

## Supplementary Materials for

## A Myeloid Signature-based Nomogram Predicts the Postoperative Recurrence of Intrahepatic Cholangiocarcinoma

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**Supplementary Figure 1. The optimum cutoff of MRS determined by X-tile plot.** (A) The optimum cutoff point (highlighted by the black/white circle) of MRS grouping was determined by X-tile plot. (B) Distribution of patients with different MRS, the cutoff point was shown on the X axis. (C) Kaplan-Meier plot showed the distinct clinical outcomes of patients with different MRS.



**Supplementary Figure 2. The optimum cutoff of MRS-based nomogram determined by X-tile plot.** (A) The optimum cutoff point (highlighted by the black/white circle) of MRS-based nomogram grouping was determined by X-tile plot. (B) Distribution of patients with different nomogram scores, the cutoff point was shown on the X axis. (C) Kaplan-Meier plot showed the distinct clinical outcomes of patients with different nomogram scores.

| Variable                         | Univariate |              |       | Multivariate |             |       |
|----------------------------------|------------|--------------|-------|--------------|-------------|-------|
|                                  | HR         | 95% CI       | Р     | HR           | 95% CI      | Р     |
| Age, years ( $\geq 58 vs < 58$ ) | 2.825      | 1.269-6.287  | 0.011 | 1.669        | 0.883-3.156 | 0.115 |
| Gender                           | 1.214      | 0.595-2.476  | 0.594 |              |             |       |
| Tumor size                       | 2.731      | 1.121-6.655  | 0.027 | 2.432        | 1.108-5.339 | 0.027 |
| Tumor location                   | 0.384      | 0.102-1.441  | 0.156 |              |             |       |
| Histological subtypes            | 0.508      | 0.218-1.186  | 0.117 |              |             |       |
| Differentiation                  | 1.625      | 0.665-3.972  | 0.287 |              |             |       |
| Perineural invasion              | 0.715      | 0.329-1.555  | 0.397 |              |             |       |
| Vascular invasion                | 2.097      | 0.877-5.015  | 0.096 |              |             |       |
| T stage                          | 2.737      | 1.089-6.877  | 0.032 | 1.519        | 0.761-3.029 | 0.236 |
| N stage                          | 2.848      | 0.705-11.507 | 0.142 |              |             |       |
| Distant metastasis               | 1.543      | 0.614-3.875  | 0.356 |              |             |       |
| TNM stage                        | 0.348      | 0.060-2.026  | 0.240 |              |             |       |
| MRS                              | 1.001      | 0.991-1.012  | 0.783 |              |             |       |

**Supplementary Table 1.** Univariate and multivariate analysis of factors associated with OS according to the Cox Proportional Hazards Model (MRS as a continuous variable)

NOTE. *P* < 0.05 represents statistical significance; HR, hazard ratio; CI, confidence interval.

| Index    | Original sample | Training sample | Test sample | Optimism | Corrected index | n   |
|----------|-----------------|-----------------|-------------|----------|-----------------|-----|
| $D_{xy}$ | 0.4987          | 0.4940          | 0.4747      | 0.0193   | 0.4795          | 300 |
| $R^2$    | 0.3658          | 0.3737          | 0.3443      | 0.0294   | 0.3363          | 300 |
| Slope    | 1.0000          | 1.0000          | 0.9332      | 0.0668   | 0.9332          | 300 |
| D        | 0.0938          | 0.0990          | 0.0870      | 0.0120   | 0.0818          | 300 |
| U        | -0.0057         | -0.0058         | 0.0029      | -0.0087  | 0.0030          | 300 |
| Q        | 0.0996          | 0.1048          | 0.0840      | 0.0208   | 0.0788          | 300 |

**Supplementary Table 2.** Bootstrap validation and bias-corrected estimates of the MRS-based nomogram for predicting postoperative recurrence of iCCA

NOTE. "Training" refers to accuracy when evaluated on the bootstrap sample used to fit the model, and "Test" refers to the accuracy when this model is applied without modification to the original sample.  $D_{xy}$ : Somers' rank correlation between predicted probability and observed incidence;  $R^2$ : the fraction of log likelihood explained by the model of the log likelihood that could be explained by a perfect model, penalized for the complexity of the model; Slope, calibration slope, which is the slope of predicted log odds vs. true log odds; D: discrimination index, which is the -2 log likelihood at the shrunken linear predictor, penalized for estimating one parameter; U: unreliability index, which measures how far the model maximum log likelihood (which allows for an overall slope correction) is from the log likelihood evaluated at "frozen" regression coefficients. Q: logarithmic accuracy score, which is a normalized and penalized -2 log likelihood that is evaluated at the uncorrected linear predictor.