

## SUPPORTING INFORMATION

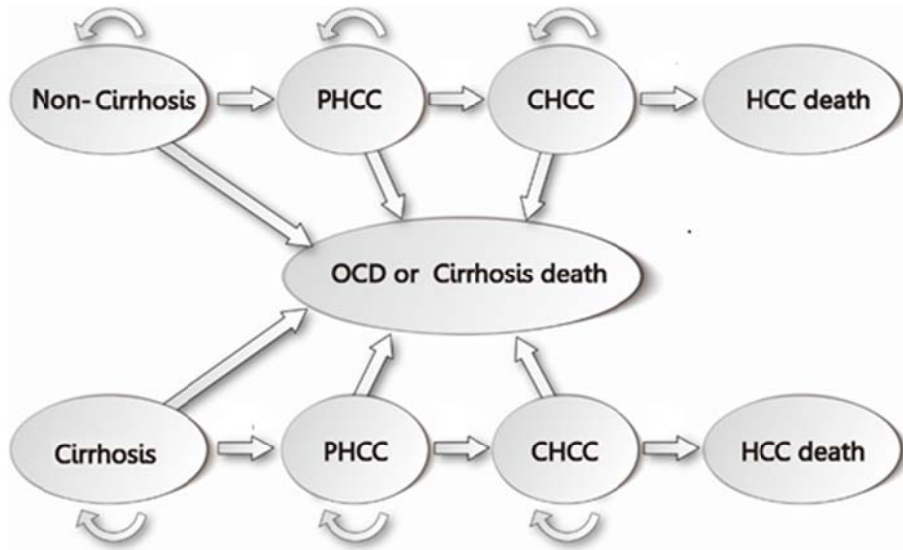
**Table S1 Sensitivity analysis of selected variables with incremental cost-effectiveness ratios calculated to compare strategies**

Variables	Strategy		
	Two-stage	Mass	Mass screening
	screening <i>vs</i> none	screening <i>vs</i> none	<i>vs</i> Two-stage screening
<b>Sensitivity of ultrasonography for hepatocellular carcinoma (%)</b>			
70	52.9 K	41.9 K	Dominant
75	51.6 K	41.0 K	Dominant
80	50.4 K	40.3 K	Dominant
83, base	49.3 K	39.5k	Dominant
90	48.3 K	38.9 K	Dominant
<b>Attendance rate (%)</b>			
40	44.6 K	35.1 K	Dominant
50	47.2 K	37.5 K	Dominant
60, base	49.7 K	39.8 K	Dominant
70	52.3 K	42.2 K	Dominant
80	54.8 K	44.5 K	Dominant
<b>Compliance rate of ultrasonography (%)</b>			
60	45.4 K	32.3 K	4.8k
70	46.4 K	35.5k	Dominant
80, base	49.3 K	39.8 K	Dominant

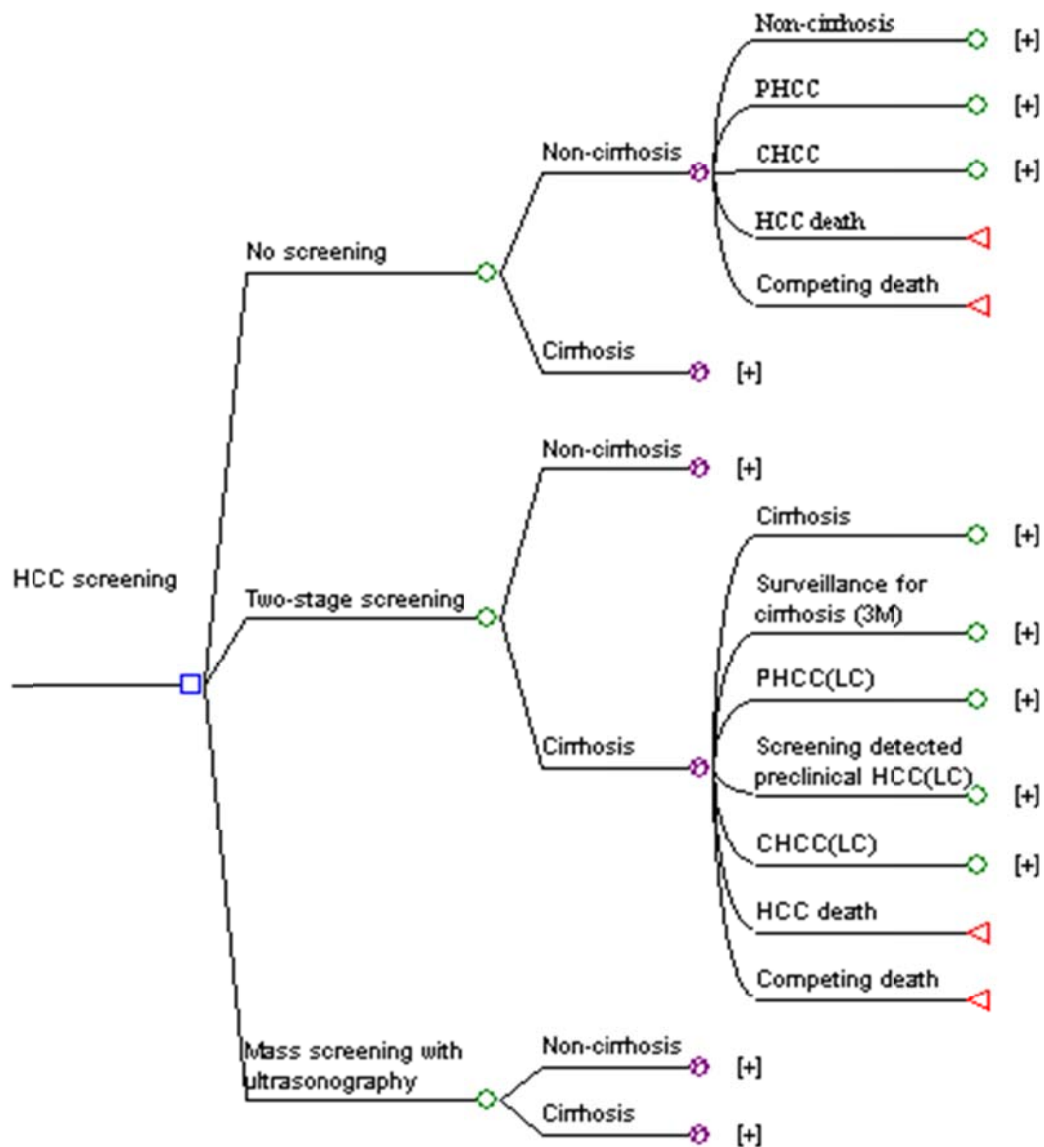
Variables	Strategy		
	Two-stage	Mass	Mass screening
	screening <i>vs</i>	screening <i>vs</i>	<i>vs</i> Two-stage
	none	none	screening
90	56.6 K	46.8 K	Dominant
100	70.1 K	59.5 K	Dominant
<b>Cost of Ultrasonography (USD)</b>			
13.8	46.4 K	28.2 K	Dominant
20.6	48.0 K	34.0 K	Dominant
27.5, base	49.7 K	39.8 K	Dominant
34.4	51.4 K	45.6 K	14.7 K
41.3	53.1 K	51.4 K	42.3 K
<b>Cost of 1<sup>st</sup>-stage screening (USD)</b>			
12.5	42.4 K	39.8 K	26.2 K
15.6	45.5 K	39.8 K	9.6 K
18.6	48.7 K	39.8 K	Dominant
21.9, base	51.8 K	39.8 K	Dominant
25	54.9 K	39.8 K	Dominant
<b>Specificity of 1<sup>st</sup> stage (%)</b>			
50	59.8 K	39.8 K	Dominant
60	54.8 K	39.8 K	Dominant
70, base	49.7 K	39.8 K	Dominant
80	44.7 K	39.8 K	14.1 K
90	39.7 K	39.8 K	40.7 K

Threshold: The value of variable giving a similar ICER among strategies; Cost of 1<sup>st</sup> stage

screening: 9.9; Cost of ultrasonography: 44.1; Specificity of 1<sup>st</sup> stage screening: 90%. ICER: Incremental cost-effectiveness ratio; Dominant: More effective and less costly than reference strategy; K: × 1000.



**Figure S1 The framework for Markov state transition model on the natural history of hepatocellular carcinoma.** PHCC: Preclinical hepatocellular carcinoma; CHCC: Clinical hepatocellular carcinoma; OCD: Other causes of death.



**Figure S2** The structure of decision tree used to evaluate the cost-effectiveness of different screening strategies for hepatocellular carcinoma. □: Decision node; ○: Chance node; ⊗: Markov cycle; ◁: Absorbing state; PHCC: Preclinical hepatocellular carcinoma; CHCC: Clinical hepatocellular carcinoma.

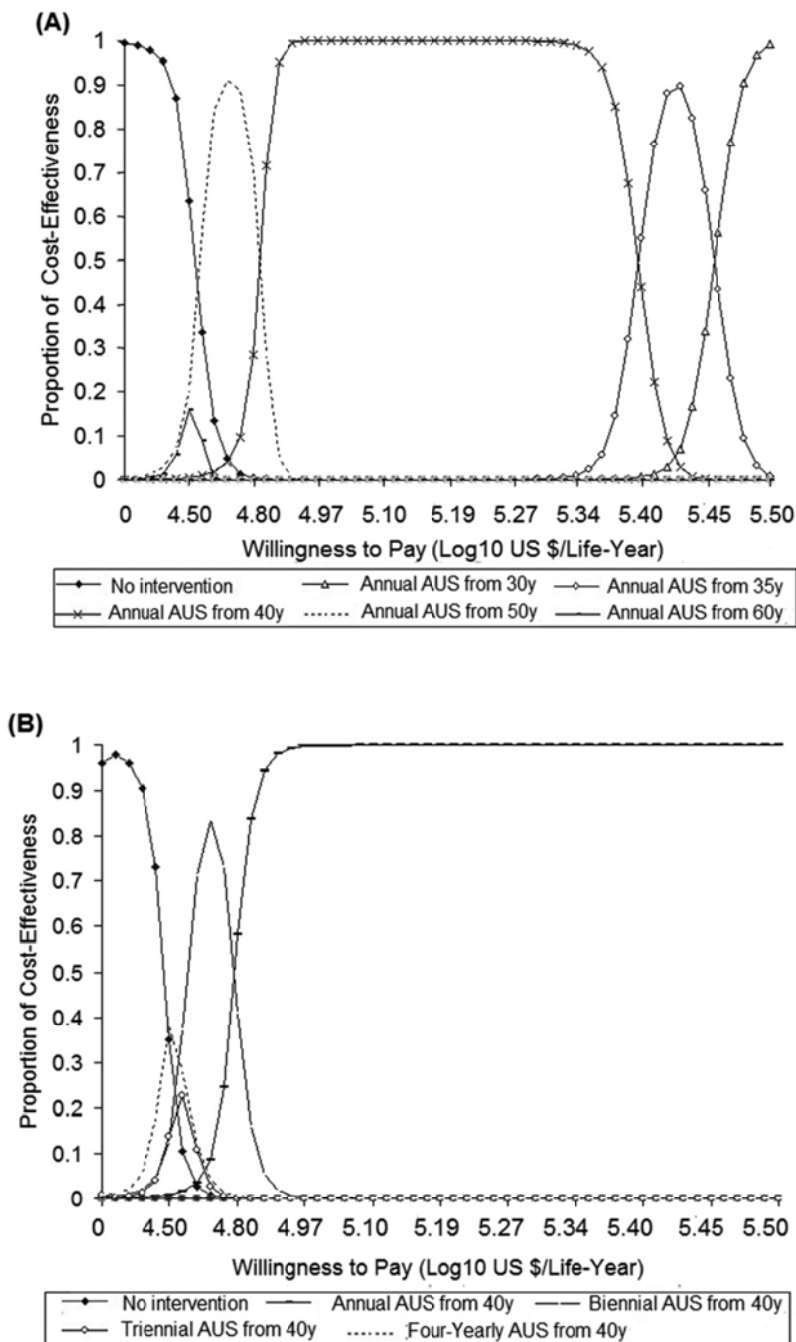


Figure S3 Acceptability curves for the choice of the most cost-effective initial screening age (A) and inter-screening interval (B).