**Supplementary Material**
Table S1 Supplementary information of 6 patients undergoing laparoscopic radical resection of hilar cholangiocarcinoma

| case | Median size of tumor | TNM stage | R stage | Atypical hyperplasia | Vascular invasion | knots |
|------|----------------------|-----------|---------|----------------------|------------------|-------|
| 1    | 2.1 cm               | T4N0M0    | IIIB    | N                    | N                | 4     |
| 2    | 3.6 cm               | T2N0M0    | II      | N                    | Y                | 4     |
| 3    | 1.5 cm               | T2N0M0    | II      | N                    | N                | 4     |
| 4    | 1.7 cm               | T2N0M0    | II      | N                    | N                | 4     |
| 5    | 2.4 cm               | T2N0M0    | II      | N                    | N                | 4     |
| 6    | 2.0 cm               | T2N0M0    | II      | Y                    | N                | 4     |