

Supplementary Method

1. Inclusion/exclusion criteria

1) Inclusion criteria

1. Aged greater than 20 years
2. Histologically or cytologically confirmed biliary tract cancer
3. Initially unresectable or metastatic or recurring disease
4. Including intrahepatic cholangiocarcinoma, extrahepatic cholangiocarcinoma, gallbladder cancer, and Ampulla of Vater cancer
5. Previous received one palliative chemotherapy
6. Patients had measurable or evaluable lesion according to the RECIST criteria ver. 1.1.
7. Eastern Cooperative Oncology Group (ECOG) performance status of 0 or 1
8. Adequate hematologic, renal and hepatic function

2) Exclusion criteria

1. Evidence of another active cancer
2. Known brain metastasis or primary central nervous system tumor that were not well controlled with standard medical therapy
3. Uncontrolled intercurrent illness
4. Known HUV positive patients
5. Significant cardiovascular disease including congestive heart failure or active angina pectoris
6. History of a myocardial infarction within 6 months
7. History of a stroke or transient ischemic attack within 6 months