



Annual Report 2024

**University Hospital of
Zurich Transplant Center**

1	The Transplant Center in its 18th Year	4
	Figure 1 : Case numbers 2024 showing the change compared to the previous year	4
2	Center-Specific and Integrative Functions	6
2.1	Transplant Coordination	6
2.2	Transplant Immunology Laboratory	8
2.2.1	Awards	9
	Figure 2 : Photo Merit Award Transplant Team Station E East III	9
2.3	Participation in National and International Committees	10
2.4	Professional development.....	13
2.5	Swiss Transplant Cohort Study (STCS)	14
3	Organ Donation Network.....	15
	Figure 3: Registered donors in the DBD and DCD protocol in the Donor Care Association, 2020 - 2024.....	15
4	General Care of Transplant Recipients at the Transplant Center.....	16
4.1	Anesthesiological Aspects of Transplantation	16
4.2	Nursing Care in the Transplant Center	17
	Figure 4: APN Nursing Consultations for kidney transplants	18
	Figure 5: APN nursing advice for liver TPL	19
	Figure 6: APN Nursing advice cardiac TPL.....	21
4.3	Infectious Disease Care for Transplant Patients.....	23
4.4	The Aftercare of Organ Transplant Patients in Dermatology	24
4.5	Special Consultation Hours for Transplant Psychiatry at the Clinic for Consultative Psychiatry and Psychosomatics	25
5	The Individual Transplant Programs.....	26
5.1	Center for Stem and Immune Cell Therapy	26
5.1.1	Allogeneic Stem Cell Transplantation.....	26
5.1.2	Autologous Stem Cell Transplantation.....	26
5.1.3	CAR-T cell therapy	26
5.1.4	Gene-Edited Blood Stem Cells.....	26
5.2.1	Miscellaneous from the Center for Stem and Immune Cell Therapy.....	27
5.2	Lung Transplantation	28
	Figure 7: Number of lung transplants at the USZ 2017 - 2024.....	28
	Figure 8: Evaluation of a donor lung under ex-vivo-lung-perfusion (EVLV).....	30
	Figure 9: EVONE during unilateral pulmonary TPL.....	32
5.3	Liver Transplantation	33
5.4	Kidney Transplantation	35
5.5	USZ - Zurich Children's Hospital Pediatric Kidney Transplantation.....	36
5.6	Pancreas Transplantation.....	37
5.7	Islet Transplantation	38
5.8	Heart Transplantation.....	39
	Figure 10: The "Organ Care System" (OCS) (TransMedics, Inc., Andover, MA, USA)	39
6	Attachments	40
6.1	Personnel Composition of the Transplant Center 2024	40
6.2	Transplant Activities 2014 - 2024.....	43
6.3	Outcome of Organ Transplants	43
6.4	International Advisory Board (IAB) Meeting 20 24	44
6.5	Congress Contributions.....	46
6.6	Scientific Publications 20 24	47
	Heart.....	47
	Immunology (HLA laboratory).....	47
	Infectiology	48
	Liver 50	
	Lung 51	
	Dermatology	52
	Kidney & Pancreas.....	53
	Kidney, Zurich Children's Hospital (Kispi).....	55
	Stem cell/immune cell transplantation	56
6.7	Transplant Awards 2024	59
	Patient-Related Study Award.....	59
	Figure 11: Presentation of the award to MUDr. Dusan Harmáček.....	59
	Laboratory Experimental Study Award	60

	Figure 12: Presentation of the award to PD Dr. med. Corina Schneidawind (deputy handover to Prof. Dr. med. Dominik Schneidawind, spouse)	60
	Achievement Award	61
	Figure 13: Presentation of the award to the Transplantation Unit E OST III team	61
6.8	Professional development 2024.....	62
	18th Annual Symposium of the Zurich Transplant Center 2024.....	62
	Monthly Seminar "Hot Topics in Transplantation" (TNT) 2024	64

1 The Transplant Center in its 18th Year

Prof. Dr. med. Nicolas Müller, Head of the Transplant Center

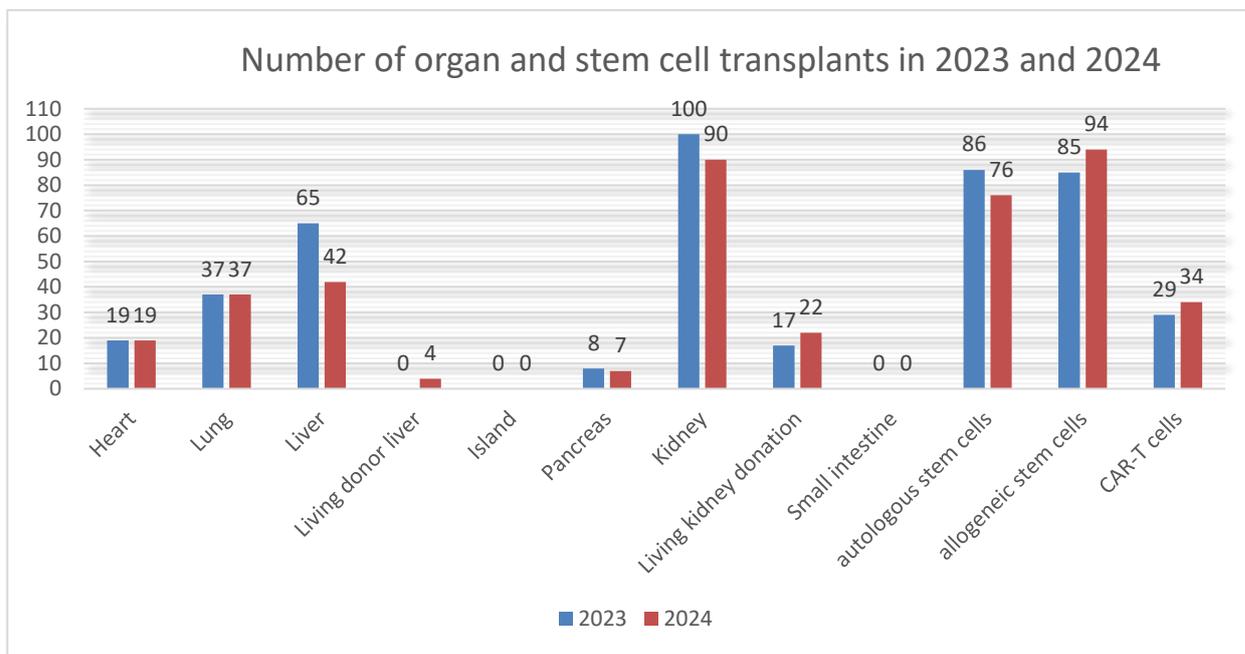


Figure 1 : Case numbers 2024 showing the change compared to the previous year

Summary

In 2024, a total of 221 solid organs were transplanted (2023: 246); 27 patients on the waiting list for organ transplants died (2023: 36). 94 allogeneic transplants, 76 autologous transplants and 34 CAR-T cell therapies were performed in 2024.

Transplant Center

2024 was a "normal" year for our transplant center, and after the record set in 2023, it was also an opportunity to ease the strain on our very stretched resources.

The implementation of a center for organ recovery/repair/assessment was driven forward intensively and the first concrete steps were initiated. This also includes planning the introduction of normothermic regional perfusion during organ removal. This modality is becoming increasingly established and is of central importance, particularly for our many extended criteria donors.

And last but not least, the Swiss Transplant Cohort STCS will be financially supported by the SNSF for a further 4 years from 2025 to 2028.

Last year, the transplant center was able to transfer all of its standard documents to a document management system, which means that they now also meet the requirements of a quality management system.

In November 2024, the transplant center and all organ transplant programs were inspected by Swissmedic and the Federal Office of Public Health during a 2-day inspection. These inspections usually take place every 3-5 years when an application is made to extend the operating licenses for the transplant programs. Last year, a license for the import and export of homograft was also applied for in this context.

The inspection was successfully completed and the approvals for all transplant programs were extended for a further 5 years.

Research and training

With 97 publications, the center was also very successful academically.

The 18th annual symposium of the Transplant Center was not unexpectedly held under the topic: Organ Recovery, Assessment and Repair - Current Status and Future Perspectives, and was met with great interest.

Targets for 2025

- Opening of a comprehensive Organ Recovery and Assessment Center.
- First meeting with an almost completely renewed International Advisory Board.
- New and modern data management concept for DCA and transplant coordination.
- Start of NRP

2 Center-Specific and Integrative Functions

2.1 Transplant Coordination

Stefanie Schiess, Head of Transplant Coordination

Personnel Development and Team Structure

The year 2024 was characterized by personnel changes and structural developments within Transplant Coordination. Nadine Hauser left the team in January. Fatlum Isufi took over the role of deputy to Stefanie Schiess on 01.01.2024. Since then, he has significantly contributed to the management of the Transplant Coordination.

The application process for two new positions was successfully completed in February. Tea Pavic and Michael Merkel joined the team on 01.06.2024. Due to renovation work on East U 57, the team was temporarily spread across various locations within the USZ (University Hospital of Zurich), which required increased organizational flexibility.

Individual team members completed work shadowing placements in dialysis in order to further deepen their expertise. In addition, collaboration with DCA was intensified, which included mutual job shadowing and joint team meetings.

Introduction of MS Teams Telephony

Teams telephony was introduced in 2024 to improve the accessibility of Transplant Coordination. The implementation took place gradually, accompanied by training on how to use the new telephone solution.

SwissMedic/BAG Audit

In spring, the team began to comprehensively revise existing manuals and create new work instructions to ensure continuous quality assurance. In May, preparations for the SwissMedic/BAG audit began under the leadership of Uschi Schäfer, Quality Manager of the Transplant Center. The final audit in November was successful.

Continuing Education and Congress Participation in 2024

Transplant Coordination was represented at several national and international congresses again this year:

- January: Participation in the Swiss Transplantation Society Congress in Thun.
- March: Participation in the SWTP winter symposium in Lucerne.
- October: Participation in the DCD Congress in Bucharest.
- November: Participation in the first Swisstransplant Congress in Lucerne - the entire team was present, which is why the office remained closed on this day.
- November: Attended the Transplant Procurement Management Advanced International Training Course, where valuable insights were gained for Transplant Coordination.

Transplant Coordination: Organ Offers and Waiting List Management

Transplant Coordination received **a total of 213 Swiss, and 356 foreign organ offers** in 2024. The team also carried out 175 assessments and added 228 patients to the national waiting list.

Assessments 2024 by the Transplant Coordination:

- Live kidney donation Stage 1: 30
- Live kidney donation Stage 2: 19
- Live liver donation Stage 1: 6
- Live liver donation Stage 2: 4

At the end of December 2024, 11 employees were working in Transplant Coordination with a total workload of 9.5 FTEs.

Outlook

The year 2024 was characterized by personnel changes, structural challenges and significant further developments. A key milestone was the SwissMedic/BAG audit, which was successfully completed and confirmed the high quality and safety standards in Transplant Coordination. Despite these conditions, the Transplant Coordination team was able to successfully carry out its tasks and drive forward key projects.

In the coming year, the focus will continue to be on optimizing existing processes, adapting to regulatory changes and promoting interdisciplinary collaboration.

2.2 Transplant Immunology Laboratory

Dr. med. PhD. Jakob Nilsson, Head Physician, Transplant Immunology and Zehra Gündüz, Head Biomedical Analyst HF (BMA), HLA Typing Laboratory

Performed Analyses

In 2024, the Transplant Immunology Laboratory continued to provide the USZ Transplant Center with transplant immunology laboratory analyses of the highest international standard. With a total of 7,179 clinical samples received by the laboratory, 2,953 HLA typings, and 7,388 bead-based analyses of anti-HLA antibodies were performed. The laboratory has a 24-hour on-call service to ensure the rapid HLA typing of organ donors and thus enable the allocation of donated organs within the Swiss Organ Allocation System (SOAS). In 2024, we HLA-typed 62 deceased organ donors. We also contributed to the cross-matching of a further 127 deceased organ donors. We supported the stem cell transplant program with transplant immunological testing of 123 potential stem cell recipients and HLA typing of 193 potential donors.

Waiting List for Organ Transplantation

The transplant immunology laboratory conducts ongoing transplant immunology tests to ensure that the waiting lists for organ transplants are updated at all times. On June 1, 2025, there were 300 patients on the waiting list for a donor kidney at the USZ, of which 90 new patients were registered in 2024 alone. In the same period, 112 patients received a new kidney at the USZ (including 22 from living donors). With regard to lung transplants, we carried out 51 transplant immunology assessments of potential recipients in 2024 and 37 patients received a new lung at the USZ. On 01.06.2025, 14 patients were on the waiting list for a lung transplant. Finally, we also carried out the immunological characterization of 40 potential candidates for a heart transplant, with a total of 19 patients transplanted at the USZ in 2024. 9 patients were still on the waiting list as of June 1st 2025.

Important Changes to the Laboratory Tests

In 2024, several changes were made to our laboratory procedures. We introduced Oxford Nanopore Technology to provide high-resolution HLA typing for deceased donors. This novel sequencing technique allows us to generate complete sequences of all 11 HLA genes in 3.5 hours, further improving immunological risk assessment for organ allocation and facilitating personalized decision making. In 2024, we also introduced the analysis of donor-derived cell-free DNA (dd-cfDNA) into our routine for the detection of graft damage in organ transplants. This exciting new method enables non-invasive screening for rejection and real-time monitoring of graft injury as part of therapy evaluation in the event of rejection.

Additional Information

In 2024, the team was expanded with three new BMAs (Nertila Brahim, Svenja Conzett and Nicole Teutsch), while two BMAs (Emel Hamiti and Edith Jurkovic) left the team. The European Federation of Immunogenetics (EFI) also conducted an accreditation process for the laboratory and the EFI accreditation of the laboratory was successfully renewed with no non-conformities identified and positive comments on the high laboratory standard. The laboratory also continued to support the ongoing Swiss Transplant Cohort Study (STCS) by processing 472 clinical samples from transplanted patients in 2024 and by collecting and shipping aliquots from stored samples for STCS-approved clinical trials.

2.2.1 Awards

Awards/Distinctions the TPLZ has received or that clinics have received in connection with organ transplantation:

Patient-Related Study Award 2024 of the Transplant Center Zurich

- **MUDr. Dusan Harmáček** for his work on "Molecular diagnosis of antibody-mediated rejection: Evaluating biopsy-based transcript diagnostics in the presence of donor-specific antibodies but without microvascular inflammation, a single-center de-scriptive analysis."

Laboratory Experimental Study Award 2024 of the Transplant Center Zurich

- **Dr. med. Dr. phil. Corina Schneidawind** for the work "CD19-chimericantigenreceptor-invariantnaturalkillerTcellstransactivateNKcellsandreducealloreactivity."

Es konnten keine Einträge für ein Abbildungsverzeichnis gefunden werden.

Merit Award 2024 of the Transplant Center Zurich

- Transplantation Unit Team E East III was awarded the "Merit Award 2024" for their services as clinical nurses for the care of transplanted patients.



Figure 2 : Photo Merit Award Transplant Team Station E East III

2.3 Participation in National and International Committees

Andreas Flammer

President-Elect of the Working Group Heart of Swisstransplant (STAH)
Scientific Committee Member STS, Swiss Transplantation Study
Past-President and Nucleus Member of the Swiss Society of Cardiology Working Group Heart Failure
HSM support group VAD
Member European Society of Cardiology (ESC)
Fellow of the European Society of Cardiology (FESC)
ESC Congress Program Committee Member 2024 (CPC)
Board Member Heart Failure Association of the ESC
Fellow of the European Heart Failure Association (HFA)
Member HFA Committee on Acute Heart Failure (2022-2024)
Member European Society of Microcirculation

René Hage

Member of International Society of Heart and Lung Transplantation (ISHLT)

Sven Hillinger

Scientific Committee: Swiss Transplant Cohort Study
Member Ethics-Committee of the University Hospital Zurich

Kerstin Hübel

Member of the Board: STAPS
Member of the Swiss Kidney Paired Donation Group (KPD)
Member of the Swiss Transplant Society
Fellow of the European Board of Surgical Qualification - Transplant Medicine

Thomas Schachtner

Member of the Swiss Transplant Kidney working group (STAN)
Member Scientific Committee (STCS, Swiss Transplant Cohort Study)

Stephanie Klinzing

SGUM: Member of the Continuing Education Committee POCUS
Swisstransplant: Member CNDO (Representative SGI)

Andreas Kremer

Council Member and Program Committee of Swiss Association for the Study of the Liver (SASL)
Scientific Committee of Swiss Transplant Cohort Study (STCS)
Board Member of Swiss Transplantation Society (STS)
Council Member of Swiss Transplant Audit Group Liver (STAL)
Member of the American Association for the Study of Liver Disease (AASLD)
Steering Committee (2013-2021) and Member of German Pruritus Research Society (AGP)
Member of the German Liver Foundation (Dt. Leberstiftung)
Member of the German Society for Internal Medicine (DGIM)
Member of the European Association for the Study of the Liver (EASL)
Member of the International Society for the Study of Itch (IFSI) and Council Member of the Special Interest Group for Systemic Itch at IFSI
Member of the Dutch Society of Hepatology (NVH)
Member of the Swiss Society of Gastroenterology (SGG)
Steering Committee of Swiss HePa

György Lang

Member of the Thoracic Advisory Board, Eurotransplant Foundation
Member of the LAS Review Board, Eurotransplant Foundation
Past President of the Austrian Society for Thoracic Surgery
President of the ÖÄK examination board for thoracic surgery specialists
Member STALU Swisstransplant

Roger Lehmann

Past President of the Central European Diabetes Association (FID) 2013-2018
Board Member of the European Pancreas and Islet Transplant Association 2013-2019

Nicolas Müller

Board member, Past president, Swiss Society of Infectious Diseases
Member, IVHSM specialized body
Chairman of Scientific Committee, Swiss Transplant Cohort Study
Member of the Board, and Head Scientific Committee, Swiss Society of Transplantation
Editorial Board Xenotransplantation; Transplant Infectious Diseases, Transplantation
Member, Comité Médical, Swisstransplant
Council member-at-large, Immunocompromised host society ICHS

Mirjam Nägeli

Board member and academic secretary SCOPE (Skin Care in Organ Transplant Patients Europe)
Member Scientific Committee Swiss Transplant Cohort Study (STCS)
Member ITSCC (International Transplant Skin Cancer Collaborative)
President Working group Organ transplantation SGDV (part of Swiss society of Dermatology and Venerology)

Jakob Nilsson

Member of the Boards/Scientific Committees (STAN, Immunology working group)
Chair of AI Working group Swiss Transplant Cohort Study (STCS)
Fellow Transplant Society
Fellow European Federation of Immunogenetics
Member WMDA
Associate editor Frontiers in Immunology

Fabian Rössler

Member of the Swiss Transplant Kidney working group (STAN)
Member of the Swiss Transplant Pancreas working group (STAPS)
Member Scientific Committee (STCS, Swiss Transplant Cohort Study)
Member of the Swiss Transplant Society
Fellow of the European Board of Surgical Qualification - Transplantation
Board Member of the European Pancreas Transplant Research Consortium

Stefanie Schiess

Swisstransplant: Member of a CNDO working group
 Member Comité Medical Working Group

Isabelle Schmitt-Opitz

SAKK Thoracic Surgery Representative for the Lung Cancer Group
Chair Lung Cancer Center Zurich
International Mesothelioma interest group (iMig) board member
Swiss National Science Foundation (SNSF) National and Research Council
Board of Trustees Schulthessklinik
International Director American Association of Thoracic Surgeons (AATS)
European Society of Thoracic Surgeons (ESTS) Past President, member of Board of Directors, and Learning
Affair Committee
Program Committee for ESTS, AATS, AATS ITSOS, ESMO, ISHLT, iMig, and ELCC
International Association of the Study of Lung Cancer (IASLC) Taskforce Mesothelioma, Staging
Subcommittee MPM, Track Committee Member NSCLC
International Society of Heart and Lung Transplantation (ISHLT) representative of the Advanced Lung Failure
and Transplantation Interdisciplinary Network Steering Committee
Journal of Thoracic and Cardiovascular Surgery (JTCVS) Associate Editor
Chair World Conference on Lung Cancer (WCLC) 2025
Scientific Committee European Society for Medical Oncology (ESMO) Congress 2025
Scientific Committee European Lung Cancer Conference (ELCC) 2025

Dominik Schneidawind

Vice President of Swiss Blood Stem Cell Transplantation (SBST)

President of the Commission Allogenic Transplantation (KAT) of SBST
Vice President Swiss Group for Clinical Cancer Research (SAKK) Cellular Therapies Working Group
Scientific Committee Member of the Swiss Transplant Cohort Study (STCS)
European Society for Blood and Marrow Transplantation (EBMT)
JACIE Inspector for EBMT
Swiss Society for Hematology (SGH)
German Society of Medical Oncology and Hematology (DGHO)
German Working Group for Hematopoietic Cell Transplantation and Cellular Therapy (DAG-HSZT)
European Organization for Research and Treatment of Cancer (EORTC)
Consortium for iNKT Research and Therapy (CiRT) Advisory Board Member

Rolf Schüpbach

Swiss Transplant Society

Igor Tudorache

Member of the Swiss Society for Cardiac and Thoracic Vascular Surgery
Nucleus Member Swiss Transplant Working Group Heart (STAH)
Member German Society for Thoracic, Cardiovascular and Vascular Surgery (DGTHG)
Member European Association for Cardio-Thoracic Surgery (EACTS)
Member of The International Society for Heart and Lung Transplantation (ISHLT)

2.4 Professional development

Prof. Dr. med. Nicolas Müller, Member of the TNT Organizing Committee

The **18th Annual Symposium** of the Transplantation Center was dedicated to an important topic: **Organ Recovery, Assessment and Repair - Current Status and Future Perspectives** with a perspective from outside and a perspective from inside (USZ). The state-of-the-art presentation was given by a pioneer in this field, Prof. Shaf Keshavjee, who will also act as the new International Advisor for the lung program.

The 2024 TNT seminar, a monthly seminar in all transplant-related topics, focused on specific but also overarching topics and, in addition to USZ speakers, renowned international speakers were also invited (for a detailed program, see page 67).

We would like to take this opportunity to thank our sponsors, without whom these events would not be able to take place on this scale. The program can be viewed in the appendix.

2.5 Swiss Transplant Cohort Study (STCS)

Prof. Dr. med. Nicolas Müller, President Scientific Committee STCS

After extensive preparatory work, the STCS was reorganized and the transformation into a "Data Infrastructure and Services" organization with the legal form of an association was carried out. In this new legal form, a new submission was made to the Swiss National Science Foundation, which, after an intensive evaluation process, decided to support the cohort for a further 4 years up to and including 2028. We are very grateful for this and will do everything in our power to continue to be a beacon for research in transplantation medicine as a cohort of national importance (together with the Swiss HIV Cohort).

With over 8,784 active patients, including 2,978 (1/3) in Zurich, the STCS has developed into an internationally recognized institution whose research findings are attracting a great deal of interest. The aim is to make even better use of this treasure trove of data and samples, and to motivate all those involved to submit projects.

3 Organ Donation Network

Donor Care Association (DCA)

The following information is taken from the annual report of the Donor Care Association 2024. Organ donation medicine comprises the specialist hospital-based processes relating to organ donation. The employees of the DCA are affiliated with the University Hospital Zurich (USZ). In 2024, 33 organ donations were carried out in the DCA network - a significant decrease to the previous year. There are many reasons for this: increasingly older and sicker potential donors are faced with a low consent rate, which leads to these sharp fluctuations.

A further shift from DBD to DCD donation could not be observed, although the number of donors was lower. The focus for the DAC is now on the introduction of normothermic regional perfusion, which will hopefully increase the proportion of utilized donors again.

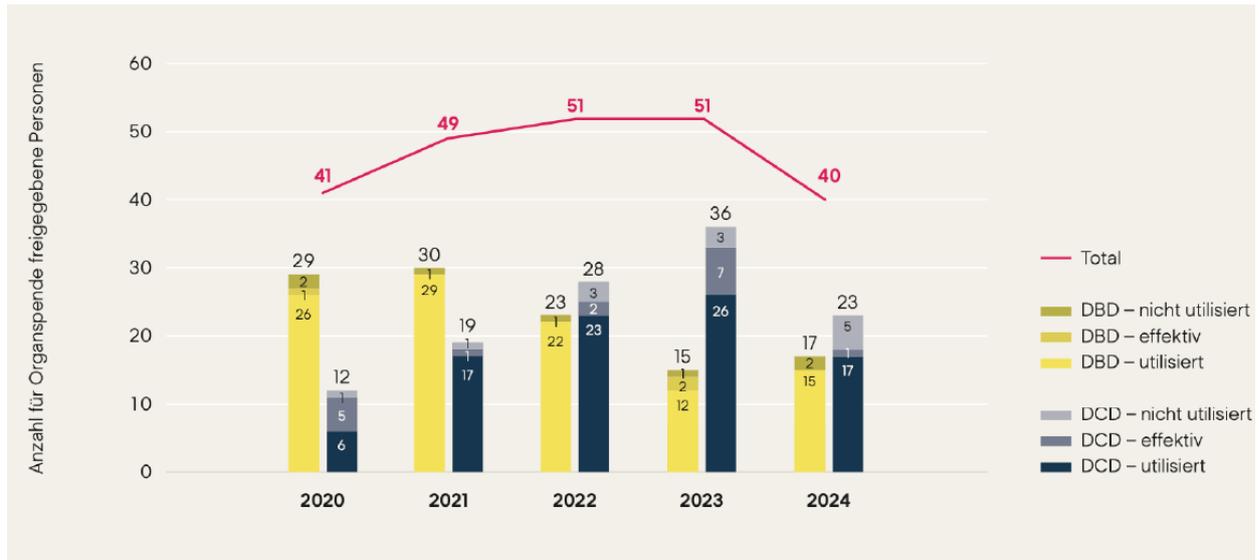


Figure 3: Registered donors in the DBD and DCD protocol in the Donor Care Association, 2020 - 2024

4 General Care of Transplant Recipients at the Transplant Center

4.1 Anesthesiological Aspects of Transplantation

Dr. med. Rolf Schüpbach, Senior Consultant, Institute of Anesthesiology and Perioperative Medicine

Dr. Raffael Stadler was added to the anesthesia team, as long-standing member, Prof. Martin Schläpfer, left during the course of the year. He has accepted a position as head physician at Chur Cantonal Hospital.

The number of all consultations carried out regarding listing has reached the impressive figure of 183; 77 patients were listed for a liver transplant and 34 for a lung transplant.

With a team of 10 specialized anesthesiologists, 37 lung transplants and 49 liver transplants were performed, in addition to which four patients were supported for live liver donation. The staffing requirements for this are considerable, as care times of up to 16 hours can be expected, which requires careful staff planning to ensure patient safety.

4.2 Nursing Care in the Transplant Center

Helen Ziegler, MScN, nursing expert area C

Nursing Transplant Department E East III

East E III is a highly specialized, interdisciplinary bed ward that offers in-depth care for transplant patients. It has a capacity of 15 beds. Around 23 nursing staff work in shifts and ensure continuous care 365 days a year.

If patients receive an organ offer, they usually enter at East E III and are specifically prepared for the upcoming operation.

Following a lung, liver, kidney, pancreas or islet transplant, patients in this department receive specialized care and comprehensive support tailored to their individual needs.

The wide range of tasks also includes structured patient education on the safe and timely administration of immunosuppressants and planning discharge, whether to a rehabilitation clinic or home.

It was with great pleasure that the department received the Transplant Center Merit Award at the Transplant Symposium in November 2024 for its high level of commitment and passionate everyday dedication. Many congratulations!

APN Nursing Consultation Hours

3 nursing experts APN (Advanced Practice Nurse) offer patients and their relatives consultations before and after a kidney, heart, or liver transplant. The aim is to prepare patients and their relatives in the best possible way for life with the new organ, to strengthen their personal responsibility in dealing with the disease and to promote individual self-management. The long-established transplant care consultations take place in both outpatient and inpatient settings.

Kidney Transplant Care Consultation

Alice Wirth, nursing expert APN

The care consultation focuses on patients and their relatives before and after a kidney transplant. The first in-person contact takes place during the inpatient stay following the transplant. In the following weeks and months, outpatient follow-up checks and consultations are held on the following topics: Medication management, promotion of healthy behavior regarding nutrition and exercise, coping with the new situation (evaluation of support needs at home, questions about returning to work, dealing with social contacts) and prevention of infections and secondary diseases. The content and scope of the consultations are adapted to the individual needs of the patients, with the overriding aim of enabling self-management. The pre-transplant care consultation in preparation for a kidney transplant is being further expanded.

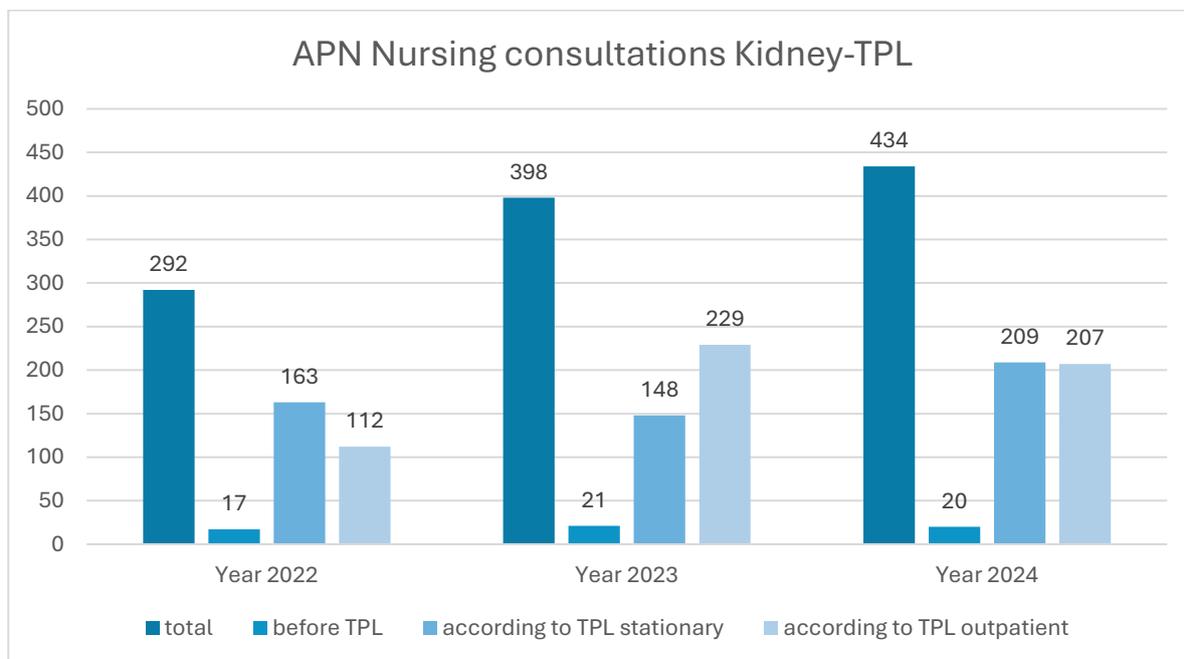


Figure 4: APN Nursing Consultations for kidney transplants

Cooperation at USZ

Due to the spatial conditions in the outpatient nephrology department, patients' questions and concerns after the transplant are increasingly dealt with by telephone and email. The care provided by the APN nursing expert continues to take place on an inpatient and outpatient basis, in person and by telephone. Cooperation with external specialist services (Spitex, retirement and nursing homes) is continuously being expanded. In 2024, a new service recording system was introduced for the nursing experts at USZ, which is currently being tested and further optimized. This may result in certain deviations in recorded data.

Information Brochures

In addition to the consultations, patients and relatives receive the following brochures "Things to know about preparing for a liver transplant", the "Guide on liver cirrhosis", which is available in 4 languages, and "Things to know about life after a liver transplant". The brochures also serve as a basis for structured inpatient education. Depending on requirements (e.g. language barrier, cognitive impairment), topic cards with pictures are used and handed out during the consultation.

Wards

The APN nursing expert on the wards is primarily a resource for supporting patients and their relatives with extended care and support needs. The exchange with the ward specialist and the nursing team is an important part of maintaining a high standard of care. Weekly interprofessional ward rounds additionally enable a participatory exchange with the patients.

Cantonal Hospital Lugano

For patients from Ticino, the exchange between hospitals is used to pass on open nursing issues from previous consultations and to ensure continuous patient care.

Zurich Children's Hospital

Since this year, the transition has been individually coordinated. In 2024, four young adults switched from pediatric to adult medicine. After an initial meeting with the APN kidney transplant nursing expert at Zurich Children's Hospital, the actual transition in collaboration with both treatment teams took place at USZ. Following the switch, patients now receive needs-oriented nursing care at individually adapted intervals.

Liver transplant care consultation

Andrea Pfister Koch, nursing expert APN

The liver transplant care consultation offers patients and their relatives advice before and after the transplant. The content and scope of the consultations are adapted to the individual needs of those affected. The main topics are

- Before transplantation: symptom management, the waiting list procedure, healthy behavior (e.g. smoking cessation, abstinence from alcohol, diet and exercise), emotional processing of the disease situation, arranging peer discussions
- After transplantation: taking medication, preventing infections, self-monitoring, rejection reaction, sun protection, healthy behavior

Around 2/3 of all consultations take place during an inpatient stay. The majority of outpatient consultations are conducted by telephone or email.

In terms of numbers, APN consultations are still on the rise compared to previous years, especially post-transplant consultations. Patients and relatives use the low-threshold service to clarify questions and concerns or, if necessary, to be referred to internal specialists or external service providers.

In addition to the APN nursing consultations, a total of 175 patients were seen on 36 OLT consultation afternoons on an interdisciplinary basis together with a senior physician. Patients appreciate the continuity of care and the fact that psychosocial concerns can be addressed alongside medical issues.

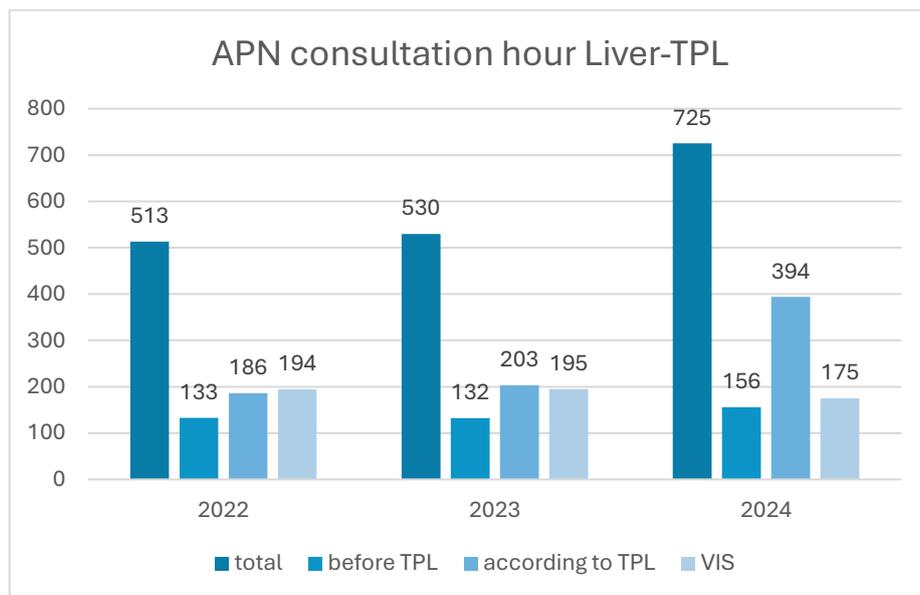


Figure 5: APN nursing advice for liver TPL

Cooperation

Collegial and interprofessional collaboration within USZ and beyond was further consolidated and expanded in 2024.

- At USZ: Pre-transplant, there is close collaboration with the two APN hepatology nursing experts, Dr. Sonja Beckmann and Ms. Rebecca Schäfers. They care for patients with liver cirrhosis for whom a liver transplant is not yet an option or who cannot be transplanted for various reasons and for whom palliation must be initiated. The two APNs in hepatology fill an important gap in this regard. In addition, they also provide support and advice for complex patients on the waiting list, as well as liver transplant patients who require inpatient treatment in course.
- The consultations and structured, inpatient education during the hospital stay after the transplant are planned and carried out together with the nursing teams on the wards. The weekly interprofessional case discussions allow the treatment team, consisting of the nursing service, APN, clinical nurse or medical service and physiotherapy, to respond quickly to individual needs and coordinate discharge planning in a timely manner. If necessary, other professions such as the consultant psychiatrist, nutritionist or social services are called in.
- Rehabilitation: Cooperation with individual rehabilitation centers was further established in 2024. The APN Liver Transplantation is in regular contact with the experts at the Clavadel/Davos and Seewis rehabilitation clinics.
- Canton Hospital St. Gallen (KSSG): Patients who receive most of their pre- and post-transplant medical care at the KSSG also receive advice from the APN Hepatology nursing expert at the KSSG. This collaboration enables a seamless transition between the institutions. This allows for outstanding issues from previous consultations to be passed along to the APN nursing expert at the respective hospital.

Presentations, Training and Further Education

- LTT for HF and FH students at USZ: *Self-management before/after liver transplantation*
Presentation 1 x per semester (January and July)
- Intensive care unit E HOER Team training: *Liver Transplantation: Assessments and Waiting Time*
Carried out on 14 and 19.08.2024
- E East III Team training: *Liver Transplantation Nursing Consultation*
Carried out on 19.01.2024
- E South Team case discussion: *Addiction and Transplantation*
Conducted in collaboration with APN Psychiatry and APN Hepatology
- E East III Team training: *Alcohol Dependency*
Carried out on 18.11.2024
- Center for Living, Leisure and Work (CARL) Mendrisio/TI: *Life After Liver Transplantation*
MS-Teams training for the care team of a liver transplant patient on 15.11.2024
- Certificate of Advanced Studies (CAS) BFH: *Addiction and Dependency Disorders*
August 2022 - June 2024, Andrea Pfister Koch

Heart Transplant Care Consultation

Shahira Hraibi-Malash, nursing expert APN

The Heart Transplant Care Consultation (HTx) supports patients and their relatives with a range of counseling services before and after transplantation. The content and scope of the personal consultations at the University Hospital Zurich (USZ) are adapted to the individual needs and prior knowledge of those affected. The nursing consultations, which heavily focus on participation and empowerment, are carried out by nursing expert APN Shahira Hraibi-Malash, who is supported by her team of nursing specialists. In 2024, 141 consultations were carried out, with 42 consultations taking place before, and 99 after transplantation. A total of 69 patients and relatives received advice. The fluctuation in the number of consultations in 2023 is due to the change in personnel in the APN position, which was vacant for several months. The figures increased in 2024 despite the new APN's induction period.

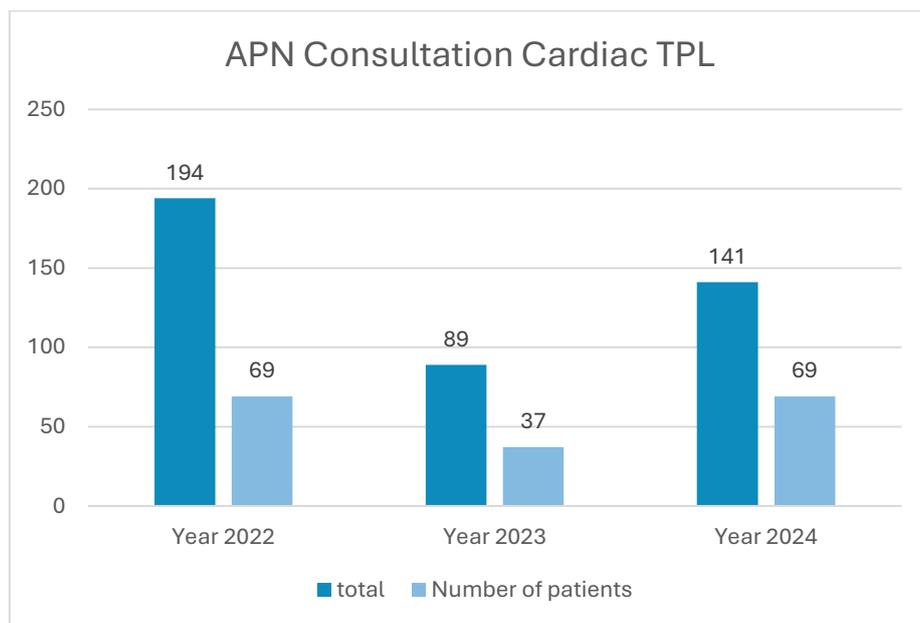


Figure 6: APN Nursing advice cardiac TPL

Before the Heart Transplant

The first consultation takes place as part of the inpatient assessments for transplantation. Counseling topics include the further steps while on the waiting list, the procedure of a heart transplant, the duration of the hospital stay, recovery time and possible psychological and emotional challenges. At this point, those affected also receive the brochure "Information on Heart Transplantation" and, if they wish, are put in contact with a person who has previously had a heart transplant. Heart failure counseling is also provided to promote the self-management of heart failure and to encourage positive health behaviors such as smoking cessation, healthy eating, exercise and restricted drinking.

Transplantation as the "last resort" is associated with high hopes for those affected. The time before the transplant is often accompanied by a high level of psychological tension and uncertainty. If the physical and/or psychosocial situation of those affected requires additional support, further APN consultations are offered as part of the monthly outpatient consultations.

After the Heart Transplant

After heart transplantation, patients and their relatives are trained on aspects of self-management, such as hygiene measures, vital sign and symptom monitoring and medication management, through structured education. These educational units take place in the inpatient setting and are planned and carried out by the nursing staff of the heart transplant department OST D 1 and 2.

At the same time, the HTPL nursing consultation will take place at least once to plan and support the transition to rehabilitation and the subsequent return home to everyday life and to clarify any unanswered questions. If necessary, a handover by phone or callback with the nursing department of the rehabilitation clinic providing follow-up treatment will ensue.

The main topics in this phase are the process and frequency of follow-up checks, signs and symptoms of

rejection or infections, and prompt contact in the event of physical complaints or emotional challenges. Further outpatient follow-up consultations are planned as required and include topics such as medication adherence, prevention of cardiovascular risk factors, sun protection, visits to the dentist, returning to work and travel planning after heart transplantation.

Cooperation at the University Hospital Zurich (USZ)

We put great importance on keeping close interprofessional cooperation and careful consultation with the medical service, nursing team, consultant psychiatry service, physiotherapy, social services and transplant coordination, to ensure that patients receive treatment and aftercare "as if from a single source."

Transition Program of the Zurich Children's Hospital (KISPI)

Since 2020, there has been an exchange with the APN Heart Transplantation of the Zurich Children's Hospital (KISPI) and a transition program for adolescents and their relatives, to accompany the transition from care at the KISPI to the HTPL consultation at the USZ.

In 2024, three adolescents transferred to USZ consultations.

Presentations, training and further education

- Lecture for HF students at the Health and Social Education Center in Chur: *Organ Donation and Heart Transplantation*.
Carried out on 10.09.2024

4.3 Infectious Disease Care for Transplant Patients

Prof. Dr. med. Nicolas Müller, Head Physician, Clinic for Infectiology

Of a total of 10,775 consultations, 2,342 (22%) had a transplant-specific background. This is approximately ¼ of all infectiology consultations carried out at the University Hospital Zurich (USZ). Our 4 interdisciplinary ward rounds have become well established: The joint discussion from a surgical and specialist medical perspective, complemented by the infectiological and pharmacological perspective, and with the participation of specialized nursing in some of the rounds, enables optimal care of these complex patients.

4.4 The Aftercare of Organ Transplant Patients in Dermatology

Dr. med. Mirjam Nägeli, Dermatology Clinic

Recipients of solid organs and bone marrow/stem cells are seen in the specialized immunosuppressed consultation hours (ISS) of the Dermatology Clinic. The ISS is the only outpatient dermatology consultation that will remain on the campus of the University Hospital Zurich (USZ) and has not been moved to the Circle. In 2024, we recorded over 2,800 consultations with over 2,000 patients. The main focus is on the prevention, early detection and treatment of white skin cancer (spinocellular carcinoma of the skin), which is the most common malignant tumor resulting from long-term immunosuppression. On one hand, existing tumors are detected and removed as part of the pre-transplant assessment. On the other hand, transplanted patients are made aware of the problem of white skin cancer and trained in how to avoid it through appropriate behavior, clothing, and the use of sunscreen and early detection. In an inpatient setting, we offer extracorporeal photopheresis for patients with chronic lung rejection (bronchiolitis obliterans) following lung transplantation and chronic graft-versus-host disease following stem cell transplantation (in addition to dermatology patients with cutaneous T-cell lymphoma of the Sézary type).

Information Brochures

In addition to the consultation, new patients receive the brochure "The Skin with Suppressed Body Defenses."

Studies

As part of a multicenter European study, we are investigating how many of our patients are affected by metastases from skin cancer and which characteristics indicate an increased risk. In this way, we hope to be able to provide targeted support at an early stage to those patients with the greatest need.

4.5 Special Consultation Hours for Transplant Psychiatry at the Clinic for Consultative Psychiatry and Psychosomatics

KD Dr. med. Katja-Daniela Jordan, Clinic for Consultative Psychiatry and Psychosomatics

All organ recipients are offered high-quality psychosocial counseling and support. If possible, this is done by the same specialist from the initial assessment and consultation, throughout the waiting period, through to the post-operative hospital stay and even later on. Relatives are also involved in the treatment if required. In addition, psychosocial assessments and counseling are carried out for people before live donation. Our care is provided on the wards as part of inpatient stays, as outpatient or telemedical consultations. The team members are also involved in ward rounds and interdisciplinary case discussions on the wards as well as listing colloquia. In our outpatient consultation hours, care can also be continued over a longer period.

This was achieved with a modest staffing budget and a number of staff changes thanks to the optimal collaboration with numerous specialists and clinics at the University Hospital Zurich (USZ) and external departments involved, as well as the integration into the Consultation and Emergency Psychiatry Department under the direction of Dr. Sebastian Euler. The care of patients before and after heart transplantation is provided by the psychocardiology department under the specialist responsibility of the senior consultant PD Dr. med. Lena Jellestad. KD Dr. med. Katja-Daniela Jordan is responsible for all other organs. When caring for inpatients, we benefit from the opportunity of involving APN psychiatry.

Last year, Suriya Tuttner successfully completed her Master's thesis as a Clinical Nurse Specialist at the Zurich University of Applied Sciences on the subject of subjective experiences of patients with regard to aftercare following liver transplantation due to ethyltoxic liver cirrhosis. We were able to provide professional support with this.

Employees are strongly committed to teaching and further education. Together with the Department of Nephrology under the direction of Prof. Dr. med. Britta George and numerous dialysis centers in and around Zurich, all 422 first-year students of human medicine, dentistry and chiropractics at the University of Zurich were once again able to complete communication training at a dialysis center. This brought the students into contact with patients on the waiting list for a kidney transplant and raised their awareness of psychosocial issues and contexts. As part of the training of dialysis nurses in German-speaking Switzerland, the Psychosocial Aspects of Patients with Chronic Kidney Disease course was again held at Zurich Waid City Hospital, which includes taking transplant-specific issues into consideration.

5 The Individual Transplant Programs

5.1 Center for Stem and Immune Cell Therapy

5.1.1 Allogeneic Stem Cell Transplantation

The total number of allogeneic stem cell transplants amounted to 94 in 2024, an increase on the previous year (2023 n=85). The median age of patients across all entities was 59 years, compared to 58 years in 2023. The most common indications remain myeloid neoplasms (n=80) followed by lymphomas (n=5) and acute (n=3) or chronic lymphocytic leukemias (n=3). The number of unrelated donors amounted to 57. 37 allogeneic stem cell transplants were performed from related donors, with 21 of the transplants coming from haploidentical relatives (children, siblings or parents). All allogeneic stem cell transplants were performed with G-CSF-mobilized peripheral blood stem cells. Matching the age distribution of our cohort, 83% of patients were conditioned at reduced intensity. The assessment and provision of transplants from healthy, volunteer donors for other centers in Switzerland and worldwide remained stable at 57 compared to the previous year (2023 n=56).

5.1.2 Autologous Stem Cell Transplantation

The total number of autologous stem cell transplants in 2024 amounted to 76, a slight decrease on the previous year (2023 n=86). This is due to the new importance of CAR-T cell therapy with diffuse large cell B-cell lymphoma and multiple myeloma. The median age of patients across all entities was 55 years. As expected, the most common indication among malignancies continues to be multiple myeloma (n=42), followed by non-Hodgkin's lymphoma (n=23). Six patients with multiple sclerosis qualified for high-dose chemotherapy with autologous stem cell support following an interdisciplinary case conference.

5.1.3 CAR-T cell therapy

In the area of CAR-T cell therapy, 34 procedures were carried out last year, an increase to the previous year (2023 n=29). This is due to the expansion of indications for various products. In 2024, Cilta-cel was introduced at USZ alongside Ide-cel as a second product for the treatment of multiple myeloma. Therefore, by the end of 2024, USZ will be qualified for all approved commercial CAR-T cell products in Switzerland.

5.1.4 Gene-Edited Blood Stem Cells

In 2024, SwissMedic approved the first gene-editing therapy for patients with transfusion-dependent beta-thalassemia and severe sickle cell disease. This is Exa-cel, a CRISPR/Cas9 gene-edited stem and progenitor cell product. USZ will soon be the first Swiss center to be activated to offer and carry out the therapy. This will grant affected patients access to this innovative therapy.

5.2.1 Miscellaneous from the Center for Stem and Immune Cell Therapy

Fortunately, there was low staff turnover in 2024, and employees returned after maternity leave or time abroad. Continuity and experience are essential for the quality of treatment of patients in complex disease situations with elaborate therapies. New media could be utilized in the training of assistant doctors: A self-produced video tutorial on the retransfusion of blood stem cells was greatly appreciated.

By summer 2024, all high-dose chemotherapy protocols were successfully implemented in eChemo3.0 thanks to excellent collaboration with the USZ Pharma Service and training was provided for all areas.

The JACIE interim audit was successfully completed in January 2024. The documents for the regular JACIE reaccreditation were also submitted in 2024. The follow-up to the SwissMedic inspection of December 2023 was successfully completed with the approved action plan.

Internal audits were conducted on data management, the stem cell laboratory and in the jointly accredited partner hospital Stadtspital Zurich. Monitoring audits of commercial products and training sessions, including mock runs for future studies and therapies, were also carried out. This was done to detect and correct any weak spots in a protected environment.

After a long break due to the pandemic, a varied and exciting patient day for stem cell transplant patients, their relatives and caregivers was held again on September 7, 2024. The response was consistently positive.



A nursing consultation for allogeneic stem cell transplant patients was established in the outpatient clinic with the aim of offering continuous support and low-threshold accessibility on nursing issues and thus promoting patient adherence and self-management.

In 2024, 10 nurses from the stem cell transplant program successfully completed the hematology-oncology nursing course.

We can also look back on a successful international hematology congress of the Haematology Nurses & Healthcare Professionals Group (HNNHCP), which was held at the University Hospital Zurich on November 7th and 8th 2024. A total of 450 nurses and colleagues from other professional groups from various hematology centers around the world were able to listen in on the presentations during these two days.

5.2 Lung Transplantation

Prof. Dr. med. György Lang; Prof. Dr. med. Isabelle Schmitt-Opitz; Thoracic Surgery, PD. Dr. med. Ömer Senbaklavaci
Dr. med. René Hage, PhD; PD Dr. med. Macé Schuurmans, Pneumology

Transplant Activity

Our transplant team once again successfully performed 37 lung transplants in 2024. This was a repeat of the highest number of lung transplants in Zurich from the previous year, although the amount of donors declined slightly as compared to the previous year.

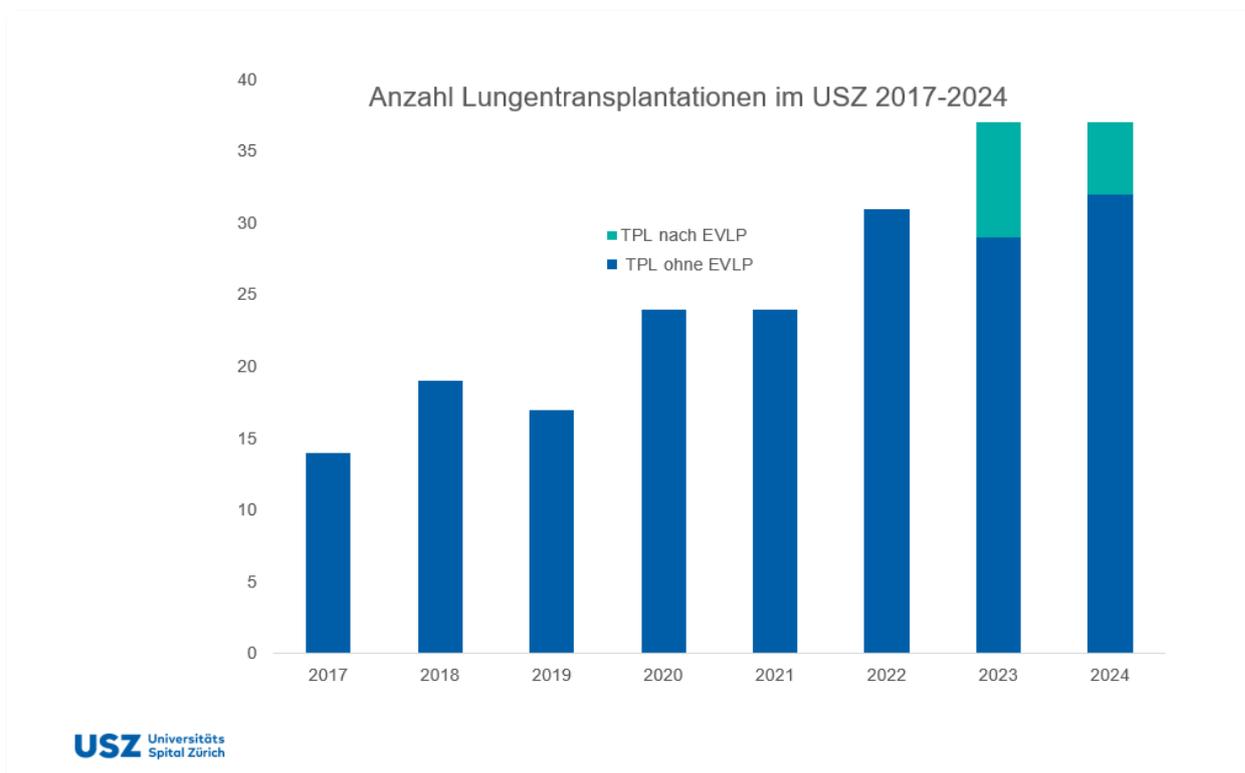


Figure 7: Number of lung transplants at the USZ 2017 - 2024

In terms of personalized medicine, we were able to successfully transplant further patients over the age of 70. This required very precise evaluation and selection but is also in line with international efforts. Wherever possible, less stressful, one-sided surgical procedures were used. The use of a new ventilation technique during unilateral lung transplantation enabled our patients to receive particularly gentle and safe anesthesia during these procedures.

Personnel

With PD Dr. med. Ömer Senbaklavaci, we have succeeded in gaining an experienced transplant surgeon for our program. He brings experience from renowned lung transplant centers such as Vienna, Newcastle, Mainz and Freiburg with him and is responsible for the scientific aspects and quality assurance in our program. With his appointment as Head Physician, we have been able to meet the important requirement of the 2023 international audit to further strengthen the thin surgical staffing levels for lung transplants. Together with Prof. Dr. med. Isabelle Schmitt-Opitz and Prof. Dr. med. György Lang, we now have 3 implantation surgeons at our disposal.

We saw a lot of mobility last year, particularly among our collection surgeons:

Dr. med. Lucas Hoyos Meia followed the call of his home country and took on a staff surgeon position at the Hospital Universitario Reina Sofia in Cordoba, Spain. His work at the University Hospital Zurich (USZ) has made a decisive contribution to the successful roll-out of the EVLP program.

Dr. med. Ilker Iskender with his extensive experience of EVLP operations from the Leuven Transplant Center, was able to support our younger colleagues in training for this procedure. Starting February 2025, he will spend a year of further training at the University Hospital AKH Vienna of the Vienna Health Association, General Hospital of the City of Vienna (AKH), one of the world's leading lung transplant centers in Europe.

Dr. med. Levente Fazekas has been able to make a significant contribution to the training of our younger generation of procurement surgeons with the broad experience he has gained in the UK, particularly in the field of organ preservation in DCD lung donors. He is currently pursuing a fellowship in the lung transplant program at Toronto General Hospital.

Dr. med. Olivia Theissen Lauk was able to support our explantation activities in the first half of the year and is currently spending a training period in Vancouver. Meanwhile, remaining in this area are: Dr. med. Bianca Battilana, Dr. med. Gian-Marco Monsch, and Dr. med. Raphael Werner - all of whom were also trained for the EVLP mission in Paris. Dr. med. Theodoros Papatropoulos is currently fulfilling his obligation to spend a year of further training in Chur for his specialist curriculum. Fortunately, he will remain with us to cover the on-call duties for the EVLP assignments.

Following the departure of Prof. Dr. med. John Dark, Newcastle, we were able to recruit Prof. Dr. med. Shaf Keshavjee from the world's leading center for lung transplantation in Toronto, as a new expert for the IAB.

The Department of Pneumology oversaw the field of transplantation and cystic fibrosis with 3 part-time senior physicians: PD Dr. med. Maurice Roeder (60%), Dr. med. Silvan Manuel Vesenbeckh (60%) and Dr. med. René Hage, PhD (90%). The team was supplemented by an assistant doctor (100%), who often had to help out in the department for several days or weeks.

PD Dr. med. Maurice Roeder and Dr. med. Silvan Vesenbeckh left the USZ in November 2024. We would like to thank both of them for their excellent commitment to lung transplant patients as well as their research and teaching activities. Since December 1st 2024, med. pract. Barbara Bahrapoori has joined the team with a workload of 70% in lung transplantation, 10% in the bronchiectasis consultation and 20% in the ILZ.

The international lung transplant audit in June 2023 was carried out on the initiative of Thoracic Surgery and was conducted by 3 external experts: Prof. Dr. med. Shaf Keshavjee (Toronto), Prof. Dr. med. Peter Jaksch (Vienna) and Prof. Dr. med. John-David Aubert (Lausanne). In order to implement one of the main recommendations of the audit, another job application (senior physicians and coordination) was submitted and discussions held in 2024. This valuable and important external view has resulted in several suggestions for optimization.

Tight staffing levels continue to present a considerable challenge.

Cooperation with External Hospitals

The cooperation with the Pneumology Department at the Cantonal Hospital of St. Gallen (KSSG) has been in place since 2021. Partial inpatient assessments for lung transplantation (1 week) are carried out at KSSG, with additional examinations at USZ. In 2024, no new transplanted patients from Eastern Switzerland could be transferred to KSSG for outpatient follow-up care, as the contract with USZ is still pending. Due to the staffing situation at USZ, the previously bi-weekly on-site consultation was replaced by a weekly telephone meeting with Dr. med. Anna-Lena Walter (Senior Physician, KSSG). The annual follow-up at USZ remains as it was.

The intensified collaboration with the Pneumology Department at Lucerne Cantonal Hospital (LUKS) and Inselspital Bern for transplant aftercare was prepared in 2022 and partially implemented from 2023 on. A contractual arrangement is still pending. Due to staff shortages, some patients were also referred to private practices.

Ex-Vivo-Lung-Perfusion / EVLP

It is not only in the field of lung transplantation that the trend for organ preservation is moving towards normothermic machine perfusion - the "Machine Perfusion" symposium organized by Swisstransplant in summer showed that this technique is now used in all organ transplants throughout Switzerland. In Switzerland ex-vivo-lung-perfusion (EVLP) is currently only used at USZ. This is an extremely cost-intensive procedure: the consumables alone for an EVLP operation amount to around CHF 31,000. Unfortunately, in comparison to other European countries such as Austria, the Netherlands or France, the financing in

Switzerland is not sustainable. The current billing system via Swisstransplant means that only around 50% of the actual costs are reimbursed to USZ.

The provision of the currently only commercially available EVLP platform, XVIVO XPS, which is also accredited by SwissMedic, was secured over the past year with the support of the USZ Innovation Pool.

The problem has been repeatedly addressed in the STALU, and as a result the two lung transplant centers (CHUV + USZ) have joined forces to call for a sustainable renegotiation of the tariff rates.



Figure 8: Evaluation of a donor lung under ex-vivo-lung-perfusion (EVLP):

10°C Degree Technique / RCT

The new storage technique for donor lungs at 10°C (as opposed to the standard 4°C) is emerging as a game changer worldwide. Experimental and clinical studies have confirmed that it enables significantly longer cold ischemia periods of up to over 16 hours for donor lungs. As an "early adapter", we have already established this technology in 2023, enabling us to already realize logistical improvements in the process, such as shifting nighttime operations to the elective time range or being able to better manage simultaneous organ offers. We are currently taking part in an international, multicenter RCT to evaluate the procedure.

Quality Assurance

Currently, the data of the lung transplantation process is recorded in various traditionally managed data

sets such as Excel tables. Although these show a remarkably high level of granularity, when we systematically checked them, we found that - due to the manual entry method from Kisim, SOAS, etc. - an unacceptable error rate was detectable. For quality assurance, we are therefore aiming to use a standardized, RedCap-based data collection system, preferably with automated entry procedures.

SOPs

Over the course of the year, all SOPs for lung transplantation were systematically reviewed and adapted to the latest findings. They are now also easier to find on the transplant center's restructured intranet page.

Allocation System

As already stated in the 2023 international audit, the current allocation system for donor lungs cannot be considered up to date. It is difficult to make changes because the procedure is enshrined in the Transplantation Act. The problem is known and was also addressed by us during the BGA audit. It was agreed in the STALU that both the urgency and Lung Allocation Score (LAS) of waiting list patients would initially be recorded in both programs by means of prospective data collection, to monitor and evaluate divergent allocations.

Organ Assessment Center (OAC)

The fact that the concept of an Organ Recovery Center (ORC) or Organ Assessment Center (OAC) is not just a dream of the future, but is already clinical reality in North America, was impressively demonstrated by the visionary keynote speech at the 18th Transplantation Symposium by our new IAB member Prof. Dr. med. Shaf Keshavjee. The realization of this idea has also been intensively pursued at USZ in cooperation with all transplant programs since the beginning of the year, and a valuable exchange also took place with colleagues from Swisstransplant during the symposium on machine perfusion in Lucerne. During the visit of **Swisstransplant** Foundation Board President Flavia Wasserfallen, Member of the Council of States of the Canton of Bern, we also attempted to present this development to our decision-makers.

Research Activities

Currently running research projects:

- Continuation of the ETH cooperation for the development of artificial lungs using 3D silicone printing
- Development of a new organ chamber for long-term EVLP applications
- Further development in collaboration with the Institute of Anesthesia of the use of a new ventilation technique (circulatory ventilation / EVONE) for unilateral lung transplants
- Establishment and management of an international research group within the framework of the ESTS (European Society of Thoracic Surgeons) for the evaluation of different re-transplantation strategies
- Outcome analysis PGD (Primary Graft Dysfunction) after a-priori use of VA ECMO in bilateral lung transplantation
- Prospective monitoring of lung allocations with LAS (Lung Allocation Score) versus SOAS rules
- Outcome analysis emergency lung transplantation according to SOAS criteria
- Outcome analysis of a restrictive transfusion strategy in lung transplantation

Einsatz EVONE bei unilateraler LungenTPL



Figure 9: EVONE during unilateral pulmonary TPL

5.3 Liver Transplantation

PD Dr. med. Pascale Tinguely, Prof. Dr. med. José Oberholzer, Department of Visceral and Transplant Surgery

Prof. Dr. med. Andreas Kremer, Dr. med. Ansgar Deibel, Clinic for Gastroenterology and Hepatology

Transplant activity

In 2024, 46 liver transplants were performed in Zurich; out of a total of 126 liver transplants nationwide (36.5%). The most common underlying diseases leading to liver transplantation were hepatocellular and cholangiocellular carcinoma (12), dysmetabolic fatty liver disease (8), alcoholic cirrhosis (7) and acute liver failure (6). Retransplantation within 3 months due to primary non-function or graft dysfunction was performed in 3 cases. Most liver transplants (22) were performed after donation after circulatory death (DCD), followed by 20 after donation after brain death (DBD), 4 after living liver donation and one split liver transplant. There were 15 urgent liver transplants, with only two organs being obtained from abroad. All DCD livers and some DBD livers continued to be routinely optimized by ex vivo liver perfusion (Hypothermic Oxygenated Perfusion, HOPE) and evaluated by measuring flavin mononucleotide (FMN) in the perfusion fluid. In addition, the first steps were taken to introduce Normothermic Regional Perfusion (NRP) during abdominal organ harvesting, in an interdisciplinary approach with the Donor Care Association (DCA), anesthesia and machine perfusionists, to further improve the quality of marginal donor organs and thus clinical outcomes in liver transplant patients. This is expected to be introduced at the USZ in 2025.

A total of 91 patients were added to the waiting list in 2024. 15 patients on the waiting list died in 2024. In addition to selecting patients with indications for a liver transplant and closely monitoring the listed patients in the pre-transplant consultation, follow-up care after a liver transplant is also a key aspect of our clinical work. This involves individual and holistic care that is tailored to the specific needs and requirements of each individual patient. Together with referring colleagues in private practice and in hospital, over 700 patients received long-term care following a liver transplant last year.

Personnel

On the visceral surgical side, the liver transplant program has been headed by PD Dr. med. Dr. phil. Pascale Tinguely since July 2024, who complements the liver transplant team of Prof. Dr. med. José Oberholzer and Prof. Dr. med. Henrik Petrowsky. She came to the USZ after several international fellowships and 3 years working as a senior physician in liver transplantation and hepatobiliarypancreatic surgery at the Royal Free Hospital in London UK. On the hepatological side, the liver transplantation program is headed by Prof. Dr. med. Andreas Kremer. The team is supported by two senior physicians and 4 assistant physicians in the pre- and post-transplantation consultation hours, as well as the respective inpatient teams. In addition, Advanced Practice Nurses provide relevant support for the entire team in both the pre-TPL and post-TPL settings.

In-Situ and Ex-Situ Machine Perfusion

The extensive experience with ex-situ hypothermic oxygenated machine perfusion (HOPE), including the measurement of predictive markers during perfusion, is being successfully continued at USZ. In 2024, 28 of the 45 livers evaluated on the HOPE machine were accepted for transplantation. The refined evaluation and improvement of marginal donor organs through machine perfusion is of central importance given the increasing number of marginal organs in Switzerland. This is currently being expanded at USZ to include normothermic perfusion, primarily in-situ normothermic regional perfusion (NRP), which, based on growing data and international experience, enables significantly improved outcomes after liver transplantation of donor after cardiac death (DCD) organs. NRP is being implemented in a structured manner at USZ in interdisciplinary collaboration with the Donor Care Association (DCA), with an expected launch in 2025.

Impetus for Living Liver Donation and Transplant Oncology

One of the Transplant Center's main concerns in 2024 was to promote living liver donation due to the high number of transplants for tumor therapy, with the aim of shortening the waiting time (average waiting time of 1.07 years in Switzerland in 2024) - especially for patients with underlying malignant diseases such as cholangiocellular, hepatocellular or metastases of colorectal or neuroendocrine carcinoma. These oncological indications, including those for secondary liver tumors, are increasing due to growing evidence that liver transplantation can lead to significantly longer survival in narrowly selected patients compared to systemic therapy alone. Correct timing of transplantation in these indications is crucial, which is why living liver donation is a priority here to avoid additional burden on waiting lists. In order to reduce the time required to assess potential living liver donors, the liver transplantation colloquium process was restructured so that potential living liver donors and their status in the assessment process are now discussed weekly. In

addition, a new position was created and approved for transplant coordination and support specifically for the living organ donation program for visceral organs (liver and kidney), which will be filled in 2025.

Further Training

A core task of our transplant center is the further training of medical colleagues in dealing with liver transplant patients as well as the training of motivated and outstanding young surgeons in liver transplantation. Residents from the respective areas rotate for 6 months in the pre-transplantation (gastroenterology) or post-transplantation consultation hours (gastroenterology and visceral surgery). The colleagues also take part in the weekly interdisciplinary transplant colloquia. In Visceral Surgery, 2 young surgeons are introduced to multivisceral organ removal and liver transplantation in a 2-year fellowship. Further training is supported by the existing APNs in the pre- and post-TPL consultation hours. Our training concept ensures that trainees acquire the necessary medical knowledge in dealing with waiting list and transplant patients as well as the highly complex surgical management of these patients.

Cooperation with External Hospitals

The previous smooth collaboration with the referring hospitals continued seamlessly in 2024. These include the Cantonal Hospital of St. Gallen and the University Hospital of Basel, which carry out the inpatient assessment examinations independently, as well as the cantonal hospitals of Aarau, Baden, Chur, Frauenfeld, Lucerne, Münsterlingen and Winterthur. Prof. Dr. med. Andreas Kremer physically attends monthly liver colloquia at most of the above-mentioned hospitals to ensure intensive collaboration and a smooth exchange of information.

Activities of the Research Group

- With the retrospective, multicenter cohort study "Characterization of the geographic influence on liver-disease associated mortality and liver transplantation", Dr. med. Ansgar Deibel, analyses the geographical differences in liver mortality in Switzerland and in listings for liver transplantation. The aim of this study is to identify any geographical deficits in care.
- In a further retrospective, multicenter cohort study "Etiologies and outcome of patients with acute liver failure listed for urgent liver transplantation in Switzerland", Dr. med. Ansgar Deibel is investigating the causes of acute liver failure in Switzerland, predictive parameters on the day of listing and survival after transplantation.
- Ex-situ normothermic machine perfusion: In a large animal model, the cellular processes and the potential stimulation of liver growth are investigated using normothermic perfusion before partial liver transplantation, with the aim of obtaining valuable, full-length transplants from small liver portions, thus providing a potential alternative to whole-organ transplantation, especially in oncological indications.
- Innovation research: Development of direct, continuous measurement of FMN in the perfusion solution of perfused livers on the HOPE machine using fluorospectrometry for dynamic and user-friendly evaluation of the functionality of marginal donor organs.
- Personalized Precision Medicine & Liver Prediction Modelling: Design of AI-based multifactorial prediction models for decision making regarding organ acceptance of a specific organ for a specific recipient in collaboration with engineers at ETH
- Ldltregistry.org: Collaboration in internationally leading, comprehensive registry database for the investigation of outcomes and predictive parameters in living liver donors and living liver donation recipients.
- Collaboration with Dr. Giulia Magini (HUG) for the retrospective, multicenter cohort study "Donation-after-circulatory death liver transplantation. Outcome and risk factors for ischemic cholangiopathy in the Swiss setting".

5.4 Kidney Transplantation

Prof. Dr. med. Thomas Schachtner, Department of Nephrology, Dr. med. Kerstin Hübel, Department of Nephrology and Department of Visceral and Transplant Surgery and Dr. med. Fabian Rössler, Department of Visceral and Transplant Surgery

Last year, the Kidney Transplant Center at the University Hospital Zurich (USZ) successfully maintained the impressive transplant volume of the previous year. A total of 112 kidney transplants were performed (2023: 117), including 22 living donations and 90 post-mortem donations. This success is the result of outstanding collaboration with our referring physicians, particularly in the areas of waiting list assessment and transplant aftercare.

Aftercare following kidney transplants remains a key focus of our work. Despite the high volume of transplants, we continue to focus on individual and comprehensive care that meets the needs of each individual patient. Together with our referring physicians, we cared for over 1,500 patients in the long-term course after a kidney transplant last year. Our outpatient clinics at the Campus and Circle sites offer optimal conditions to ensure both high-quality aftercare and personal support.

Since 2024, Dr. Elena Rho from the Department of Nephrology has enriched our team with her expertise and commitment. She takes on a role in the careful and comprehensive donor assessment prior to potential living kidney donations, a process that is crucial to the success and safety of these procedures. She also supports our team in managing and optimizing the kidney transplant waiting list.

The continuous training of medical staff remains a central focus of our work as a transplant center. Last year, we further developed our training program for prospective nephrologists to ensure that they acquire the skills required to provide excellent care for kidney transplant patients. New to the program is an intensive 6-month rotation at the Campus site, during which the residents work closely with experts from Transplant Surgery, Transplant Immunology, Urology and specialized nursing staff. During this phase, they care for newly transplanted patients in the crucial first year after the operation and benefit from an interdisciplinary approach that guarantees the highest standards of care.

Our Kidney Transplant Center has continued to actively participate in research to improve the treatment of our patients. Over the past year, we have participated in several clinical trials focusing on new immunosuppressants, the diagnosis of rejection reactions and long-term outcomes after kidney transplantation. These research activities have not only helped to provide our patients with access to innovative diagnostics and treatment methods, but also to expand our own expertise and strengthen our reputation as a leading transplant center. The results of our work have been presented at numerous national (Swiss Society of Nephrology SGN, Swiss Transplant Society STS) and international conferences and meetings (German Transplantation Society DTG, German Society of Nephrology DGfN, European Renal Association ERA, American Transplant Congress ATC, Banff-PITOP Joint Meeting).

Activities of the Research Groups

- Conducting the investigator-initiated study "The DD-cfDNA/PIRCHE-II Study": Calibrating the donor-derived cell-free DNA (DD-cfDNA) baseline in the first year after kidney transplantation to the Predicted Indirectly Recognizable HLA-Epitopes (PIRCHE-II) scores and assessing the risk for rejection and the development of de novo DSA.
- Conducting the investigator-initiated study "HistoMol Study": Assessing the potential of the molecular diagnosis of kidney allograft biopsies to improve post-transplant patient care.
- Study as part of the Swiss Transplant Cohort Study (STCS): Differences between the Observed and Expected Serum Creatinine Range after Kidney Transplantation.
- Study center of the randomized, double-blind, multicenter phase III study "IMAGINE Study": Clazakizumab for the Treatment of Chronic Active Antibody Mediated Rejection in Kidney Transplant Recipients.
- Study center of the randomized, double-blind, multicenter phase III study "TRANSCEND AMR Trial": A Double-Blind, Placebo-Controlled, Multicenter, Randomized Phase 3 Trial Evaluating the Efficacy and Safety of Felzartamab in Kidney Transplant Recipients with Late Antibody-Mediated Rejection.
- **Swisstolerance.ch** study: Induction of immunological tolerance by combined kidney and stem cell transplantation.
- Various master's and dissertation projects.

5.5 USZ - Zurich Children's Hospital Pediatric Kidney Transplantation

Medical Staff

On May 1, 2024, Wesley Hayes (formerly Great Ormond Street Hospital, England) took over as Medical Director of Nephrology at Zurich Children's Hospital (Kispi). In addition, Dr. Katharina Rohner joined the team on 01.07.2024 and Dr. Katrina Evers on 01.11.2024 as senior physicians.

Transplant Activity

After an earlier pause in pediatric kidney transplants in Zurich, the pediatric kidney transplant fact sheets and trajectories were updated and 4 kidney transplants for children were successfully performed in the last quarter:

- Sept 2024: Living donor transplant for a 15-year-old girl on peritoneal dialysis
- November 2024: Living donor transplant for a 5-year-old boy with primary hyperoxaluria on Lumasiran on hemodialysis
- November 2024: Deceased donor transplant for a 12-year-old girl on hemodialysis
- November 2024: Living donor transplant for a 5-year-old boy - pre-emptive

Research Activities

Wesley Hayes is Chief Investigator for the multi-center randomized controlled transplant trial "LIMITS", which is being conducted in England with a grant from the National Institute for Health and Care Research. This study compares post-operative recovery in children treated with traditional large volumes of fluid versus conservative volumes.

As part of the STCS, Dr. Katharina Evers is conducting an analysis of clinical outcomes in children and adolescents who have been switched from CNI to Belatacept.

5.6 Pancreas Transplantation

PD Dr. med. Fabian Rössler, Visceral and Transplant Surgery

In 2024, 7 pancreas transplants were performed. These were all performed as simultaneous pancreas and kidney transplants (SPK) in recipients with long-standing type 1 diabetes and chronic kidney disease. All 7 SPK were first transplants from DBD donors. This corresponds to a stable development in numbers compared to the previous year. The results of these combined pancreas and kidney transplants were excellent, with the exception of one surgical graft loss. The potential for an increase in the number of pancreas transplant cases in the coming years lies in the increased transplantation of DCD pancreas donors, especially DCD after normothermic regional perfusion.

5.7 Islet Transplantation

Prof. Dr. med. José Oberholzer, Department of Visceral and Transplant Surgery, Prof. Dr. med. Roger Lehmann, Endocrinology and Diabetology

In 2024, one autologous but no allogeneic islet cell transplant was performed. We anticipate performing allogeneic islet cell transplants again this year.

5.8 Heart Transplantation

Dr. med. Igor Tudorache, Senior Physician, Clinic for Cardiac Surgery
Prof. Dr. med. Andreas Flammer, Head Physician, Clinic for Cardiology

In 2024, a total of 19 heart transplants were performed at our center. This maintained the already very good figures from 2023. By way of comparison, 14 transplants were performed in 2022, while 11 operations were possible in each of the previous three years. This pleasing and sustained increase in the number of transplants can be attributed to several factors.

A key milestone was the introduction of the Organ Care System (OCS) in 2022. This system enables improved organ preservation and thus an expanded donor selection. The establishment of DCD transplantation (Donation after Circulatory Death) has also contributed to the increase. However, there has been a slight decline here: While 5 DCD heart transplants were still performed in 2023, only 2 were performed in 2024.

The SherpaPak system is now used almost as standard for organ transportation (if the OCS is not used). This modern transport container ensures optimum temperature distribution through controlled cooling and thus makes a significant contribution to maintaining the quality of the donor organ.

The use of long-term mechanical circulatory support systems ("artificial hearts") is becoming increasingly important. These so-called assist devices are used as a bridge until transplantation (bridge to transplant) or until the end of life (destination). Their number has increased significantly in recent years: from 5 implantations in 2022 to 7 in 2023 to 17 implantations in 2024. The use of short-term mechanical support systems, in particular ECMO (extracorporeal membrane oxygenation) and Impella, also remains a central component of the treatment of our critically ill patients.

For post-operative and long-term care, we continue to work closely with the Reha Kliniken Wald. In addition, cooperation with the Rehasentrum Davos has been intensified to enable even more individualized rehabilitation.



Figure 10: The "Organ Care System" (OCS) (TransMedics, Inc., Andover, MA, USA)

6 Attachments

6.1 Personnel Composition of the Transplant Center 2024

	Board of Directors	Board of Trustees
Management	Manager Prof. Dr. med. Nicolas Müller	Chairman Prof. Dr. med. Frank Ruschitzka
Heart	Prof. Dr. med. Andreas Flammer Dr. med. Igor Tudorache	Prof. Dr. med. Frank Ruschitzka Prof. Dr. med. Omer Dzemali
Lung	Dr. med. René Hage Prof. Dr. med. György Lang / Prof. Dr. med. Isabelle Schmitt-Opitz	PD Dr. med. Macé Schuurmans Prof. Dr. med. Isabelle Schmitt-Opitz / Prof. Dr. med. György Lang
Liver	PD Dr. med. Pascale Tinguely Prof. Dr. med. Andreas Kremer	Prof. Dr. med. Beat Müllhaupt Prof. Dr. med. José Oberholzer
Kidney	Prof. Dr. med. Thomas Schachtner Dr. med. Fabian Rössler	Prof. Dr. med. Britta George Prof. Dr. med. José Oberholzer
Pancreas and islet cells	Prof. Dr. med. Roger Lehmann Dr. med. Fabian Rössler Dr. med. Kerstin Hübel	Prof. Dr. med. Felix Beuschlein Prof. Dr. med. José Oberholzer
Small bowel and multivisceral transplantation	PD. Dr. med. Pascale Tinguely	Prof. Dr. med. José Oberholzer
Stem cells	Prof. Dr. med. Dr. phil. Dominik Cutting wind	Prof. Dr. med. Markus Manz
Consultation services	Prof. Dr. med. Nicolas Müller, Infectiology Dr. med. Mirjam Nägeli, Dermatology KD Katja-Daniela Jordan, Consultant psychiatry and psychosomatics	Prof. Dr. med. Michael Weller
Anesthesiology	Dr. med. Rolf Schüpbach	Prof. Dr. med. Marco Zalunardo
Transplantation immunology laboratory	Dr. med. Jakob Nilsson, Ph. D.	Prof. Dr. med. Onur Boyman
Care	Helen Ziegler	Stephan Schärer
Intensive care medicine	PD Dr. med. Stephanie Klinzing	Prof. Dr. med. Reto Schüpbach
Homograft	Dr. med. Martin Schmiady	
Transplantation Coordination	Stefanie Schiess	
Transplant station E OST III	Dr. med. Kerstin Hübel	
Research	Ph. D. Lucia Bautista Borrego	
Quality management	Ursula Schäfer	
Clinic manager	Alexandra Stettler	
DCA (seat without voting rights)	PD Dr. med. Matthias Hilty / Dr. med. Anisa Hana	
Dean		Prof. Dr. med. Dr. Frank J. Rühli

International Advisory Board until 2024	
Heart	Prof. Dr. med. Mandeep R. Mehra, USA
Lung	Prof. Dr. med. John Dark, UK
Liver	vacant
Kidney	Prof. Dr. med. Christophe Legendre, France
Pancreas and islet cells	Prof. Dr. med. Eelco de Koning, Netherlands
Stem cells	Prof. Dr. med. Ernst Holler, Germany
Anesthesiology and intensive care medicine	Prof. Dr. med. Michael Hiesmayr, Austria

International Advisory Board from 2025	
Heart	Prof. Dr. med. Maria G. Crespo Leiro, Spain
Lung	Prof. Dr. med. Shaf Keshavjee, Canada
Liver	Prof. Dr. med. Vincenzo Maria Mazzaferro, Italy
Kidney	Prof. Dr. med. Georg Böhmig, Austria
Pancreas and Islet Cells	Prof. Dr. med. Lucrezia Furian, Italy
Stem Cells	Prof. Dr. med. Jürgen Finke, Germany
Anesthesiology	Prof. Dr. med. Vera von Dossow, Germany
Intensive Care Medicine	Prof. Dr. med. Hasse Møller-Sørensen, Denmark

Referring physicians of the transplant center		
St. Gallen	Cantonal hospital	Dr. Dr. med. David Semela
Zurich	Klinik im Park	Dr. med. Michael Möddel
Zurich	City Dialysis	Dr. med. Cícvara / Dr. med. Küper / Prof. Dr. med. Nilufar Mohebbi
Bathing	Cantonal Hospital Baden	PD Dr. med. Harald Seeger
Chur	Cantonal Hospital Chur	Dr. med. Reto Venzin
Winterthur	Winterthur Cantonal Hospital	Dr. med. Thomas Kistler
Laugh	Lachen Hospital	Dr. med. Kneubühl / Dr. med. Schorn
Glarus	Nephrology Glarus	Dr. med. Georgalis
Muri	Muri Hospital	Dr. med. Rahel Pfammatter
Train		Dr. med. Varga
Wetzikon	Wetzikon Hospital	Dr. med. Etter
	Lakeside hospital	Dr. med. Matheis
Davos		Dr. med. Christina Venzin
Uster		Dr. med. Alf Corsenca
Zurich	Waidspital	Dr. med. Johannes Trachsler
Bellinzona	Ospedale San Giovanni	Dr. med. Lorenzo Berwert
Lugano		Dr. Med. Antonio Bellasi
Hochfelden	Dialyse-Praxis	Dr. med. Nasser Dhayat
Uznach	Hospital	Dr. med. Matthias Neusser
Chiasso	MedQualitas	Dr. med. Claudio Cereghetti
Urdorf		Dr. med. Martin Sachs
Zollikerberg	Zollikerberg Hospital	Dr. med. Robert Schorn
Frauenfeld		Dr. med. Stefan Flury
Zurich	Practice	Dr. med. Michael Möddel
Zurich	Zurich Children's Hospital	Prof. Dr. med. Wesley Hayes
Aarau	KS Aarau	Prof. Dr. med. Stephan Segerer
Lucerne	Lucerne Cantonal Hospital	Dr. med. Odermatt
Schaffhausen	Cantonal Hospital	Dr. med. Marco Miozzari
Schlieren	NephroLimmat	Dr. med. Ulrike Raff

6.2 Transplant Activities 2014 - 2024

Organ	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Herz total	16	14	10	17	16	11	11	11	14	19	19
- DCD	0	0	0	0	0	0	0	0	0	5	2
Lunge total	32	31	23	14	19	17	24	24	31	37	37
- DCD	5	5	3	2	3	4	5	7	9	15	8
Leber total	43	59	52	64	54	64	52	60	52	65	46
- Leichenleber einzeln	28	44	34	37	37	61	49	58	49		42
- DCD	12 + 7 Domino	12	6+1 Domino	21	12	22	9	22	26	28	22
- Lebendleber	2	2	7	5	4	1	3	2	3	0	4
- Leber und Niere	1	1	4	1	1	2	2	0	0	0	0
- Leber und Dünndarm / Multiviszeral	0	0	0	0	0	0	0	1	0	0	0
Niere total	84	96	88	104	100	91	97	85	89	117	112
- Leichenniere einzeln	44	62	48	54	58	60	76	60	64		90
- DCD	11	6	9	18	4	23	21	14	19	44	48
- Lebendniere	22	23	22	23	30	20	21	25	25	17	22
- Niere und Pankreas	5	3	4	4	5	8	8	7	4	8	7
- Niere und Inselzellen	1	1	1	3	2	1	0	0	0	0	0
- Niere und Herz	0	0	0	1	0	0	0	0	0	0	0
- Niere und Leber	1	1	4	1	1	2	2	0	0	0	0
Pankreas total	7	3	4	4	5	8	8	9	4	8	7
- Pankreas alleine	2	0	0	0	0	0	0	1	0	0	0
- Pankreas und Niere	5	3	4	4	5	8	8	7	4	8	7
- Pankreas/ Multiviszeral	0	0	0	2	0	0	0	1	0	0	0
Inseln total	6	3	6	5	2	1	0	0	0	0	0
- Inseln alleine	5	2	4	2	0	0	0	0	0	0	0
- Inseln und Niere	1	1	1	3	2	1	0	0	0	0	0
- Inseln und Leber	0	0	1	0	0	0	0	0	0	0	0
Dünndarm/multiviszeral	0	0	0	0	0	0	0	1	0	0	0
Stammzellen total	151	150	150	148	174	168	170	159	162	171	170
- autolog	98	92	94	93	107	100	88	90	95	86	76
- allogon	53	58	56	55	67	68	82	70	67	85	94

Für Organspende freigegebene spendende Personen in der Donor Care Association 2020 - 2024

	2020	2021	2022	2023	2024
Spender DBD effektiv	29	30	23	15	17
- utilisiert	26	29	22	12	15
Spender DCD effektiv	12	19	28	36	23
- utilisiert	6	17	23	26	17
Total effektiv	41	49	51	51	40
- utilisiert	32	36	45	38	32

6.3 Outcome of Organ Transplants

Since 2013, the results have been published for all centers throughout Switzerland. This is done in compliance with the Transplantation Act and Ordinance. The "STCS Annual Report" is publicly available at www.stcs.ch.

6.4 International Advisory Board (IAB) Meeting 20 24

Prof. Dr. med. Nicolas Müller, Head of the Transplant Center

Meeting International Advisory Board 2024

Minutes: 9:00 - 11:30

Present Strategic Board:

Frank Ruschitzka (FR), Omer Dzemali (OD), Markus Manz (MM), Nicolas Müller (NM), Isabelle Schmitt-Optiz (IS), Reto Schüpbach (RS), Macé Schuurmans (MS), Rolf Schüpbach (RS), Britta George (BG), György Lang (GL), Shaf Keshavjee (SK), Andreas Kremer (AK), Andreas Flammer (AF), Fabia Schär (FS), Raluca Fend (RF) (*Excused: Jose Oberholzer, Felix Beuschlein, Frank Rühli, Stephan Schärer, Beat Müllhaupt*)

International Advisory Board:

John Dark (in person), Christophe Legendre (via ZOOM), Eelco de Koning (in person), Ernst Holler (in person), Michael Hiesmayr (in person) (*Excused: Mandeep Mehra*)

- FR welcomes everyone and provides information on the challenges facing the USZ / Switzerland and asks for support to build on its strengths.
- NM mentions the last meeting of the current Advisory Board in this composition. Their support and time are greatly appreciated.
- NM reports on the donor development and on the annual reporting of the Swiss Transplant Cohort Study, including crude survival curves.
- Each program reports on its achievement and challenges:
 - o **Heart:** First DCD heart transplant in Switzerland in March 2023, extension of the mandate to perform heart transplants for the next 5 years. Increase in heart transplants due to DCD with the OCS system. Challenges: increasing number of consultations, increasing number of tpls requiring resources, challenging patients, increasing age of donors, increasing number of patients transplanted after VAD, longer waiting list for blood type 0.
 - o **HSCT:** Dealing with different problems: Allogeneic haematopoietic stem cell transplants slowly increasing. Autologous haematopoietic stem cell transplants: slowly decreasing. CAR-T cell therapies (upcoming therapy): expensive, but efficient. Patient days for allogeneic blood stem cell transplants: steadily increasing. Selection of USZ as Exa-Cel (Casgevy) treatment center: new, very expensive intervention. Start 2025 with the 5th anniversary of the Cell Therapy and Transplantation Unit SUEDE. Challenges in the coming years: broad assess could be a problem.
 - o **Lung:** Last year was an exceptional year, with the highest number ever recorded in Switzerland: 37 lung transplants, all-cause mortality 2023 30/90 days 0%. Relaunching EVLP program 2023-06/2024: utilization rate 50%, 16 EVLP runs / 8 implants. Effect of implementing routine perioperative va-ECMO on primary graft dysfunction: significantly lower PGD rates 24 hours post-transplant in routine-ECMO group. Trend towards lower PGD rates in routine-ECMO group at 0h and 72h. Toward personalized medicine: relaunching single lung tpl. Challenges: Increasing age to 74 years, personal situation (gap between senior and student surgeons and the younger ones)
 - o **Anesthesiology:** organ donation challenges: fewer donors due to fewer car accidents resulting in less DBD donation, saver workplace, almost no overdoses, faster access to excellent health care system. Opportunities: Increasing population with one organ failure and insufficient quality of live. Trend in organ donation the last 5 years: DCD donations in 2023 account for 70% of

cases (in 2018 20%). Innovative approaches at USZ bring DCD donations closer to the standards of DBD protocols.

- **Kidney:** app. 90-120 transplantations/year. Net-increase of app. 50-60 patients/year.
- **Liver:** 2023 app. 70 transplantations/year, nearly 50% DCD that goes along with some challenges. HOPE utilization rate: 73%. Challenges: dcd organs, marginal organs, older age, too small living donor liver transplant program, combined transplant patients, blood group 0.
- **Pancreas:** one observation: kind of inflammatory syndrome 7 to 10 days after transplantation.

6.5 Congress Contributions

Lungs:

György Lang:

- "How to build a transplant program from the scratch". Toronto, October 1, 2024, Toronto Vienna Lung Transplant Academy, Autumn Course
- "Update lung donors and donor lungs". DCA Symposium, June 20, 2024, Zurich
- "Donor/Recipient Size Matching, from Chest X-ray to Artificial Intelligence", Austrotransplant, October 17, 2024, Salzburg
- György Lang: "EVLP". Swisstransplant Kick off Meeting Machine Perfusion. July 1st, 2024, Lucerne

Isabelle Schmitt-Opitz:

- "Update on lung transplants - new perspectives", Transplant for life, 23.5.2024, Zurich
- 1. "Use of ECMO in lung transplantation", Lung Transplantation Conference, 13.11.2024, virtual
- 2. "V-A ECMO for lung transplant & lung cancer", ESTS School: basic adult ECMO course and simulation training for thoracic surgeons, 13.12.2024, USZ

Ömer Senbakkavaci:

- New organ preservation techniques: Can lung transplantation be moved to day time surgery? Swisstransplant Autumn Symposium, November 12 - 13, 2024, Lucerne

Lucas Hoyos:

3. Indirect Recognition HLA Score as a Predictor of CLAD In Lung Transplant (Poster ISHLT 2024)
4. Controlled Donation After Circulatory Death Lung Transplantation in University Hospital Zurich: 10-years' Experience (Lecture ISHLT 2024)

Bianca Battilana:

5. Pulmonary Endarterectomy for Chronic Thromboembolic Changes in a Patient after Lung Transplantation - A Case Report (Poster ISHLT 2024)

Theodoros Papatziropoulos:

- EVLP and Inflammatory Cascade Control for Lung Transplantation in a Buried Donor (Poster ISHLT 2024)

6.6 Scientific Publications 20 24

Heart

1. Schmiady MO, Bec LP, Shallah M, Flammer AJ, Vogt PR, Wilhelm MJ.
Long-distance donor heart procurement using an innovative cold static storage system.
Perfusion 2023 (March); online ahead of print 2024 Jul;39(5):1006-1008.: DOI:
10.1177/02676591231163018, PMID: 36905360.
2. Schmiady MO, Jashari R, Lenherr R, Regenscheit S, Hitendu D, Wendt M, Schiess S, Schweiger M, Hofmann M, Sromicki J, Flammer A, Wilhelm MJ, Cesnjevar R, Carrel T, Vogt PR, Mestres CA.
How to counteract the lack of donor tissue in cardiac surgery? Initial experiences with a newly established homograft procurement program.
Cell Tissue Bank 2024 Mar;25(1):1-10. doi: 10.1007/s10561-023-10087-z. Epub 2023 Apr 25.
3. Rossi VA, Nebunu D, Nägele MP, Barthelmes J, Haider T, Laptseva N, Bitos K, Kreysing L, Frank M, Enseleit F, Wilhelm MJ, Dzemali O, Ruschitzka F, Sudano I, Flammer AJ.
Vascular function in patients with advanced heart failure and continuous-flow or pulsatile ventricular assist devices.
Clin Res Cardiol. 2024 Aug 21. doi: 10.1007/s00392-024-02519-x. Online ahead of print.
4. Alyaydin E, Parianos D, Hermes-Laufer J, Nägele MP, Castro L, Papathanasiou M, Reinecke H, Flammer AJ.
Sodium-glucose co-transporter 2 inhibitors in left ventricular assist device and heart transplant recipients: a mini-review.
Heart Fail Rev. 2025 Mar;30(2):327-335. doi: 10.1007/s10741-024-10465-z. Epub 2024 Nov 8.
5. Alyaydin E, Gotschy A, Parianos D, Nägele MP, Tudorache I, Flammer AJ, Stehli J.
Tricuspid regurgitation after heart transplantation: where innovation and intervention are in hibernation.
Heart Fail Rev. 2025 May;30(3):619-625. doi: 10.1007/s10741-025-10494-2. Epub 2025 Feb 13.
6. Chioncel O, Mebazaa A, Farmakis D, Abdelhamid M, Lund LH, Harjola VP, Anker S, Filippatos G, Ben-Gal T, Damman K, Skouri H, Antohi L, Collins SP, Adamo M, Miro O, Hill L, Parissis J, Moura B, Mueller C, Jankowska E, Lopatin Y, Dunlap M, Volterrani M, Fudim M, Flammer AJ, Mullens W, Pang PS, Tica O, Ponikowski P, Ristic A, Butler J, Savarese G, Cicoira M, Thum T, Bayes Genis A, Polyzogopoulou E, Seferovic P, Yilmaz MB, Rosano G, Coats AJS, Metra M.
Pathophysiology and clinical use of agents with vasodilator properties in acute heart failure. A scientific statement of the Heart Failure Association (HFA) of the European Society of Cardiology (ESC).
Eur J Heart Fail. 2025 May 4. doi: 10.1002/ejhf.3673. Online ahead of print.

Immunology (HLA laboratory)

7. Shih NR, Nong T, Murphey C, Lopez-Cepero M, Nickerson PW, Taupin J-I, Devriese M, Nilsson J, Maignon M-B, Bray RA.
HLA class I peptide polymorphisms contribute to class II DQ β 0603: DQ α 0103 antibody specificity.
Nature Communications. 2024;15(1):609.
8. Raineri F, Frischknecht L, Nilsson J, Rössler F, Cavelti-Weder C, von Moos S, Schachtner T.
Assessing the Predictive Power of PIRCHE-II Scores for the Development of De Novo Donor-Specific Antibodies After Simultaneous Pancreas-Kidney Transplantation.
Transplant international. 2024;37:13720.
9. Pettersson L, Frischknecht L, Westerling S, Ramezanali H, Weidmann L, Lopez KC, Schachtner T, Nilsson J.
Detection of donor-derived cell-free DNA in the setting of multiple kidney transplantations.
Frontiers in Immunology. 2024;15:1282521.

10. Deng Y, Frischknrecht L, Wehmeier C, de Rougemont O, Villard J, Ferrari-Lacraz S, Golshayan D, Gannagé M, Binet I, Wirthmueller U, Sidler D, Schachtner T, Schaub S, Nilsson J.
Pre-transplant donor specific antibodies in ABO incompatible kidney transplantation-data from the Swiss transplant cohort study.
Frontiers in Immunology. 2024;15:1355128.

Infectiology

11. Zbinden A, Seth-Smith HMB, Beltrami V, Mancini S, Droz S, Burgi U, Melillo D, Schuurmans MM, Schwizer B, Schmid I, Casaulta C, Barben J, Mueller NJ, Imkamp F.
Burkholderia cenocepacia ST-250 in cystic fibrosis patients in Switzerland: Genomic investigation of transmission routes.
Diagn Microbiol Infect Dis. 2024;110(2):116429.
12. Trepl J, Pasin C, Schneidawind D, Mueller NJ, Manz MG, Bankova AK, Abela IA.
Evaluating tixagevimab/cilgavimab prophylaxis in allogeneic haematopoietic cell transplantation recipients for COVID-19 prevention.
Br J Haematol. 2024;204(5):1908-12.
13. Teh BW, Reynolds GK, Mikulska M, Mueller NJ, Slavin MA.
Improving infection reporting in hematology treatment trials.
Blood Adv. 2024;8(22):5925-6.
14. Schreiber PW, Hoessly LD, Boggian K, Neofytos D, van Delden C, Egli A, Dickenmann M, Hirzel C, Manuel O, Koller M, Rossi S, Banz V, Schmied B, Guerke L, Matter M, de Rougemont O, Bonani M, Golshayan D, Schnyder A, Sidler D, Haidar F, Kuster SP, Stampf S, Mueller NJ, members of the Swiss Transplant Cohort S.
Surgical site infections after kidney transplantation are independently associated with graft loss.
Am J Transplant. 2024;24(5):795-802.
15. Reinhold I, Quiblier C, Blaser F, Bogeholz J, Imkamp F, Schuurmans MM, Soyka MB, Zbinden R, Mueller NJ.
Detection of Scedosporium spp.: Colonizer or pathogen? A retrospective analysis of clinical significance and management in a large tertiary center.
Med Mycol. 2024;62(2).
16. Ragozzino S, Mueller NJ, Neofytos D, Passweg J, Muller A, Medinger M, Van Delden C, Masouridi-Levrat S, Chalandon Y, Tschudin-Sutter S, Khanna N, Swiss Transplant Cohort S.
Epidemiology, outcomes and risk factors for recurrence of Clostridioides difficile infections following allogeneic hematopoietic cell transplantation: a longitudinal retrospective multicenter study.
Bone Marrow Transplant. 2024;59(2):278-81.
17. Pietrzko E, Bogli S, Frick K, Ebner-Dietler S, Capone C, Imkamp F, Koliwer-Brandl H, Muller N, Keller E, Brandi G.
Broad Range Eubacterial Polymerase Chain Reaction of Cerebrospinal Fluid Reduces the Time to Exclusion of and Costs Associated with Ventriculostomy-Related Infection in Hemorrhagic Stroke.
Neurocrit Care. 2024;40(3):1109-16.
18. Opriessnig T, Xiao CT, Mueller NJ, Denner J.
Emergence of novel circoviruses in humans and pigs and their possible importance for xenotransplantation and blood transfusions.
Xenotransplantation. 2024;31(2):e12842.
19. Mueller NJ, Manuel O, Hirzel C, Swiss Transplant Cohort S.
Donor-derived infections: The Swiss perspective.
Transpl Infect Dis. 2024;26 Suppl 1(Suppl 1):e14314.

20. Marks KM, Kang M, Umbleja T, Cox A, Vigil KJ, Ta NT, Omoz-Oarhe A, Perazzo H, Kosgei J, Hatlen T, Price J, Katsidzira L, Supparatpinyo K, Knowles K, Alston-Smith BL, Rathod P, Sherman KE, Team AS. **HepB-CpG vs HepB-Alum Vaccine in People With HIV and Prior Vaccine Nonresponse: The BEe-HIVe Randomized Clinical Trial.** JAMA. 2024.
21. Luong ML, Nakamachi Y, Silveira FP, Morrissey CO, Danziger-Isakov L, Verschuuren EAM, Wolfe CR, Hadjiliadis D, Chambers DC, Patel JK, Dellgren G, So M, Verleden GM, Blumberg EA, Vos R, Perch M, Holm AM, Mueller NJ, Chaparro C, Husain S. **Management of infectious disease syndromes in thoracic organ transplants and mechanical circulatory device recipients: a Delphi panel.** Transpl Infect Dis. 2024;26(3):e14251.
22. Lopez-Medrano F, Carver PL, Rutjanawech S, Aranha-Camargo LF, Fernandes R, Belga S, Daniels SA, Mueller NJ, Burkhard S, Theodoropoulos NM, Postma DF, van Duijn PJ, Arnaiz de Las Revillas F, Perez Del Molino-Bernal C, Hand J, Lowe A, Bodro M, Vanino E, Fernandez-Cruz A, Ramos-Martinez A, Makek MJ, Bou Mjahed R, Manuel O, Kamar N, Calvo-Cano A, Rueda-Carrasco L, Munoz P, Alvarez-Uria A, Perez-Recio S, Sabe N, Rodriguez-Alvarez R, Silva JT, Mularoni A, Vidal E, Alonso-Titos J, Del Rosal T, Classen AY, Goss CW, Agarwal M, Mejia-Chew C, group Es. **Clinical Management and Outcomes of Nontuberculous Mycobacterial Infections in Solid Organ Transplant Recipients: A Multinational Case-control Study.** Transplantation. 2024.
23. Kusejko K, Neofytos D, van Delden C, Hirsch HH, Meylan P, Boggian K, Hirzel C, Garzoni C, Sidler D, Schnyder A, Schaub S, Golshayan D, Haidar F, Bonani M, Kouyos RD, Mueller NJ, Schreiber PW, Swiss Transplant Cohort S. **Do Infectious Diseases After Kidney Retransplantation Differ From Those After First Kidney Transplantation?** Open Forum Infect Dis. 2024;11(3):ofae055.
24. Kusejko K, Kouyos RD, Bernasconi E, Boggian K, Braun DL, Calmy A, Cavassini M, van Delden C, Furrer H, Garzoni C, Hirsch HH, Hirzel C, Manuel O, Schmid P, Khanna N, Haidar F, Bonani M, Golshayan D, Dickenmann M, Sidler D, Schnyder A, Mueller NJ, Gunthard HF, Schreiber PW, Swiss HIVCS, the Swiss Transplant Cohort S. **Infectious disease events in people with HIV receiving kidney transplantation: Analysis of the Swiss HIV Cohort Study and the Swiss Transplant Cohort Study.** BMC Infect Dis. 2024;24(1):1143.
25. Kufner V, Frey AC, Burkhard SH, Schmutz S, Ziltener G, Zaheri M, Wiedmer CV, Plate A, Trkola A, Huber M, Mueller NJ. **Exploring viral aetiology in upper respiratory tract infections: insights from metagenomic next-generation sequencing in Swiss outpatients before and during the SARS-CoV-2 pandemic.** Swiss Med Wkly. 2024;154:3797.
26. Kimura M, Rinaldi M, Kothari S, Giannella M, Anjan S, Natori Y, Phoompoung P, Gault E, Hand J, D'Asaro M, Neofytos D, Mueller NJ, Kremer AE, Rojko T, Ribnikar M, Silveira FP, Kohl J, Cano A, Torre-Cisneros J, San-Juan R, Aguado JM, Mansoor AE, George IA, Mularoni A, Russelli G, Luong ML, AlJishi YA, AlJishi MN, Hamandi B, Selzner N, Husain S. **Invasive aspergillosis in liver transplant recipients in the current era.** Am J Transplant. 2024;24(11):2092-107
27. Hofer KD, Wolfensberger N, Bachofner A, Schneidawind C, Stuhler C, Buhler MM, Abela IA, Muller NJ, Zenz T, Manz MG, Rosler W, Khanna N, Schneidawind D. **B-cell maturation antigen-directed bispecific antibodies in plasmablastic lymphoma.** Br J Haematol. 2024;205(2):722-5.
28. Hillenbrand CA, Bani DA, Follonier O, Kaur A, Weissbach FH, Wernli M, Wilhelm M, Leuzinger K, Binet I, Bochud PY, Golshayan D, Hirzel C, Manuel O, Mueller NJ, Schaub S, Schachtner T, Van Delden C, Hirsch HH, Swiss Transplant Cohort S.

BK Polyomavirus (BKPyV) Serotype-Specific Antibody Responses in Blood Donors and Kidney Transplant Recipients with and without new-onset BKPyV-DNAemia: A Swiss Transplant Cohort Study.

Am J Transplant. 2024.

29. Giannella M, Lanternier F, Delliere S, Groll AH, Mueller NJ, Alastruey-Izquierdo A, Slavin MA, Infection EsgoF, Infection in Immunocompromised H.
Invasive fungal disease in the immunocompromised host: changing epidemiology, new antifungal therapies, and management challenges.
Clin Microbiol Infect. 2024
30. Fishman JA, Mueller NJ.
Infectious Diseases and Clinical Xenotransplantation.
Emerg Infect Dis. 2024;30(7):1311-8.
31. Damonti L, Gasser M, Kronenberg A, Buetti N.
Epidemiology of bloodstream infections caused by extended-spectrum cephalosporin-resistant Escherichia coli and Klebsiella pneumoniae in Switzerland, 2015-2022: secular trends and association with the COVID-19 pandemic.
J Hosp Infect. 2024;150:145-52.
32. Coussement J, Bansal SB, Scemla A, Svensson MHS, Barcan LA, Smibert OC, Clemente WT, Lopez-Medrano F, Hoffman T, Maggiore U, Catalano C, Hilbrands L, Manuel O, T DUT, Shern TKY, Chowdhury N, Viklicky O, Oberbauer R, Markowicz S, Kaminski H, Lafaurie M, Pierrotti LC, Cerqueira TL, Yahav D, Kamar N, Kotton CN.
Initial empirical antibiotic therapy in kidney transplant recipients with pyelonephritis: A global survey of current practice and opinions across 19 countries on six continents.
Transpl Infect Dis. 2024:e14362.
33. Arheilger L, Barbagallo M, Rancic GS, Stretti F, Dietler-Ebner S, Mueller NJ, Keller E, Togni C, Brandi G.
Intraventricular antibiotics for severe central nervous system infections: a case series.
Sci Rep. 2024;14(1):28267.
34. Amstutz A, Chammartin F, Audige A, Eichenberger AL, Braun DL, Amico P, Stoeckle MP, Hasse B, Papadimitriou-Olivgeris M, Manuel O, Bongard C, Schuurmans MM, Hage R, Damm D, Tamm M, Mueller NJ, Rauch A, Gunthard HF, Koller MT, Schonenberger CM, Griessbach A, Labhardt ND, Kouyos RD, Trkola A, Kusejko K, Bucher HC, Abela IA, Briel M, Speich B, Swiss HIVCS, Swiss Transplant C.
Antibody and T-Cell Response to Bivalent Booster SARS-CoV-2 Vaccines in People With Compromised Immune Function: COVERALL-3 Study.
J Infect Dis. 2024;230(4):e847-e59.

Liver

35. Kimura M, Rinaldi M, Kothari S, Giannella M, Anjan S, Natori Y, Phoompoung P, Gault E, Hand J, D'Asaro M, Neofytos D, Mueller NJ, Kremer AE, Rojko T, Ribnikar M, Silveira FP, Kohl J, Cano A, Torre-Cisneros J, San-Juan R, Aguado JM, Mansoor AE, George IA, Mularoni A, Russell G, Luong ML, AlJishi YA, AlJishi MN, Hamandi B, Selzner N, Husain S.
Invasive aspergillosis in liver transplant recipients in the current era.
Am J Transplant. 2024 Nov;24(11):2092-2107. DOI: 10.1016/j.ajt.2024.05.016. Epub 2024 May 25. PMID: 38801991.
36. Corpechot C, Lemoine S, Soret PA, Hansen B, Hirschfield G, Gulamhusein A, Montano-Loza AJ, Lytyak E, Pares A, Olivas I, Eaton JE, Osman KT, Schramm C, Sebode M, Lohse AW, Dalekos G, Gatselis N, Nevens F, Cazzagon N, Zago A, Russo FP, Floreani A, Abbas N, Trivedi P, Thorburn D, Saffioti F, Barkai L, Roccarina D, Calvaruso V, Fichera A, Delamarre A, Sobenko N, Villamil AM, Medina-Morales E, Bonder A, Patwardhan V, Rigamonti C, Carbone M, Invernizzi P, Cristofori L, van der Meer A, de Veer R, Zigmond E, Yehezkel E, Kremer AE, Deibel A, Bruns T, Große K, Wetten A, Dyson JK, Jones D, Dumortier J, Pageaux GP, de Lédinghen V, Chazouillères O, Carrat F; Global &

ERN Rare-Liver PBC Study Groups.

Adequate versus deep response to ursodeoxycholic acid in primary biliary cholangitis: To what extent and under what conditions is normal alkaline phosphatase level associated with complication-free survival gain?

Hepatology. 2024 Jan 1;79(1):39-48. DOI: 10.1097/HEP.0000000000000529. Epub 2023 Jul 3. PMID: 37399238.

Lung

37. Iskender I. **Technical Advances Targeting Multiday Preservation of Isolated Ex Vivo Lung Perfusion.** Transplantation. 2024 Jun 1;108(6):1319-1332. Doi: 10.1097/TP.0000000000004992.
38. Sander ML, Eulenburg V, Maeyashiki T, Jang JH, Müller SD, Stehr SN, Jungraithmayr W, Piegeler T. **Remote Kidney and Liver Injury After Transplantation of Lung Allografts in an Allogeneic Mouse Model.** Transplant Proc. 2024 Nov;56(9):2046-2053. Doi: 10.1016/j.transproceed.2024.10.020.
39. Moneke I, Ogutur ED, Kornyeva A, Fähndrich S, Schibilsky D, Bierbaum S, Czerny M, Stolz D, Passlick B, Jungraithmayr W, Frye BC. **Donor age over 55 is associated with worse outcome in lung transplant recipients with idiopathic pulmonary fibrosis.** BMC Pulm Med. 2024 Oct 9;24(1):499. Doi: 10.1186/s12890-024-03317-x. PMID: 39385110
40. Coppens A, Verleden SE, Claes E, Voet H, Verleden GM, Lapperre TS, Yildirim AÖ, Jungraithmayr W, Yamada Y, Peeters DJE, Hendriks JMH. **Murine orthotopic lung transplant models: A comprehensive overview of genetic mismatch degrees and histopathological insights into chronic lung allograft dysfunction.** Am J Transplant. 2024 Nov;24(11):1930-1940. Doi: 10.1016/j.ajt.2024.07.033. Epub 2024 Aug 2. PMID: 39098448 Review
41. Moneke I, Semmelmann A, Ogutur ED, Senbaklavaci O, Jungraithmayr W. **Increased Donor Organ Size and Age is Associated with Reduced Survival in Female Lung Transplant Recipients.** Transplant Proc. 2024 Jul-Aug;56(6):1429-1435. Doi: 10.1016/j.transproceed.2024.05.035. Epub 2024 Jul 23. PMID: 39048476
42. Ohm B, Kalbhenn J, Hettich I, Emmerich F, Semmelmann A, Ortmann J, Czerny M, Stolz D, Jungraithmayr W. **Repeated Single-lung Transplantation After Previous Contralateral Pneumonectomy-A Unique Challenge.** Transplant Direct. 2024 Mar 12;10(4):e1613. Doi: 10.1097/TXD.0000000000001613. eCollection 2024 Apr. PMID: 38481965
43. Wolfgang Jungraithmayr. **Neue Forschungsmodelle zur chronischen Abstoßung nach Lungentransplantation. Präzise Imitation der klinischen Situation der Organtransplantation eröffnet neue therapeutische Perspektiven.** Z Herz- Thorax- Gefäßchir 2024; 38:91–92 <https://doi.org/10.1007/s00398-023-00621-2>
44. Hage, R; Hoier, D; Chatzidaki, E; Roeder, M; Schuurmans M. **Severe Abdominal Complications in Lung Transplant Recipients.** Exp Clin Transplant 2024, 22,933-939, DOI:10.6002/ect.2024.0246.
45. Schmucki, K.; Gaisl, T.; Hofmann, P.; Hage, R.; Steinack, C.; Fehr, T.H.; Ulrich, S.; Schuurmans, M.M. **mTOR inhibitors after lung transplantation: a real-life experience.** Journal of Thoracic Disease 2024, 16, 3007-3018, DOI:10.21037/jtd-23-1623.
46. Hage, R.; Frauenfelder, T.; Clarenbach, C.F.; Schuurmans, M.M. **Combined pulmonary fibrosis and emphysema and lung transplantation: current evidence and future directions.** J Thorac Dis 2024, 16, 7290-7299, DOI:10.21037/jtd-24-1200.
47. Hage, R.; Chatzidaki, E.; Roeder, M.; Schuurmans, M.M. **Effects of Comorbidity and Frailty on Hospitalization and Mortality in Lung Transplant Recipients.** Exp Clin Transplant 2024, 22, 698-705, DOI:10.6002/ect.2024.0186.

48. Gautschi, F.; Vogelmann, T.; Ortmanns, G.; Knorr, F.; Steinack, C.; Hage, R.; Nageli, M.; Schuurmans, M.M.
Early extracorporeal photopheresis treatment is associated with better survival in patients with chronic or recurrent acute lung allograft dysfunction.
J Clin Apher 2024, 39, e22128, DOI:10.1002/jca.22128.
49. Bradicich, M.; Schuurmans, M.M.; Pazhenkottil, A.P.; Steinack, C.; Hillinger, S.; Hage, R.
Orthostatic Hypotension and Antihypertensive Treatment in Lung Transplant Recipients: A Cross-Sectional Study.
Exp Clin Transplant 2024, 22, 381-385, DOI:10.6002/ect.2024.0006.
50. Amstutz, A.; Chammartin, F.; Audige, A.; Eichenberger, A.L.; Braun, D.L.; Amico, P.; Stoeckle, M.P.; Hasse, B.; Papadimitriou-Olivgeris, M.; Manuel, O.; et al.
Antibody and T-cell response to bivalent booster SARS-CoV-2 vaccines in people with compromised immune function (COVERALL-3).
J Infect Dis 2024, doi:10.1093/infdis/jiae291.
51. Sander ML, Eulenburg V, Maeyashiki T, Jang JH, Müller SD, Stehr SN, Jungraithmayr W, Piegeler T.
Remote Kidney and Liver Injury After Transplantation of Lung Allografts in an Allogeneic Mouse Model.
Transplant Proc. 2024 Nov;56(9):2046-2053. DOI: 10.1016/j.transproceed.2024.10.020.
52. Moneke I, Ogutur ED, Kornyeva A, Fähndrich S, Schibilsky D, Bierbaum S, Czerny M, Stolz D, Passlick B, Jungraithmayr W, Frye BC.
Donor age over 55 is associated with worse outcome in lung transplant recipients with idiopathic pulmonary fibrosis.
BMC Pulm Med. 2024 Oct 9;24(1):499. DOI: 10.1186/s12890-024-03317-x.
53. Hage, R.; Bonzon, J.; Schuurmans, M.M.
Direct Oral Anticoagulation in Lung Transplant Recipients.
Exp Clin Transplant 2024, 22, 249-257, DOI:10.6002/ect.2023.0338.
54. Moneke I, Semmelmann A, Ogutur ED, Senbakkavaci O, Jungraithmayr W.
Increased Donor Organ Size and Age is Associated with Reduced Survival in Female Lung Transplant Recipients.
Transplant Proc. 2024 Jul-Aug;56(6):1429-1435. DOI: 10.1016/j.transproceed.2024.05.035.
55. Arheilger, L.; Muller, N.; Muller, M.M.; Ganter, C.C.; Hage, R.; Schuurmans, M.; David, S.
[Visual diagnosis for experts].
Med Klin Intensivmed Notfmed 2024, DOI:10.1007/s00063-024-01166-4.
56. Heliövaara, E; Hage, R.; Schuurmans, M.; Jaksch, P.; Tikkanen, J.
Pretransplant Management of Coexisting Diseases.
In European Respiratory Society (ERS) Monograph "Lung Transplantation"; Perch, M; Meloni, F; Vos, R, Eds.; European Respiratory Society, Sheffield, 2024; pp. 77-92. ISBN 978-1-84984-184-9.

Dermatology

57. de Jong E, Genders R, Harwood CA, Green AC, Plasmeijer EI, Proby C, Geissler E, Ferrándiz-Pulido C, Ducroux E, Euvrard S, Geusau A, Jahn-Bassler K, Borik-Heil L, Rácz E, Nägeli M, Hofbauer GFL, Piaserico S, Russo I, Mackintosh L, Borges-Costa J, Angeliki-Gkini M, Zavattaro E, Savoia P, Imko-Walszuk B, Dębska-Slizień A, Garmyn M, van Kelst S, Ricar J, Cetkovska P, Matin R, Güleç AT, Seçkin D, Anene CA, Oliveira WRP, Rademaker M, Goeman J, van Geloven N, Ruiz E, Murad F, Karn E, Schmults CD, Bouwes Bavinck JN.
Cumulative incidence and risk factors for cutaneous squamous cell carcinoma metastases in organ transplant recipients: The Skin Care in Organ Transplant Patients in Europe-

International Transplant Skin Cancer Collaborative metastases study, a prospective multicenter study.

J Am Acad Dermatol. 2024 Jun;90(6):1200-1209. DOI: 10.1016/j.jaad.2024.01.040. Epub 2024 Feb 1. PMID: 38301923

Kidney & Pancreas

58. Halloran PF, Madill-Thomsen KS, Böhmig G, Bromberg J, Budde K, Barner M, Mackova M, Chang J, Einecke G, Eskandary F, Gupta G, Myślak M, Viklicky O, Akalin E, Alhamad T, Anand S, Arnol M, Baliga R, Banasik M, Bingaman A, Blosser CD, Brennan D, Chamienia A, Chow K, Ciszek M, de Freitas D, Dęborska-Materkowska D, Debska-Ślizień A, Djamali A, Domański L, Durlik M, Fatica R, Francis I, Fryc J, Gill J, Gill J, Glyda M, Gourishankar S, Grenda R, Gryczman M, Hruba P, Hughes P, Jittirat A, Jurekovic Z, Kamal L, Kamel M, Kant S, Kasiske B, Kojc N, Konopa J, Lan J, Mannon R, Matas A, Mazurkiewicz J, Miglinas M, Müller T, Narins S, Naumnik B, Patel A, Perkowska-Ptasińska A, Picton M, Piecha G, Poggio E, Bloudíčková SR, Samaniego-Picota M, Schachtner T, Shin S, Shojai S, Sikosana MLN, Slatinská J, Smykal-Jankowiak K, Solanki A, Veceric Haler Ž, Vucur K, Weir MR, Wiecek A, Włodarczyk Z, Yang H, Zaky Z.

Subthreshold rejection activity in many kidney transplants currently classified as having no rejection.

Am J Transplant. 2025 Jan;25(1):72-87. DOI: 10.1016/j.ajt.2024.07.034. Epub 2024 Aug 6. PMID: 39117038.

59. Weidmann L, Harmacek D, Castrezana Lopez K, Helmchen BM, Gaspert A, Korach R, Bortel N, Schmid N, von Moos S, Rho E, Schachtner T.

Limitations of biopsy-based transcript diagnostics to detect T-cell-mediated allograft rejection.

Nephrol Dial Transplant. 2025 Feb 4;40(2):294-307. DOI: 10.1093/ndt/gfae147. PMID: 38925651.

60. Harmacek D, Weidmann L, Castrezana Lopez K, Schmid N, Korach R, Bortel N, von Moos S, Rho E, Helmchen B, Gaspert A, Schachtner T.

Molecular diagnosis of antibody-mediated rejection: Evaluating biopsy-based transcript diagnostics in the presence of donor-specific antibodies but without microvascular inflammation, a single-center descriptive analysis.

Am J Transplant. 2024 Sep;24(9):1652-1663. DOI: 10.1016/j.ajt.2024.03.034. Epub 2024 Mar 27. PMID: 38548057.

61. Brune JE, Dickenmann M, Sidler D, Walti LN, Golshayan D, Manuel O, Haidar F, Neofytos D, Schnyder A, Boggian K, Mueller TF, Schachtner T, Khanna N, Schaub S, Wehmeier C; Swiss Transplant Cohort Study.

Frequency and impact on renal transplant outcomes of urinary tract infections due to extended-spectrum beta-lactamase-producing Escherichia coli and Klebsiella species.

Front Med (Lausanne). 2024 Feb 15;11:1329778. DOI: 10.3389/fmed.2024.1329778. PMID: 38426162; PMCID: PMC10902035.

62. Deng Y, Frischknecht L, Wehmeier C, de Rougemont O, Villard J, Ferrari-Lacraz S, Golshayan D, Gannagé M, Binet I, Wirthmueller U, Sidler D, Schachtner T, Schaub S, Nilsson J.

Pre-transplant donor specific antibodies in ABO incompatible kidney transplantation - data from the Swiss transplant cohort study.

Front Immunol. 2024 Feb 1;15:1355128. DOI: 10.3389/fimmu.2024.1355128. PMID: 38361942; PMCID: PMC10867099.

63. Pettersson L, Frischknecht L, Westerling S, Ramezanali H, Weidmann L, Lopez KC, Schachtner T, Nilsson J.

Detection of donor-derived cell-free DNA in the setting of multiple kidney transplantations.

Front Immunol. 2024 Feb 22;15:1282521. DOI: 10.3389/fimmu.2024.1282521. PMID: 38455037; PMCID: PMC10917974.

64. Rössler F, Kalliola F, de Rougemont O, Hübel K, Hügli S, Viggiani d'Avalos L, Schachtner T, Oberholzer J.
Simultaneous Pancreas and Kidney Transplantation from Donors after Circulatory Death in Switzerland.
J Clin Med. 2024 Jun 16;13(12):3525. DOI: 10.3390/jcm13123525.
PMID: 38930054; PMCID: PMC11204996.
65. Weidmann L, Laux C, Castrezana Lopez K, Harmacek D, George B, von Moos S, Schachtner T.
Immunosuppression and transplantation-related characteristics affect the difference between eGFR equations based on creatinine compared to cystatin C in kidney transplant recipients.
Clin Kidney J. 2024 Aug 20;17(11):sfae253. DOI: 10.1093/ckj/sfae253.
PMID: 39502371; PMCID: PMC11536772.
66. Hillenbrand CA, Akbari Bani D, Follonier O, Kaur A, Weissbach FH, Wernli M, Wilhelm M, Leuzinger K, Binet I, Bochud PY, Golshayan D, Hirzel C, Manuel O, Mueller NJ, Schaub S, Schachtner T, Van Delden C, Hirsch HH; Swiss Transplant Cohort Study.
BK polyomavirus serotype-specific antibody responses in blood donors and kidney transplant recipients with and without new-onset BK polyomavirus-DNAemia: A Swiss Transplant Cohort Study.
Am J Transplant. 2024 Nov 22:S1600-6135(24)00707-X. DOI: 10.1016/j.ajt.2024.11.019. Epub ahead of print.
PMID: 39580075.
67. Rho E, Bohraus P, George B, von Moos S, Schachtner T.
Leukopenia early after kidney transplantation: a switch from mycophenolate to mTOR inhibitor appears safe and feasible and improves viral control in a high-risk population.
J Nephrol. 2024 Oct 14. DOI: 10.1007/s40620-024-02111-6. Epub ahead of print.
PMID: 39400861.
68. Halfon M, Taffé P, Bucher C, Haidar F, Huynh-do U, Mani LY, Schachtner T, Wehmeier C, Venetz JP, Pascual M, Fakhouri F, Golshayan D; Swiss Transplant Cohort Study.
Outcome of Patients Transplanted for C3 Glomerulopathy and Primary Immune Complex-Mediated Membranoproliferative Glomerulonephritis.
Kidney Int Rep. 2024 Oct 15;10(1):75-86. DOI: 10.1016/j.ekir.2024.10.008.
PMID: 39810762; PMCID: PMC11725970.
69. Raineri F, Frischknecht L, Nilsson J, Rössler F, Cavelti-Weder C, von Moos S, Schachtner T.
Assessing the Predictive Power of PIRCHE-II Scores for the Development of De Novo Donor-Specific Antibodies After Simultaneous Pancreas-Kidney Transplantation.
Transpl Int. 2024 Dec 18;37:13720. DOI: 10.3389/ti.2024.13720.
PMID: 39744043; PMCID: PMC11688186.
70. Widmer J, Eden J, Abbassi F, Angelico R, Rössler F, Müllhaupt B, Dutkowski P, Bueter M, Schlegel A.
How best to combine liver transplantation and bariatric surgery? - Results from a global, web-based survey.
Liver Int. 2024 Feb;44(2):566-576. DOI: 10.1111/liv.15791. Epub 2023 Dec 11.
PMID: 38082500.
71. Heining FM, Bieri U, Niemann T, Maletzki P, Tschung C, Adank JP, Rössler F, Nocito A, Hefermehl LJ.
The Transabdominal Lumbar Approach (TALA) for Robotic Renal Surgery-A Retrospective Single-Center Comparative Study and Step-by-Step Description of a Novel Approach.
Cancers (Basel). 2024 Jan 20;16(2):446. DOI: 10.3390/cancers16020446.
PMID: 38275887; PMCID: PMC10814128.
72. Brügger C, Hunkeler Z, Diebold M, Krättli J, Geiger I, Wehmeier C, Wolff T, Vogt B, Storni F, Golshayan D, Zingg T, de Seigneux S, Haidar F, Binet I, Schnyder A, Hübel K, Müller T, Rössler F, Steiger J, Hirt-Minkowski P.

Early Complications in Kidney Donors and Course of Health-related Quality of Life 12 mo After Donation: An Analysis of the Swiss Organ Living-Donor Health Registry.

Transplant Direct. 2024 Oct 10;10(11):e1716. DOI: 10.1097/TXD.0000000000001716.
PMID: 39399060; PMCID: PMC11469818.

73. Eckharter C, Oberholzer J, Stolzmann-Hinzpeter R, Rössler F.
Simultaneous Pancreas and Kidney Transplantation in a Patient with Situs Inversus Abdominalis.
Cureus. 2024 Nov 8;16(11):e73271. DOI: 10.7759/cureus.73271.
PMID: 39650883; PMCID: PMC11625395.
74. Manuel O, Laager M, Hirzel C, Neofytos D, Walti LN, Hoenger G, Binet I, Schnyder A, Stampf S, Koller M, Mombelli M, Kim MJ, Hoffmann M, Koenig K, Hess C, Burgener AV, Cippà PE, Hübel K, Mueller TF, Sidler D, Dahdal S, Suter-Riniker F, Villard J, Zbinden A, Pantaleo G, Semmo N, Hadaya K, Enríquez N, Meylan PR, Froissart M, Golshayan D, Fehr T, Huynh-Do U, Pascual M, van Delden C, Hirsch HH, Jüni P, Mueller NJ; Swiss Transplant Cohort Study (STCS).
Immune Monitoring-Guided Versus Fixed Duration of Antiviral Prophylaxis Against Cytomegalovirus in Solid-Organ Transplant Recipients: A Multicenter, Randomized Clinical Trial.
Clin Infect Dis. 2024 Feb 17;78(2):312-323. DOI: 10.1093/cid/ciad575.
PMID: 37738676; PMCID: PMC10874264.
75. Da Canal F, Breuer E, Hübel K, Mikulicic F, Buechel RR, de Rougemont O, Seeger H, Vetter D.
Impact of successful secondary hyperparathyroidism treatment on cardiovascular morbidity in patients with chronic kidney disease KDIGO stages G3b-5.
Ir J Med Sci. 2024 Dec;193(6):2723-2732. DOI: 10.1007/s11845-024-03770-x. Epub 2024 Aug 31.
PMID: 39215777.

Kidney, Zurich Children's Hospital (Kispi)

76. Deesker LJ, Karacoban HA, Metry EL, Garrelfs SF, Bacchetta J, Boyer O, Collard L, Devresse A, Hayes W, Hulton SA, Martin-Higuera C, Mochhala SH, Neuhaus TJ, Oh J, Prikhodina L, Sikora P, Oosterveld MJS, Groothoff JW, Mandrile G, Beck BB.
Intrafamilial Disease Heterogeneity in Primary Hyperoxaluria Type 1.
Kidney Int Rep. 2024 Jul 31;9(10):3006-3015. doi: 10.1016/j.ekir.2024.07.026.
PMID: 39430166; PMCID: PMC11489452.
77. Frishberg Y, Hayes W, Shasha-Lavsky H, Sas DJ, Michael M, Sellier-Leclerc AL, Hogan J, Willey R, Gansner JM, Magen D.
Efficacy and safety of lumasiran for infants and young children with primary hyperoxaluria type 1: 30-month analysis of the phase 3 ILLUMINATE-B trial.
Front Pediatr. 2024 Sep 16;12:1392644. DOI: 10.3389/fped.2024.1392644.
PMID: 39355649; PMCID: PMC11443422.
78. Saland JM, Lieske JC, Groothoff JW, Frishberg Y, Shasha-Lavsky H, Magen D, Mochhala SH, Simkova E, Coenen M, Hayes W, Hogan J, Sellier-Leclerc AL, Willey R, Gansner JM, Hulton SA.
Efficacy and Safety of Lumasiran in Patients with Primary Hyperoxaluria Type 1: Results from a Phase III Clinical Trial.
Kidney Int Rep. 2024 Apr 26;9(7):2037-2046. DOI: 10.1016/j.ekir.2024.04.048.
PMID: 39081738; PMCID: PMC11284403.
79. Deja A, Guzzo I, Cappoli A, Labbadia R, Bayazit AK, Yildizdas D, Schmitt CP, Tkaczyk M, Cvetkovic M, Kostic M, Hayes W, Shroff R, Jankauskiene A, Virsilas E, Longo G, Vidal E, Mir S, Bulut IK, Pasini A, Paglialonga F, Montini G, Yilmaz E, Correia Costa L, Teixeira A, Schaefer F; ESCAPE Network.
Factors influencing circuit lifetime in paediatric continuous kidney replacement therapies - results from the EurAKId registry.
Pediatr Nephrol. 2024 Nov;39(11):3353-3362. DOI: 10.1007/s00467-024-06459-6. Epub 2024 Jul 18.
PMID: 39023538; PMCID: PMC11413113.

80. D'Ambrosio V, Wan ER, Siew K, Hayes W, Walsh SB.
A female patient with Dent disease due to skewed X-chromosome inactivation.
 Clin Kidney J. 2024 Apr 2;17(6):sfae092. DOI: 10.1093/ckj/sfae092.
 PMID: 38873575; PMCID: PMC11170036.
81. Beal F, Forrester N, Watson E, Williams M, Buckton A, Marlais M, Maxted A; UK Gene Panel Study Group; Woolf AS, Saleem MA, Platt C.
A targeted gene panel illuminates pathogenesis in young people with unexplained kidney failure.
 J Nephrol. 2024 Jun;37(5):1273-1284. DOI: 10.1007/s40620-024-01964-1. Epub 2024 Jun 5.
 PMID: 38837003.
82. Tan HL, Marlais M, Veligratli F, Shah S, Hayes W, Bockenbauer D.
Treatment of paediatric renal tubular acidosis with a prolonged-release alkali supplementation.
 Pediatr Nephrol. 2024 Nov;39(11):3373-3375. DOI: 10.1007/s00467-024-06411-8. Epub 2024 May 21.
 PMID: 38771324.
83. Walker E, Hayes W, Bockenbauer D.
Inherited non-FGF23-mediated phosphaturic disorders: A kidney-centric review.
 Best Pract Res Clin Endocrinol Metab. 2024 Mar;38(2):101843. DOI: 10.1016/j.beem.2023.101843.
 Epub 2023 Nov 25.
 PMID: 38042745.
84. Hayes WN, Laing E, Brown R, Silsby L, Smith L, Thomas H, Kaloyirou F, Sharma R, Griffiths J, Hume-Smith H, Marks SD, Kessar N, Christian M, Dudley J, Shenoy M, Malina M, Muorah M, Ware N, Yadav P, Reynolds B, Bryant W, Spiridou A, Wray J, Peters MJ.
A pragmatic, open-label, randomized controlled trial of Plasma-Lyte-148 versus standard intravenous fluids in children receiving kidney transplants (PLUTO).
 Kidney Int. 2024 Feb;105(2):364-375. DOI: 10.1016/j.kint.2023.09.032. Epub 2023 Oct 31.
 PMID: 37914088; PMCID: PMC10804931.

Stem cell/immune cell transplantation

85. Hofer KD, Wolfensberger N, Bachofner A, Schneidawind C, Stühler C, Bühler MM, Abela IA, Müller NJ, Zenz T, Manz MG, Rössler W, Khanna N, Schneidawind D.
B-cell maturation antigen-directed bispecific antibodies in plasmablastic lymphoma.
 Br J Haematol. 2024 Aug;205(2):722-725. doi: 10.1111/bjh.19571. Epub 2024 May 23.
 PMID: 38782604 No abstract available.
86. Driessen A, Unger S, Nguyen AP, Ries RE, Meshinchi S, Kreutmair S, Alberti C, Sumazin P, Aplenc R, Redell MS, Becher B, Rodríguez Martínez M.
Identification of single-cell blasts in pediatric acute myeloid leukemia using an autoencoder.
 Life Sci Alliance. 2024 Aug. 27;7(11):e202402674. DOI 10.26508/lsa.202402674. Print 2024 Nov.
 PMID: 39191488 Free PMC article.
87. Moraes Ribeiro E, Secker KA, Nitulescu AM, Schairer R, Keppeler H, Wesle A, Schmid H, Schmitt A, Neuber B, Chmiest D, Podavini S, Märklin M, Klimovich B, Schmitt M, Korkmaz F, Lengerke C, Schneidawind C, Schneidawind D.
PD-1 checkpoint inhibition enhances the antilymphoma activity of CD19-CAR-iNKT cells that retain their ability to prevent alloreactivity.
 J Immunother Cancer. 2024 Jan 31;12(1):e007829. doi: 10.1136/jitc-2023-007829.
 PMID: 38296597 Free PMC article.
88. Wesle A, Moraes Ribeiro E, Schairer R, Keppeler H, Korkmaz F, Radszuweit P, Bieber K, Lengerke C, Schneidawind D, Schneidawind C.
CD19-chimeric antigen receptor-invariant natural killer T cells transactivate NK cells and

- reduce alloreactivity.**
Cytotherapy. 2025 Jan;27(1):7-15. DOI: 1016/j.jcyt.2024.08.004. Epub 2024 Aug 10.
PMID: 39269404.
89. Treppl J, Pasin C, Schneidawind D, Mueller NJ, Manz MG, Bankova AK, Abela IA.
Evaluating tixageyimab/cilgayimab prophylaxis in allogeneic hematopoietic cell transplantation recipients for COVID-19 prevention.
Br J Haematol. 2024 May;204(5):1908-1912. doi: 10.1111/bjh.19321. Epub 2024 Feb 7.
PMID: 38327109
90. Erkner E, Hentrich T, Schairer R, Fitzel R, Secker-Grob KA, Jeong J, Keppeler H, Korkmaz F, Schulze-Hentrich JM, Lengerke C, Schneidawind D, Schneidawind C.
The RORy/SREBP2 pathway is a master regulator of cholesterol metabolism and serves as potential therapeutic target in t(4;11) leukemia.
Oncogene. 2024 Jan;43(4):281-293. doi: 10.1038/s41388-023-02903-3. Epub 2023 Nov 29.
PMID: 38030791 Free PMC article.
91. Schimmer RR, Sutter T, Bachofner A, Ranieri E, Rodewald AK, Kremer Hovinga JA, Kimmich N, Trincherio A, Studt JD.
Successful management of refractory immune-mediated thrombotic thrombocytopenic purpura during pregnancy and delivery using the anti-VWF nanobody caplacizumab.
Br J Haematol. 2024 May;204(5):1994-1998. doi: 10.1111/bjh.19284. Epub 2024 Jan 2.
PMID: 38168722
92. Arber C, Baerlocher G, Chalandon Y, Daskalakis M, Duchosal M, Fehr M, Gerull S, Güngör T, Nair G, Pabst T, Passweg JR, Piccolruaz B, Renner C, Ruefer A, Schneidawind D, Stüssi G, Zeerleder S, Halter JP; Swiss Blood Stem Cell Transplant and Cellular Therapies (SBST) group.
Technical comment on: Trottmann M, et al. Real-world expenditures and survival time after CAR-T treatment for large B-cell lymphoma in Switzerland: a retrospective study using insurance claims data.
Swiss Med Wkly. 2024 Oct 3;154:3704. doi: 10.57187/s.3704.
PMID: 39463445 No abstract available.
93. Fischer J, Erkner E, Radszuweit P, Hentrich T, Keppeler H, Korkmaz F, Schulze-Hentrich J, Fitzel R, Lengerke C, Schneidawind D, Schneidawind C.
Only Infant MLL-Rearranged Leukemia Is Susceptible to an Inhibition of Polo-like Kinase 1 (PLK-1) by Volasertib.
Int J Mol Sci. 2024 Nov 27;25(23):12760. doi: 10.3390/ijms252312760.
PMID: 39684470 Free PMC article.
94. Buhlmann A, Rom E, Schweiger G, Schneidawind D, David S.
Extracorporeal cytokine adsorption as therapeutic option for immune effector cell-associated neurotoxicity syndrome.
Neurol Sci. 2025 Jan;46(1):479-481. doi: 10.1007/s10072-024-07812-1. Epub 2024 Oct 17.
PMID: 39417926 Free PMC article.
95. Schumacher M, Beer S, Moraes Ribeiro E, Korkmaz F, Keppeler H, Fitzel R, Erkner E, Radszuweit P, Lengerke C, Schneidawind C, Hoefert S, Mauz PS, Schneidawind D.
Treatment response of advanced HNSCC towards immune checkpoint inhibition is associated with an activated effector memory T cell phenotype.
Front Oncol. 2024 Mar 7;14:1333640. doi: 10.3389/fonc.2024.1333640. eCollection 2024.
PMID: 38515578 Free PMC article.
96. Benoit TM, Bachofner A, Wolfensberger N, Zaugg-Berger Y, Manz MG, Schneidawind D.
Inferior Overall Survival After Haploidentical Donor Lymphocyte Infusions in Relapsed Myeloid Neoplasms.
Eur J Haematol. 2025 Feb;114(2):315-324. doi: 10.1111/ejh.14340. Epub 2024 Nov 5.
PMID: 39501442 Free PMC article.
97. Passweg JR, Baldomero H, Ansari M, Arber C, Chalandon Y, Daskalakis M, Diepold M, Diesch-

Furlanetto T, Duchosal MA, Gerull S, GÜngör T, Heim D, Hitz F, Holbro A, Masouridi-Levrat S, Nair G, Novak U, Pabst T, Renner C, Stussi G, Schneidawind D, Schanz U, Wannesson L, Halter JP; Swiss Blood Stem Cell Transplantation Group (SBST).

Hematopoietic cell transplantation and cellular therapies in Switzerland. Evolution over 25 years. A report from the stem cell transplantation and cellular therapies working groups of the SBST 1997-2021.

Hematol Oncol. 2024 Jan;42(1):e3241. doi: 10.1002/hon.3241. Epub 2023 Dec 6.

PMID: 38058031

6.7 Transplant Awards 2024

The awards of the Transplant Center Zurich were awarded for the 14th time at the Autumn Symposium in November 2024. The awards were once again very kindly sponsored by Astellas Pharma and presented by Dr. med. Kerstin Hübel, member of the award committee of the Board of Directors. Prizes were awarded for a laboratory experimental study, a clinical study and the merit award.

Patient-Related Study Award

Mr. MUDr. Dusan Harmáček:

"Molecular diagnosis of antibody-mediated rejection: Evaluating biopsy-based transcript diagnostics in the presence of donor-specific antibodies but without microvascular inflammation, a single-center descriptive analysis".



Figure 11: Presentation of the award to MUDr. Dusan Harmáček

Laboratory Experimental Study Award

PD Dr. med. Dr. phil. Corina Schneidawind:

" CD19-chimericantigenreceptor-invariantnaturalkillerTcellstransactivateNKcellsandreducealloreactivity " .



Figure 12: Presentation of the award to PD Dr. med. Corina Schneidawind (deputy handover to Prof. Dr. med. Dominik Schneidawind, spouse)

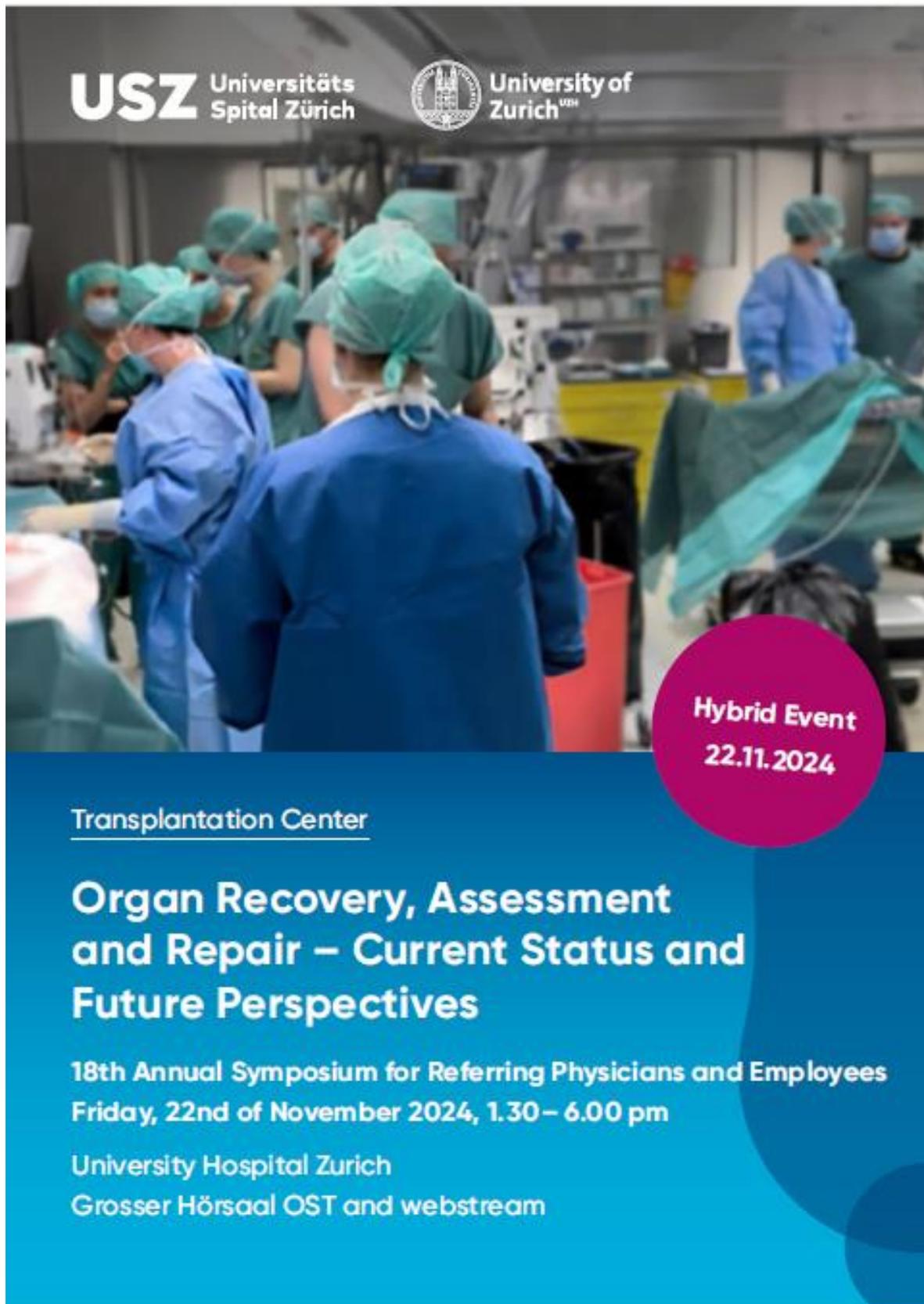
Achievement Award
Team Transplant Station E OST III:



Figure 13: Presentation of the award to the Transplantation Unit E OST III team

6.8 Professional development 2024

18th Annual Symposium of the Zurich Transplant Center 2024



USZ Universitäts Spital Zürich  University of Zurich^{UM}

Hybrid Event
22.11.2024

Transplantation Center

Organ Recovery, Assessment and Repair – Current Status and Future Perspectives

18th Annual Symposium for Referring Physicians and Employees
Friday, 22nd of November 2024, 1.30 – 6.00 pm

University Hospital Zurich
Grosser Hörsaal OST and webstream

Link to flyer: [18th-Annual-Symposium-of-the-University-Hospital-Zurich-Transplant-Center_programs.pdf](#)

Organ Recovery, Assessment and Repair – Current Status and Future Perspectives
18th Annual Symposium for Referring Physicians and Employees

Zeit		
13.30	Welcome and opening address	Nawid Khaladj
13.40	Opening remarks	Nicolas Müller
13.45	Annual report	Nicolas Müller
From old to new: what is possible? Current status and future of organ recovery		Chair: John Dark
14.05	- Keynote: The potential of organ recovery: The Toronto experience: - Discussion Shaf Keshavjee with John Dark, IAB	Shaf Keshavjee
Where are we in the USZ?		Chair: Andreas Kremer
15.00	Liver - Current status and future perspectives 20'	Pascale Tinguely
15.30	Transplantation Awards Zurich Transplantation Center	Kerstin Hübel
16.00 – 16.30 Coffee break		
From old to new: what is possible? Current state and future of organ recovery		Chair: Thomas Schachtner
16.30	Kidney and Pancreas - Current status and future perspectives 20' - Outside view: Discussion Eelco de Koning & Christophe Legendre, IAB	Fabian Rössler
17.00	- Cellular therapies: Desensitization protocols for allogeneic HCT in patients with donor-specific antibodies 20' - Outside view: Discussion with Ernst Holler, IAB 10'	Philipp Hockl
17.30	Heart - Current status and future perspectives 20'	Igor Tudorache
18.00	Closing remarks	Nicolas Müller
	Apéro	

Monthly Seminar "Hot Topics in Transplantation" (TNT) 2024



TNT-Seminar, Programm 2024: am Montag jeweils um 17.15 bis 18.00, gefolgt von einem Apéro
 Eine separate Einladung mit Link für die virtuelle Teilnahme folgt jeweils in der Woche davor

Datum	Thema	Referent	Affiliation	Host
22.01.2024	Neue Perspektiven nach Organtransplantationen: Immunmonitoring und Höhenbergsteigen	Prof. Dr. med. Peter Jaksch, Lungentransplantationsprogramm Wien	Wien	Prof. Dr. med. Nicolas Müller
26.02.2024	Prävention im Fokus: Impfungen und infektiologische Abklärungen vor Immunsuppression	Dr. med. Dr. sc. nat. Irene Alma Abela	USZ	Prof. Dr. med. Nicolas Müller
29.04.2024	Robotics in Transplant Surgery	Prof. Dr. med. José Oberholzer	USZ	Dr. med. Kerstin Hübel
27.05.2024	Moralisch verwerfliche Alkoholsünder	Prof. Dr. med. Tanja Krones	USZ	Prof. Dr. med. Andreas Kremer
24.06.2024	Acute liver failure und Lebertransplantation	Dr. med. Rudolf Ansgar Deibel	USZ	Prof. Dr. med. Andreas Kremer
30.09.2024	Die Transplantation aus Sicht des Anästhesisten: Was und wann für welches Organ?	Dr. med. Rolf Schüpbach	USZ	Prof. Dr. med. Nicolas Müller
28.10.2024	Update Organhandel	Prof. Dr. med. Thomas Müller		Dr. med. Kerstin Hübel
25.11.2024	Transplantationskoordination 2024: Gemeinsam Zukunft gestalten, Herausforderungen meistern, Visionen leben	Stefanie Schiess und Team TPLK	USZ	Prof. Dr. med. Nicolas Müller

Mit grossem Dank an unsere Sponsoren

