

Dynamic Endoscopic Ultrasound Needle for Streamlined Procedures

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BACKGROUND

Endoscopic technologies involve non-invasive medical procedures that lead to better, more cost-effective treatment for the patient while simultaneously reducing strains on bustling hospitals.

Physicians use endoscopic ultrasound for numerous procedures, including:

- Exploration and diagnosis of digestive tract diseases
- Assessment of biliary duct occlusions
- Drainage of pancreatic pseudocysts
- Stent placement to restore the passage of digestive fluids

DEFINITION OF THE PROBLEM

Advancements in endoscopic ultrasound equipment and techniques have significantly increased the range of applications and efficacy of this technology. Present endoscopic technology, however, often involves a doctor having to remove one device and insert a new one each time a new function is needed, limiting the physician's speed and efficiency during procedures.

INVENTIVE SOLUTION

Researchers at the University of Virginia have developed a Dynamic Endoscopic Ultrasound Needle that allows the physician to locate, explore and/or alleviate a lesion using just one device instead of several. This new device will be able to accommodate other endoscopic devices — from stent delivery to electrocautery — in order to decrease procedure time and increase the efficacy with which the surgeon operates.