

## Purchase of the Olympus Articulating HD 3D Laparoscopic Surgical Video System

UHN/Princess Margaret Cancer Centre - October 2014

### Why a 3D operating system? What are its benefits to the surgeon and patient?

Many of our pancreas, liver, and biliary surgical procedures are done laparoscopically. Laparoscopic surgery, also called minimally invasive surgery (MIS), is a modern surgical technique in which operations are performed through small incisions in the body.

3D equipment helps to improve the speed, accuracy, and precision of surgical tasks such as dissection, grasping, and suturing when compared with traditional 2D surgical systems. This is accomplished through 3D vision and depth perception when performing laparoscopic procedures. A 3D system is ideal for suturing, accurately identifying tissue planes, and other precision surgical tasks that are required in laparoscopic surgical cases.

Surgeons often find that long laparoscopic operations are less tiring than functioning in 2D and thus can perform longer, more complex operations more efficiently using this technology. There are a number of advantages to the patient with laparoscopic surgery versus the more common, open procedure. In general laparoscopic operations have a multitude of benefits to patients and are associated with:

- decreased blood loss,
- decreased pain,
- shortened length of stay in hospital,
- improved well-being and return to normal function,
- less time to begin chemotherapy.

In general, the adoption of a minimally invasive approach to pancreatic surgery has been very slow. We believe this technology will not only enhance our ability to perform operations more efficiently but also allow us to expand the scope of procedures we can perform laparoscopically.

*Thanks in part to Pancreatic Cancer Canada, we upgraded our operating room capacity to high definition imaging last year, allowing us to see laparoscopic 2D imaging much more clearly (equipment in photo to right). We'd now like to take the next step. This new 3D module is one that can be easily added to our existing imaging system and allows the surgeon to choose either 2D or 3D visualization from the surgical field. This helps to reduce capital investments and simplify asset management and training.*





### **3D Imaging in Laparoscopy: Improving Training and Skill Acquisition for Trainees**

Studies have shown that the stereoscopic advantage of 3D imaging in laparoscopy avails itself in those who are in training by improving co-ordination, spatial awareness, and timing in comparison to the traditional 2D imaging. 3D laparoscopy can reduce the time needed and steepens the learning curve for laparoscopic training and will be beneficial for the training of the next generation of pancreatic surgeons.

