In biliary tract cancer, gemcitabine platinum (GP) doublet palliative chemotherapy is the current standard treatment. The aim of this study was to analyze recent trials, even those small and nonrandomized, and identify superior new regimens. Trials published in English between January 2000 and January 2014 were analyzed, as well as ASCO abstracts from 2010 to 2013. In total, 161 trials comprising 6,337 patients were analyzed. The pooled results of standard therapy GP (no fluoropyrimidine, F, or other drug) were as follows: the median response rate (RR), tumor control rate (TCR), time to tumor progression (TTP) and overall survival (OS) were 25.9 and 63.5%, and 5.3 and 9.5 months, respectively. GFP triplets as well as G-based chemotherapy plus targeted therapy were significantly superior to GP concerning tumor control (TCR, TTP) and OS, with no difference in RR. Triplet combinations of GFP as well as G-based chemotherapy with (predominantly EGFR) targeted therapy are most effective concerning tumor control and survival.