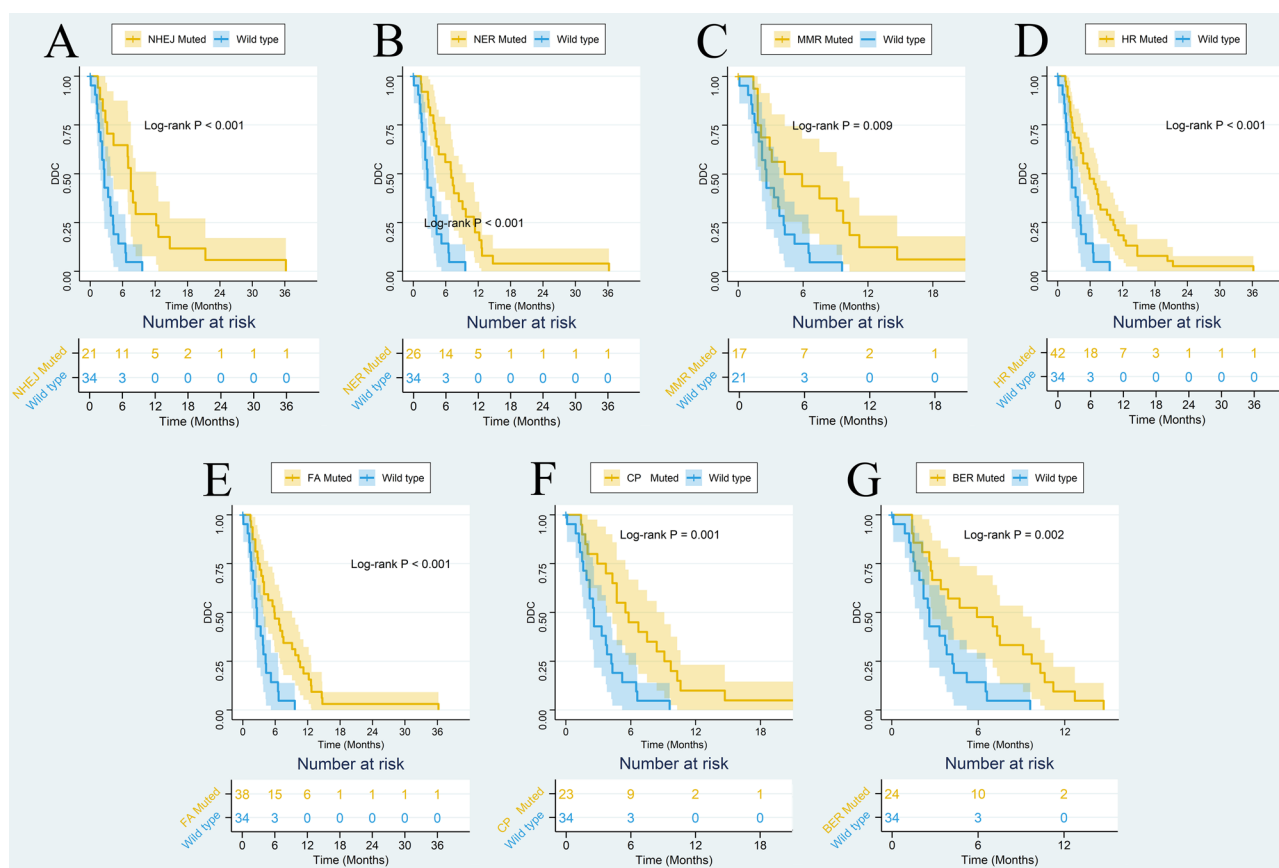


Figure S3 DDC of NSCLC patients with alteration in NHEJ (A), NER (B), MMR (C), HR (D), FA (E), CP (F), and BER (G) compared with DDRwt group. DDC, duration of disease control; NHEJ, non-homologous end joining; NER, nucleotide excision repair; MMR, mismatch repair; HR, homologous recombination; FA, Fanconi anemia pathway; CP, cell-cycle checkpoint; BER, base excision repair.

Table S1 The univariate Cox regression results for PFS

Characteristics	Hazard ratio (95% CI)	P value
DDR		
DDRwt	Reference	
DDRmut	3.102 (1.981–4.857)	<0.001
Gender =female	0.733 (0.407–1.319)	0.30
Age ≤60 (years)	0.906 (0.608–1.349)	0.63
Smoke =no	0.743 (0.444–1.242)	0.26
Pathological type		
Squamous carcinoma	Reference	
Adenocarcinoma	1.024 (0.684–1.534)	0.91
Large cell carcinoma	0.864 (0.118–6.324)	0.89
TNM =IV	1.009 (0.680–1.499)	0.96
Chemotherapy		
Pemetrexed	Reference	
Gemcitabine	1.175 (0.417–3.307)	0.76
Paclitaxel	1.037 (0.680–1.581)	0.87
Docetaxel	0.468 (0.196–1.117)	0.09
ECOG =1	0.658 (0.428–1.012)	0.056
Lymph node	1.048 (0.836–1.313)	0.68

DDRmut, DDR-mutant; DDRwt, DDR-wild type; PFS, progression-free survival.

Table S2 The univariate Cox regression results for OS

Characteristics	Hazard ratio (95% CI)	P value
DDR		
DDRwt	Reference	
DDRmut	2.217 (1.229–3.997)	0.008
Gender=female	0.516 (0.231–1.149)	0.11
Age ≤60 (years)	0.926 (0.566–1.517)	0.76
Smoke =no	0.555 (0.281–1.099)	0.09
Pathological type		
Squamous carcinoma	Reference	
Adenocarcinoma	0.862 (0.522–1.421)	0.56
Large cell carcinoma	2.849 (0.378–21.438)	0.31
TNM=IV	1.176 (0.717–1.931)	0.52
Chemotherapy		
Pemetrexed	Reference	
Gemcitabine	1.075 (0.372–3.101)	0.89
Paclitaxel	0.802 (0.477–1.348)	0.41
Docetaxel	0.374 (0.113–1.238)	0.11
ECOG =1	0.888 (0.536–1.471)	0.65
Lymph node	0.903 (0.696–1.170)	0.44

DDRmut, DDR-mutant; DDRwt, DDR-wild type; ECOG, eastern cooperative oncology group; OS, overall survival.