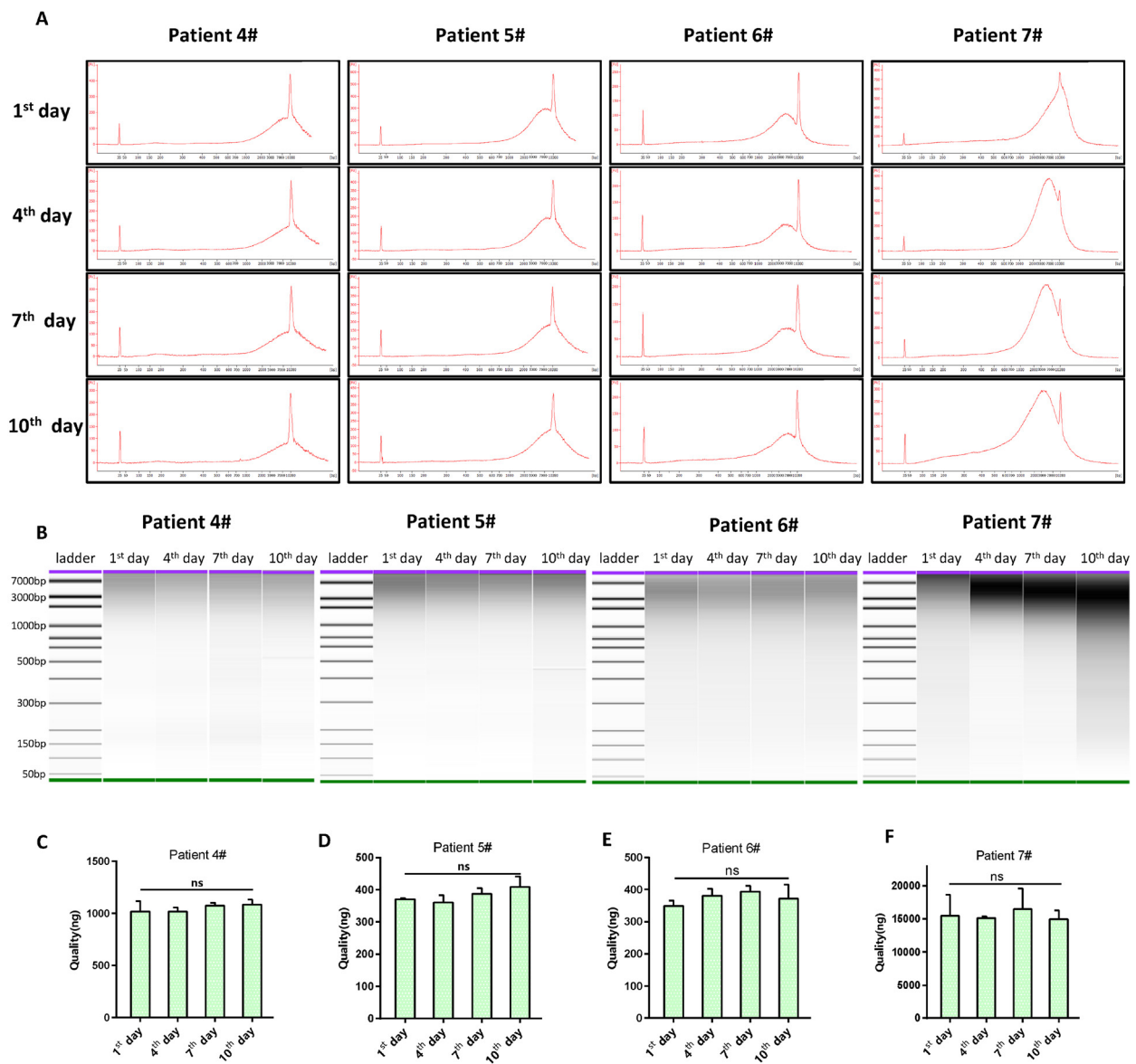
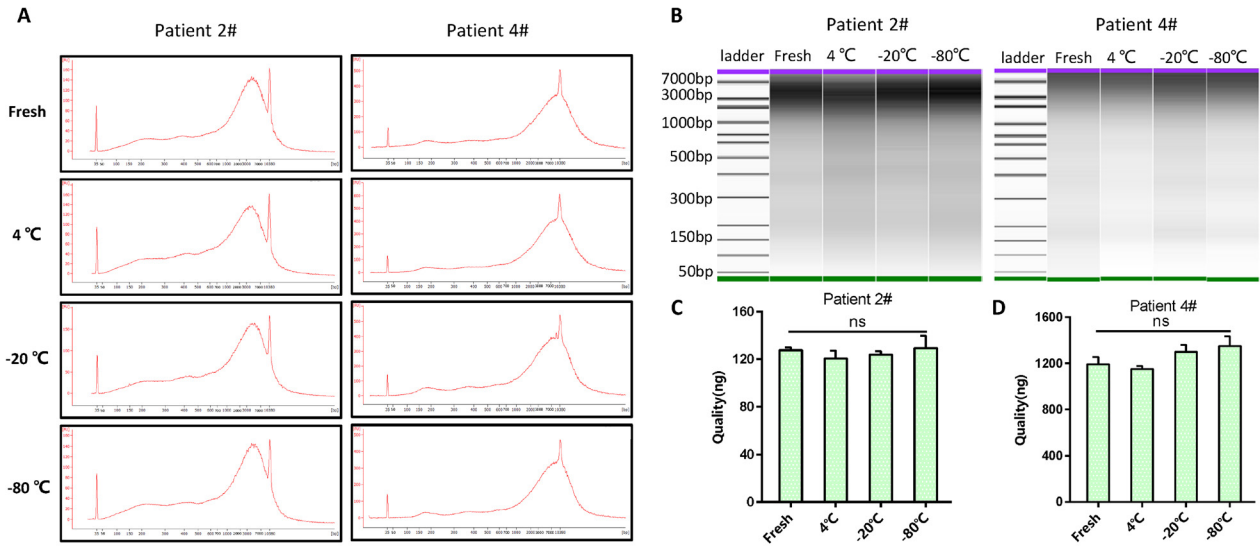


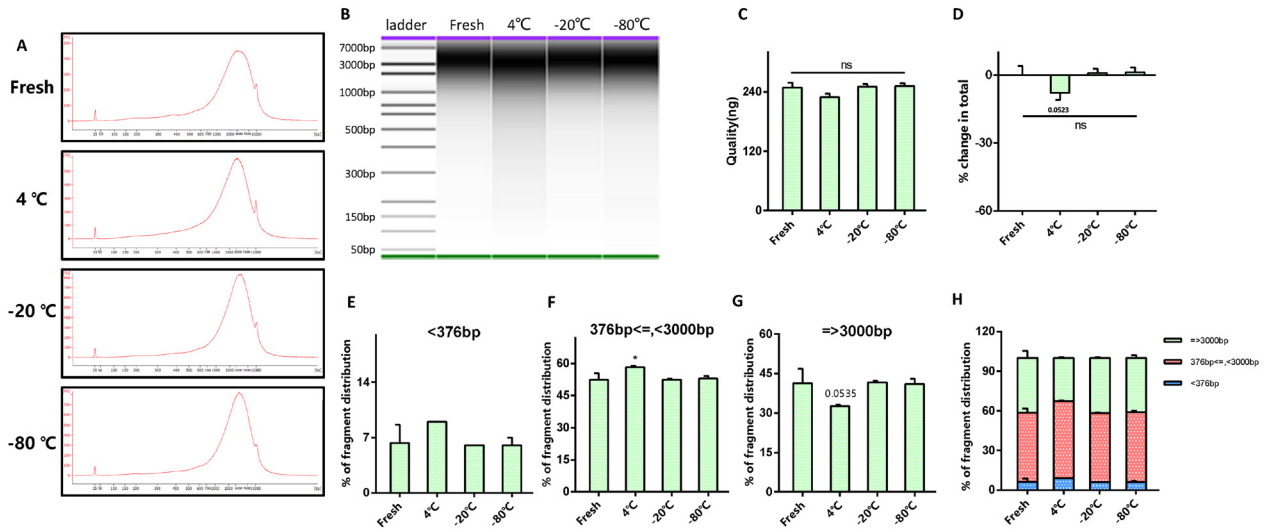
**Figure S1** Bile cfDNA from bile samples collected with regular tubes and stored at RT for 2 months. (A) Fragment distribution of bile cfDNA detected by the Agilent 2100 bioanalyzer. (B) Electronic DNA bands generated according to cfDNA fragment sizes. Total amount (C) measured by Qubit 3.0 fluorometer and the percentage of change (D) in bile cfDNA. Percentages of fragments shorter than 376 bp (E), or between 376 and 3,000 bp (F), or longer than 3,000 bp (G). (H) Bar plots showing the percentage size distribution of bile cfDNA fragments. \*,  $P \leq 0.05$ ; \*\*,  $P \leq 0.001$ ; \*\*\*,  $P \leq 0.0001$ . cfDNA, cell-free DNA; RT, room temperature.



**Figure S2** Bile cfDNA from bile samples stored at RT with protectant. The fragment distribution (A) and electronic DNA bands (B) detected by Agilent 2100 bioanalyzer, and total extracted amount (C-F) of bile cfDNA measured by Qubit 3.0 fluorometer. ns,  $P > 0.05$ . cfDNA, cell-free DNA; RT, room temperature.



**Figure S3** Bile cfDNA from bile samples stored at different temperatures with protectant for 2 months. The fragment distribution (A) and electronic DNA bands (B) detected by the Agilent 2100 bioanalyzer. Total extracted amount (C,D) of bile cfDNA measured by Qubit 3.0 fluorometer. ns,  $P > 0.05$ . cfDNA, cell-free DNA.



**Figure S4** Bile cfDNA from bile samples stored for 2 months at different temperatures without protectant. (A) Fragment distribution of bile cfDNA detected by the Agilent 2100 bioanalyzer. (B) Electronic DNA bands generated according to cfDNA fragment sizes. Total amount (C) measured by Qubit 3.0 fluorometer and percentage of change (D) of bile cfDNA. Percentage of fragments shorter than 376 bp (E), or between 376 bp and 3,000 bp (F), or longer than 3,000 bp (G). (H) Bar plots showing the size distribution of the percentage of bile cfDNA fragments. ns,  $P > 0.05$ ; \*,  $P \leq 0.05$ . cfDNA, cell-free DNA.