

Table S1 60 Ferroptosis-related genes

Ferroptosis-related genes	Name
<i>ACSL4</i>	acyl-CoA synthetase long-chain family member 4
<i>AKR1C1</i>	aldo-keto reductase family 1 member C1
<i>AKR1C2</i>	aldo-keto reductase family 1 member C2
<i>AKR1C3</i>	aldo-keto reductase family 1 member C3
<i>ALOX15</i>	arachidonate 15-lipoxygenase
<i>ALOX5</i>	arachidonate 5-lipoxygenase
<i>ALOX12</i>	arachidonate 12-lipoxygenase
<i>ATP5MC3</i>	ATP synthase membrane subunit c locus 3
<i>CARS</i>	cysteinyl tRNA synthetase
<i>CBS</i>	cystathionine beta synthase
<i>CD44</i>	CD44 molecule
<i>CHAC1</i>	ChaC glutathione- specific gamma-glutamyl cyclotransferase 1
<i>CISD1</i>	CDGSH iron sulfur domain 1
<i>CS</i>	citrate synthase
<i>DPP4</i>	dipeptidyl-dipeptidase-4
<i>FANCD2</i>	Fanconi anemia complementation group D2
<i>GCLC</i>	glutamate-cysteine ligase catalytic subunit
<i>GCLM</i>	glutamate-cysteine ligase modifier subunit
<i>GLS2</i>	glutaminase 2
<i>GPX4</i>	glutathione peroxidase 4
<i>GSS</i>	glutathione synthetase
<i>HMGCR</i>	3-hydroxy-3-methylglutaryl-CoA reductase
<i>HSPB1</i>	heat shock protein beta 1
<i>CRYAB</i>	heat shock protein beta 5
<i>LPCAT3</i>	lysophosphatidylcholine acyltransferase 3
<i>MT1G</i>	metallothionein-1G
<i>NCOA4</i>	nuclear receptor coactivator 4
<i>PTGS2</i>	prostaglandin-endoperoxide synthase 2
<i>RPL8</i>	ribosomal protein L8
<i>SAT1</i>	spermidine/spermine N1-acetyltransferase 1
<i>SLC7A11</i>	solute carrier family 7 member 11
<i>FDFT1</i>	farnesyl-diphosphate farnesyltransferase 1
<i>TFRC</i>	transferrin receptor
<i>TP53</i>	tumor protein 53

Table S1 (continued)

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Ferroptosis-related genes	Name
<i>EMC2</i>	ER membrane protein complex subunit 2
<i>AIFM2</i>	apoptosis inducing factor mitochondria associated 2
<i>PHKG2</i>	phosphorylase kinase, g2
<i>HSBP1</i>	heat-shock 27-k Da protein 1
<i>ACO1</i>	aconitase 1
<i>FTH1</i>	ferritin heavy chain 1
<i>STEAP3</i>	six-transmembrane epithelial antigen of prostate 3
<i>NFS1</i>	cysteine desulfurase
<i>ACSL3</i>	acyl-CoA synthetase long-chain family member 3
<i>ACACA</i>	Acetyl-CoA carboxylase alpha
<i>PEBP1</i>	phosphatidylethanolamine-binding protein 1
<i>ZEB1</i>	zinc finger E-box-binding homeobox 1
<i>SQLE</i>	squalene monooxygenase
<i>FADS2</i>	fatty acid desaturase 2/acyl-CoA 6-desaturase
<i>NFE2L2</i>	nuclear factor, erythroid 2 like 2
<i>KEAP1</i>	kelch-like ECH- associated protein 1
<i>NQO1</i>	quinone oxidoreductase-1
<i>NOX1</i>	NADPH oxidase 1
<i>ABCC1</i>	ATP binding cassette subfamily C member 1
<i>SLC1A5</i>	solute carrier family 1 member 5
<i>GOT1</i>	glutamic-oxaloacetic transaminase 1
<i>G6PD</i>	glucose-6-phosphate dehydrogenase
<i>PGD</i>	phosphoglycerate dehydrogenase
<i>IREB2</i>	iron response element-binding protein 2
<i>HMOX1</i>	heme oxygenase 1
<i>ACSF2</i>	acyl-CoA synthetase family member 2

Table S2 Gene Symbol of 5 CpGs in the model

CpGs	Gene symbol
cg02916418	<i>PGD</i>
cg05373863	<i>SLC7A11</i>
cg07137701	<i>ZEB1</i>
cg13028471	<i>SLC7A11</i>
cg15044146	<i>ACACA</i>

Table S3 correlation analysis of gene expression and methylation

CpGs	Gene symbol	r	P
cg02916418	<i>PGD</i>	-0.45	1.39E-19
cg05373863	<i>SLC7A11</i>	-0.07	2.07E-01
cg07137701	<i>ZEB1</i>	0.10	4.60E-02
cg13028471	<i>SLC7A11</i>	-0.16	1.63E-03
cg15044146	<i>ACACA</i>	-0.02	7.25E-01

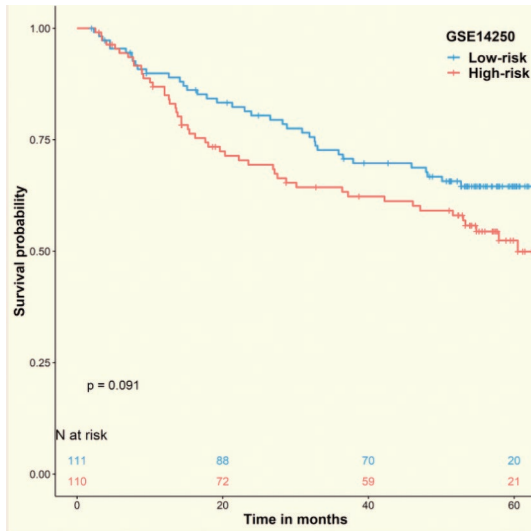


Figure S1 The transcription score was validated in an independent dataset GSE14250, which demonstrated that high-risk group had significant shorter survival time than low-risk group (HR =2.72, 95% CI: 1.19–6.20, P=0.0175, log-rank P=0.0098).