Supplementary data

Table 1. Odds ratio (OR) and 95% confidence interval (CI) of clinical status and *MALAT1* genotypic frequencies in 394 hepatocellular carcinoma patients.

Variable	Genotypic frequencies		
	rs3200401	**rs619586**	**rs1194338**
Clinical Stage (Stage I/II vs Stage III/IV)	*p = 0.497*	*p = 0.766*	*p = 0.494*
Tumor size (≦T2 vs >T2)	*p = 0.596*	*p = 0.807*	*p = 0.515*
Lymph node metastasis (No vs Yes)	*p = 0.541*	*p = 0.461*	*p = 0.888*
Distant metastasis (No vs Yes)	*p = 0.513*	*p = 0.493*	*p = 0.541*
Vascular invasion (No vs Yes)	*p = 0.290*	*p = 0.728*	*p = 0.100*
Child-Pugh grade (A vs B or C)	*p = 0.914*	*p = 0.489*	*p = 0.083*
HBsAg (Negative vs Positive)	*p = 0.162*	*p = 0.388*	*p = 0.295*
Anti-HCV (Negative vs Positive)	*p = 0.639*	*p = 0.600*	*p = 0.885*
Liver cirrhosis (Negative vs Positive)	*p = 0.194*	*p = 0.287*	*p = 0.471*

Table 2. Distribution frequency of the clinical status and for *MALAT1* SNPs frequencies in hepatocellular carcinoma patients with stratified by gender.

Variable	Male			Female		
	rs3200401	**rs619586**	**rs1194338**	**rs3200401**	**rs619586**	**rs1194338**
Clinical Stage (Stage I/II vs Stage III/IV)	*p = 0.539*	*p = 0.383*	*p = 0.745*	*p = 0.715*	*p = 0.509*	*p = 0.431*
Tumor size (≦T2 vs. > T2)	*p = 0.603*	*p = 0.352*	*p = 0.955*	*p = 0.770*	*p = 0.415*	*p = 0.168*
Lymph node metastasis (No vs Yes)	*p = 0.746*	*NA*	*p = 0.360*	*NA*	*p = 0.301*	*NA*
Distant metastasis (No vs Yes)	*p = 0.617*	*p = 0.411*	*p = 0.232*	*p = 0.630*	*p = 0.954*	*p = 0.419*
Vascular invasion (No vs Yes)	*p = 0.248*	*p = 0.384*	*p = 0.534*	*p = 0.896*	*p = 0.546*	*p = 0.049**
Child-Pugh grade (A vs B or C)	*p = 0.728*	*p = 0.247*	*p = 0.096*	*p = 0.444*	*p = 0.668*	*p = 0.507*
HBsAg (Negative vs Positive)	*p = 0.194*	*p = 0.254*	*p = 0.240*	*p = 0.766*	*p = 0.698*	*p = 0.995*
Anti-HCV (Negative vs Positive)	*p = 0.497*	*p = 0.565*	*p = 0.961*	*p = 0.670*	*p = 0.732*	*p = 0.929*
Liver cirrhosis (Negative vs Positive)	*p = 0.431*	*p = 0.278*	*p = 0.715*	*p = 0.198*	*p = 0.707*	*p = 0.414*

* *p* value < 0.05 as statistically significant. NA: not applicable.

Table 3. Distribution frequency of the clinical status and for *MALAT1* SNPs frequencies in hepatocellular carcinoma patients with stratified by smoking status.

Variable	Smokers			Non-smokers		
	rs3200401	**rs619586**	**rs1194338**	**rs3200401**	**rs619586**	**rs1194338**
Clinical Stage (Stage I/II vs Stage III/IV)	*p = 0.353*	*p = 0.945*	*p = 0.311*	*p = 0.895*	*p = 0.740*	*p = 0.093*
Tumor size (≦T2 vs. >T2)	*p = 0.353*	*p = 0.945*	*p = 0.311*	*p = 0.963*	*p = 0.788*	*p = 0.101*
Lymph node metastasis (No vs Yes)	*NA*	*NA*	*p = 0.962*	*p = 0.516*	*p = 0.879*	*p = 0.892*
Distant metastasis (No vs Yes)	*p = 0.251*	*NA*	*p = 0.498*	*p = 0.889*	*p = 0.979*	*p = 0.791*
Vascular invasion (No vs Yes)	*p = 0.371*	*p = 0.551*	*p = 0.101*	*p = 0.524*	*p = 0.352*	*p = 0.428*
Child-Pugh grade (A vs B or C)	*p = 0.860*	*p = 0.192*	*p = 0.036**	*p = 0.770*	*p = 0.867*	*p = 0.600*
HBsAg (Negative vs Positive)	*p = 0.034**	*p = 0.487*	*p = 0.761*	*p = 0.961*	*p = 0.583*	*p = 0.273*
Anti-HCV (Negative vs Positive)	*p = 0.405*	*p = 0.300*	*p = 0.541*	*p = 0.937*	*p = 0.870*	*p = 0.504*
Liver cirrhosis (Negative vs Positive)	*p = 0.141*	*p = 0.626*	*p = 0.884*	*p = 0.651*	*p = 0.333*	*p = 0.298*

* *p* value < 0.05 as statistically significant. NA: not applicable.

Table 4. Association of *MALAT1* genotypic frequencies with hepatocellular carcinoma laboratory findings.

Characteristic	AFP [a] (ng/mL)	AST [a] (IU/L)	ALT [a] (IU/L)	AST/ALT [a] ratio
rs3200401				
CC	3333.6 ± 1009.4	100.5 ± 10.7	233.9 ± 139.5	1.5 ± 0.1
CT + TT	2076.5 ± 942.5	151.7 ± 34.3	113.3 ± 22	1.4 ± 0.1
p value	0.136	0.268	0.822	0.624
p value [b]	0.280	0.040*	0.624	0.556
rs619586				
AA	3436.3 ± 884.3	120.1 ± 14.1	216.9 ± 111.5	1.5 ± 0.1
AG + GG	230.7 ± 76	104 ± 40.1	74.6 ± 10.8	1.4 ± 0.1
p value	0.116	0.085	0.946	0.190
p value [b]	0.214	0.479	0.507	0.529
rs1194338				
CC	3059.6 ± 1241.7	97.6 ± 12.7	312.1 ± 213.2	1.5 ± 0.1
CA + AA	2804.1 ± 904.3	132.9 ± 21.8	102.1 ± 14.4	1.4 ± 0.1
p value	0.962	0.344	0.375	0.803
p value [b]	0.680	0.158	0.261	0.532

Mann-Whitney U-test was used between two groups. Multiple linear regression was used to adjust for age, gender, cigarette smoking, and alcohol consumption. [a] Mean ± standard error. [b] Adjusted for age, gender, cigarette smoking, and alcohol consumption. AFP, alpha-fetoprotein; AST, aspartate aminotransferase; ALT, alanine aminotransferase.

Table S5. Odds ratio (OR) and 95% confidence interval (CI) of clinical status and *MALAT1* genotypic frequencies in hepatocellular carcinoma patients with hepatitis B virus infection (*n* = 167)

Variable	Genotypic frequencies		
	rs3200401	**rs619586**	**rs1194338**
Clinical Stage (Stage I/II vs Stage III/IV)	*p = 0.615*	*p = 0.695*	*p = 0.426*
Tumor size (≦T2 vs. > T2)	*p = 0.581*	*p = 0.542*	*p = 0.501*
Lymph node metastasis (No vs Yes)	*p = 0.616*	*p = 0.999*	*p = 0.396*
Distant metastasis (No vs Yes)	*p = 0.473*	*p = 0.877*	*p = 0.848*
Vascular invasion (No vs Yes)	*p = 0.550*	*p = 0.566*	*p = 0.228*
Child-Pugh grade (A vs B or C)	*p = 0.865*	*p = 0.086*	*p = 0.107*
Anti-HCV (Negative vs Positive)	*p = 0.978*	*p = 0.614*	*p = 0.951*
Liver cirrhosis (Negative vs Positive)	*p = 0.108*	*p = 0.284*	*p = 0.312*

Table 6. Odds ratio (OR) and 95% confidence interval (CI) of clinical status and *MALAT1* genotypic frequencies in hepatocellular carcinoma patients with hepatitis C virus infection (*n* = 178).

Variable	Genotypic frequencies		
	rs3200401	**rs619586**	**rs1194338**
Clinical Stage (Stage I/II vs Stage III/IV)	*p = 0.487*	*p = 0.594*	*p = 0.912*
Tumor size (≦T2 vs > T2)	*p = 0.849*	*p = 0.644*	*p = 0.750*
Lymph node metastasis (No vs Yes)	*NA*	*NA*	*p = 0.452*
Distant metastasis (No vs Yes)	*NA*	*NA*	*p = 0.452*
Vascular invasion (No vs Yes)	*p = 0.322*	*p = 0.170*	*p = 0.497*
Child-Pugh grade (A vs B or C)	*p = 0.649*	*p = 0.476*	*p = 0.998*
HBsAg (Negative vs Positive)	*p = 0.634*	*p = 0.554*	*p = 0.702*
Liver cirrhosis (Negative vs Positive)	*p = 0.435*	*p = 0.761*	*p = 0.189*

NA: not applicable.