

Supplementary Materials

Tables

Table S1 Univariate analysis of overall survival and cancer-specific survival.

Characteristics	Overall survival		Cancer-specific survival	
	HR	P-value	Gray' test	P-value
Age	<55		0.59	0.74
	55-65	0.98(0.85-1.13)	0.78	
	≥65	1.01(0.87-1.16)	0.93	
Gender	Female		0.88	0.35
	Male	1.07(0.94-1.22)	0.31	
Race	Black		8.36	0.015
	White	0.99(0.86-1.14)	0.89	
	Other	1.12(0.94-1.34)	0.20	
Marital	Married		2.91	0.23
	Single	1.04(0.92-1.18)	0.50	
	Separated	1.01(0.89-1.15)	0.89	
AFP	Negative		14.63	1.31E-04
	Positive	1.41(1.22-1.63)	2.23E-06	
Tumor Size	>5 cm		11.65	6.40E-04
	≤5 cm	0.78(0.7-0.88)	3.88E-05	
T stage	T1		21.17	9.70E-05
	T2	1.08(0.91-1.29)	0.39	
	T3	1.38(1.21-1.57)	1.59E-06	
	T4	1.33(1.1-1.6)	3.42E-03	
N stage	N0		7.18	7.38E-03
	N1	1.22(1.09-1.36)	5.42E-04	
Surgery	No		25.79	3.81E-07
	Yes	0.39(0.3-0.49)	2.10E-14	
Chemotherapy	No/unknown		25.03	5.64E-07
	Yes	0.61(0.55-0.68)	9.93E-21	
Radiotherapy	No/unknown		6.15	0.013
	Yes	0.71(0.62-0.81)	1.63E-07	
Lung metastasis	No		26.99	2.04E-07
	Yes	1.39(1.25-1.55)	1.62E-09	
Bone metastasis	No		0.61	0.43
	Yes	0.97(0.86-1.08)	0.55	
Brain metastasis	No		0.03	0.85
	Yes	1.04(0.71-1.53)	0.84	

Table S2. Conditional survival for overall survival of distant-metastatic hepatocellular carcinoma.

Total survival time (month)	survived time(month)					
	0	2	4	6	8	10
2	65.89%					
4	46.51%	70.59%				
6	34.77%	52.77%	74.76%			
8	27.99%	42.48%	60.18%	80.50%		
10	22.61%	34.31%	48.60%	65.01%	80.76%	
12	19.16%	29.08%	41.20%	55.11%	68.46%	84.77%

Table S3 Conditional survival for cancer-specific survival of distant-metastatic hepatocellular carcinoma.

Total survival time (month)	survived time(month)					
	0	2	4	6	8	10
2	64.14%					
4	44.37%	69.18%				
6	32.79%	51.12%	73.89%			
8	26.33%	41.05%	59.34%	80.31%		
10	21.07%	32.85%	47.48%	64.26%	80.01%	
12	17.48%	27.25%	39.39%	53.31%	66.38%	82.96%

Table S4. Multivariate Cox regression analysis for six months overall survival at a specific time after initial diagnosis.

Characteristics	2-month after diagnose		4-month after diagnose		6-month after diagnose		
	HR	P-value	HR	P-value	HR	P-value	
Age	<55						
	55-65	1.05(0.85-1.31)	0.64	1.24(0.95-1.63)	0.12	1.39(1.01-1.93)	0.046
	≥65	1.02(0.81-1.28)	0.89	1.19(0.9-1.58)	0.23	1.34(0.96-1.87)	0.089
Gender	Female						
	Male	1.15(0.93-1.42)	0.20	0.99(0.77-1.28)	0.97	1.01(0.75-1.36)	0.95
Race	Black						
	White	0.97(0.78-1.22)	0.81	1.02(0.78-1.33)	0.90	1.07(0.78-1.46)	0.69
	Other	1.14(0.86-1.51)	0.35	1.03(0.73-1.46)	0.85	1.11(0.73-1.67)	0.64
Marital	Married						
	Single	0.9(0.74-1.1)	0.31	1.03(0.81-1.3)	0.84	1.16(0.88-1.53)	0.30
	Separated	0.95(0.78-1.16)	0.60	1.00(0.78-1.27)	0.99	1.1(0.83-1.46)	0.51
AFP	Negative						
	Positive	1.39(1.11-1.73)	3.81E-03	1.57(1.21-2.05)	8.16E-04	1.51(1.12-2.02)	6.44E-03
Tumor Size	>5 cm						
	≤5 cm	0.76(0.6-0.96)	0.022	0.68(0.51-0.89)	6.17E-03	0.69(0.5-0.96)	0.028
T stage	T1						
	T2	1.14(0.84-1.55)	0.41	1.25(0.87-1.78)	0.23	1.32(0.88-1.99)	0.18
	T3	1.24(1.-1.53)	0.046	1.28(1.-1.65)	0.054	1.32(0.99-1.76)	0.063
	T4	1.2(0.89-1.61)	0.23	1.44(1.03-2.01)	0.033	1.43(0.96-2.14)	0.082
N stage	N0						
	N1	1.2(1.01-1.43)	0.039	1.14(0.92-1.4)	0.24	1.29(1.-1.65)	0.047
Surgery	No						
	Yes	0.4(0.27-0.59)	6.56E-06	0.49(0.33-0.73)	3.88E-04	0.55(0.36-0.83)	4.99E-03
Chemotherapy	No/unknown						
	Yes	0.72(0.61-0.85)	9.15E-05	0.85(0.69-1.05)	0.14	1.01(0.78-1.3)	0.96
Radiotherapy	No/unknown						
	Yes	0.73(0.59-0.92)	6.10E-03	0.87(0.68-1.12)	0.29	0.94(0.71-1.27)	0.70
Lung metastasis	No						
	Yes	1.27(1.07-1.51)	7.52E-03	0.97(0.77-1.21)	0.76	0.9(0.69-1.18)	0.45
Bone metastasis	No						
	Yes	1.12(0.92-1.38)	0.26	1.01(0.79-1.29)	0.93	1.11(0.83-1.47)	0.49
Brain metastasis	No						
	Yes	1.13(0.63-2.02)	0.69	1.29(0.65-2.57)	0.47	1.25(0.53-2.94)	0.61

Table S5. Competing risk analysis for six months cancer-specific survival at a specific time after diagnosis.

Characteristics	2-month after diagnose		4-month after diagnose		4-month after diagnose		
	HR	P-value	HR	P-value	HR	P-value	
Age	<55						
	55-65	1.05(0.85-1.31)	0.64	1.17(0.89-1.54)	0.26	1.31(0.95-1.81)	0.099
	≥65	1.02(0.81-1.28)	0.85	1.2(0.91-1.6)	0.2	1.4(1.02-1.93)	0.039
Gender	Female						
	Male	1.2(0.98-1.48)	0.079	1.03(0.81-1.32)	0.79	1.09(0.8-1.49)	0.6
Race	Black						
	White	0.99(0.8-1.23)	0.96	1.04(0.8-1.35)	0.77	1.01(0.75-1.38)	0.94
	Other	1.22(0.94-1.57)	0.14	1.06(0.76-1.49)	0.72	1.1(0.74-1.65)	0.64
Marital	Married						
	Single	0.95(0.78-1.15)	0.61	1.05(0.84-1.32)	0.67	1.19(0.91-1.56)	0.21
	Separated	0.93(0.77-1.13)	0.47	0.99(0.78-1.26)	0.93	1.1(0.82-1.46)	0.53
AFP	Negative						
	Positive	1.34(1.08-1.67)	7.80E-03	1.56(1.2-2.02)	8.30E-04	1.55(1.16-2.07)	2.70E-03
Tumor Size	>5 cm						
	≤5 cm	0.75(0.59-0.96)	0.021	0.68(0.52-0.89)	5.50E-03	0.7(0.51-0.97)	0.031
T stage	T1						
	T2	1.14(0.84-1.55)	0.41	1.17(0.82-1.68)	0.38	1.31(0.87-1.98)	0.19
	T3	1.21(0.98-1.48)	0.074	1.25(0.98-1.6)	0.077	1.28(0.96-1.71)	0.088
	T4	1.24(0.95-1.61)	0.12	1.49(1.09-2.05)	0.013	1.48(1.01-2.19)	0.045
N stage	N0						
	N1	1.15(0.98-1.36)	0.087	1.16(0.95-1.42)	0.15	1.3(1.01-1.66)	0.044
Surgery	No						
	Yes	0.42(0.29-0.62)	1.30E-05	0.49(0.34-0.7)	1.30E-04	0.52(0.34-0.8)	2.60E-03
Chemotherapy	No/unknown						
	Yes	1.31(1.11-1.54)	1.10E-03	1.14(0.92-1.4)	0.23	0.95(0.73-1.24)	0.71
Radiotherapy	No/unknown						
	Yes	1.29(1.05-1.59)	0.016	1.13(0.89-1.43)	0.33	0.96(0.71-1.3)	0.8
Lung metastasis	No						
	Yes	1.25(1.06-1.48)	9.20E-03	1.00(0.81-1.25)	0.97	0.96(0.74-1.25)	0.75
Bone metastasis	No						
	Yes	1.11(0.91-1.35)	0.29	1.04(0.82-1.32)	0.73	1.1(0.82-1.49)	0.53
Brain metastasis	No						
	Yes	1.06(0.58-1.93)	0.85	1.21(0.61-2.42)	0.59	1.06(0.47-2.39)	0.89

Figures

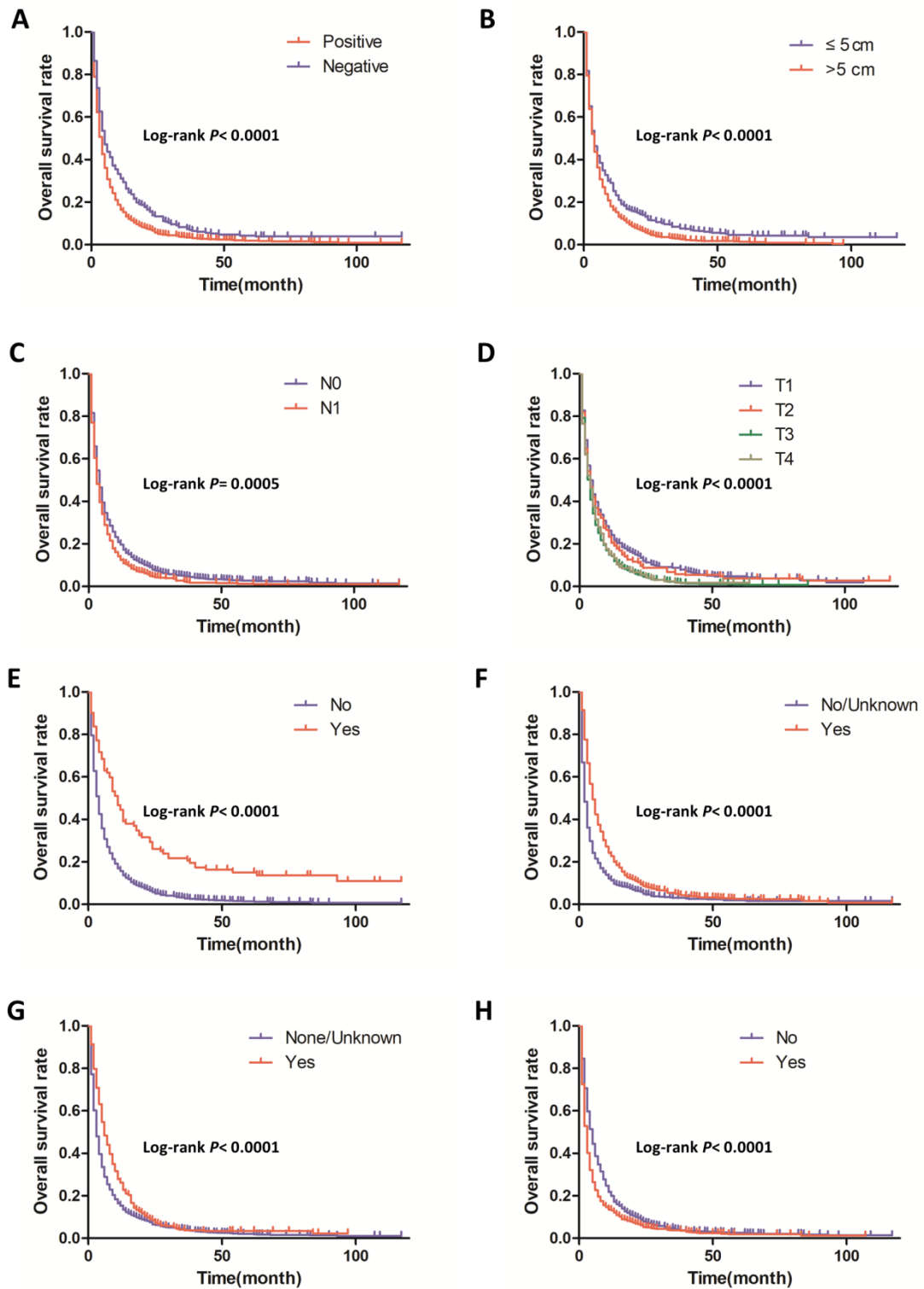


Fig. S1. Actual overall survival stratified by: A) AFP, B) tumor size, C) N stage, D) T stage, E) primary-site surgery, F) Chemotherapy, G) Radiotherapy, H) Lung metastasis.

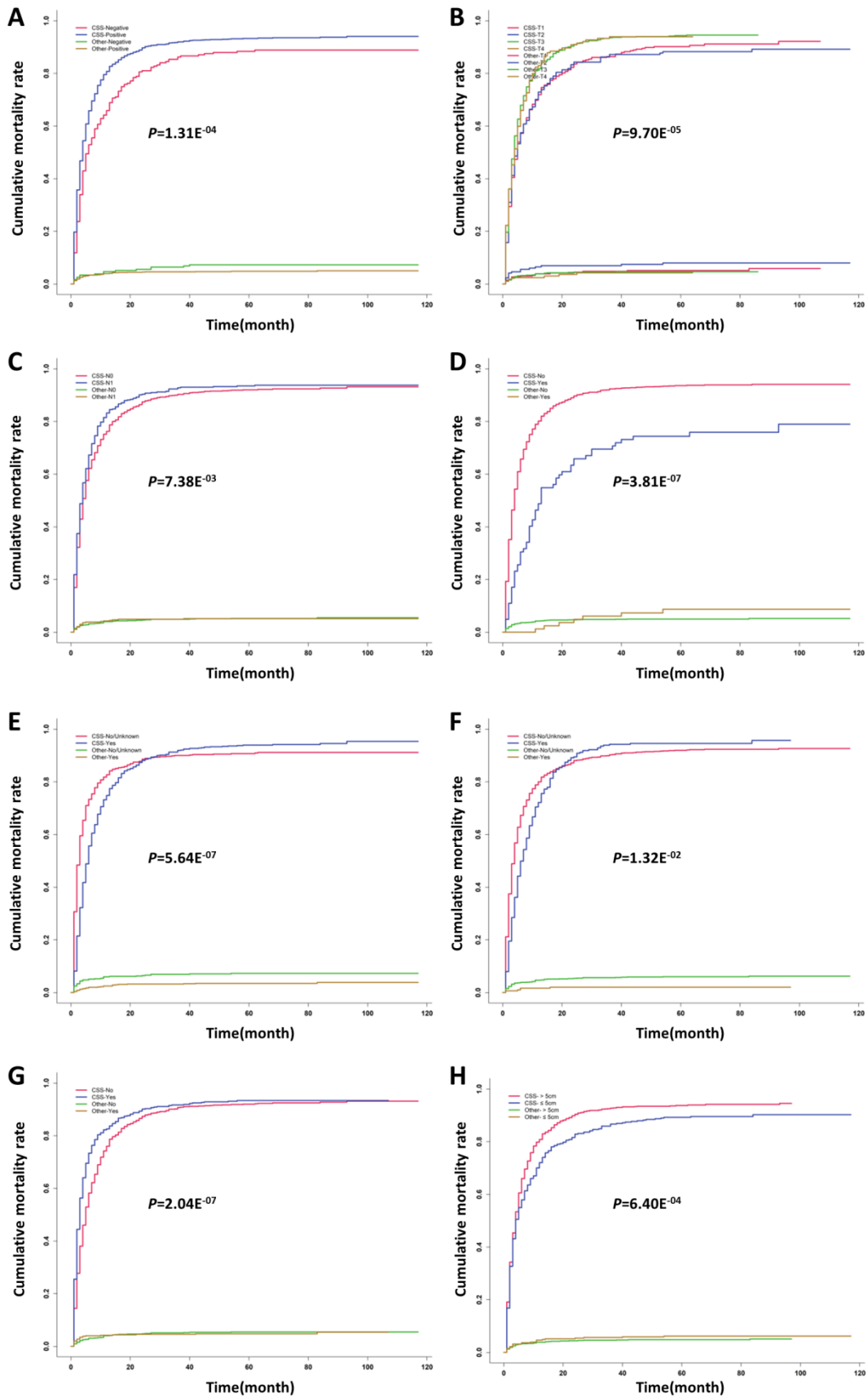


Fig. S2. Cumulative mortality rate stratified by: A) AFP, B) T stage, C) N stage, D) primary-site surgery, E) Chemotherapy, F) Radiotherapy, G) Lung metastasis, H) tumor size.

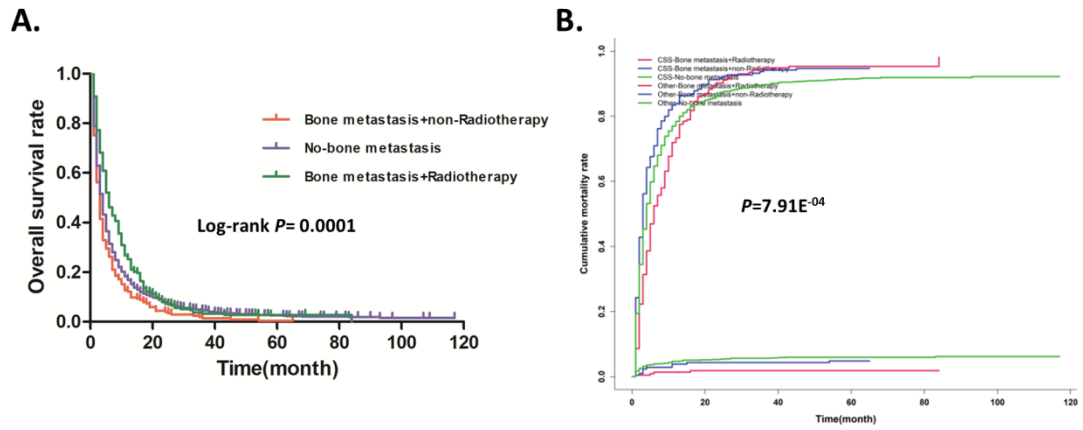


Fig. S3. Survival stratified by bone metastasis and radiotherapy; A) Actual overall survival; B) Cumulative mortality rate.