SpyGlass[™] DS II Direct Visualization System



Boston Scientific

About Cholangioscopy

The SpyGlass DS System

A Full Suite of Solutions



View of normal ducts



Taking a biopsy using **SpyBite[™] Biopsy Forceps**



Fragmenting a large stone using EHL



Ordering Information

The SpyGlass[™] DS System

The SpyGlass DS System enables high resolution imaging and therapy during an endoscopic retrograde cholangiopancreatography (ERCP) procedure to target biopsies and fragment stones, which may result in **more efficient evaluation** and help reduce the need for additional testing and repeat procedures compared to traditional ERCP, and enable patients to **receive treatment sooner**⁶. The system enables direct visualization of the bile and pancreatic ducts and can help obtain biopsy specimens, lead to the diagnosis of abnormalities, and guide stone therapy.

Since its launch in 2015, the SpyGlass DS System has impacted more than 80,000 patient lives in more than 65 countries.

80,000 m PATIENTS





Learn More About the SpyGlass DS System

About Cholangioscopy

The SpyGlass DS System

A Full Suite of Solutions

The SpyGlass[™] DS System provides **important clinical**, **operational and**

disorders, such as difficult stones and indeterminate strictures.



In a clinical study of 289 pa clinical management was altered in 85% of patients undergoing diagnostic ERC with cholangioscopy.¹²

May enable **faster, more definitive cancer** diagnosis by allowing clinicians to obtain biopsies of tissue under direct visualization, improving sensitivity and diagnostic yield.^{1*}









Ordering Information

economic benefits for managing patients with complex pancreaticobiliary

atients, s CP	95 95 96 95 96 95 1 1 1 1 1 1 1 1 1 1
	A recent study showe enhanced diagnostic and less radiation exp single-operator chola



Additional Resources

5% stone clearance rates² may educe the need for more invasive nd costly procedures, which may ave a significant impact on patient outcomes and patient satisfaction.



ed the SpyGlass DS System provided yield, shorter procedure times, posure compared to a fiberoptic angiopancreatoscopy system.¹⁰



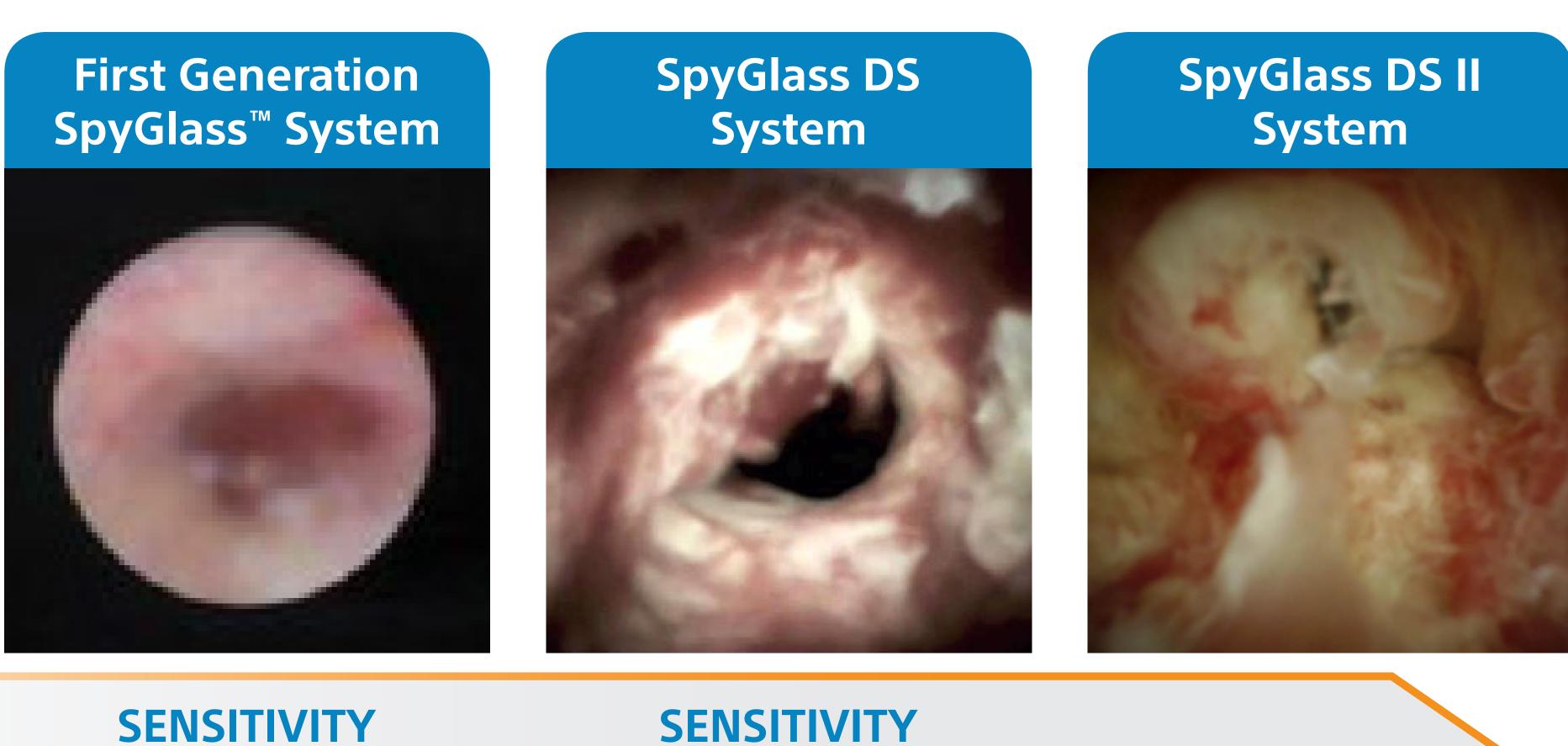
Fluoroscopy vs Digital Imaging

The SpyGlass DS System

Does reliance upon two dimensional, black and white imaging (fluoroscopy) enable the most effective way to diagnose and treat pancreaticobiliary strictures and stones?

Fluoroscopic **Cytology Brush**

49%



86%

SENSITIVITY 1,3,4,5,6 30%





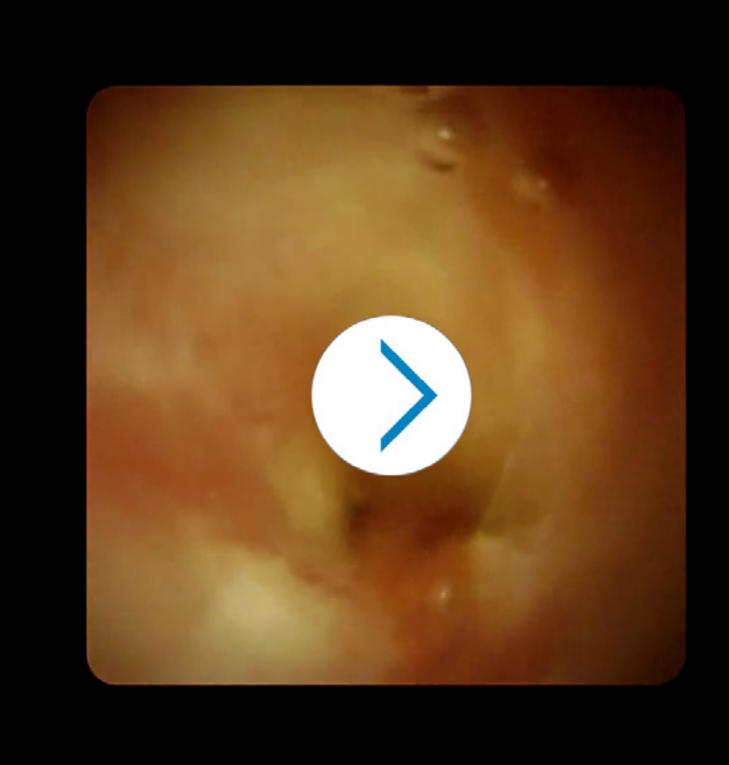




Additional Resources



Click to watch video below



View of Cholangiocarcinoma Video provided courtesy of Isaac Raijman, M.D.



SpyScope[™] DS II Access & Delivery Catheter **A Full Suite of Solutions Ordering Information** The SpyGlass DS System

Our Purpose is Clear: The 3rd Generation SpyScope DS II Access & Delivery Catheter Built on the **ground-breaking technology** of the SpyScope DS Catheter, the SpyScope DS II Catheter features increased resolution and adjusted lighting to provide physicians with an even better view of the biliary and pancreatic ducts.

New CMOS chip featuring increased resolution

Adjusted lighting designed to reduce light flare, improve lighting in the corners of the video, and provide an enhanced view down the lumen



SpyScope DS II Catheter

Increased resolution, at 2.5x that of the **SpyScope DS Catheter****

- HDR processing for improved visibility
- Easy platform upgrade process

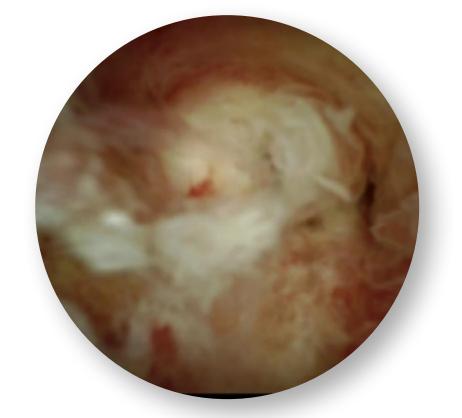




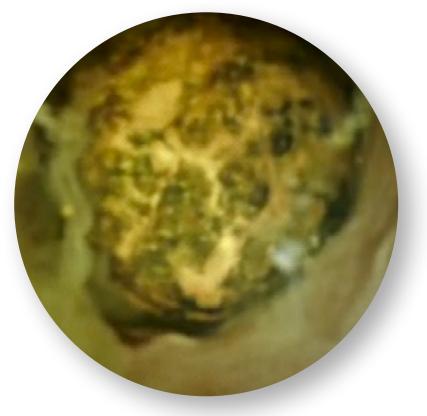
Additional Resources



View of Biliary Duct



View of Cholangiocarcinoma



View of Biliary Stone

New Accessories

The SpyGlass DS System

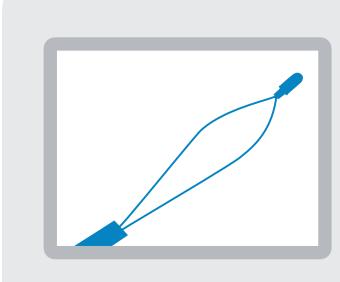
An Expanding Suite of Compatible Accessory Devices

SpyGlass[™] Retrieval Basket



The new SpyGlass Retrieval Basket can be used to capture and remove residual biliary and pancreatic stones and stone fragments visualized with the SpyGlass DS System.

SpyGlass Retrieval Snare



The new SpyGlass Retrieval Snare is designed to enable efficient capture and removal of foreign bodies in the biliary and pancreatic ducts, such as migrated plastic stents, during an ERCP procedure.









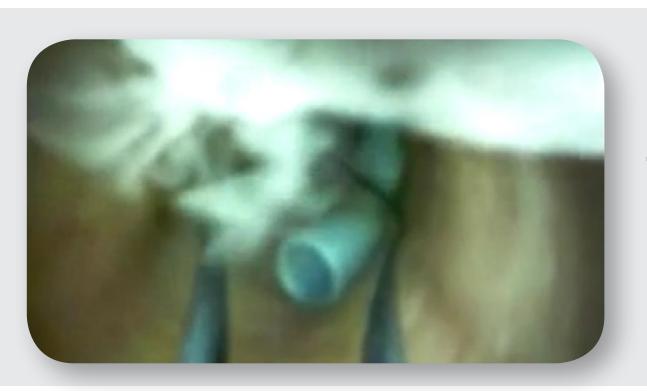
Ordering Information

Stone Management

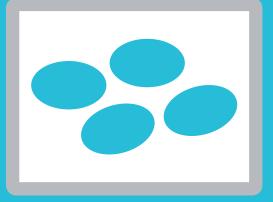


Direct visualization stone clearance using EHL has been shown to be clinically effective with demonstrated **procedural success**, with single-session stone clearance rates of $\sim 75\%^2$.

Achieving single session stone clearance and reducing the need for a repeat procedure(s) may deliver greater patient satisfaction and decrease unnecessary procedural costs.



Additional Resources



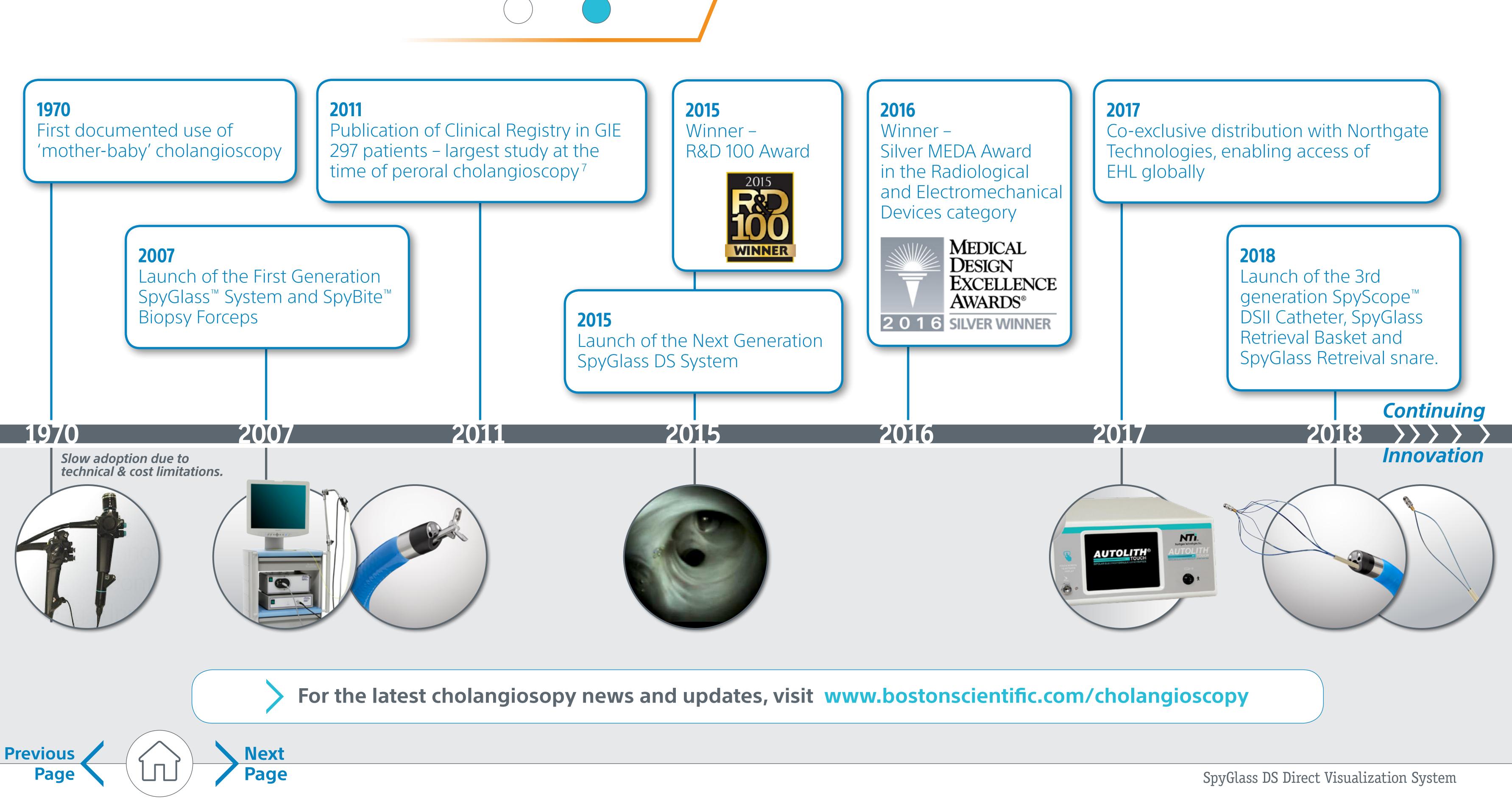
In a recent study, **15/50** patients (30%) were found to have residual biliary stones

that were not seen with occlusion cholangiogram, but were detected using the SpyGlass DS System.¹¹

Capture and removal of a biliary plastic stent using the SpyGlass **Retrieval Snare.**

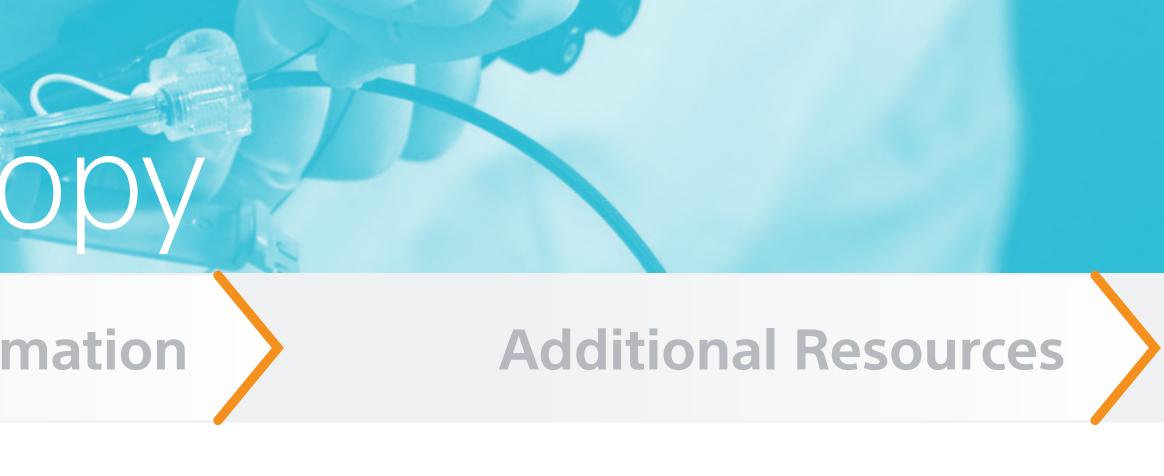
A History of Innovation in Cholangioscopy

The SpyGlass DS System



A Full Suite of Solutions

Ordering Information



Ordering Information **The SpyGlass DS System A Full Suite of Solutions**

Order Number	Product Description			
SpyGlass [™] DS System Capital				
M005 4665 0	SpyGlass™ DS Digital Contr			
SpyGlass DS System Device				
M005 4661 0	SpyScope [™] DS II Access & I			
M005 4660 0	SpyScope DS Access and D			

Order Number	Product Description	Cable Diameter (in / mm)	Jaw Outer Diameter (mm)	Jaw Opening (mm)	Working Length (cm)	Require Endoscope w Channel (r	
SpyGlass DS Accessory Devices (Optional)							
M005 4627 0	SpyBite [™] Biopsy Forceps	0.039/1.0	1.0	4.1/55°	286	1.2	
M005 4655 0	SpyGlass Retrieval Basket	NA	NA	NA	286	1.2	
M005 4656 0	SpyGlass Retrieval Snare	NA	NA	NA	286	1.2	

Order Numb	er Product Description	Order Number	Product Description	
Biliary EHL	Probe	Autolith Touch	System Accessories	
M005 4662	0 1.9Fr., 375cm Biliary EHL Probe	M005 4675 0	Autolith Touch Exter	
Autolith [™] To	ouch System	M005 4676 0	Autolith Touch Foot	
M005 4668	0 Autolith Touch EHL Generator			





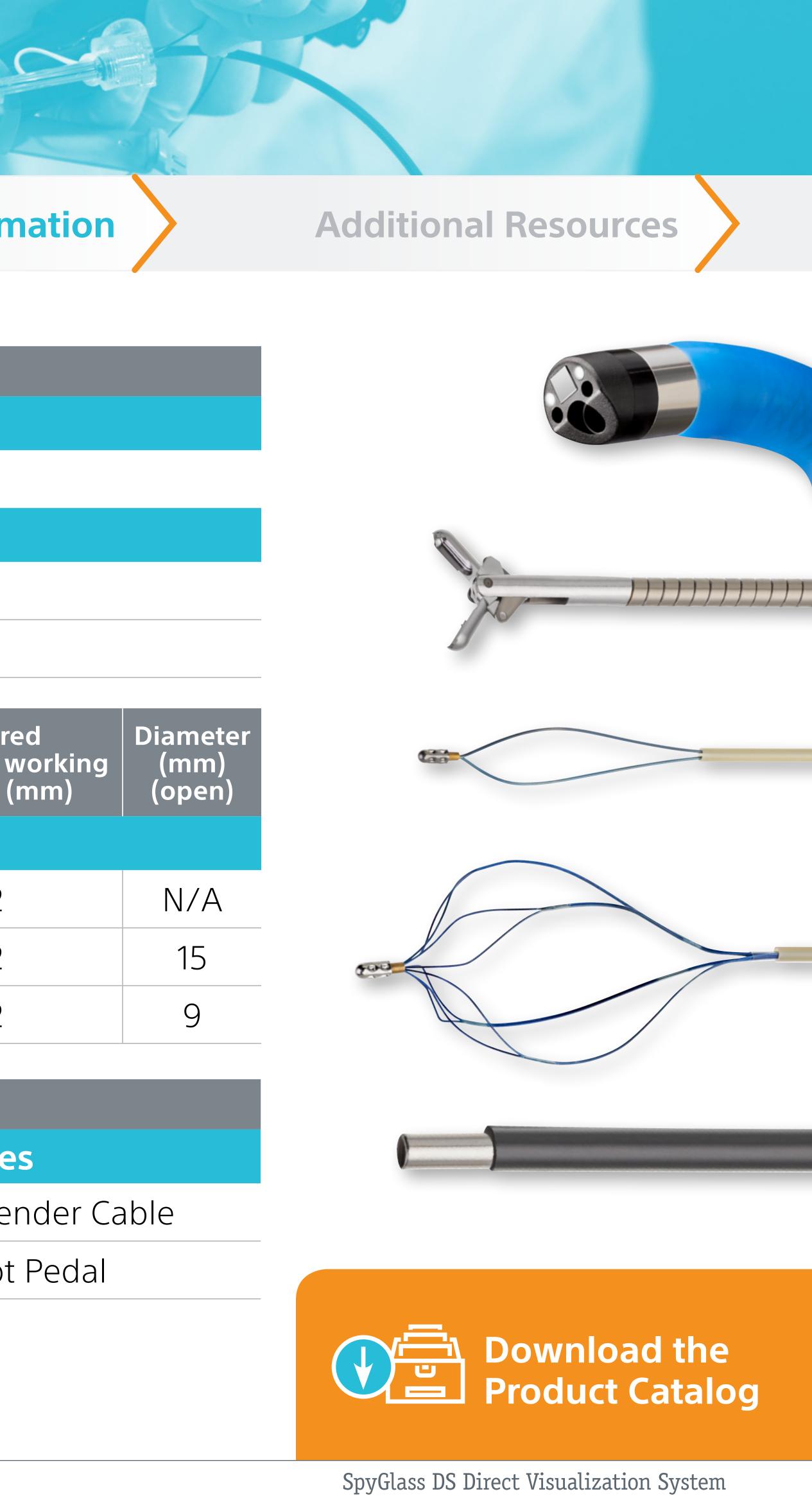


Ordering Information

troller

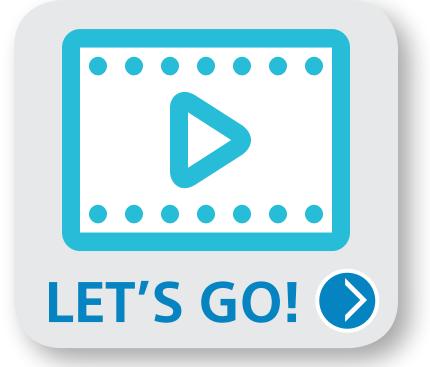
Delivery Catheter

Delivery Catheter





Additional Resources **The SpyGlass DS System**



Cholangioscopy and Pancreatoscopy Video Atlas

Explore our library of short video clips to help familiarize yourself with the appearance of various pancreatic and biliary findings as seen using cholangioscopy with the SpyGlass DS System. (Internet Required)



Cholangioscopy Image Reference Guide Become familiar with the appearance of strictures, villous lesions, stone disease, and more using the SpyGlass DS System. (Internet Required)



SpyGlass[™] DS System. (Internet Required)

Keep up to date with the latest resources and information by visiting www.bostonscientific.com/cholangioscopy

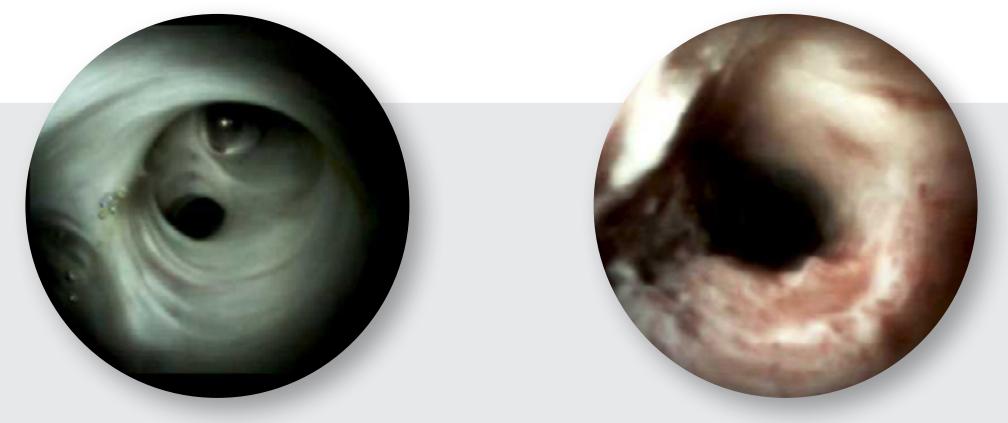






A Full Suite of Solutions

Ordering Information



Normal Duct

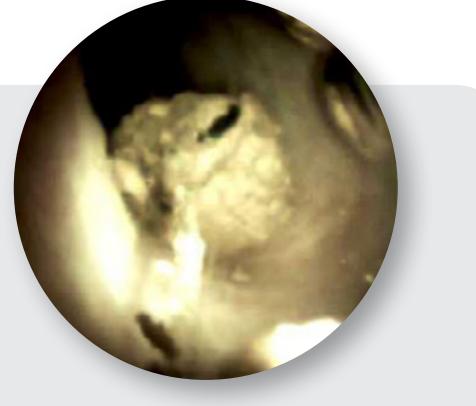
Visit EndoSuite.com to watch presentations, programs and case studies featuring the



Additional Resources



Cholangiocarcinoma



Cystic Duct Stone





Follow us on Twitter



*Compared to cytology brushing.

**Because the analysis of sensitivity in intrinsic versus extrinsic disease was limited to patients with a final diagnosis of malignancy, no computation of specificity was possible.

References:

- 1. J Jailwala, E Fogel, S Sherman, et al. Triple-tissue sampling at ERCP in malignant biliary obstruction. Gastrointest Endosc 2000; 51(4):383-390.
- 2. Brewer Gutierrez OI, Bekkali NL, Raijman I, Sturgess R, Sejpal DV, Aridi HD, Sherman S, Shah RJ, Kwon RS, Buxbaum JL, Zulli C, Wassef W, Adler DG, Kushnir V, Wang AY, Krishnan K, Kaul V, Tzimas D, DiMaio CJ, Ho S, Petersen B, Moon JH, Elmunzer BJ, Webster GJ, Chen Y-I, Dwyer LK, Inamdar S, Patrick VB, Attwell A, Hosmer A, Ko C, Maurano A, Sarkar A, Taylor LJ, Gregory MH, Strand DS, Raza A, Kothari S, Harris JP, Kumta NA, Manvar A, Topazian MD, Lee YN, Spiceland CM, Bukhari MA, Sanaei O, Ngamruengphong S, Khashab MA, Efficacy and Safety of Digital Single-Operator Cholangioscopy for Difficult Biliary Stones, Clinical Gastroenterology and Hepatology (2017), doi: 10.1016/j.cgh.2017.10.017.
- 3. Ponchon T et al. Value of endobiliary brush cytology and biopsies for the diagnosis of malignant bile duct stenosis: results of a prospective study. GIE 1995. 42(6): 565-72
- 4. Lee JG et al. Benign, dysplastic, or malignant making sense of endoscopic bile duct brush cytology: results in 149 consecutive patients. Am J Gastroenterol. 1995 90(5)722-6.
- 5. Ornellas LC et al. Comparison between endoscopic brush cytology performed before and after biliary stricture dilation for cancer detection. 2006 (41)1: 20-23.
- 6. Draganov et al., Diagnostic accuracy of conventional and cholangioscopy-guided sampling of indeterminate biliary lesions at thetime of ERCP: a prospective, long-term follow-up study, GIE, Vol. 75 (2); February 2012.
- 7. Chen Y et al, Single-operator cholangioscopy in patients requiring evaluation of bile duct disease or the rapy of biliary stones (with videos). Gastrointest Endosc 2011; 74:805-814.
- 8. Shah et al. Performance of a fully disposable, digital, single-operatorcholangiopancreatoscope. Endoscopy 2017; 49: 651–658.
- 9. Parsi et al. Endoscopic management of difficult common bile duct stones. World J Gastroenterol 2013; 19(2): 165-173
- 10. Pleskow et al. "Apple Far from the Tree": comparative effectiveness of fiberoptic single-operator cholangiopancreatoscopy (FSOCP) and digital SOCP (DSOCP). HPB 2018, 20, 285-288.
- GIE. May 2017Volume 85, Issue 5, Supplement, Page AB618.
- DDW 2017.

CAUTION: The law restricts these devices to sale by or on the order of a physician. Indications, contraindications, warnings and instructions for use can be found in the product labelling supplied with each device. Information for use only in countries with applicable health authority registrations. This material not intended for use in France. Rx only.

All images owned by Boston Scientific.

All trademarks are the property of their respective owners.

11. Sejpal et al. Prospective Evaluation of Digital Peroral Cholangioscopy for the Detection of Residual Biliary Stones That Are Missed With Conventional ERCP: an Interim Analysis.

12. Ramchandani, M. et al. Single Operator Cholangioscopy for the evaluation and diagnosis of Indeterminate biliary strictures -Results from a Large Multi-national Registry.

Scientific

Advancing science for life[™]

Boston Scientific Corporation 300 Boston Scientific Way Marlborough, MA 01752-1234 www.bostonscientific.com/Gastro www.EndoSuite.com

Ordering Information 1.888.272.1001

©2019 Boston Scientific Corporation or its affiliates. All rights reserved.

ENDO-324201-AB March 2019