

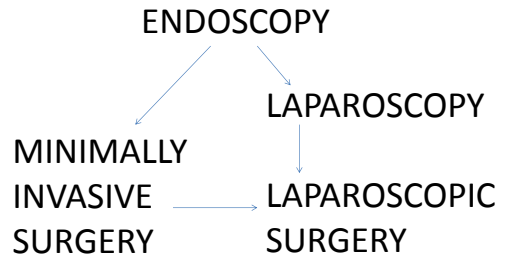


LAPAROSCOPIC SURGERY

Erasmus IP: SimClip 2013

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Maribor, 16th -29th June, 2013



1901:

- First „ceiloscopy“ on a dog
- Rigid cystoscope
- Pneumoperitoneum with air through a trocar

Georg Kelling (1866-1945)



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1901:

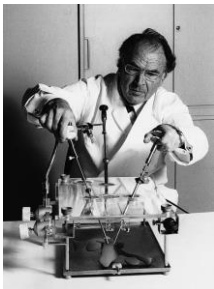
- First „ceiloscopy“ on a dog
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1924:

- First thoracoscopy on a human
- Rigid cystoscope

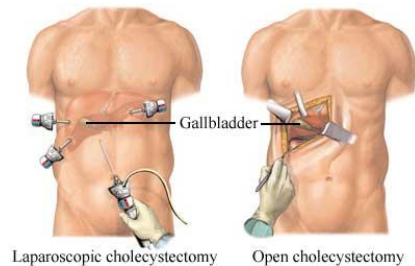
Hans Christian Jacobaeus (1879 -1937)



Kurt Semm (1927 -2003)

- Developed many laparoscopic procedures, especially in the field of gynecology
- 1981 – First laparoscopic appendectomy
- Developed several laparoscopic instruments
- Constructed a training device for laparoscopic surgery
- Published an atlas of laparoscopic surgery

LAPAROSCOPIC vs. OPEN SURGERY





LAPAROSCOPIC vs. OPEN SURGERY

ADVANTAGES

- Smaller incision
- Less pain
- Reduced risk of acquiring infections
- Reduced hemorrhaging
- Shorter hospital stay and recovery time



LAPAROSCOPIC vs. OPEN SURGERY

ADVANTAGES

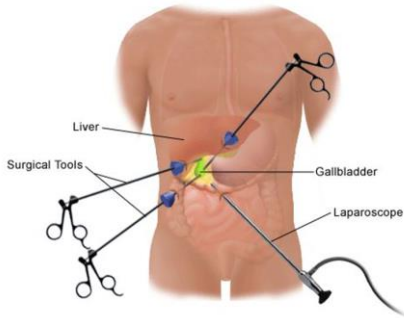
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- Less pain
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DISADVANTAGES

- Limited range of motion
- Longer operation time
- Poor depth perception
- Risk of trocar injuries to either blood vessels or bowel
- Adhesions from previous abdominal surgery may pose added risk

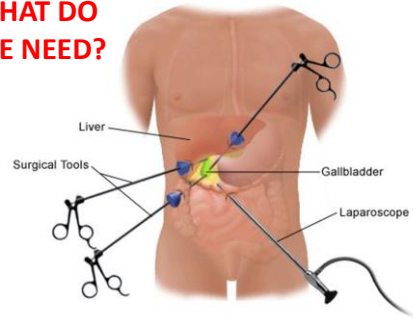


Laparoscopic Cholecystectomy (Gallbladder Removal)



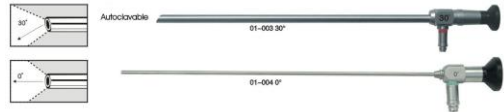
Laparoscopic Cholecystectomy (Gallbladder Removal)

WHAT DO WE NEED?



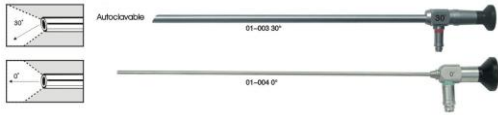
TROCARS

LAPAROSCOPE



TELESCOPIC LENS SYSTEM (0° or 30° optics)

LAPAROSCOPE



TELESCOPIC LENS SYSTEM (0° or 30° optics)



DIGITAL LAPAROSCOPE

LAPAROSCOPE



VIDEO CAMERA and FIBER OPTIC SYSTEM



VIDEO CAMERA and FIBER OPTIC SYSTEM



LAPAROSCOPIC INSTRUMENTS

LAPAROSCOPIC FORCEPS and GRASPERS



LAPAROSCOPIC INSTRUMENTS



Laparoscopic (monopolar) electrosurgical instruments:

- LAPAROSCOPIC HOOK
- LAPAROSCOPIC COAGULATION



LAPAROSCOPIC INSTRUMENTS

LAPAROSCOPIC SCISSORS

LAPAROSCOPIC CLIP APPLIER

LAPAROSCOPIC SUCTION/IRRIGATION SYSTEM



LAPAROSCOPIC SYSTEM

VIDEO SCREEN

CO2 INSUFFLATION UNIT

VIDEO SYSTEM/CAMERA

LIGHT SOURCE

ELECTROSURGICAL UNIT

EXTERNAL UNIT for the HARMONIC SCALPEL

PEDAL for ELECTROSURGICAL TOOLS

A photograph of a laparoscopic system cart. The cart has a video screen at the top, a CO2 insufflation unit, a video system/camera, a light source, an electrosurgical unit, and an external unit for the harmonic scalpel. A pedal for electrosurgical tools is also visible. Red arrows point from the labels to the corresponding components on the cart.

THANK YOU!