

da Vinci[®]

CHOLECYSTECTOMY

WITH *SINGLE-SITE*[™] TECHNOLOGY



Solutions for single-access cholecystectomy

The *da Vinci*[®] Surgical System with *Single-Site*[™]

- › High-definition 3D vision
- › Advanced instrumentation
- › *Intuitive*[®] motion

da Vinci CHOLECYSTECTOMY WITH *SINGLE-SITE*[™] TECHNOLOGY



Maintains the safety and reproducibility of a multi-port laparoscopic cholecystectomy while providing the potential patient benefits of a single-access approach.^{1,2}

The unsurpassed vision, dexterity and control provided by the *da Vinci*[®] *Si*[™] System with *Single-Site* technology offers surgeons the following potential benefits compared to manual single-port laparoscopy:

- ❖ Superior identification of biliary anatomy¹
- ❖ Meticulous dissection of Calot's triangle¹
- ❖ Improved gallbladder retraction and exposure¹
- ❖ Better ergonomics with minimal instrument crowding¹

POTENTIAL PATIENT BENEFITS* INCLUDE

- ❖ Minimal scarring^{2,3}
- ❖ Minimal pain^{1,2}
- ❖ Low blood loss²
- ❖ Fast recovery¹
- ❖ Short hospital stay^{1,2}
- ❖ High patient satisfaction¹



*Based on early clinical data.

¹Wren SM, Curet MJ. Single-port robotic cholecystectomy results from a first human use clinical study of the new *da Vinci Single-Site* surgical platform. *Arch Surg*. 2011 Jun 20. ²Kroh M, El-Hayek K, Rosenblatt S, Chand B, Escobar P, Kaouk J, Chalikhonda S. First human surgery with a novel single-port robotic system: cholecystectomy using the *da Vinci Single-Site* platform. *Surg Endosc*. 2011 Nov;25(11):3566-73. Epub 2011 Jun 3. ³Haber GP, White MA, Autorino R, Escobar PF, Kroh MD, Chalikhonda S, Khanna R, Forest S, Yang B, Altunrende F, Stein RJ, and Kaou JH. Novel robotic *da Vinci* instruments for laparoendoscopic single-site surgery. *Urology*, 2010;76(6):1279-82.

Procedure Highlights



Gallbladder Retraction

A dedicated assistant cannula in the *Single-Site* port provides access for dynamic gallbladder retraction at the patient side. This, along with the surgeon's autonomous control of two *Single-Site* Instruments and the camera, eliminates the need for ancillary retraction techniques such as transcutaneous sutures.



Adhesion Takedown

Single-Site technology facilitates stable, tremor-free lysis of adhesions to enable safe separation of tissue from underlying anatomy such as the duodenum or liver.



Triangle of Calot Dissection

Triangulated instrumentation and a stable camera provide a consistently unobstructed view of the surgical field. This facilitates precise skeletonization of the cystic artery and duct for a safe dissection of Calot's triangle.



Critical View Identification

The *da Vinci* System's high-definition 3D vision with up to 10x magnification provides clear visualization of the cystic artery and duct. Attainment of the critical view is further enabled by the surgeon's ability to provide precise, lateral countertraction on the infundibulum.



Cystic Artery and Duct Ligation and Division

The tremor-free *Single-Site Hem-o-Lok*® Clip Applier facilitates safe and accurate ligation and subsequent division of the cystic artery and duct.



Liver Bed Dissection

Unsurpassed range of motion, collision-free movements and the ability to perform effortless cross-handed maneuvers facilitates tissue manipulation and minimizes the need to regrasp. Together, these innovations enable the safe separation of the gallbladder from the liver.



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SURGICAL®

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Single-Site® Instruments Optimized for *da Vinci* Cholecystectomy

da Vinci Si PNs **TARGETED APPLICATIONS**



Cadiere Forceps 428055

- ✘ Grasping and retracting gallbladder and surrounding structures

Monopolar Cautery Hook 428052

- ✘ Dissecting triangle of Calot
- ✘ Separating gallbladder from liver bed
- ✘ Lysis of adhesions


Hem-o-lok® Clip Applier 428053

- ✘ Cystic duct and artery ligation

Curved Scissors 428057

- ✘ Cystic duct and artery transection

da Vinci Si PNs **TARGETED APPLICATIONS**



Maryland Dissector 428050

- ✘ Dissecting triangle of Calot
- ✘ Grasping gallbladder and surrounding structures

Crocodile Grasper 428059

- ✘ Grasping and retracting gallbladder and surrounding structures

Fundus Grasper 428058


- ✘ Grasping and retracting gallbladder and surrounding structures

Suction Irrigator 428054

- ✘ Clearing the surgical field
- ✘ Ensuring hemostasis after gallbladder removal

Additional *Single-Site*™ products

da Vinci Si PNs **TARGETED APPLICATIONS**



5 mm X 300 mm Curved Cannula

- ✘ Use for upper quadrant surgery

- #1 Arm 428061
- #2 Arm 428062
- 5 mm Flexible Obturator 428064

5 mm Accessory Cannula 428060

- ✘ Patient-side assistant access for 5 mm instruments


- 5 mm Obturator 420013

10 mm accessory cannula 428076

- ✘ Patient-side assistant access for 10 mm instruments

- 10 mm Obturator 428084

da Vinci Si PNs **TARGETED APPLICATIONS**



Single-Site Port 428065

- ✘ Guided cannula insertion, remote center positioning and insufflation maintenance

8.5 mm Endoscope

- ✘ High-definition 3D visualization

- 30° 371938
- 0° 371939

8.5 mm Endoscope Cannula 400263

- ✘ Endoscope Cannula

- 8 mm Blunt Obturator 420008

INTUITIVE SURGICAL®

Taking surgery beyond the limits of the human hand™



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Single-Site™ Instrumentation for the *da Vinci® Si™* System has CE Mark and is FDA-cleared for cholecystectomy. While clinical studies suggest that the *da Vinci®* Surgical System using *Single-Site™* Instrumentation is an effective tool for single-incision cholecystectomy, individual results may vary. Before performing any clinical procedure utilizing the System, physicians are responsible for receiving sufficient training and proctoring to ensure that they have the requisite training, skill, and experience necessary to protect the health and safety of the patient. For technical information, including full cautions and warnings on using the *da Vinci* System, please refer to the System User Manual. Read all instructions carefully. Failure to properly follow instructions, notes, cautions, warnings, and danger messages associated with this equipment may lead to serious injury or complications for the patient. All people depicted unless otherwise noted are models. © 2012 Intuitive Surgical. All rights reserved. *Intuitive*, *Intuitive Surgical*, *da Vinci*, *da Vinci S HD*, *da Vinci Si*, *InSite*, *TilePro*, *Single-Site* and *EndoWrist* are trademarks or registered trademarks of Intuitive Surgical. All other product names are trademarks or registered trademarks of their respective holders. PN 873386 Rev. C 2/12