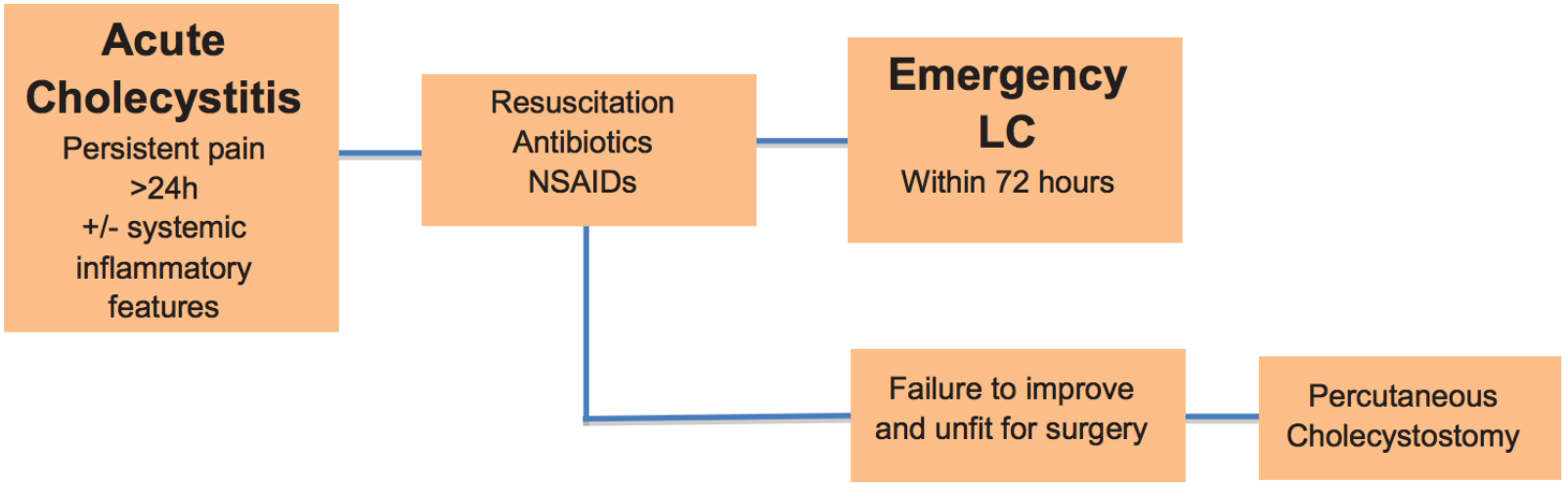
The hot gallbladder
What could possibly go wrong?

Simon Dexter

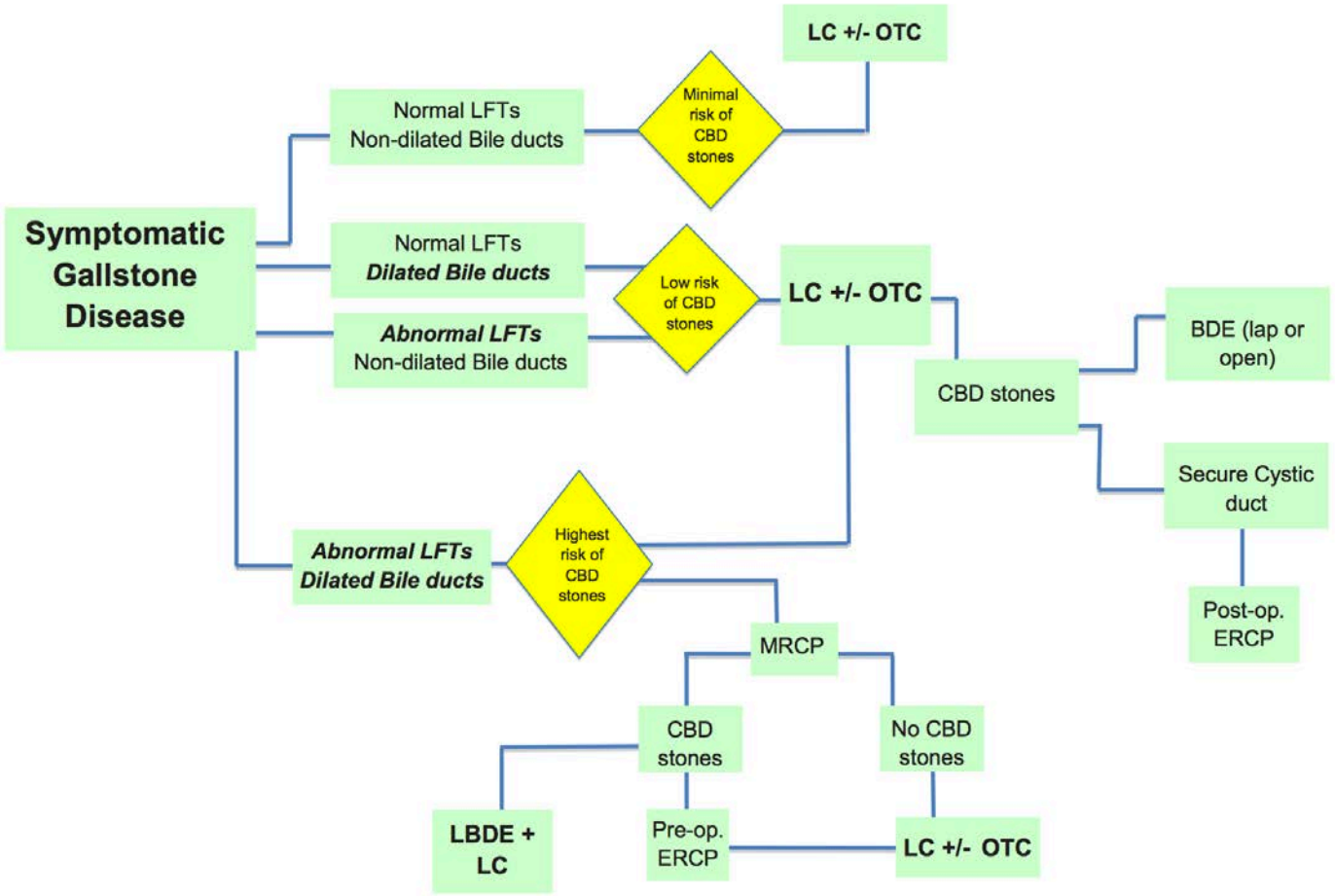
Hot gallbladder?

- Cholecystectomy during acute admission
  - Acute cholecystitis
  - Gallstone related pain – non resolving
  - Post mild acute pancreatitis

AUGIS guidelines 2015



Abnormal LFTs +/- dilated duct



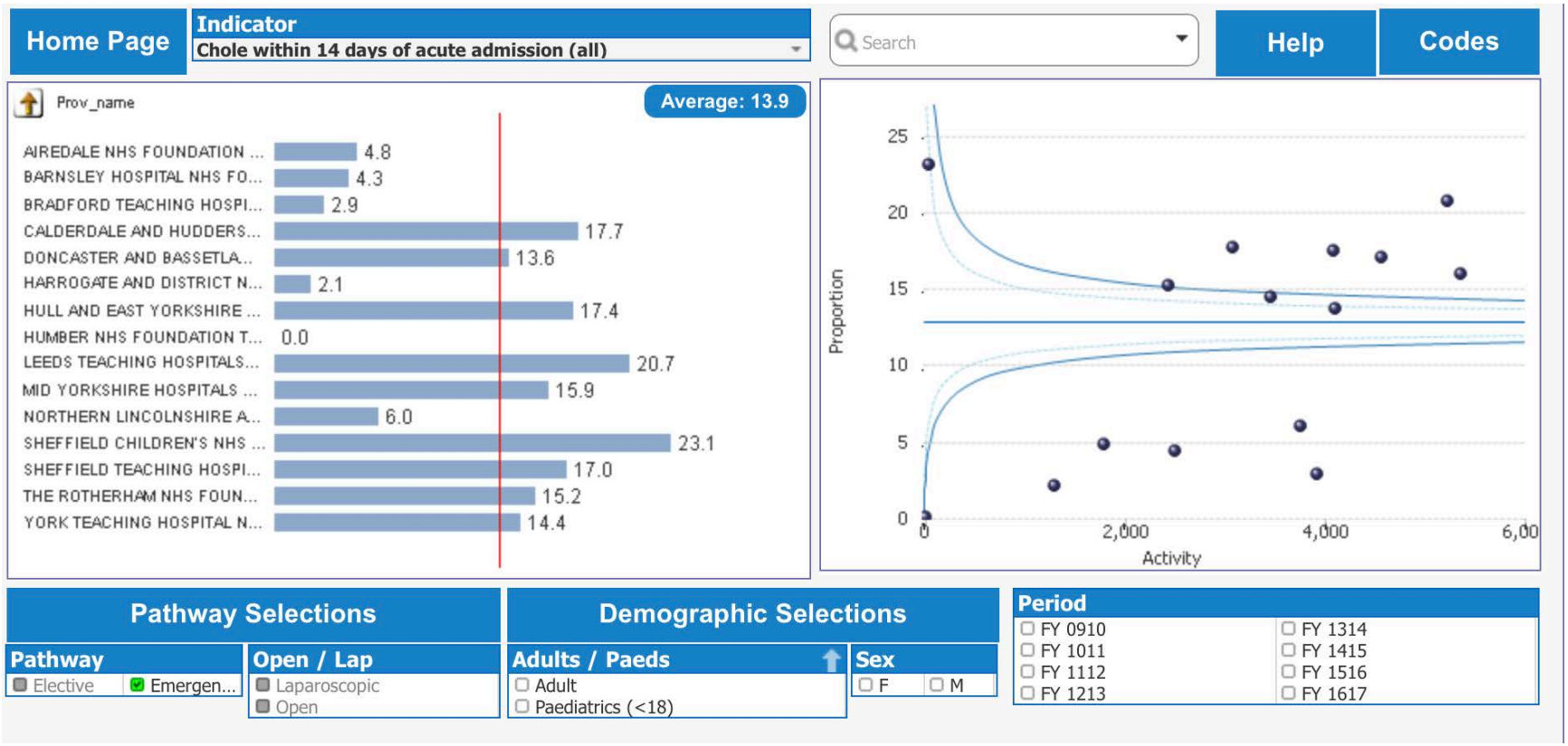
Best practice (AUGIS 2015, NICE 2014)

- Early US confirmation
- Acute cholecystectomy <72 hours (1 week)
- Laparoscopic approach
- (Percutaneous cholecystostomy)
- Appropriately experienced surgeons
- IOC + LCBDE where appropriate
- MRCP only for high CBD stone risk

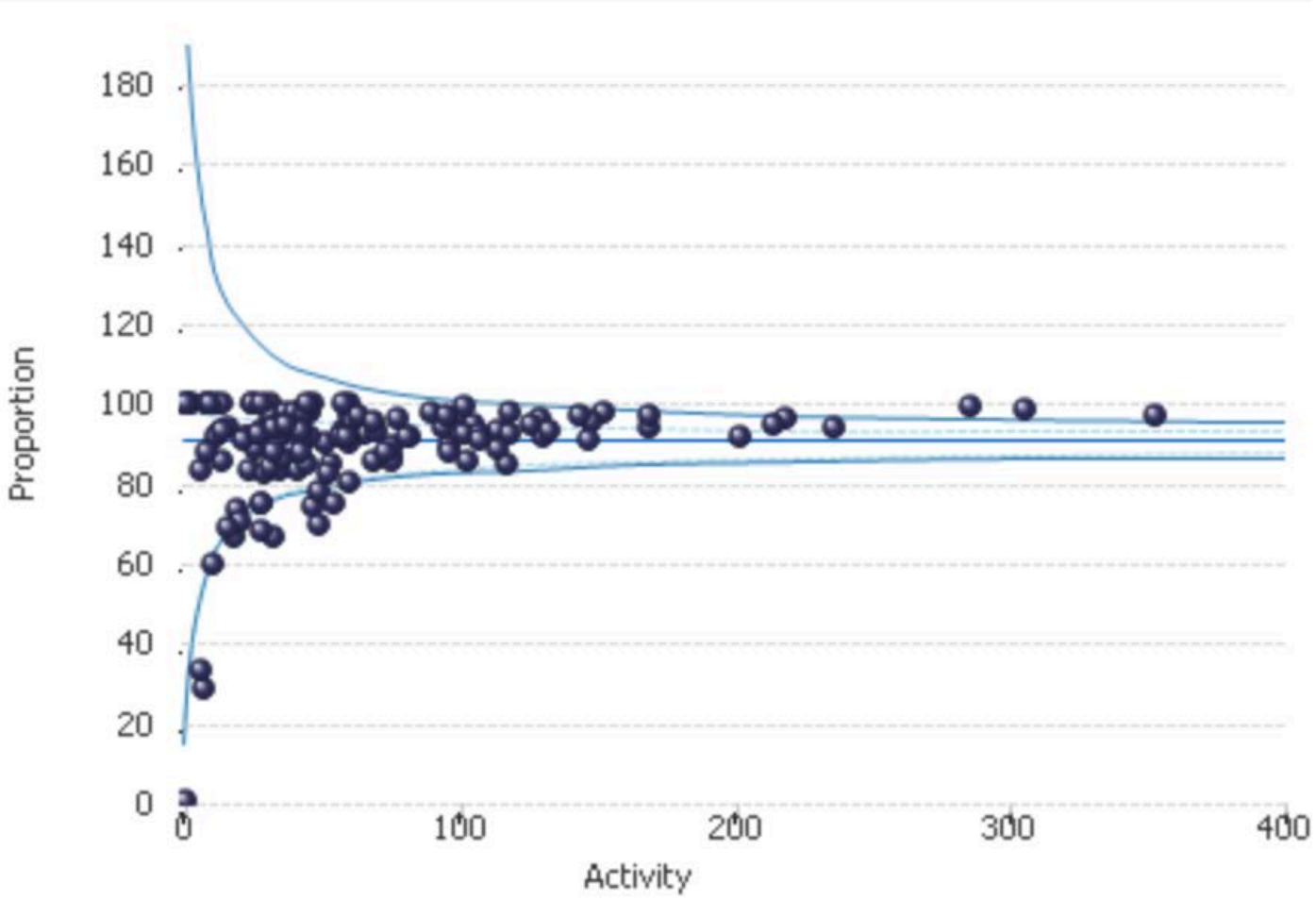
Reality

- Delayed USS
- Long waits for theatre
- Repeated starving for theatre
- Defensive investigations – further waits
- Repeated handovers from team to team
- Difficult inflamed gallbladders
- Unnecessary septic complications
- Readmissions for recurrent biliary disease

SWORD dataset



Acute cholecystectomy
% completed laparoscopically



What could go wrong before surgery?

- Handover issues
- Change in clinical picture
- Recurrent biliary complication (discharged pts)

- Responsibility lies with operating team
  - Patient id
  - Investigations
  - Reassess clinical picture
  - Preparation for theatre
  - Appropriate consent
  - WHO checks

So what could go wrong during surgery?

- Access injury
- Bleeding
- Bile duct / hilar injury
- Visceral injury

Access injury

- Usually technique
- Patient factors
  - Scars
  - Intra-abdominal adhesions
  - Thin abdomen
- Visceral injury
  - Recognise and repair
  - Beware kebab
- Vascular injury
  - Recognise
  - Avoid delay
  - Control
  - Help

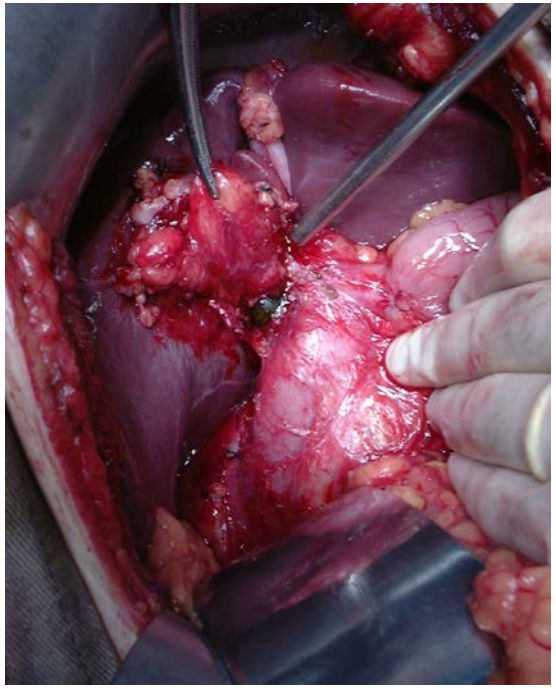
Bleeding

- Anticipate and reduce risk
  - Clotting function
  - ? Defer if dual antiplatelets / warfarin
  - Cirrhotic liver
- Avoid dissection into liver
- Close GB dissection
- Avoid hilum
- Good suction, swabs, haemostats
- Convert if uncontrolled

Bile duct injury

- Obscured anatomy
- Loss of planes
- Mirrizzi syndrome

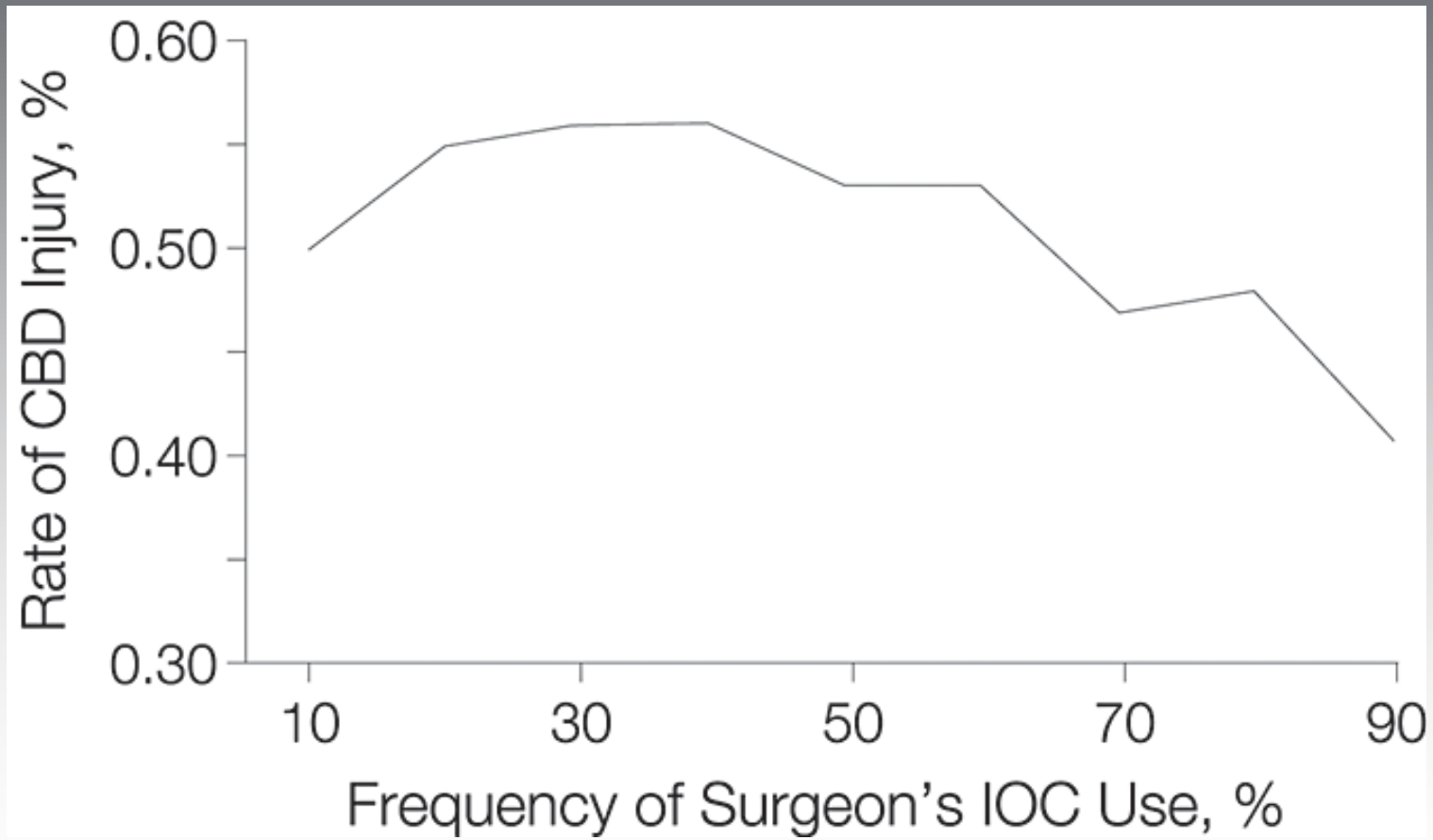
- USUALLY misidentification



Underestimation of risk

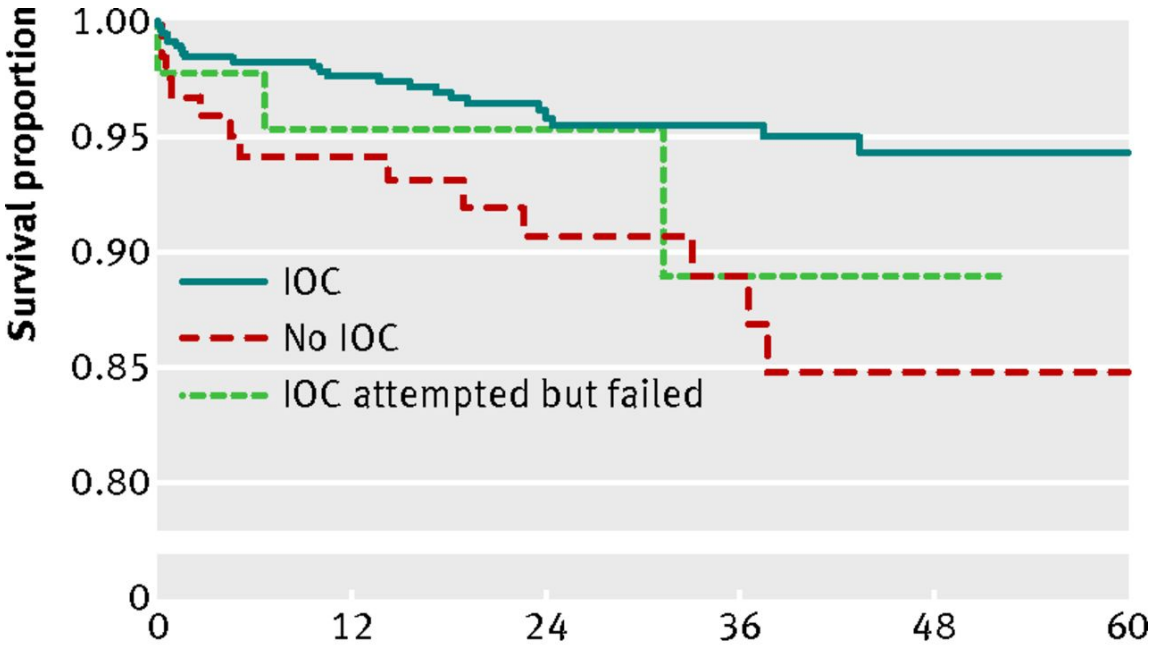
- Early in career
  - Unaware of risk
  - Underdeveloped skill, surgical and interpretational
- Later in career
  - Lack of focus
  - This wont happen to me

Frequency of Use of Intraoperative Cholangiography (IOC) by Surgeons and the Rate of Common Bile Duct Injury (CBD



Flum, D. R. et al. JAMA 2003;289:1639-1644

Fig 3 Survival in patients with iatrogenic bile duct injury during cholecystectomy, according to use of intraoperative cholangiography (IOC).



No at risk

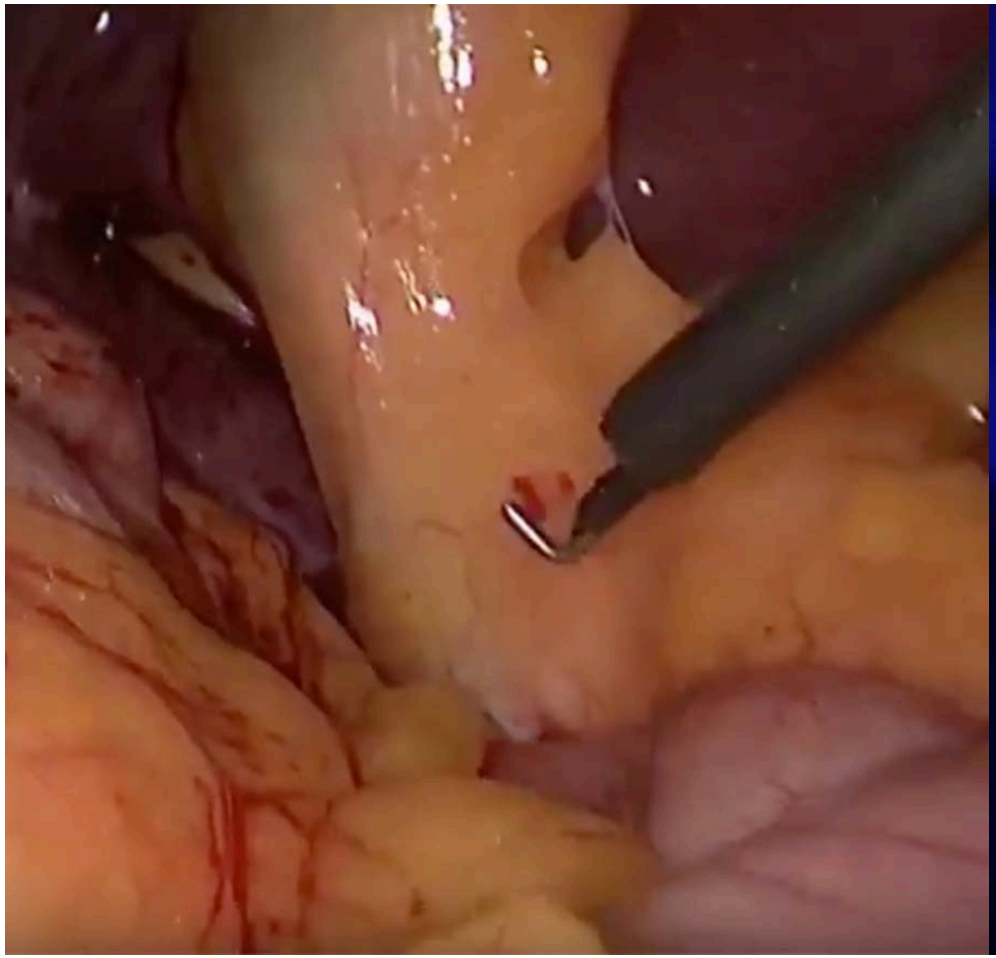
IOC	578	371	155	19
No IOC	124	76	35	5
IOC attempted but failed	45	26	8	1

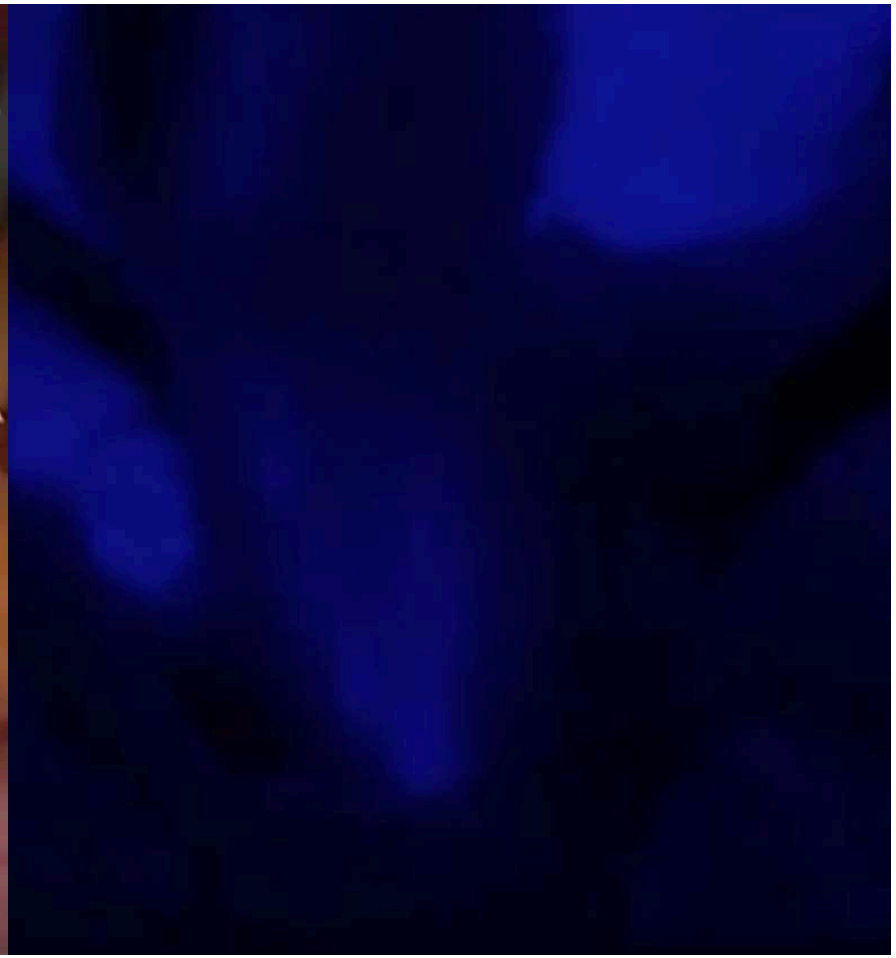
Törnqvist B et al. BMJ 2012;345:bmj.e6457

Too treacherous?

- Drain
- Cholecystostomy
- Partial cholecystectomy
- Subtotal cholecystectomy

Going forward…





And what about after surgery?

- Event
  - Sepsis
  - Bile leak
  - Retained stone
  - Bleed
  - Pancreatitis
  - Thromboembolism
- Operative strategy
  - AB's
  - Remove spilled stones
  - Washout
  - Drain
  - IOC
  - Haemostasis
  - DVT prophylaxis

Tips in acute cholecystectomy (GT)

Preparation for every case

Mental

Visualise the end product
Be aware of risks
Have a clear plan
Be prepared to call for help / convert

Good quality equipment