Table S1 Prognostic analysis of the clinical features and PRL-expression

Clinical	Features	n=114	P value (OS)	P value (PFS)
Gender	Male	95 (83%)	0.243	0.249
	Female	19 (17%)		
Age (year)	≥65	24 (17%)	0.110	0.179
	<65	90 (83%)		
HBsAg	Negative	20 (18%)	0.608	0.712
	Positive	94 (82%)		
HBcAb	Negative	4 (4%)	0.458	0.396
	Positive	110 (96%)		
AFP (ng/mL)	>400	43 (38%)	0.116	0.112
	≥20, ≤400	24 (21%)		
	<20	47 (41%)		
Tumor size (cm)	≥10	25 (22%)	<0.001*	<0.001*
	>5, <10	40 (35%)		
	≤5	49 (43%)		
Tumor number	Non single	17 (15%)	0.039*	0.036*
	single	97 (85%)		
Cirrhosis	non	17 (15%)	0.227	0.201
	Micro-nodular	49 (43%)		
	Macro-nodular	48 (42%)		
Tumor Embolus	non	65 (57%)	<0.001*	<0.001*
	Microvascular invasion	31 (27%)		
	Tumor thrombi	18 (16%)		
Tumor capsule	complete	51 (45%)	0.122	0.066
	incomplete/none	63 (55%)		
Edmondson Staging	I-II	86 (75%)	0.030*	0.028*
	III-IV	28 (25%)		
TNM Staging	Stage 1	52 (46%)	<0.001*	<0.001*
	Stage 2	28 (30%)		
	Stage 3a	34 (24%)		
PRL-3 expression	-/±	20 (18%)	<0.001*	<0.001*
	+	37 (32%)		
	++	57 (50%)		

*, was considered statistically significant.

Table S2 PRL-3 expression related with different clinical feature of HCC

Clinical	Features	PRL-3++ (%)	x^2	P value
Gender	Male	46/95 (48.2%)	0.561	0.455
	Female	11/19 (57.9%)		
Age (year)	≥65	11/24 (45.8%)	0.208	0.649
	<65	46/90 (51.1%)		
HBsAg	Negative	8/20 (40%)	0.961	0.329
	Positive	49/94 (48.9%)		
AFP (ng/mL)	>400	32/43 (74.4%)	8.741	<0.001*
	≤400, ≥20	9/24 (37.5%)		
	<20	16/47 (34.0%)		
Tumor size (cm)	≥10	24/25 (96.0%)	23.602	<0.001*
	>5, <10	21/40 (52.5%)		
	≤5	12/49 (24.5%)		
Tumor number	Non-single	10/17 (58.8%)	0.615	0.435
	single	47/97 (48.5%)		
Cirrhosis	non	9/17 (52.9%)	0.159	0.853
	Micro-nodular	23/49 (46.9%)		
	Macro-nodular	25/48 (52.1%)		
Tumor embolus	non	18/65 (27.7%)	16.624	<0.001*
	Microvascular invasion	22/31 (70.9%)		
	Tumor thrombi	17/18 (94.4%)		
Tumor capsule	complete	20/51 (39.2%)	4.383	0.039*
	Incomplete/none	37/63 (58.7%)		
Edmondsonsstaging	I-II	37/86 (43.0%)	7.124	0.009*
	III-IV	20/28 (71.4%)		
TNM staging	Stage 1	14/52 (26.9%)	13.191	<0.001*
	Stage 2	17/28 (60.7%)		
	Stage 3a	26/34 (76.5%)		

*, was considered statistically significant.

Table S3 Independent risk factors of overall survival (OS) by multifactor Cox regression model

	β	SE	Wald	df	P value	Exp(B)
PRL-3 expressions(trong positive/non strong positive)	1.409	0.353	15.972	1	<0.001	4.091
Tumor size (≥10 cm/<10 cm)	0.524	0.227	5.334	1	0.021	1.688
Tumor embolus (positive/negative)	0.211	0.368	0.329	1	0.566	0.810
Edmondson staging (III-IV/I-II)	0.218	0.321	0.461	1	0.497	1.243
TNM (Stage IIIa/StageII/Stage I)	0.393	0.356	1.224	1	0.269	1.482
Tumor number (non-single/single)	0.237	0.544	0.190	1	0.663	1.268

Table S4 Independent risk factors of progress-free survival (PFS) by multifactor Cox regression model

	β	SE	Wald	df	P value	Exp(B)
PRL-3 expression (strong positive/non strong positive)	1.505	0.353	18.157	1	<0.001	4.505
Tumor size (≥10 cm/<10 cm)	0.340	0.215	2.502	1	0.114	1.405
Tumor embolus (positive/negative)	0.153	0.347	0.196	1	0.658	0.858
Edmondson staging (III-IV/I-II)	0.071	0.332	0.046	1	0.830	1.074
TNM (Stage IIIa/StageII/Stage I)	0.235	0.338	0.484	1	0.487	1.265
Tumor number (non-single/single)	0.348	0.530	0.431	1	0.512	1.416