**Supporting Information**

Table S1 Expression of FBX8 in HCC tissues, cirrhotic liver and adjacent normal liver tissues

|  |  |  |
| --- | --- | --- |
| Group | FBX8 expression | Total |
| - | + | ++ | +++ |
| Noncancerous liver tissues | 5 | 30 | 49 | 36 | 106 |
| Cirrhotic liverAdjacent normal liver | 00 | 16 | 1021 | 2345 | 3472 |
| HCC tissues | 61 | 22 | 22 | 1 | 106 |
|  HCC tissues with cirrhosisHCC tissues without cirrhosis | 2833 | 1210 | 913 | 10 | 5056 |

Noncancerous liver tissues vs HCC tissues Z= -8.684, P<0.001 (Wilcoxon Signed Ranks Test)

HCC tissues vs cirrhotic liver Z= - 5.047, P<0.001 (Wilcoxon Signed Ranks Test)

Adjacent normal liver vs HCC tissues Z= -7.038, P<0.001 (Wilcoxon Signed Ranks Test)

HCC tissues with cirrhosis vs HCC tissues without cirrhosis λ=1.986, P=0.575 (Chi-Square Tests)

Table S2 Clinical characteristics of 106 cases of HCC patients

|  |  |  |
| --- | --- | --- |
| Characteristic | No. of Patients | % |
| Age,y<55>=55 | 6838 | 64.235.8 |
| DifferentiationWellModeratePoor | 236419 | 21.760.417.9 |
| Distant metastasisYN | 6937 | 65.134.9 |
| DisseminationYN | 5056 | 47.252.8 |
| Portalvein thrombosisNY | 9016 | 84.915.1 |
| RelapseNY | 5947 | 55.744.3 |
| Expression of FBXO8Low High  | 8125 | 76.423.6 |
| CirrhosisNY | 5650 | 52.847.2 |
| Tumor size<5cm>=5cm | 5056 | 47.252.8 |
| GenderMaleFemale | 9214 | 86.813.2 |
| Serum AFP<25ng/ml>=25ng/ml | 3769 | 34.965.1 |
| HBsAgNegativePositive | 2185 | 19.880.2 |

Table S3 Univariate and multivariate analyses of individual parameters for correlations with overall Survival rate: Cox proportional hazards model.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variables |  Univariate |  P value |  Multivariate |  P value |
| HR | CI (95%) | HR | CI (95%) |
| FBXO8 | 0.223 | 0.084-0.649 | 0.005 | 0.319 | 0.109-0.939 | 0.038 |
| Age | 1.022 | 0.566-1.847 | 0.942 |  |  |  |
| Gender | 2.459 | 0.764-7.915 | 0.132 |  |  |  |
| Portal vein thrombosis | 0.247 | 0.129-0.470 | <0.001 | 0.297 | 0.134-0.657 | 0.003 |
| Differentiation | 0.464 | 0.297-0.724 | 0.001 | 0.383 | 0.213-0.689 | 0.001 |
| Cirrhosis | 1.157 | 0.656-2.039 | 0.614 |  |  |  |
| Tumor size | 1.319 | 0.745-2.334 | 0.342 |  |  |  |
| Distant metastasis | 0.432 | 0.244-0.762 | 0.004 |  |  |  |
| Dissemination | 0.320 | 0.169-0.607 | <0.001 | 0.204 | 0.09-0.462 | <0.001 |
| Relapse | 2.065 | 1.162-3.671 | 0.014 |  |  |  |
| HBsAg status | 0.606 | 0.315-1.166 | 0.134 |  |  |  |
| Serum AFP | 0.824 | 0.462-1.471 | 0.513 |  |  |  |

Abbreviations: HR, Hazard radio; CI, Confidence interval.

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