**Supplementary Material**

**Table S1.** The clinical information of isolated CAFs from 8 CCA patients

| CAFs | Sex | Age | Tumor site                  | Tumor morphology | Margin | Histology | Lymph node status | TNM Stage | Stage |
|------|-----|-----|-----------------------------|------------------|--------|-----------|-------------------|-----------|-------|
| CAF1 | M   | 50  | Perihilar                  | MF+PI            | R0     | Tubular   | N1                | 3 1 1     | IVB   |
| CAF2 | M   | 65  |                             |                  |        |           |                   |           |       |
| CAF3 | M   | 61  | N/A                         | MF               |        |           | N/A               |           |       |
| CAF4 | M   | 83  | Intrahepatic bile duct      | MF+PI            | R0     | Tubular   | N2                | 4 1 0     | IVA   |
| CAF5 | M   | 65  | Intrahepatic bile duct      | MF+PI            | R1     | Adeno (well diff) | N0 | 4 0 x | IVA |
| CAF6 | M   | 65  | Perihilar                  | MF+PI            | R2     | Adeno (well diff) | N0 | 2a 0 x | II |
| CAF7 | M   | 60  | Perihilar                  | MF+ID            | R0     | Papillary invasive | N0 | 3 0 x | IIIB |
| CAF8 | F   | 58  | Intrahepatic bile duct      | MF               | R1     | Adeno (well diff) | Nx | 3 x x | III |

MF; mass forming, PI; periductal infiltrating; ID; intraductal.