Table S1 Baseline characteristics of the included healthy controls

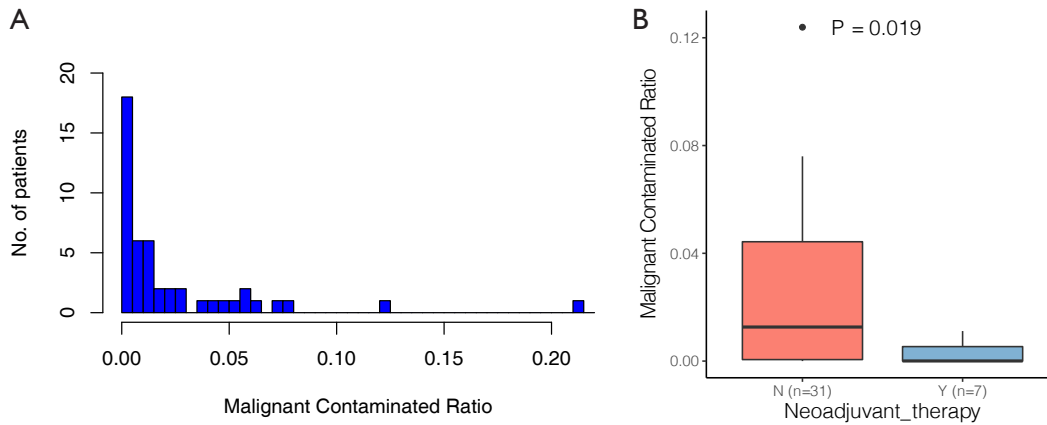| Variable	Healthy controls (n=48)
Age, median [range], years	44 [32–89]
Sex, n (%)	
Male	39 (91.2)
Female	9 (18.8)

Figure S1 The association of MCR and prognosis in resected stage LUSC (n=49). (A) The distribution of MCR. (B) The MCR of patients who underwent neoadjuvant therapy and those who did not. MCR, malignant contaminated ratio; LUSC, lung squamous cell carcinoma.
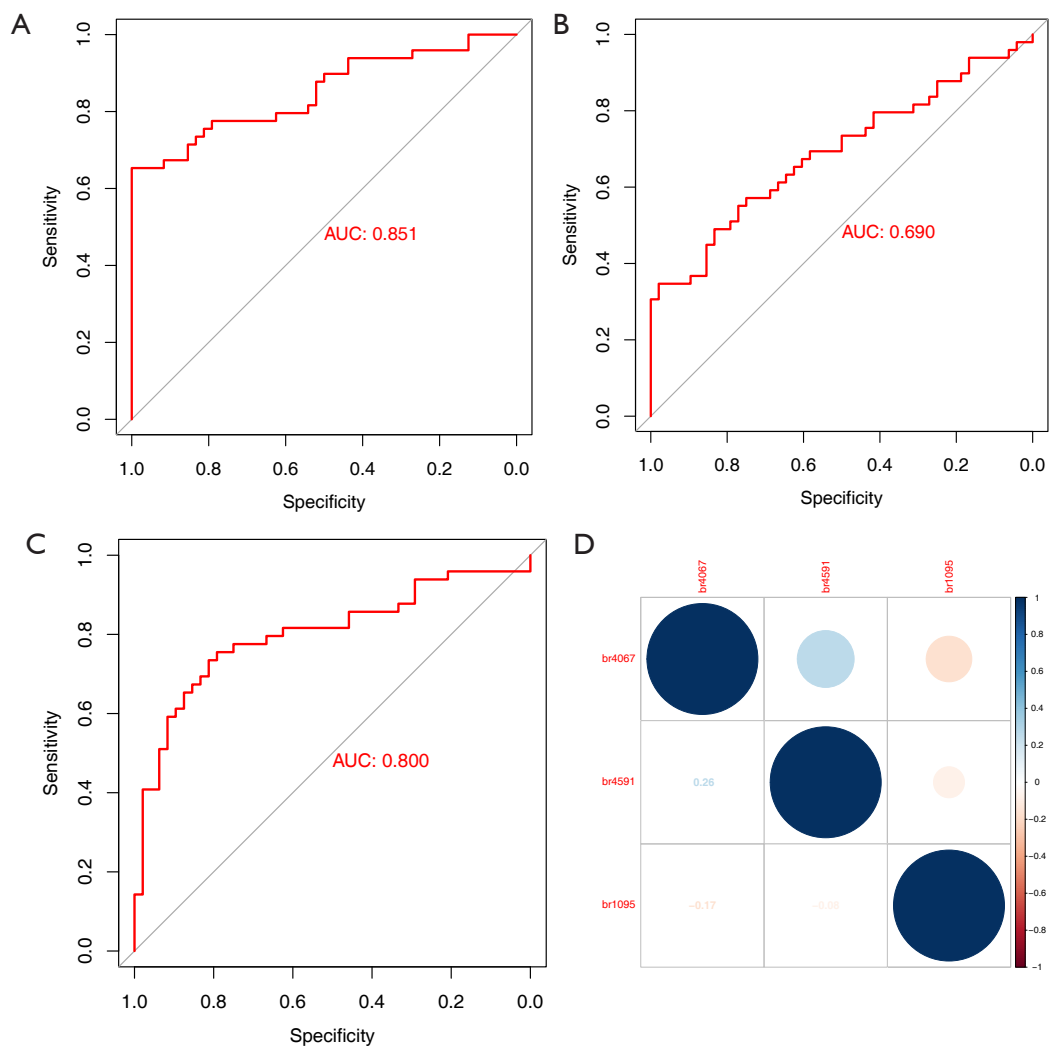
Figure S2 ROC curves of the individual block for LUSC diagnosis and correlation between blocks. The ROC of br1095 (A), br4067 (B), and br4591 (C) for LUSC diagnosis in normal controls and patients with LUSC. (D) The correlation between blocks. AUC, area under the curve; ROC, receiver operating characteristic; LUSC, lung squamous cell carcinoma.
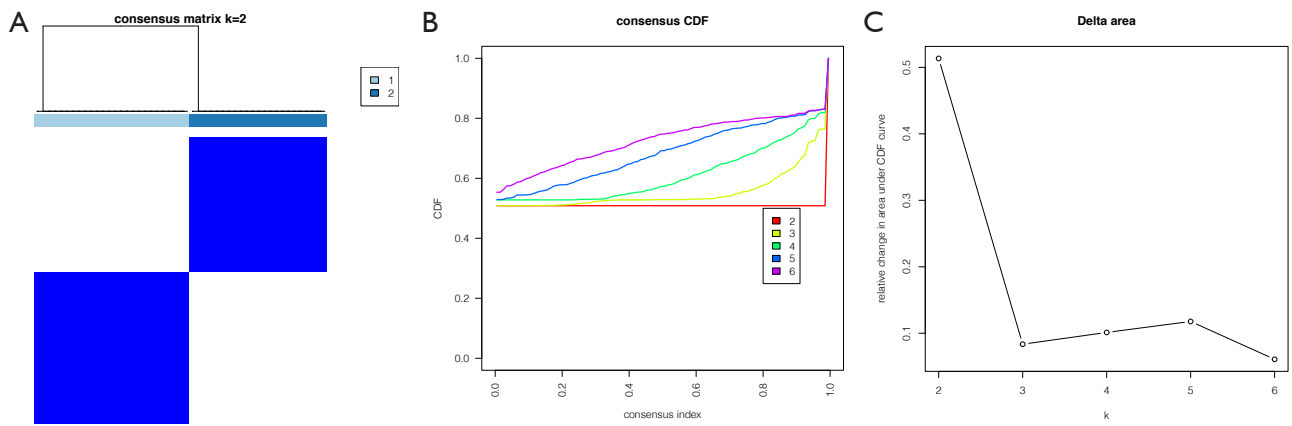
Figure S3 Non-supervised clustering of LUSC samples. (A) Consensus clustering matrix for k=2, which was the optimal cluster number in the LUSC cohort. (B) CDF curves of the consensus score (k=2–6) in the LUSC cohorts. (C) Relative change in the area under the CDF curve (k=2–6) in the LUSC cohort. LUSC, lung squamous cell carcinoma; CDF, cumulative distribution function.