

Patient information factsheet

Robotic HPB surgery

We've written this factsheet to provide you with information about robotic HPB surgery. It explains what robotic surgery is, what it involves, and what the potential advantages and risks are. We hope it will help to answer some of the questions you may have. If you have any further questions or concerns, please speak to a member of your healthcare team.

What is HPB surgery?

Hepato-Pancreato-Biliary (HPB) refers to the parts of the body which include the pancreas, liver, bile ducts, gallbladder and the duodenum. HPB surgery is a type of surgery specific to these parts of the body. HPB surgery is usually done one of three ways:

Open surgery

Open surgery is the traditional type of surgery. During open surgery, the surgeon makes one large incision (cut) in the abdomen (tummy). This allows the surgeon to see the tissues and structures in the body so that they can perform the procedure. After the procedure, the incision is closed using stitches and a dressing is applied.

Many traditionally open surgeries are now being done by laparoscopy (keyhole surgery) or by robotic surgery (see below).

Laparoscopy (keyhole surgery)

Laparoscopy is a minimally invasive surgical procedure. During laparoscopy, the surgeon makes one or more small incisions in the abdomen. These allow the surgeon to insert an instrument called a laparoscope (a small tube that has a light source and a camera, which relays images of the inside of the abdomen or pelvis to a television monitor), small surgical tools, and a tube used to pump gas into the abdomen. This makes it easier for the surgeon to look around and operate. After the procedure, the gas is let out of the abdomen, the incisions are closed using stitches and a dressing is applied.

Robotic surgery

Robotic surgery is a new type of surgery that has become more common in the last few years, especially in North America and Europe. This type of surgery has recently been introduced here at University Hospital Southampton NHS Foundation Trust (UHS). We are one of the first centres in the UK to use it for HPB surgery. We are currently receiving training for this type of surgery, and we will be performing these procedures under strict mentorship from world experts in the field.

Similar to a laparoscopy, during robotic surgery, the surgeon makes one or more small incisions in the abdomen. However, instead of a surgeon holding the laparoscope and surgical tools, a robotic platform with robotic 'arms' holds and moves them. The robot is controlled by the surgeon sitting at a console.

All HPB operations are carried out under general anaesthetic, so you will be asleep and won't feel any pain during the procedure.

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What potential advantages does robotic surgery have over other types of surgery?

Recent studies suggest that there are some potential advantages in using robotics for this type of surgery. In order to replicate these results at UHS, we will need to build up our experience in using these techniques.

The potential advantages of laparoscopy and robotic surgery over open surgery include:

- a shorter stay in hospital
- a faster recovery time
- less pain after surgery
- fewer complications from the surgery itself
- earlier return to activity or work
- earlier access to post-operative treatments (such as chemotherapy)

Additional advantages of robotic surgery over laparoscopy include:

- the robotic instruments can be moved in many directions
- the robotic instruments can get to small, difficult to reach areas of the body (such as the back of the liver)
- the robotic instruments are easier to control when doing very fine, precise work (reducing the risk of human error)

Are there any risks with robotic surgery?

The risks with robotic surgery are largely the same as those of laparoscopy and include:

- infection
- minor bleeding and bruising around the incision
- damage to other structures inside the body (such as the bowel or blood vessels)
- conversion to an open surgery (a larger incision will need to be made) if the procedure becomes too difficult or a complication occurs

However, there are also some specific risks associated with robotic surgery. These are very rare and include:

- failure of equipment or the robotic arms not doing what they were instructed to do by the surgeon (this has never been reported with the DaVinci system that we will be using at UHS)
- a traction (pulling) injury to a structure inside the body (this would be repaired immediately)
- major bleeding (in the extremely unlikely event of this happening, we will move the robot out of the way to allow the surgeons to finish the surgery in the normal way)

Contact us

If you have any questions or concerns, please contact your clinical nurse specialist. You will have been given their contact details during your first clinic appointment.

Useful links

www.davincisurgery.com

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