Endoscopy is a common diagnostic procedure used across a number of medical fields to visualize and retrieve tissue samples from otherwise hard-to-reach areas of the body. In gastroenterology, Endoscopic Retrograde Cholangiopancreatography (ERCP) is used in the diagnosis of disorders with biopsies typically obtained using catheters and biliary cytology brushes. However, these implements are often flimsy resulting in a lack of instrument guidance and decreased accuracy. Moreover, current systems require multi-modality sampling to obtain sufficient tissue samples, causing the insertion of multiple devices into the catheter and adding to the total time and cost of the procedure. This technology is a modified catheter containing a cytology brush for ERCP and other endoscopy procedures.

**Improved Tissue Sampling Capability with Modified Catheter**

The adequacy of tissue sample is crucial for accurate diagnosis. Through modifications to the construction of the catheter, this technology addresses some of the difficulties and limitations encountered during ERCP with currently available instruments. This technology provides a firm tapered catheter for endoscopy, which facilitates penetration of strictures and improves the accuracy of positioning. A window within the catheter allows for shaving of the surrounding without withdrawing the catheter or changing instrumentation. A brush contained within the catheter can be unsheathed, exposing the bristles through the window. The brush is then rotated within the catheter, ensuring that tissue is retrievable and further increasing the tissue yield. These design modifications have the potential to reduce the need for repeat procedures and misdiagnosis, resulting in a significant reduction of time, cost, and wasted resources.

**Lead Inventor:**

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Applications:

- Gastrointestinal endoscopic procedures such as Endoscopic Retrograde Cholangiopancreatography (ERCP) *Endoscopic procedures including urologic and gynecologic endoscopy, arthrosopy, and bronchoscopy *Other similar medical biopsy procedures that could benefit from the sensitivity and precise tissue sampling of this technology

Advantages:

* Sturdy tapered catheter for easier guidance to location of interest * Eliminate need for multiple biopsy methods * Maximize tissue yield by maintaining brush within catheter * High accuracy for biopsying tissue of interest

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