

video will contribute to a wider and safer practice of laparoscopic total mesorectal excision for low rectal cancer.

*No conflict of interest.*

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### 61. Glissonean approach in associated liver partition and portal vein ligation for staged hepatectomy (ALPPS)

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**Background:** ALLPS method in staged liver resection is an efficient alternative to portal vein ligation allowed to enlarge the liver remnant using portal ligation and liver parenchyma transection during first operation.

**Materials and methods:** the author present case of a patient with a sigmoid colon cancer and synchronous bilobar liver metastasis who underwent a staged liver In Situ Split resection with primary sigmoid tumor removing using glissonean pedicle approach.

**Results:** during first step of the ALLPS we used Glissonean approach for defining right primary Glissonean pedicle, and marked it with yellow stripe for further transaction during second step. We also ligated right portal vein and removed primary tumor of the sigmoid colon. On 7-th postoperative day we confirmed left liver enlargement more over 35% and decided to remove right liver. After relaparotomy we easily found yellow marked right primary Glissonean pedicle also as blue marked right hepatic vein. Then we dissected them using linear vascular stapler. Postoperative period was uneventful and patient were regarded on 8-th day after second step operation.

**Conclusions:** described method allowed us to perform the second step of ALLPS more faster and bloodless.

*No conflict of interest.*

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### 62. The virtual surgical pelvis: A highly-detailed 3D pelvic model for anatomical education and surgical simulation

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**Background:** The surgical anatomy of the pelvis is highly complex. In case of rectal cancer the surgeon is challenged to perform a total mesorectal excision (TME) warranting complete removal of the tumor and preservation of the autonomic nerves. However, incomplete TME specimens and surgical damage to the nerves are still part of clinical reality. A highly-detailed 3D pelvic model would be an excellent tool to increase anatomical knowledge of the surgical anatomy of the pelvis. Visible Human Datasets (VHDs) are often used to create a 3D model, but they lack anatomical detail such as autonomic nerves and fasciae. Immunohistochemistry is an ideal method to study those key surgical structures at microscopic level. Recently, the Unified Anatomical Human (UAH) has been developed. UAH integrates heterogeneous anatomical data and will allow registration of patient-specific diagnostic images. In this study, we describe the development of The Virtual Surgical Pelvis (VSP) and its potential clinical value in anatomical education and surgical simulation.

**Material and methods:** We selected 910 slices from a VHD that comprised the entire pelvis. All surgically relevant anatomical structures were manually segmented using Amira® software and three-dimensionally reconstructed using the UAH. The Online Anatomical Human (OAH), an online web-viewer, was developed as well. Paraffin embedded mega blocks of 1 female cadaveric pelvic exenteration specimen were sliced in transverse sections of 5 µm. A series was stained with Hematoxylin & Eosin and Masson's Trichrome and selected sections were immunohistochemically stained with S100, a pan-neuron marker. The autonomic nerves and fasciae were manually segmented in Amira® software, three-dimensionally reconstructed and integrated using the UAH.

**Results:** Currently, the VSP presents most of the essential surgical anatomy of the pelvis, including the levator ani muscle and pudendal nerve, and can be interactively visualized in the UAH and OAH. Microscopic analysis of the female cadaveric specimen reveals the organization of autonomic nerves and fasciae in relation to pelvic organs.

**Conclusion:** The VSP showing the complex pelvic anatomy is a potentially excellent tool for anatomical education. Registration of the VSP to patient-specific diagnostic images allows visualization of key surgical structures such as autonomic nerves and fasciae in relation to pelvic viscera. This makes surgical simulation a nearby future goal for all pelvic surgeons.

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Thursday 30 October 2014 11:30 – 13:15

Proffered Paper Session: Niall O'Higgins Award Session

### 63. The significance of fiberoptic ductoscopy in patients with pathological nipple discharge in one single centre material

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**Background:** Pathological nipple discharge (PND) are unilateral, spontaneous discharges as well as discharges from a single mammary duct. The aim of the project was to set FDS method in PND.

**Material and methods:** The material consists of 214 patients from 2004-2012. In FDS diagnostics procedure assesses: the percentage of successful cannulations of mammary ducts as well as the duration of examination in the distinguished four sub-periods.

Sensitivity, specificity, PPV (*Positive Predictive Value*) and NPV (*Negative Predictive Value*) FDS, galactography and cytological examination verified by means of post-operative histopathological results were assessed.