

Facing Gallbladder Surgery?

Learn about virtually scarless
surgery with minimally invasive
da Vinci® Single-Site® Surgery



da Vinci Surgery

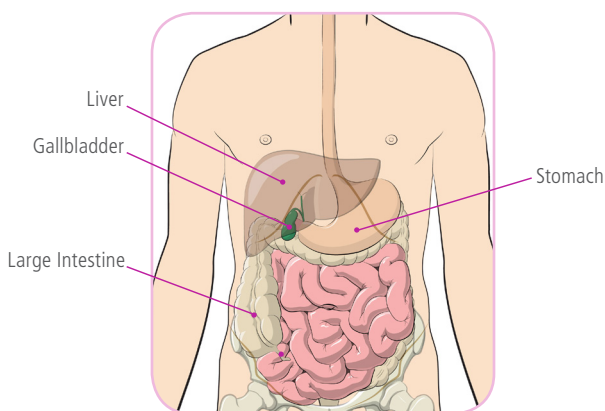
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The Conditions: Gallbladder Diseases/Disorders

Your gallbladder is a pear-shaped organ under your liver that stores and concentrates bile to help digest fat. Gallbladder disease includes: inflammation, infection, or blockage (obstruction) of the gallbladder. The most common blockage is a gallstone. Gallstones are pebble-like and solid. They can be as large as a golf ball or as small as a grain of sand.

Gallbladder disease is very common, affecting about 10-15% of adults in Europe and the U.S.¹ In fact, gallstones are the most common digestive disease leading to hospitalization in the Western world.¹

Symptoms of gallbladder disease may include: pain in the upper right side or middle of the abdomen, abdominal fullness, clay-colored stool, fever, nausea and vomiting, or yellowing of skin and whites of eyes (jaundice).



Abdominal Organs

Treatment & Surgical Options

Gallbladder Surgery

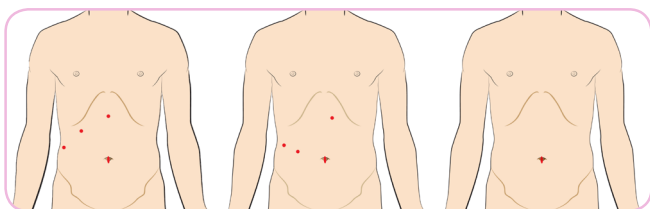
Treatment for gallbladder disease may include lifestyle changes and medication. If your symptoms get worse, your doctor may recommend surgery to remove your gallbladder. Your gallbladder is an organ that you can live without. Surgery to remove the gallbladder is called a cholecystectomy.

Cholecystectomy is performed using open surgery through one large incision or minimally invasive surgery (laparoscopy). Minimally invasive surgery can be done either through a few small incisions in your abdomen or one incision in your belly button. In laparoscopic procedures, surgeons use long-handled instruments to reach your gallbladder. One of the instruments is a tiny camera that takes images inside your body and sends them to a video monitor to guide surgeons as they operate.



Cholecystectomy through the belly button can be done using traditional single incision laparoscopy or *da Vinci*[®] *Single-Site*[®] Surgery. The *da Vinci* System features a magnified 3D high-definition vision system and flexible *Single-Site* instruments. These features enable your doctor to operate with enhanced vision and precision.

If your doctor believes you are not a candidate for *da Vinci* *Single-Site* Surgery, ask about multi-port *da Vinci* Surgery. Your surgeon can remove your gallbladder through a few small incisions (ports) with a 3D HD view of your anatomy for enhanced vision, precision, dexterity and control. It is important to discuss all treatment and surgical options with your doctor, as well as the risks and benefits of each.



Traditional Lap
Surgery

da Vinci Surgery:
Multi-port

da Vinci *Single-Site*[®]
or Traditional Lap
Single Incision Surgery

Why would you want scars?

“From all my doctor was saying, it had to be *da Vinci*. Why would you want scars?

Why would you want the extra pain of those incisions? It was mind-blowing how the experience went so smoothly.”



Kasia, Single-Site Patient

da Vinci® *Single-Site*® Surgery: A Virtually Scarless Procedure

With *da Vinci Single-Site* Surgery, doctors remove your gallbladder using state-of-the-art precision instruments. Patients who choose *da Vinci Single-Site* experience virtually scarless results, similar to single incision traditional laparoscopy. With *da Vinci*, surgery is performed through one incision in the belly button, which dramatically limits visible scarring.

As a result of *da Vinci* technology, *da Vinci Single-Site* Cholecystectomy offers the following potential benefits:

- Low rate of major complications²
- Low conversion rate to open surgery²
- Virtually scarless surgery²
- High patient satisfaction compared to traditional laparoscopy^{3*}
- Minimal pain compared to traditional laparoscopy^{3*}

* Comparable to results of most published studies on single incision laparoscopic cholecystectomies.



Risks & Considerations Related to Cholecystectomy and *da Vinci Single-Site* Surgery:

Potential risks of any cholecystectomy include:

- Bile leakage^{4,5,6}
- Bile duct stones/injury^{4,5,7}
- Pancreatitis (inflammation of the pancreas)^{4,5}
- Injury to intestines/abdominal organs⁸

Important Information for Patients

da Vinci Surgery with *Single-Site*[®] instrumentation is cleared for use in gallbladder removal, and for hysterectomy and ovary and fallopian tube removal for benign conditions. Patients who bleed easily, have abnormal blood clotting, are pregnant or morbidly obese are not candidates for minimally invasive surgery, including *da Vinci* Surgery with *Single-Site*[®] Instruments.

All surgery presents risk, including *da Vinci* Surgery. Results, including cosmetic results, may vary. Serious complications may occur in any surgery, up to and including death. Examples of serious and life-threatening complications, which may require hospitalization, include injury to tissues or organs, bleeding, infection, and internal scarring that can cause long-lasting dysfunction or pain. Temporary pain or nerve injury has been linked to the inverted position often used during abdominal and pelvic surgery. Patients should understand that risks of surgery include potential for human error and potential for equipment failure. Risks specific to minimally invasive surgery may include: a longer operative time, the need to convert the procedure to other surgical techniques, the need for additional or larger incision sites, a longer operation or longer time under anesthesia than your surgeon originally predicts. Converting to open surgery could mean a longer operative time, long time under anesthesia, and could lead to increased complications. Research suggests that there may be an increased risk of incision-site hernia with single-incision surgery. Patients should review the risks of all surgical approaches and the risks of *da Vinci* procedures to decide if *da Vinci* Surgery is right for them. It is important to talk to your doctor about his/her surgical experience. For complete information on surgical risks, safety and indications for use, please refer to www.davincisurgery.com/safety.

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Your doctor is one of a growing number of surgeons worldwide offering *da Vinci® Single-Site® Surgery*.

For more information and to find a *da Vinci* Surgeon nearest you, visit: www.daVinciGallbladderSurgery.com

¹ Portincasa P, Moschetta A, Palasciano G. Cholesterol gallstone disease. *Lancet*. 2006 Jul 15;368(9531):230-9. ² Pietrabissa A, Sbrana F, Morelli L, Badessi F, Pugliese L, Vinci A, Klersy C, Spinoglio G. Overcoming the challenges of single-incision cholecystectomy with robotic single-site technology. *Arch Surg*. 2012 Aug;147(8):709-14. ³ Wren 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 Oct;146(10):1122-7. Epub 2011 Jun 20. ⁴ Buzad FA, Corne LM, Brown TC, Fagin RS, Hebert AE, Kaczmarek CA, Pack AN, Payne TN. Single-site robotic cholecystectomy: efficiency and cost analysis. *Int J Med Robot*. 2013 May 2. doi: 10.1002/rcs.1507. [Epub ahead of print] ⁵ National Institutes of Health. Gallbladder Removal Surgery. Available from: <http://www.nlm.nih.gov/medlineplus/ency/article/002930.htm>. ⁶ Antoniou SA, Pointner R, Granderath FA. Single-incision laparoscopic cholecystectomy: a systematic review. *Surg Endosc*. 2011 Feb;25(2):367-77. doi: 10.1007/s00464-010-1217-5. Epub 2010 Jul 7. ⁷ Society of American Gastrointestinal and Endoscopic Surgeons (SAGES). Laparoscopic Gallbladder Removal (Cholecystectomy) Patient Information from SAGES. From: www.sages.org. ⁸ American College of Surgeons. Cholecystectomy, Surgical Removal of the Gallbladder. From: www.facs.org.

The Enabling Technology: *da Vinci*[®] Surgical System with *Single-Site*[®] Technology

The *da Vinci* Surgical System is designed to provide surgeons with enhanced capabilities, including high-definition 3D vision and a magnified view. Your doctor controls the *da Vinci* System, which translates his or her hand movements into smaller, more precise movements of tiny instruments inside your body.



Though it is often called a “robot,” *da Vinci* cannot act on its own. Surgery is performed entirely by your doctor. Together, the *da Vinci* System and *Single-Site*[®] instruments allow your doctor to perform gallbladder surgery through a single incision, similar to single incision traditional laparoscopy. As a result, you may be able to get back to life without the usual recovery following major surgery.