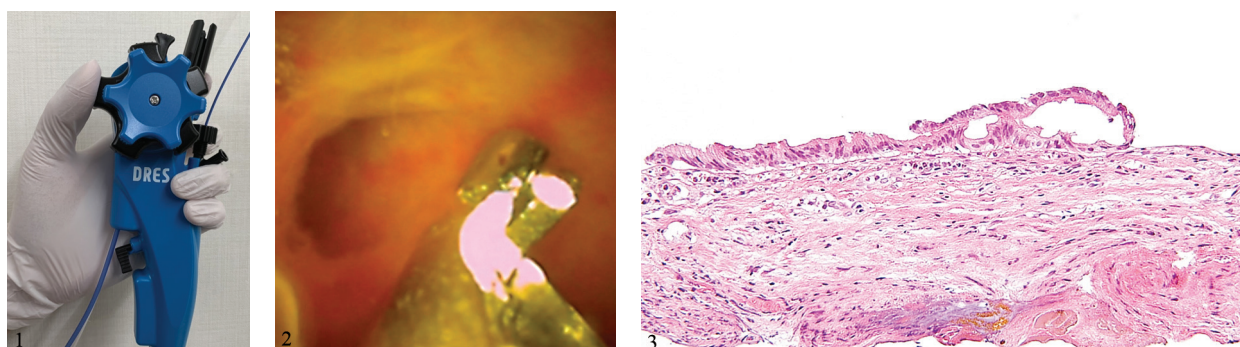


A Novel Cholangioscopy with a 2.0 mm Large Working Channel for Biliary Targeted Biopsy

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Forceps biopsy is a useful method for histopathological diagnosis of bile duct lesions. However, obtaining sufficient tissue from an appropriate target position is often difficult under fluoroscopic guidance, especially in the hilar region. Although it can be confirmed that the target position is grasped with cholangioscopy-guided biopsy, the tissue obtained is often insufficient because the working channel diameter of conventional cholangioscopy is only 1.2 mm and thus the only available forceps is a 1.0 mm diameter small-cup [1]. Here, a newly developed cholangioscope (DRES Cholangioscopy System; Japan Lifeline Co., Ltd., Tokyo, Japan) has a large working channel of 2.0 mm, allowing the use of biopsy forceps with a 1.5–1.8 mm diameter cup, used in conventional upper and lower gastrointestinal endoscopes (Fig. 1).

A 77-year-old woman diagnosed with extrahepatic cholangiocarcinoma required a biopsy of the B4 confluence for treatment decision making. A biopsy was performed using a conventional cholangioscope with 1.0 mm diameter forceps, but a diagnosis could not be made due to poor sample quality and quantity. Therefore, ERCP was re-performed and the novel cholangioscope was inserted up to the hilar portion. Targeted biopsy was then performed in the B4 confluence with cholangioscopic confirmation using 1.5 mm diameter forceps (Fig. 2). Adequate specimens were obtained with the diagnosis of no malignancy and no extension of cholangiocarcinoma

(Fig. 3), leading to the application of appropriate therapeutic strategies. No adverse events were observed after the procedure.

A mapping biopsy is often needed to determine the surgical indication and method for perihilar cholangiocarcinoma [2]. However, accurately obtaining sufficient samples from the target site is often challenging. The new cholangioscope has a large working channel, which expands the choice of devices that can be used. The ability to insert larger forceps is expected to increase the diagnostic rate of biliary targeted biopsy.

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