

Highlights 2023

Opening of the Zurich practice location

In spring 2023, we opened our third practice location in Zurich. At Bellerive Strasse 3, directly on the Utoquai lakeshore, we can now offer our patients and referring colleagues in Zurich advice and treatment close to home.

Charity Project «Jump: Drive to help» in The Gambia

For the first time, ZweiChirurgen performed surgery in The Gambia, one of the poorest countries in Africa. The small West African country is chronically underserved in all areas and most people have no access to medical care. Together with other colleagues from Switzerland and Germany, Prof. Dr. Kirchhoff spent a week in December 2023 operating in the donor funded ASB Clinic in Serrekundas (the largest city in the country). In a "surgical marathon" 25 hernia operations were performed on children and adults in a short space of time. ZweiChirurgen will now carry out an annual foreign assignment in The Gambia at the „ASB Clinic“ and further expand the capacity for hernia operations there. Further information on the project and the placement of donations can be found at www.drive-to-help.de

PRACTICE KEY FIGURES 2023

Treatments in the practice

In 2023, we carried out a total of 7688 treatments at the practice locations in Basel, Liestal and Zurich. This corresponds to an increase of 5% compared to the previous year. In addition to numerous hernia patients, this also includes 2691 proctological treatments and 269 emergency consultations.

Operations

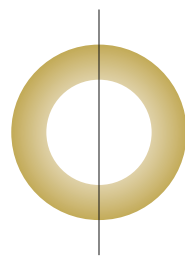
A total of 861 operations were performed by ZweiChirurgen in 2023. Of these, 414 were inpatient operations at the Merian-Iselin Clinic and 86 were outpatient operations. We performed 361 operations in our practice operating theater in Basel.

Treatment quality and operations 2023

Quality-assured hernia surgery in our certified «Competence Center for Hernia Surgery»

All patients undergoing hernia surgery are systematically and anonymously recorded in the «Herniamed» register to record the quality of care. This register currently includes around 900 clinics and practices from all over Europe that specialize in hernia surgery. Information on the register can be found at: www.herniamed.de

Since ZweiChirurgen was founded in November 2018, 1860 patients with hernia diseases have been operated in our practice, with the number of operations per year steadily increasing. In 2023, we operated on a total of 463 patients with hernias. This mainly includes operations for inguinal hernias (60%), umbilical hernia operations (20%) and incisional hernia operations (10%). We were also able to operate on 43 patients with diastasis of recti (9%), almost half of whom also



underwent additional abdominoplasty. The average length of stay in hospital was two days. More and more operations were performed on an outpatient basis in accordance with the guidelines of the Federal Office of Public Health (FOPH). In 2023, a total of 69 patients (15% of hernia patients) were treated in our clinic.

The quality of treatment was maintained at a very high level: The hernia recurrence rate for our patients one year after surgery is 0% for inguinal hernias, 0% for umbilical hernias and 0.1% for incisional hernias, which is extremely low. The proportion of our patients who still suffered from chronic pain in the groin one year after the operation was 0.9%. For comparison: on average, pain rates of 6–8% are reported in the literature. Wound complications such as bruising, wound infections or fluid accumulation occurred in 2.5% of cases, which is also a very good result compared to all other clinics in the registry.

Surgical robots

Since 2022, ZweiChirurgen have been using the „DaVinci“ surgical robot from Intuitive. In addition to a 3D image for the surgeon and the ability to perform minimally invasive surgery on complex hernias, the system offers ergonomic benefits for the surgeons in particular. In 2023, a total of 122 hernia operations were performed with robotic assistance, which corresponds to around 26% of all hernia patients. This means that ZweiChirurgen is consistently following the path of technological development in hernia surgery.

Treatment of diastasis recti

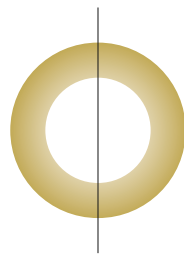
One focus in 2023 was the treatment of rectus diastasis. Around 1/3 of all women after pregnancy suffer permanently from this problem, which causes the straight abdominal muscles to diverge and severely restricts the stability of the torso. We have intensified our professional collaboration with plastic surgeon PD Dr. med. Rik Osinga (Basel) and jointly developed an interdisciplinary treatment concept. In 2023, we were able to treat a total of 43 patients surgically, whereby we also performed an abdominoplasty (tummy tuck) on 21 patients together with Dr. Rik Osinga (Plastic Surgery) in order to achieve a satisfactory cosmetic result. The other 22 patients could be operated on gently without simultaneous abdominoplasty using the so-called MILOS technique.

Treatment of chronic groin pain

Chronic groin pain after inguinal hernia surgery (CPIP) is one of the most important complications. In non-specialized surgeons, rates of 6–10% are described in the literature, which can significantly reduce the quality of life in many cases. Even though the pain rate in our patient population is significantly lower (0.8%), in 2023 we again treated many patients from all over Switzerland with this problem who were referred to us by general practitioners or other surgeons. There were 65 patients in total in 2023. In 35 cases, an operation (surgical nerve resection) was necessary, while in the other cases the pain was successfully treated with local measures (infiltrations, radiofrequency ablation).

Congresses, training courses and scientific contributions in 2023

In 2023, ZweiChirurgen were again active as speakers and experts at numerous national and international congresses. Several workshops were organized and a total of 5 publications were published in high-ranking journals. The scientific publications of ZweiChirurgen were cited in 735 other scientific articles in 2023.



OR Workshops

Due to their expertise and commitment to surgical training, a total of 13 surgical workshops were held in 2023. In total, we had more than 50 surgeons in small groups visiting us in the operating theatre to look over our shoulders while we operated and familiarize themselves with the latest developments and trends in hernia surgery.

Selected congress activities

March 2023:

PD Dr. med. Hoffmann was active as a speaker and expert at the «Austrian Hernia Days». Around 150 participants from the DACH region (Germany – Austria – Switzerland) came to Salzburg to find out about the latest developments in hernia surgery.

April 2023:

ZweiChirurgen were once again active as instructors and speakers at the international Davos Course in the «Hernia Surgery» module. Young surgeons from all over Europe meet annually in Davos to improve their surgical skills at courses lasting several days.

May 2023:

Prof. Dr. Kirchhoff and PD Dr. Hoffmann were active at the annual congress of the European Hernia Society (EHS). Around 1500 participants from Europe and overseas came to Barcelona (Spain) to exchange ideas with their colleagues at an international level. Prof. Kirchhoff was an instructor at an anatomical workshop. PD Dr. Hoffmann was once again active as an examiner for the European specialist title in hernia surgery (F.E.B.S. Abdominal Wall Surgery). Lectures were also given on the subject of rectus diastasis and the treatment of hernias in obese patients.

June 2023:

The entire ZweiChirurgen team was active at the annual congress of the newly founded Swiss College of Surgeons (SCS) in Basel. Together with the Swiss Association for Hernia Surgery (SAHC), an entire session on hernia surgery was organized, which was met with great interest. An interdisciplinary workshop was also organized for junior surgeons.

June 2023:

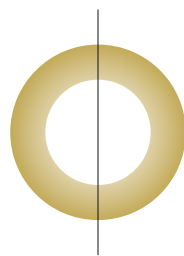
Dr. Debora Nowakowski was an invited speaker at the international annual Robotic Abdominal Wall Surgery (RAWS) meeting in Ghent, Belgium. Around 150 robotic specialists were on hand to shed light on hernia surgery, particularly from the perspective of robotics.

September 2023:

PD Dr. Hoffmann was invited to the congress of the German Society for General and Visceral Surgery (DGAV) in Hamburg. He gave a lecture on the role of ultrasound examinations in patients with inguinal hernias.

October 2023:

ZweiChirurgen were invited to speak at the Romanian Men's Society Congress in Bucharest. The focus was on the treatment of complex abdominal wall hernias. Around 250 participants from Europe came to Bucharest.



October 2023:

ZweiChirurgen hosted the renowned «Swiss Hernia Days» for the sixth time. Once again, an anatomical workshop was held in the run-up to the congress, which once again proved extremely popular with young colleagues. Afterwards, 300 surgeons from Switzerland and abroad gathered at the Congress Center Basel to spend two days learning about the latest developments and trends in hernia surgery. Over 30 national and international experts accepted our invitation to Basel and held lectures, case presentations and exciting panel discussions.

November 2023:

PD Dr. Hoffmann was invited to speak at the minimally invasive forum of the Turkish Society for Minimally Invasive and Endoscopic Surgery in Antalya (Turkey). The focus was on the focussed use of the surgical robot and the treatment of patients with rectus diastasis.

SELECTED PUBLICATIONS

— **Gender differences in epigastric hernia repair: a propensity score matching analysis of 15,925 patients from the Herniated registry.**

Hoffmann H, Mechera R, Nowakowski D, Adolf D, Kirchhoff P, Riediger H, Köckerling F.
Hernia. 2023 Aug;27(4):829-838. doi: 10.1007/s10029-023-02799-8. Epub 2023 May 9.
PMID: 37160505

— **Inguinal hernia surgery — always outpatient?**

DACH consensus group on outpatient inguinal hernia surgery; H Niebuhr 1, F Köckerling, R Fortelny, H Hoffmann, J Conze, R G Holzheimer, A Koch, G Köhler, C Krones, J Kukleta, A Kuthe, B Lammers, R Lorenz, F Mayer, M Pöllath, W Reinpold, R Schwab, B Stechemesser, D Weyhe, M Wiese, K Zarras, H-J Meyer. Chirurgen. 2023 Mar;94(3):230-236.