**Supplement figure 1.** An example of using radiomics nomogram to predict survival probability of a 35 years old male patient after surgical resection. ROI: region of interest; TACE: transcatheter arterial chemoembolization.
**Supplement figure** 2. The survival curves stratified by surgical margin, vascular invasion, local invasion, and differentiation grade. A: survival curves stratified by surgical margin; B: survival curves stratified by vascular invasion; C: survival curves stratified by local invasion; D: survival curves stratified by differentiation grade.
Supplement table 1. The formulas for constructing the radiomics scoring models.

| Model                  | Formula                                                                 |
|------------------------|-------------------------------------------------------------------------|
| radiomics score        | -0.0001249365SHAPE_Sphericity+3.2096802376GLRLM_LGRE+2.5467404092GLRLM_SRLGE |

Supplement table 2. Power analysis of the study.

| High risk group/ Low risk group | value | High risk group/ Low risk group | value |
|----------------------------------|-------|---------------------------------|-------|
| Two-sided α                      | 0.05  | Two-sided α                     | 0.05  |
| 1-year overall survival rate (High risk group) | 0.306 | 3-year overall survival rate (High risk group) | 0.056 |
| 1-year overall survival rate (Low risk group) | 0.901 | 3-year overall survival rate (Low risk group) | 0.624 |
| Assuming hazard ratio            | 7.01  | Assuming hazard ratio           | 2.5   |
| Power                            | 90%   | Power                           | 90%   |
| Estimated patients number (High risk group) | 3     | Estimated patients number (High risk group) | 7     |
| Estimated patients number (Low risk group) | 4     | Estimated patients number (Low risk group) | 8     |