

# Laparoscopic Cholecystectomy

(Endorsed 25 /11/ 99)

<b>Ref nr.</b>	SG-0000037
<b>CPT™ Code:</b>	47600, 47605, 47610, 47612, 47620, 56340, 56341, 56342
<b>ICD10 Code:</b>	K80, K81, K82, K83
<b>SAMA Code:</b>	1761
<b>Directory Code:</b>	GS037
<b>Definition:</b>	Complete or partial (subtotal) removal of the gallbladder
<b>Indication For Procedure:</b>	Symptomatic gallstones Acute cholecystitis (calculus/acalculus) Chronic cholecystitis Mucocoele of the gallbladder Gangrene of the gallbladder Calcified/porcelain gallbladder Asymptomatic gallstones in diabetic patients Asymptomatic gallstones - the indications for cholecystectomy in patients with asymptomatic gallstones remains controversial Gallbladder polyps > 5 mm Chronic acalculous cholecystitis - this diagnosis is made when there is a history of recurrent inflammation of the gallbladder in conjunction with radiological and/or operative findings of a small shrunken/fibrotic gallbladder in the absence of gallbladder or CBD stones Gallstone pancreatitis
<b>Contraindications:</b>	No absolute contraindications
<b>Pre-Operative Investigations:</b>	Liver function tests (LFTs) Full blood count (FBC) Urea/Creatinine/Electrolytes (If hypertensive/diabetic/ U+E+Cr renal insufficiency) then: U+E+Cr Abdominal ultrasound is the diagnostic modality of choice to confirm cholecystolithiaiss, determine stone size and bile duct dilatation The associated presence of choledocholithiasis may influence the operative strategy. Risk factor identification aids in the prediction of the likelihood of choledocholithiasis being present. A variety of different diagnostic and therapeutic options are available to achieve this. They will vary depending on resource availability and local expertise. For those identified at low risk of choledocholithiasis ERCP should be performed after a less invasive modality eg (EUS, MRC) has confirmed the presence of stones in the duct. In patients with cholangitis, percutaneous or ERCP drainage are the preferred methods of bile duct decompression

## Hospitalisation

### Pre-op admission days:

### Theatre Requirements:

Level 3 theatre.  
Special equipment: Equipment to perform an operative cholangiogram  
Blood requirements: nil.  
Number of assistants: One General Practitioner/ Medical officer.

### Length of stay (LOS):

Average 1-3 days

### Complications:

Early:  
Pneumonia  
DVT  
Bile leak./ Biliary peritonitis  
Jaundice  
Bile duct injury ~0.12,5%  
Right Hepatic artery injury  
Cystic duct stump leak (0.3-0.5%)  
Late:  
CBD Strictures retained stones choledocholithiasis

### Level of Care:

LOC 3

### Ancillary Services:

0

### Post Operative Investigations:

0

### Certifications:

Masteror Fellowship in General Surgery see comment 1

### Reviewed By:

E Loots  
SR Thomson

### References:

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McMahon AJ, Fullarton G, Baxter JN, O'Dwyer PJ, Bile duct injury and bile leakage in laparoscopic cholecystectomy. *Br J Surg* 1995; **82**: 307-313.  
Nathanson LK, Shimi S, Cushieri A. Laparoscopic cholecystectomy: the Dundee technique. *Br J Surg* 1991; **78**: 155-159.  
Patino JF, Quintero GA. Asymptomatic cholelithiasis revisited. *World J Surg* 1998; **22**: 1119-1124.  
Demetrius EM et al. Laparoscopic cholecystectomy. *Surg Clin N Am* 2008; **88**: 1295-1313.

**Comments:**

Laparoscopic cholecystectomy should only be performed by well trained, experienced and accredited laparoscopic surgeons in theatres which are adequately equipped and staffed; it behoves the surgeons and all involved to function in a cost effective manner. Overall costs for laparoscopic techniques might be less if it can be shown that the use of the laparoscope can increase the diagnostic power, provide less post-operative pain and fewer complications (such as infections), decrease hospital stay and return to normal activities.

Laparoscopic cholecystectomy has become the most commonly performed method for removing the gallbladder. gold standard The surgeon must be adequately trained in laparoscopic and open surgical techniques as laparoscopic cholecystectomy has a significant learning curve and does have a slightly higher incidence of bile duct injuries ( 0.3% or 1: 100-200 cases ). It is however imperative that EARLY conversion (eg. after a 15-30 min trial dissection) to an open procedure be undertaken if:

- the anatomy is not clearly definable
- bleeding precludes clear vision
- uncontrollable haemorrhage
- gross dense adhesions are present
- small contracted gallbladder and suspicion of Mirizzi syndrome.
- Unable to obtain wide angle of Strasburg

Intraoperative cholangiography (IOC) remains controversial. Liberal use of selective IOC are advised. Injury to the biliary tree is reduced especially in the early learning curve of a surgeon performing laparoscopic cholecystectomies.

Current criteria for its use would be:

1. The presence or suspicion of common bile duct calculi based on elevated bilirubin, alkaline phosphatase or transaminases (AST,ALT)
2. A history in keeping with obstructive jaundice (i.e. pale stools, dark urine and jaundice)
3. A history of gallstone pancreatitis
4. To define unclear or aberrant anatomy