



## Summary: Guidewires in GI endoscopy

Prepared by the American Society for Gastrointestinal Endoscopy Technology Committee

Samuel Han, MD, MS,<sup>1</sup> Mohit Girotra, MD, FACP,<sup>2</sup> Venkata S. Akshintala, MD,<sup>3</sup> Dennis Chen, MD,<sup>4</sup> Yen-I Chen, MD,<sup>5</sup> Koushik K. Das, MD, FASGE,<sup>6</sup> Allon Kahn, MD,<sup>7</sup> Girish Mishra, MD, MSc, FASGE,<sup>8</sup> V. Raman Muthusamy, MD, MAS,<sup>9</sup> Jorge V. Obando, MD,<sup>10</sup> Frances U. Onyimba, MD,<sup>11</sup> Swati Pawa, MD, FASGE,<sup>8</sup> Tarun Rustagi, MD,<sup>12</sup> Sonali Sakaria, MD,<sup>13</sup> Guru Trikudanathan, MD, FASGE,<sup>14</sup> Ryan J. Law, DO<sup>15</sup>

Adapted from *iGIE* at <https://doi.org/10.1016/j.igie.2023.07.017>.

This document was reviewed and approved by the Governing Board of the American Society for Gastrointestinal Endoscopy.

Guidewires remain invaluable for performing both diagnostic and therapeutic endoscopy. Varying in design, composition, length, and tip shape, guidewires are used within the GI lumen and pancreaticobiliary tract to gain access to, facilitate device advancement into, and maintain access within extraluminal collections and adjacent structures.

Guidewires are an essential tool in ERCP, allowing selective access of the bile or pancreatic ducts. More recent “short” systems allow for locking of a shorter (260-270 cm) guidewire while giving the endoscopist independent control of the wire. “Long” systems enable countertension during device advancement but require device exchanges over a long guidewire (>450 cm) with the aid of an assistant.

Guidewire use has expanded rapidly in therapeutic EUS, ranging from EUS-guided rendezvous procedure to EUS-guided left hepaticogastrostomy and transmural drainage of walled-off collections. Typically, long angled guidewires are used in such procedures because of the need to selectively direct the guidewire (eg, through the major papilla into the duodenum during a rendezvous procedure) and perform exchanges over the guidewire.

Within the GI lumen, guidewires are most commonly used for dilation and placement of enteral stents. Stiffer guidewires are preferred to facilitate advancement of dilators and stent delivery catheters because they can create the friction needed for effective countertension during device advancement. Additionally, guidewires can aid in endoscope advancement past strictures, Zenker’s diverticulum, and other tortuous intraluminal anatomy.

Ductal perforation, albeit relatively rare, represents the most common guidewire-related adverse event in ERCP. In therapeutic EUS, guidewire shearing can occur when the guidewire contacts the tip of the needle tip, which can result in leaving a foreign body within the pancreaticobiliary tract.

In summary, guidewires are widely used in GI endoscopy, with a large variety available for specific purposes from therapeutic EUS procedures to ERCP to luminal stent placement. The full technology status evaluation report can be found here (available online at [https://www.igiejournal.org/article/S2949-7086\(23\)00089-4/fulltext](https://www.igiejournal.org/article/S2949-7086(23)00089-4/fulltext)).

### DISCLOSURE

*The following authors disclosed financial relationships:* V. S. Akshintala: Board member for Origin Endoscopy Inc; consultant for Dragonfly Endoscopy Inc; educational grants from Abbvie, Boston Scientific Corporation, and Medtronic; travel compensation from Mauna Kea Technologies, Inc; food and beverage compensation from Mauna Kea Technologies, Inc, Boston Scientific Corporation, and Abbvie Inc. D. Chen, S. Sakaria: Food and beverage compensation from Ambu Inc. Y-I. Chen: President of Chess Medical; consultant for Boston Scientific Corporation. K. K. Das: Patent-holder with Interpace Biosciences; food and beverage compensation from Medtronic, Inc. A. Kahn: Consultant for MiMedx. G. Mishra: Consultant for Pentax of America, Inc and Cook Medical LLC; travel compensation Pentax of America, Inc; food and beverage compensation from Pentax of America, Inc, Cook Medical LLC, Ambu Inc, Boston Scientific Corporation, and Wilson Cook Medical Inc. V. Raman Muthusamy: Consultant for Medtronic and Boston Scientific Corporation; research support from Boston Scientific Corporation; stock options/equity in Capsovision; advisory board for Endogastric Solutions and Motus GI; travel compensation from Boston Scientific Corporation; food and beverage compensation from Boston Scientific Corporation, Steris Corporation, Medtronic, Inc, Apollo Endosurgery US Inc, Endogastric Solutions, Inc,

Cook Medical LLC, Pentax of America, Inc, and Olympus America Inc. J. V. Obando: Shareholder with Surgenly LLC. F. U. Onyibma: Food and beverage compensation from Endogastric Solutions, Inc and Medtronic, Inc. S. Pawa: Consultant for Boston Scientific Corporation. T. Rustagi: Consultant for Boston Scientific Corporation; food and beverage compensation from Boston Scientific Corporation and Merit Medical Systems Inc. G. Trikudanathan: Consultant for Boston Scientific Corporation; food and beverage compensation from Boston Scientific Corporation. R. J. Law: Consultant for ConMed Corporation, Boston Scientific Corporation, Medtronic USA Inc, and Olympus America Inc; royalties from UpToDate; food and beverage compensation from Olympus America Inc, Boston Scientific Corporation, and Ethicon Inc.

Copyright © 2025 by the American Society for Gastrointestinal Endoscopy  
0016-5107/\$36.00

<https://doi.org/10.1016/j.gie.2023.12.031>

Received December 20, 2023. Accepted December 22, 2023.

Current affiliations: Division of Gastroenterology, Hepatology and Nutrition, The Ohio State University Wexner Medical Center, Columbus, Ohio, USA (1), Department of Gastroenterology, Swedish Medical Center, Issaquah, Washington, USA (2), Division of Gastroenterology and Hepatology, The Johns Hopkins Hospital, Baltimore, Maryland, USA (3), Digestive Diseases Center, University of Chicago, Chicago, Illinois, USA (4), Division of Gastroenterology & Hepatology, McGill University Health Centre, Montreal, Quebec, Canada (5), Division of Gastroenterology, Washington University School of Medicine, St Louis, Missouri, USA (6), Department of Gastroenterology and Hepatology, Mayo Clinic, Scottsdale, Arizona, USA (7), Department of Gastroenterology, Wake Forest School of Medicine, Winston Salem, North Carolina, USA (8), Division of Digestive Diseases, UCLA Health System, David Geffen School of Medicine at UCLA, Los Angeles, California, USA (9), Division of Gastroenterology, Duke University Health System, Raleigh, North Carolina, USA (10), Department of Gastroenterology, WellSpan Digestive Health, York, Pennsylvania, USA (11), Department of Gastroenterology, California Pacific Medical Center, San Francisco, California, USA (12), Department of Gastroenterology, Emory University, Atlanta, Georgia, USA (13), Division of Gastroenterology, Hepatology and Nutrition, University of Minnesota, Minneapolis, Minnesota, USA (14), Department of Gastroenterology and Hepatology, Mayo Clinic, Rochester, Minnesota, USA (15).

Access to ***Gastrointestinal Endoscopy Online*** is reserved for all subscribers!

Full-text access to ***Gastrointestinal Endoscopy Online*** is available for all subscribers. ASGE MEMBER SUBSCRIBERS: To activate your individual online subscription, please visit <http://www.asge.org> and follow the instructions. NON-MEMBER SUBSCRIBERS: To activate your individual online subscription, please visit <http://www.giejournal.org> and follow the prompts to activate your *online access*. To activate your account, you will need your subscriber account/membership number, which you can find on your mailing label (*note*: the number of digits in your subscriber account number varies from 6 to 10 digits). See the example below in which the subscriber account number has been circled:

**Sample mailing label**

This is your Nonmember  
subscriber account number →

1234567-89 J037 10/00 Q: 1

CHRIS SMITH, MD  
12<sup>TH</sup> & PINE STREET  
CENTER CITY, NY 10001-001

Personal subscriptions to ***Gastrointestinal Endoscopy Online*** are for individual use only and may not be transferred. Use of ***Gastrointestinal Endoscopy Online*** is subject to agreement to the terms and conditions as indicated online.