Supplementary table 1.

ICD-9 and procedure codes

|  |  |
| --- | --- |
| ICD-9 for disease |  |
| Cholelithiasis | ICD-9-CM 574.0-574.91, 575.0-575.12, 576.1-576.2 |
| Chronic hepatitis B | ICD-9-CM V02.61, 070.20, 070.22, 070.30 and 070.32 |
| Chronic hepatitis C | ICD-9-CM V02.62, 070.41, 070.44, 070.51 and 070.54 |
| Helicobacter infection | 041.86 |
| Diabetes mellitus | ICD-9-CM 250 |
| End-stage renal disease | Catastrophic illness card, HV 585 |
| Congenital cystic disease of liver | ICD-9-CM 751.62, 751.69 |
| Clonorchis and Opisthorchis | ICD-9-CM 121.0, 121.1 |
| Inflammatory bowel diseases | ICD-9-CM 555–556 |
| Cholangiocarcinoma | ICD-9-CM 155.1, 156.1, 230.8 and 235.3 |
| Procedure code |  |
| Cholecystectomy | 75203B, 75215B |
| Endoscopic sphincterotomy | 56031B, 56033B |
| Endoscopic papillary balloon dilatation | 56032B |

Supplementary table 2. Comparisons recurrent biliary events between cholangiocarcinoma patients and non-cholangiocarcinoma patients in ES/EPBD group

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| --- | --- | --- | --- |
|  | ES/EPBD group  N=537 | | p value |
| Cholangiocarcinoma after first 6 months (N=11) | Non-cholangiocarcinoma group (N= 510) |  |
| RBE events  Mean (SD) | 54  4.909 (1.749) | 892  4.323 (2.081) | 0.563 |
| Patient who had RBE events | 9 | 357 | 0.317\* |

ES=endoscopic sphincterotomy; EPBD= endoscopic papillary balloon dilatation; RBE= recurrent biliary events; \*Fisher exact test