General Report of the 7th Mission of SURGEONS FOR AFRICA/ CHIRURGEN FÜR AFRIKA in Rwanda 2023

1. General Report from Rwanda

In close collaboration with the two British partner organisations **Operation Hernia** with Dr. Chris Oppong and **Rwanda Legacy of Hope** with Pastor Osee Nvatuka the seventh mission of the **SURGEONS FOR AFRICA/ CHIRURGEN FÜR AFRIKA** Initiative took place from February, 24th, 2023 till March, 3rd, 2023 in various hospitals in Rwanda. With the excellent support by the Ministry of Health in Rwanda and of the Embassy of Rwanda in Germany, especially with support of his Excellence the Ambassador, Mr. Igor Cesar, was this trip possible the import of our generous donations of 26 boxes with surgical materials from Germany without any difficulties. Because of a huge fundraising campaign in preparation to the mission the German Team has in their excess luggage donations with a value of more than 250.000€ (mainly hernia meshes) to remain in Rwanda.

Because of the Corona Pandemic a much smaller German team of the Organisation SURGEONS FOR AFRICA has established with partner organisations Operation Hernia a "Train-the trainer" module in 2022 for more advanced surgeons. In 2023 we had again once again a big team with 19 volunteers from Germany. The Ministry of Health has fixed and prepared five different hospitals in Rwanda for training firstly 30 General practitioner's in Hernia surgery.

- CHUB University hospital Butare (British Team)
- Musanze Referral hospital (2 additional Faculty, 7 trainees)
- Rwamagama Provincial hospital (5 trainees)
- Kabutare District hospital (6 trainees)
- Kabgaye District hospital (1 additional Faculty, 6 trainees)

In each hospital was a team of volunteers with average two Consultant Surgeons, one Consultant Anaesthetist, one operating nurse and one anaesthetic nurse. The huge German Team set out on February 23rd, 2023 and February 25th, 2023 for Kigali, the capital of Rwanda.

The preparations for this year mission were a challenge because of various reasons:

1. We had in our German team eight new volunteers, with no experience and knowledge in Rwandan hospitals. Always we have mixed the team with experienced and new members, so that every included hospital can work smoothly.

2. We have had to change the team shortly three days before of the departure of the team, because one experienced surgeon could not join this year. Final the British team could solve our problem with nominating an experienced consultant surgeon, Prof. Jacob Akoh to the Kabutare team.

3. We had not any clear expectations about the surgical knowledge and surgical skills of the Trainees as General practitioners. With on average 5 to 8 trainees we had never before such a huge amount of trainees per hospital to train.

4. The MOH in Rwanda has changed 10 days before the start of the mission one included training hospital from Munini to Kabutare, which was in the original plannings and where the communication of our team with the officials of Munini was already established long time before.

5. The amount of bureaucracy was increased year by year. It was a challenge to get temporary licences for all team members in time, same with the declaration of our donations to the MOH. Finally the Embassy of Rwanda in Germany with their Ambassador, his Excellence Igor Cesar and the Partner organisation Rwanda Legacy of Hope with Pastor Osee Nvatuka could sort everything out.

With a pre-course evaluation we asked all the participants about their pre-existing surgical experience. The vast majority as General practitioner's has already a huge surgical experience in but mostly only with caesarean sections. Only a few trainees had any previous experience in hernia surgery.

The theoretical training took place on Friday February 24th, 2023 and Saturday, February 25th, 2023 at the Conference Centre at the Lemigo Hotel in Kigali. Especially because of the tremendous support of Prof. Faustin Ntirenganya, the coordinator of the surgical education in Rwanda from the University CHUK Kigali was this new course format well prepared and performed. The following topics were included this year and were adapted to the different group of trainees with General practitioner's this year:

- Anatomy
- Diagnosis and Differential Diagnosis
- Indication for Surgery
- Evidence for Mesh Repair
- Evidence for Tissue- (Non-Mesh) Repair
- How to perform Mesh Repair: Principles
- Video Demonstration of LICHTENSTEIN Repair (*INCISION)
- How to Perform Non-Mesh Repair: Prinicples
- Video Demonstration SHOULDICE Repair (*INCISION)
- Local Anesthetic Technique
- Interactive Session: Scrotal Hernias
- Paediatric Hernia Surgery
- Femoral Hernias
- Complications and how to Avoid them
- Ventral Hernias
- Interactive Session: Strangulated Hernias
- Outcome of Hernia Repair in a Remote Setting.



First time we have included two interactive sessions about scrotal hernias and incarcerated hernias in four smaller groups to allow more interaction with the trainees. After all the presentations there was enough space for a controversial discussion of the trainers and trainees and afterwards all lectures were evaluated from the participants (Table 1):

TOPIC	FACULTY	Average Score
Anatomy	Ralph Lorenz	4.12
Diagnosis and Differential Diagnosis	Emanuel Mutabazi	4.38
Indication for Surgery	Joachim Conze	4.2
Evidence for Mesh Repair	Chris Oppong	4.2
Evidence for Tissue- (Non-Mesh) Repair	Ralph Lorenz	4.08
How to perform Mesh Repair: Principles	Chris Oppong	4.08
Video Demonstration of LICHTENSTEIN Repair (*INCISION)	Chris Oppong	4.31
How to Perform Non-Mesh Repair: Prinicples	Ralph Lorenz	4.04
Video Demonstration SHOULDICE Repair (*INCISION)	Ralph Lorenz	4.16
Local Anesthetic Technique	Jacob Akoh	4.08
Interactive Session: Scrotal Hernias	ALL	4.04
Paediatric Hernia Surgery	Albrecht Frunder	3.47
Femoral Hernias	Jacob Akoh	3.87
Complications and how to Avoid them	Joachim Conze	4.33
Ventral Hernias	Jacob Akoh	4.33
Interactive Session: Strangulated Hernias	All	4.66
Outcome of Hernia Repair in a Remote Setting	Paul Fisher	4.13

Tab. 1: Evaluation of the lectures of the train-the-trainer-course 2023

(*school grades: 5-excellent, 4-very good, 3-good, 2-average, 1-poor)

Additional we try the measure and evaluate the impact of the theoretical training on their knowledge by the trainees with a self-assessment (Tab.2)

TOPIC	Average Score	Average Score
	Pre-course lectures	Post-course lectures
Overall-Knowledge of Hernia Surgery	5.74	7.87
Overall-Skill in Hernia Surgery	4.48	7.03
Anatomical Knowledge	5.65	7.9
Evidence for Mesh Repair	4.77	8.2
How to perform Mesh Repair (Lichtenstein)	4.26	7.5
How to perform Non-Mesh Repair (Shouldice)	3.03	7.3

Tab. 2: Excess of the Evaluation of the knowledge pre-course and post-course, Self-Assessment Knowledge - Scoring yourself on a scale of 1-10 (10 is excellent)

After the Church Service on Sunday morning, February, 26th, 2023 all teams were picked up by the various hospitals to transport the teams and additional the boxes to their final destination to Butare, Kabutare, Musanze, Rwamagama and Kabgaye.

2. Report from Musanze

By Dr. Ralph Lorenz



The **Musanze-Team** consists of the following German voluteers:

- Dr. Ralph Lorenz Consultant Surgeon from Berlin
- PD Dr. Joachim Conze Consultant Surgeon from Munich
- Dr. Armin Polzin Anaesthetist from Berlin
- Petra Woelki leading Operating nurse from Starnberg
- Susan Fritzsche -leading Anaesthetic nurse from Starnberg.

Additional as Faculty and Trainers in the Musanze Team we had two young Rwandan Surgeons, who finished the course module "Train-the-trainer" in 2021 and 2022. They got both first-time an additional training and supervision as trainer from us.

- Dr. Venuste NSABIMANA
- Dr. Blaise HABINEZA

Following Trainees join the training in Musanze Referral Hospital:

- Dr. Blandine TWAMBAZIMA as surgical resident in PGY 3

and the following General practioner's as trainees:

- Dr. Vanessa Imelda MUGEMANYI
- Dr. Eric TUYISHIME
- Dr. Benjamin DKYAVULIKIRA
- Dr. Deogratias NGABOYEKA LUSHOMBO
- Dr. Emmanuel MURAGIJEYEZU
- Dr. Yves Victor TWIZERE KOKO





The Musanze-Team has finished 42 Hernia operations with 38 groin Hernias (19 Shouldice Repairs, 15 Lichtenstein Repair, 4 Marcy Repair, 2 preperitoenal Mesh Repairs for ventral hernias, 2 direct suture closures for ventral hernias)

The transport from Kigali to Musanze in the North of Rwanda took almost three hours, so that we reach the Musanze hospital together with 10 boxes with surgical and anaesthetic materials in late afternoon. In the boxes weh ad i.e. anaesthetic materials with emergency medicaments, local anaesthesia, syringes and cannulas, , single-waxy and re-usable surgical gowns and drapes, sterile and unsterile gloves, different sutures , many commercial hernia meshes in different sizes and surgical instruments to remain in Rwanda.

We got a very warm welcome at Musanze Hospital from the Medical Director Dr. Philbert Muhire (we know him from previous missions at his former place to work at Rwamagama hospital) and got a guidance through the Operating department. We decided spontaneously like in previous missions successfully established that we will do the training instead of two different operating rooms only in one but with two operating tables. One of the biggest benefits for local operating team was that they have one operation theatre for any emergency cases at any time. The training was so never interrupted or disturbed by any other issues. We prepare therefore two operating tables with functioning diathermy machines, two new operation lamps and one anaesthetic machine in one operation theatre. The existing surgical instruments were well prepared and immediately usable.

We got a safe store for all our materials so we unpack our donations in this room, so that we can start all operation with no delay on Monday morning After the storage of the materials we had screened together with all trainees almost 10 Hernia patients for the following day. The first hernia operations were demonstrated by the trainers but after a few demonstrations the trainees took over the hernia operations.

The vast majority were operations in spinal anaesthesia (31), in 7 cases a general anaesthesia with laryngeal mask was used and four almost smaller hernia cases were done under local anaesthesia. The German Team at Musanze Hospital performed in this week all together **42 Hernia-Operations at the Musanze Referral Hospital**, 33 Operations were done by the course participants under supervision of the trainers. In the OP-program were mostly sometimes really enlarged inguinal hernias (8 Scrotal hernias). Beside there were also some recurrent and mostly simple ventral hernias.

Main focus of this course was the open inguinal hernia surgery including training of two standardized operation techniques with Shouldice-technique as pure tissue repair (19 operations) for younger patients and smaller hernias and Lichtenstein-technique as mesh repair (15 operations) for older patients or even large groin hernias or recurrences. Pediatric hernias were fixed by Marcy Repair (4cases). For ventral hernias we trained open suture (2 cases) and open mesh repair (2 cases). The trainees got also a short introduction into a tailored approach, in which inguinal hernia cases a pure-tissue-repair is feasible or even recommended and in which cases a mesh repair is preferable. The training of almost one technique with a clear binding standard makes the training simpler and more effective. Beside Hernia techniques the training includes also other issues, like anatomical lessons, suturing, learning surgical knots, tissue handling, instrument handling, perfect assistance, instrument sterilisation and hygiene in the OR.

All operation were continued without complications, most patients went home after a very short hospital stay.

All trainees were always extremely high motivated, attentive and supportive. So the training was excellent and very effective for all participants. The local GP from Musanze Victor Koko deserves a special thank because of his perfect administration and organisation with recruiting patients, organising visits also on the ward.

Our additional faculties Dr. Venuste NSABIMANA and Dr. Blaise HABINEZA could get a first guidance as trainer for the long-lasting effect of this training. Both are experienced surgeons with additional theoretical hernia training in 2021 and theoretical and practical training in spring 2022 also in soft skills. Both have right now the capacity, knowledge, and skills to train new generations of young surgeons. This snowball effect makes this type of hernia training in Rwanda so unique and sustainable and should be continued in the future.

Almost all course participants could reach after one week of training a level of skills and experience, that they can carry out almost most simple inguinal hernias with minimal supervision but not completely independent. More complicated cases should be performed by experienced surgeons.

All course-contents were evaluated by trainees, but also by the trainers. The preliminary results of the evaluation seem to be very pleasant. A certification ceremony took place on Friday afternoon, March 3rd, 2023 in the near of the Musanze hospital. The Certificates were given to all trainees and team members from the Medical Director of the hospital and the Surgeons for Africa representative. Because of the huge fundraising campaign of the SURGEONS FOR AFRICA every course participant got a very special gift as starter package for Hernia surgery, including many Hernia-meshes and sutures.

As an additional social event we organised for Thursday evening a really for all participants and the officials of the Musanze hospital enjoyable Get-together including dinner and dancing party in a small but very pleasant restaurant in Musanze.

3. Report from Kabgaye

by Dr. Chiara Tosolini

The Kabgaye-Team consists of the following German voluteers:

- Dr. Karl Spitzer Consultant Surgeon from Munich
- Dr. Chiara Tosolini Consultant Surgeon from Erding
- Dr. Evelyn Koblitz Consultant Anaesthetist from Berlin
- Jenny Preuss Operating nurse from Berlin
- Doreeen Haevecker Anaesthetic nurse from Berlin.



Additional as Faculty and Trainers in the Kabgaye-Team we had one young Rwandan Surgeons, who finished the course module "Train-the-trainer" in 2021 and 2022. He got additional training and supervision as trainer.

- Dr. Patrick UWITONZE

Following Trainees/ General practioner's join the training in Kabgaye District Hospital:

- Dr. GASASIRA BAHIZI Ernest
- Dr. BUGINGO Jean Pierre
- Dr. PIOKA LEZE Yannick
- Dr. NTAGAYANGABO KAJABIKA Theophile
- Dr. SIBOMONA Charles
- Dr. MUHIGA MUKIZA Pascal

The Kabgaye Teams has finished 19 inguinal Hernia operations, (16 Lichtenstein Repairs, 2 Shouldice Repairs, 1 Marcy Repair)

Report by Dr. Chiara Tosolini

Team Germany:

The cooperation between the anesthesiological and surgical team was very good, despite the lastminute change of the team leader. The compatibility was excellent and the competence brought along was good, the expertise of Dr. Koblitz and Dr. Spitzer, as well as the flexibility of the three new team members, simplified the adaptation to the situation on site.

The fact that three of the five team members came from the same surgical team and were already very experienced and harmonized, also helped.

What can be improved:

The communication in advance with the hospital regarding materials to bring and patient preparation and recruitment.

Hospitality on site:

The accommodation in Hotel Saint Andre was pleasant and comfortable, the distance from the hospital very small, so that little time was lost. The food was good and actually too much: it would have been more practical and pleasant to have one meal break for the entire team, including trainees, instead of lunch and 2 coffee breaks for Europeans.

Infrastructure and hospital organization:

The hospital was an established, functioning district clinic, our department was the emergency room surgery block: a small examination - surgery room, 2 operating rooms with washroom and steri, ample lounge space for staff and trainees.

We found good and efficient time management and availability of those responsible on site: in addition to our course, the department had to carry out the routine activity of the emergency room, as well as some surgeries, so that, over the 5-day course, we always had the smaller OR at our disposal. We could only use the main theather, which is better equipped (with a working ventilation machine and operating room light), for two operations. The problem was solved on the third day by dividing the operating area into 2 Ors. The only anesthetic option was therefore spinal and local. The medical, nursing, and administrative staff, when not busy with routine activities, were always available, friendly and helpful. We were assisted by a very dedicated surgeon, who had also taken part in a "train the trainer" course.

The equipment and instruments were sufficient to satisfactory: there were enough instruments. The quality, although a little substandard, was more than acceptable.

The new hospital should be complete in 2 years, with a larger operating theater and better conditions, we would like to test that.

The only real deficiency was patient recruitment and selection: sufficient number of patients were prepared only for the first two days. This negatively affected the surgical exposure of the trainees (only 19 operations in total).

Trainees:

We have worked with six trainees (all general practitioners) and one medical student. Three spoke English well, two spoke English acceptably, one understood but did not speak English, one did not understand or speak English at all. However, communication was possible due to the support between trainees and our minimal knowledge of French.

The number of trainees was maximum, the presence of a medical student helped a lot (communication with patients, support in the routine of the department).

The motivation and commitment of the trainees was very high, the willingness to help each other was also very good, especially the interaction at the table was very effective.

The theoretical knowledge was good and homogeneous, as proof that the course in advance was very effective. Surgical skills (tissue and instrument handling, as well as performing knots and sutures) were somewhat limited. It was possible to practice knotting and sewing outside the OR, that could perhaps be implemented in the run-up course.

In 5 days, and with unfortunately very few patients available, all 6 participants were able to perform at least 1 complete inguinal hernia repair. 4 out of 6 trainees were able to perform the operation twice.

Overall, it was fun to work with and within the team, and despite the circumstances, we really enjoyed our work.

We look forward to the next assignment.

4. Report from Rwamagama

By Dr. Ursula Coppenrath-Witschen





The Rwamagama-Team consists of the following German voluteers:

- Dr. Albrecht Frunder Consultant Surgeon from Tübingen
- Dr. Ursula Coppenrath-Witschen Consultant Surgeon from Ulm
- Dr. Gertrud Flessner Consultant Anaesthetist from Berlin
- Elke Knape Operating nurse from Berlin
- Heike Herget Anaesthetic nurse from Berlin.

Following Trainees General practioner's join the training in Rwmagama Provincial Hospital:

- Dr. KWIZERA Donata
- Dr. HARELIMANA Grace James
- Dr. MUGISHO BALEKE Herrmann
- Dr. BELLARMIN Matungo
- Dr. KANDA TUMBA Junior

The Rwamagama Team has finished 37 Operations, 36 with groin hernias (Majority Lichtenstein Repair, some Shouldice Repairs, some Marcy Repairs (exact data on request))

Report from Rwamagama by Dr. Ursula Coppenrath-Witschen

After 2 hour-drive our group of five Germans with 3 Rwandarian colleague - our trainees- arrived safely in Rwamagama in the afternoon 27/2/2023. Dr. Christian Kalisa, who speaks very good German, and his leading colleague Dr. Harelimana Grace James - the trainee of the Rwamagama hospital- greeted us very friendly and guided us to the theatre. The two theatres were rarely used - the first reason was a new theatre for the many caesarean sections and gynaecological surgery and the second reason caused in missing a surgical department.

With the grateful help of Dr. Kalisa, Dr. Harelimana James, the nurse and colleagues it was possible to prepare the theatre with all necessary materials for the anaesthesia. This included ventilators, a new operating table and the diathermy for both theatres. The instruments were complete and sterilized.

The employers of the theatre, the nurses, the trainees, and Dr. Kalisa tried to help where ever they could. (Including the extensive and delicious lunch).

Every day our organization got better and so we could do the training of operation groin hernia very well. Very helpful was the surgical and anaesthesiologic donated materials which we brought from Germany.

The 5 trainees were general medicines and all from different hospitals.

On the same evening as well as on all evenings we examined the patients with groin hernia. All trainees were with us and each one was assigned individual patient for care. All patients were male. Additional were two children - boys.

Early in the morning we started the surgery. The first hernia operations we explained each steps and from the second day the trainees were able to do more and more parts by themselves. They learned very quick; thus they carried out herniotomy independently on the end of the week. During the days the trainees, who were not operating, switched the theatre and were able to learn from all operations. They asked a lot and often it was a discussion - sometimes we were challenged by language barriers - English, French, Kinyarwanda.

The cases were interesting, the hernias were mostly big, scrotal hernia, recurrence hernia with huge sacs, open processus vaginalis, one with ascites, two with appendices, one with coecum, one with traumatic hematoma, two children - a lot to learn and to discuss.

At the end we finished successful, all patients were discharged at time and very fine and without any special problems.

The important result was that all trainees learned the hernia surgery very well and will be able to execute this two techniques of hernia surgery in their hospital.

5. Report from Kabutare

By PD Dr. Christoph Paasch



The Kabutare-Team consists of the following British and German voluteers:

- Prof. Dr. Jacob Akoh Consultant Surgeon from Plymouth
- PD Dr. Christoph Paasch Consultant Surgeon from Erding
- Dr. Denisa Frncikowa Consultant Anaesthetist from Vienna
- Peggy Grassmann Operating nurse from Berlin
- Mandy Meyer Anaesthetic nurse from Berlin.

Following Trainees/ General practioner's join the training in Kabutare District Hospital:

- Dr. MUKAMANZI Seraphine
- Dr. NTIGURIRWA Jean De La Paix
- Dr. DUKUZIMA Alain Serge
- Dr. SINABUBARAGA Vincent
- Dr. MFITUMUKIZA Jerome
- Dr. ARITINWE Richard

The Kabutare-Team has finished 41 inguinal Hernia Operations

(39 Lichtenstein Repairs, 2 Onlay Mesh Repairs for ventral Hernias)

Report by PD Dr. Christoph Paasch Location: Kabutare District Hospital Period: 27.02.2023 to 03.04.2023 Team leader: Prof. Jacob Acoh (UK)

From 27.02.2023 to 03.04.2023 we conducted a training mission in Butare at Kabutare District Hospital with SURGEONS FOR AFRICA supported by the Ministry of Health in Rwanda. Our team consisted of 5 persons (Peggy Grassmann, operating room nurse; Mandy Meyer anesthesia nurse; Denisa Frncikova, anesthesiologist; Prof. Jacob Akoh and Christoph Paasch, surgeons). Already on 26.02.2023 a well-organized bus transport from Kigali to Butare took place. The team was accommodated in well-equipped single rooms in a Catholic hotel 5 minutes by car from the place of operation.

On the first day, 26.02.2023, the team was warmly welcomed by the clinic director. Together they inspected the premises, handed over the aid supplies from Germany (dressing materials, medicines, sutures and plastic mesh), made a team introduction and identified deficiencies to be remedied. The operating room area consisted of two operating rooms (Hereafter OP1, OP2). The following deficiencies were surveyed:

- Defective breathing machine (OP1+OP2)
- Missing second operating table (OP2)
- Defective door (OP1)
- Missing OR lighting (OP2) (OP2)
- Missing diathermy
- Missing local anaesthetics

Subsequently, the team discussed with the clinic director how these deficiencies could be remedied in the short term. Already on 27.02.2023, the first day of surgery, a 2nd operating table, a diathermy and a mobile operating lamp were procured. In this way, surgical care could be started in both rooms. The breathing machine could not be repaired, so after the consumption of the local anaesthetics brought with the patient, which could not be procured, from the 2nd day on all patients were provided with spinal anaesthesia.

Two teams were formed (team 1 in OR2: Prof. Jacob Acoh + three medical colleagues from Rwanda + 2 OR nurses from the hospital; team 2 in OR1: Christoph Paasch, Peggy Grassmann, Mandy Meyer + three medical colleagues from Rwanda). Dr. Frncikova performed the spinal anaesthesia in both theaters as an anaesthesiologist with the temporary help of an anaesthesiologic colleague on site. The respective working day was started with a morning meeting and ended with an afternoon meeting.

During the above period, 41 hernias (36 male patients) were successfully operated. Lichtenstein surgery was performed in 39 cases and onlay-repair for ventral hernias in 2 cases. No early postoperative complications occurred.

Initial organizational problems, such as the lack of surgical clothing, food and drinking water supplies, and long transfer times, were subsequently solved with the help of everyone involved. In particular, the medical colleagues from Rwanda were increasingly involved in the perioperative procedures (insertion of intravenous access, storage, and transport).

During the first two days, both surgeons focused on explaining the situs and its anatomical structures. This already showed a sound knowledge of all participants, which can be traced back to the previous series of lectures in Kigali. Operative partial steps were already taken over by the medical colleagues from Rwanda (continuous suture of the external nerve aponeurosis, mesh

fixation, wound closure and opening). Breaks between surgical procedures were used for suture courses.

From 03/01/2023, on the 3rd day of operation, the medical colleagues from Rwanda assisted the operations. It is estimated that 3 independent Lichtenstein surgeries could be performed on each day. On the last day of deployment, 03.03.2023, our colleagues independently performed these surgeries successfully under mutual assistance. Afterwards, a final meeting was held with the clinic director and the certificates were ceremoniously handed over to the trainees.

In summary, from our perspective, especially against the background of the short preparation time of the Kabutare District Hospital, we can speak of a successful training mission.

Many hernias were treated and independent surgery was made possible for the local medical colleagues.

The team would like to thank the hospital director, the trainees and all the local staff for the warm welcome and the great commitment.

6. Conclusion

The German Team has finished in one week <u>all together 139 Operations</u>, <u>138 Hernias with not any</u> <u>complication</u>.

24 Trainees were successfully trained by the German and German-British teams for inguinal hernia surgery.

The biggest success was that some of the trainees were infected by our surgical passion and enthusiasm and have expressed their wish to start a surgical postgraduate training in Rwanda.

A big thank deserves also our partner organisations **Operation Hernia** with Dr. Chris Oppong and **Rwanda Legacy of Hope** with Pastor Osee Nvatuka same as all the so friendly, kind, and attentive staff from the all the hospitals.

A huge thank should also be expressed to every volunteer team member of the SURGEONS FOR AFRICA Organisation. Because of their enthusiasm they spent a lot of time in preparations and a part of their personal holidays.

We would be very happy to continue this hernia education with a next training course in 2024.

Murakoze Cyane!

Kalph form

Dr. Ralph Lorenz for the SURGEONS FOR AFRICA / CHIRURGEN FÜR AFRIKA