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Research in Graubünden

**Hands-on training in surgery**

The Davos Course celebrates its 40th anniversary



*Before operating on patients, surgeons learn on realistic models. Image: Jens Weber / DRC Medientechnik*

From April 15 to 20, 2023, two hundred and sixty aspiring surgeons will practice surgical techniques on organs in the abdominal cavity under the guidance of seventy medical specialists at the “Davos Course” at the Davos Congress Center. The spectrum of practice ranges from making a correct surgical knot to performing a gallbladder removal using minimally invasive (keyhole) surgery.

The Davos Course is taking place for the fortieth time this year. Peter Vogelbach, a specialist in visceral surgery and senior consultant at the Graubünden Cantonal Hospital in Chur, has been involved since the first course was held in 1984. Since 2017, he has served as president of the GI Foundation, which is responsible for organizing the courses. Vogelbach looks back: “The Davos Course was created on the initiative of the surgeons Martin Allgöwer, Felix Harder and Thomas Rüedi in the style of the AO Davos Courses, in which surgical techniques for the treatment of bone fractures and defects are trained. Initially, the course participants came from German-speaking countries. Nowadays they come from Northern and Central Europe. We regularly support participants from low-income countries with scholarships.”

Vogelbach describes the program: “There are nine training modules at different levels. The participants have sixty fully equipped workstations at their disposal, which could be found like this in any hospital. They train on torsos specially developed for the course, which accurately

depict the abdominal cavity. For this purpose, we receive organic material from the abattoir, for example pig stomachs and livers, gall bladders and, above all, intestines, in order to practice gastrointestinal sutures. It would be much easier to just put a stomach or intestine on the table, but we try to create as realistic a picture as possible. In the abdominal cavity, you have to work in a confined space.

There is also virtual reality training, which digitally simulates operations on the stomach, intestines or gall bladders. The advantage is that participants can practice without a tutor. Everything is recorded so that errors can be reconstructed and discussed afterwards. Robotic surgery is also trained on the course. It has made great progress in recent years. Surgical robots were first used in urology, for example for prostate operations. They are being used more and more in gastrointestinal surgery, especially for operations on the esophagus or in the lesser pelvis. Surgeons can control the instruments of the surgical robot 'remotely' with their hands and the camera with their feet. The robot implements the movements 1:1."

Vogelbach credits the development of minimally invasive surgery, which has eliminated the need for large incisions and thus significantly reduced the risk of complications, as the most important advance in gastrointestinal surgery over the past forty years. He hopes that the Davos Course will continue to contribute to the training of young surgeons in the future with the support of sponsors, the municipality of Davos and the Academia Raetica.

Peter Vogelbach and Daniela Heinen



*Peter Vogelbach*

*Photo provided*

### **More information**

The GI Foundation, established in 1989, evolved from the "Arbeitsgruppe für Gastroenterologische Chirurgie" (AGC) and is responsible for the Davos Course ([www.davoscourse.ch](http://www.davoscourse.ch)), which has been held since 1984. It is an institutional member of the Academia Raetica.

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