



Annual report

**Transplant Centre
University Hospital Zurich**

2011

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1. The Transplant Centre in its 4th year

Thomas Fehr – coordinator TPLZ

To conclude the 4th year since the foundation of the Transplant Centre the 5th International Symposium on Transplant Medicine has taken place in Zurich in November 2011. This introductory chapter summarizes the most prominent events of the transplantation year 2011, which will be looked at in more detail in the ensuing chapters with regard to the individual programmes.

1.1. Retrospect

Organ donation

The emphasis of activities in the year 2011 was on the sector of organ donation. Since several years the USZ has been under scrutiny because of its small number of multi organ donors compared to other university hospitals. All the more we are pleased to report that two milestones could be reached to this effect in 2011:

- The programme of organ donation after circulatory arrest (also called DCD programme) could be resumed after long lasting juridical discussions and meticulous preparation by a team under the guidance of Markus Béchir. 6 kidneys and one liver from DCD donors have been successfully transplanted until the end of 2011. Hence the USZ now holds a cutting edge in Switzerland on this sector.
- The structures regarding re-organization of the organ donation network have been revised. With the active support of the new Medical Director of the USZ, Jürg Hodler, the position of a network coordinator could be created, who will collaborate closely with the intensive care units of the Zurich network hospitals in the future.

Structural issues

In the context of this reorganization the structural integration of the TPLZ at the USZ within the scope of the LEAD2 project was also discussed. The idea to subsume the interdisciplinary teams of the Transplant Centre (transplant coordination, HLA typing laboratory, quality management) in a separate structure under uniform management has been evaluated but abandoned. It was decided to leave the existing structures of the TPLZ as they are and that the Kuratorium as the supreme managing body should report directly to the Medical Director (ADI) and not to the Hospital Direction (SDI). The confirmation by the SDI is pending. For the HLA typing laboratory a new managing structure has been defined with a director (Thomas Fehr, Nephrology), a co-director (Urs Schanz, Haematology) and a head on the part of solid organs (Jens Brockmann, Visceral Surgery). Hence the structure now corresponds to the accreditation standards of the European Federation of Immunogenetics (EFI), while on the administrative part the laboratory remains integrated in the Clinic of Visceral Surgery. The structural problem of the professional management and the organizational integration of the transplant coordination, however, could not be solved in 2011 and urgently needs to be dealt with in 2012.

Transplant activities

The high standard of transplant activities could be maintained for all programmes and even increased significantly in individual areas. Thus the kidney transplant programme has reached for the first time a three-digit number with 100 transplantations in 2011. Likewise a significant increase could be noted in the lung transplant programme. The allogeneic stem cell programme has been able to consolidate its activities after a considerable increase in 2010. The same holds true for the liver transplantation.

As novelties a multivisceral transplantation (stomach, duodenum, pancreas and small bowel) has been performed for the first time in 2011 and likewise the first transplantation of a singular pancreas took place in 2011. Eventually a so-called "cross-over transplantation" in two immunologically incompatible living donor pairs could be realized for the first time in collaboration with the University Hospital of Geneva.

Continuing education and advanced training

Continuing education activities in 2011 were marked by 3 symposia:

- A symposium on transplant nursing has taken place for the first time in January, which has marked the foundation of a national nursing network in this specialized field – a project which was initiated by the USZ and in which all Swiss-German transplant centres are participating.

- In early summer a public symposium on the promotion of organ donation has been organized, where a lung-transplanted patient from the USZ has given an impressive account of his experience when climbing the Kilimanjaro. The symposium was attended by around 100 participants.
- In November a top-class international symposium with referees from USA, Japan and Europe has taken place, which has again been connected with a meeting of the International Advisory Board of the TPLZ. This event, which was dedicated to the topic "Living donor organ donation", has attracted more than 200 participants to the USZ.

Varia

For organizational and administrative tasks of the TPLZ an excellent co-worker has been found in Mrs Kathrin Kocher who became acquainted swiftly with the complex functions. With her help and with the support of the IT division of the USZ a new intranet site for the TPLZ has been created, which is still under construction and is intended to serve as a source of information of every kind in connection with transplantation at the USZ.

1.2. Outlook

For 2012, the TPLZ is again envisaging a number of new activities in the field of continuing education and advanced training. Continuing education symposia on the topics of ethics in transplantation, questions of HLA antibody determination and organ donation are planned. As a novelty the TPLZ will organize for the first time the Hesperis Course of the ESOT in Zurich. The autumn symposium 2012 will be dedicated to the topic of long-term care of transplanted patients.

On the structural side, the professional management and the organizational integration of the transplant coordination need definitely to be settled in 2012. In this context the business regulations of the TPLZ ought to be adapted and updated as well.

For the successful continuation of the DCD programme additional resources have to be made available and respective applications for increasing the OP capacity in particular during the night and on weekends have been submitted by the TPLZ. At the same time the recently initiated network coordination will put the collaboration with the Zurich network hospitals on a new basis and intensify it.

Finally the USZ will have to face the challenge of implementing the Swiss DRG in 2012. To what extent this new tariff system will influence transplantation, which so far have already been indemnified with flat rates, is still unclear at this stage and has to be observed carefully.

2. Centre specific and integrative functions

2.1. Transplantation coordination

Werner Naumer – Head transplantation coordination

Due to the resignation of Stefan Regenscheit – who is now holding the new position of network coordinator – there has been a job change in the team. Fortunately the vacancy could be filled seamlessly, so that the living donor kidney programme can be continued without problems. The initial on-the-job training of the new co-worker in the coordination will require approximately one year.

Jointly with me two colleagues from the team have successfully passed the new European coordinator's examination, which is approved by the U.E.M.S.

In addition we have been able to introduce donor key persons (DKP) in all network hospitals and in the USZ in spite of the minor resources. This means that on every intensive care unit there are two care persons who are being trained specifically regarding the subject of organ donation and who incorporate this special knowledge in the care team.

The information evenings, which are organized 2-3 times a year for patients on the kidney waiting list, find vivid interest and are very well attended. This evening also takes place once a year in the Canton of Tessin in the Italian language.

Among others we had to accomplish 134 evaluation plans for living donor kidney donation, deceased donor liver transplantation and living donor liver transplantation.

In total we have coordinated 197 organs, i.e. 23 more than in the previous year (1350 hours of coordination). The DCD programme was successfully started in October and we have been able to coordinate as many as 3 DCD donors in the last 3 months of 2011. We want to thank everyone for the excellent cooperation which essentially contributes to facilitate the procedures.

2.2. Interdisciplinary HLA typing laboratory

Barbara Rüsi – Head interdisciplinary HLA typing laboratory

The interdisciplinary HLA typing laboratory appears in new brilliance. The reconstruction and renovation works have been completed in October 2011. The entire HLA team is delighted to work in modern, bright and functionally designed laboratories. The rooms, equipments and information systems are functional and contribute in all respects to the quality of the services. Now not only the standards of the QUALAB (Swiss Committee for Quality Assurance in Medical Laboratories) but also the criteria of the EFI (European Federation of Immunogenetics) are being fulfilled. The objective to obtain the international accreditation according to the EFI standards can now be realized.

There has been a staff change in 2011 with regard to the medical direction of the HLA laboratory. PD Dr. Georg Stüssi has been appointed Chief Physician of the Clinic of Haematology at the Cantonal Hospital in Bellinzona. His successor is PD Dr. Urs Schanz (Leitender Arzt, Clinic of Haematology).

The volume of orders has been increased compared to 2010. HLA evaluations for living donor kidney donations were increased by 36%. HLA evaluations in patients with haematologic diseases and their families, with regard to potential stem cell transplantation, increased by around 20%. In the case of HLA-associated diseases the evaluations of HLA-B*27 increased by 15%.

The anti HLA-antibody monitoring after kidney transplant is now exclusively based on Luminex analyses. In particular in highly immunized recipients the anti HLA-antibodies after transplantation are monitored at close intervals. In 2011 more than twice as much Luminex Single Ag tests were prescribed in comparison to the previous year.

In 2011 33 immunized up to highly immunized kidney recipients could be transplanted. This corresponds to 49% of the post-mortal kidney transplantations (see table 1).

Table 1: Percentage of immunized patients in post-mortal KTPL

Year	Post-mortal KTPL	Immunized patients
2009	56	18 (32%)
2010	58	22 (38%)
2011	68	33 (49%)

In a retrospective study conducted in collaboration with the Clinic of Cardiology, the significance of the donor-specific antibodies class I with Luminex could be confirmed as a strong indicator for the short-term, but, however, not the long-term survival of the heart transplant recipients.

2.3. Research in the Transplant Centre

Rolf Graf – research representative

Basic research

The efforts of research related to basic understanding of various aspects of transplantation have focused on the following topics:

- Development of skin cancer after transplantation in conjunction with immunosuppression is a significant clinical problem. To understand tumor suppression in the skin, keratinocytes were analyzed with respect to interferon regulatory factor 6 which targets Notch and downstream elements. In vitro and in vivo experiments demonstrated that this factor is essential for repression of tumor formation.
- Viral infection in renal transplants is a severe problem and the detection in biopsies might give additional insight into the state of the graft. To detect the presence of BK virus, an in situ hybridization technique with silver enhancement was performed to evaluate this technology for automated detection. Although the technique is feasible, it appears to be of limited value in the diagnostic assessment of BK virus compared to established techniques.
- In a mouse model of skin grafts, it was evaluated whether selective modulation of apoptosis in the adaptive immune system could be a new target for immunosuppression. Indeed, by targeting apoptosis of allogeneic T-cells using a novel proapoptotic compound (ABT-737), the alloimmune response could be reduced without affecting the physiological function of T- & B-cells.
- Partial liver transplantation is susceptible to a minimum size, below which the graft does not function properly, with a loss of its regenerative ability. In a model of small-for-size liver transplantation, mice received a 30% graft which is usually insufficient for regeneration. By supplementing serotonin, a known stimulator for liver regeneration, survival of small-for-size grafts could be significantly improved. This emphasizes the crucial role of serotonin for liver regeneration.

Translational and clinical research

Almost fifty manuscripts were published on various aspects of clinical studies and recommendations associated with issues of transplantation.

Kidney and pancreas transplantation

- Monitoring of graft conditions in the face of chronic damage are an important topic. In an editorial, it is surmised that new technologies e.g. transcriptomic analysis might enhance the understanding why some grafts may be at a higher risk for graft dysfunction.
- A meta-analysis demonstrated the need for tight monitoring of patients with the special medication of cinacalcet for the treatment of hyperparathyroidism.
- A study on the immunoabsorption of antibodies in ABO incompatible kidney transplantation demonstrated only a partial efficiency when adsorbers other than Glycosorb® were used, asking for caution in applying semi-selective immunoabsorption.⁷
- Kidney function was assessed in a retrospective study of patients with a pancreas alone transplantation. A high Tacrolimus level at six months after transplantation was the only independent risk factor affecting kidney function.
- In a multi-centric trial, Everolimus based immunosuppression concurrent with an early reduction of calcineurin inhibitor improved renal function 12 months after kidney transplantation.
- Training of patients to better take care of themselves and assess their situation was addressed in a publication focusing on self-management of patients after kidney transplantation.
- A training manual was provided for the correct procurement of organs from heart beating donors. A description of the procurement procedures with informative drawings and instructions should help training surgeons.

Liver transplantation

- A number of issues concerning organ allocation and patient selection for liver transplantation have been discussed. Spawned by the recent changes in the Swiss transplantation laws, the MELD score was introduced as guidance for patient selection. Due to the chronic lack of donors, the issue of fairness has raised many debates. Therefore, a cohort of patients transplanted in the last three years before implementing the law was compared to patients after implementation. It was clearly demonstrated that the recipients were sicker, yet the overall survival of all patients, including those on the list, was increased.
- Exclusion criteria in the assessment of the quality of the graft are discussed, as marginal donors are increasingly included in view of the waiting lists, while an increasing severity of diseases leads to advanced therapeutic interventions (as e.g. renal replacement therapy).
- A first report on conclusions of experts from the Consensus Conference on Liver Transplantation for Hepatocellular Carcinoma was published. A more detailed and condensed publication with recommendations will follow in 2012.

Lung transplantation

- Transplantation of lungs in patients with cystic fibrosis is a common procedure, extending the life span considerably. Patients with concurrent diabetes mellitus often have a more severe disease. After lung transplantation, it was found that diabetes did not negatively affect the outcome and long-term survival.
- Size matching of lungs to the recipient is crucial for optimal lung function. In a study on forced expiratory volume it was found that the predicted forced volume of the donor lung matched the recipient's volume after resizing and transplantation.
- A study on pediatric patients with idiopathic pulmonary hypertension compared the outcome of heart-lung with bilateral lung transplantation. It appears that both treatment options have a similar outcome, favoring bilateral transplantation as it maximizes donor organ use i.e. the hearts for other recipients.
- A case report on a non-small cell cancer in a recipient demonstrated by molecular analysis that the origin was from the donor organ, suggesting a tight tumor immunosurveillance.
- Pre-testing of end-stage cystic fibrosis patients for transplantation includes exercise tests. A survey in several international centers evaluated the use and limitations of this parameter.
- Several updates of the Registry of the International Society of Heart and Lung Transplantation were provided.

Heart transplantation

- Improving heart function in patients with congestive heart failure has been attempted by many means. An unusual approach was taken in a placebo controlled study using Flavanol-rich chocolate versus control chocolate. After ingestion of the Flavanol-rich chocolate several parameters were improved, including platelet adhesion and vasodilatation. Long-term beneficial effects were not observed, however.
- Dose monitoring of Cyclosporine A in heart transplantation is still a matter of debate. A clinical study demonstrated that the outcome is not different if CsA is monitored two hours after intake.

Stem cell transplantation

- Stem cell transplantation is a therapy of choice for patients with multiple myeloma. Patients treated with autologous peripheral blood stem cell transplantation were compared with patients receiving chemotherapy. Although the stem cell therapy was better, overall survival was similar as the patients relapsing after chemotherapy could be salvaged with subsequent transplantation.
- Graft-versus-host disease was assessed in patients with allele-matched hematopoietic stem cell transplantation. These patients exhibit complications despite the close match. Several further factors were identified that predicted increased GvHD risk and mortality. It was concluded that microsatellite assays might add to the pre-transplant risk assessment.
- A further study on graft-versus-host disease demonstrated that hematopoietic stem cell derived endothelial cells do not contribute to angiogenesis and vascular repair in recipients.
- A trial on the beneficial effects of physical exercise after human stem cell transplantation indicated a benefit compared with standard of care.
- In a clinical trial, reduction of neutropenia was evaluated with standard filgrastim compared to pegfilgrastim, drugs derived from granulocyte-colony stimulating factors. The pegylated form was at least equal if not superior with less post-transplant complications.

2.4. Continuing education

Nicolas Müller – member organizing committee TNT

The seminar *Hot Topics in Transplantation* intends to reflect the enormous width and complexity of transplantation. In 2011 again notable international, national and local referees could be gained for a presentation with the support of a generous sponsoring by Astellas Pharma AG, MSD AG, Genzyme GmbH, Novartis Pharma Switzerland AG, Roche Pharma (Switzerland) AG, Pfizer AG.

Peter Nickerson (Winnipeg, Canada) reported on new concepts of immune monitoring, Jan Nico Bouwes Bavinck (Leiden, Netherlands) represented the important field of dermatology. Mrs Tanja Krones (Clinical Ethics, USZ) illuminated ethical aspects of dissent solution. Jens Lundgren (Copenhagen, Denmark) presented his Danish concept for the early detection of relevant infections complications. A highlight represented the lecture of Robert Elliot (Auckland, New Zealand) from Living Cell Technologies, who reported on first results of clinical trials with porcine islet cells in diabetic patients.

2.5. Swiss Transplant Cohort Study (STCS)

Nicolas Müller – President of the scientific committee STCS

The STCS is currently in an important phase of consolidation. The first scientific projects have started, in part under Zurich guidance, all of them with Zurich participation. Zurich is bearing the major burden of the enrolled patients – 749 or little less than 37% of a total of 2028 patients are in the Zurich centre. This is presenting us with a considerable logistic challenge in order to guarantee a perfect processing of the samples and the data collection. Our special thanks go to all who have contributed!

The first studies have been presented in the "American Transplant Congress" in November and have generated much interest. Further data will be presented in 2012.

3. Patient care in the Transplant Centre

3.1. Donor monitoring

Markus Béchir – Intensive care

Requirements on the part of the organ donation have continuously increased in the course of the recent years.

In the meantime the Zurich network with 23 partner hospitals has become the largest transplant network in Switzerland. Up to now the monitoring has been guaranteed by a transplant coordinator and a chief physician quasi on-the-job in addition to the regular duties. With the increasing requirements with regard to professional training, quality data recording and questions about organ donation in general, the existing resources were not sufficient to provide optimal support in the network. An analysis of the situation resulted in the creation of a new position, the so-called *network coordinator* Zurich. The position could be filled with Mr Stefan Regenscheit, who will assume this function for the Zurich network as of March 1st, 2012. Due to this measure we expect professionalization and efficiency increase as well as a more comprehensive network monitoring with continuing education, quality survey and science transfer.

The 3 keystones of the strategy are:

- Creation of optimal basis for organ donor network
- Checking of existing processes. Analysis of current state
- Implementation of improvements according to analysis of current state. Transfer to target state

In addition we can report on the restart of the DCD programme on the part of organ donors. After a planning and project phase of 1 ½ years the programme was started at the USZ on January 1st, 2011. In the meantime 5 such organ donors with appropriate transplantation of organs could be recruited. The complex processes of such a programme from the beginning to the end have brought together many professions and disciplines, and jointly processes have been defined that have well performed to-date. Altogether the implementation of the programme can be considered successful; duties and processes were clear and could be realized accordingly. We are planning to continuously improve the programme, i.e. to control the courses after each organ donation and to incorporate possible changes in the processes. Thus we have integrated the process of continuous improvement in this programme in order to establish an efficient programme at the USZ with minimal resources available.

Altogether the year 2011 was marked by structural changes with a pleasant increase of resources and with the re-implementation of the ambitious DCD organ donation project. We are convinced that we have created a basis to further get ahead on the part of organ donation and to improve our processes for the benefit of the patients on the waiting list in order to improve survival and quality of life.

3.2. Anaesthesiologic aspects of transplantation

Marco Zalunardo - Anaesthesia

2011 was marked by a significant increase of transplantation numbers compared to the previous year:

Heart transplants:	+ 14.2%
Lung transplants:	+ 13.3%
Kidney transplants:	+ 12%
Liver transplants:	+ 4.2%

The trend towards more resource-consuming and complex cases, which was already observed in 2010, proved true in 2011 as well. In addition there was the development and start of the Non Heart Beating Donor (NHBD) transplantation programme, which meant a step forward on different levels. The programme offers increased and better chances to get an organ for patients on the waiting list than before. After the official start in October, organs from as many as 3 Non Heart Beating Donors could be transplanted already until the end of 2011 – so far with excellent outcome.

The NHBD programme represents a true challenge from a medical, logistical, ethical, but also from an interdisciplinary point of view, which so far has been managed in an excellent way by the NHBD team

together with the involved transplant teams – a further example of the outstanding interdisciplinary collaboration in this speciality.

The significant increase of transplantation numbers, but also the investment for the NHBD programme, however, clearly revealed the logistical limits of the Institute of Anaesthesiology. Our staff resources are more than exhausted and are not sufficient any more to fulfil the requirements. Nonetheless we are looking ahead confidently, as promotion of transplant medicine at the USZ is a long-standing tradition and a high priority. In addition the current leading position of the USZ NHBD programme compared to other transplant centres appears to be helpful for future political discussions on a national level.

From the scientific perspective the study on postconditioning with Sevofluran in liver transplantations, which meanwhile encompasses several large transplant centres in Switzerland and abroad, has to be mentioned for 2011 (Prof. Dr. B. Beck Schimmer, Dr. J. Bonvini). The study was continued and so far 75% of the required patients have been included internationally. Also in 2011 the retrospective study on the influence of preoperative right-ventricular function and intraoperative administration of thrombocytes on the outcome after lung transplantations has been published in the European Journal of Cardiothoracic Surgery (PD Dr. M.P. Zalunardo).

3.3. Nursing care in the Transplant Centre

Beatrice Biotti – Nursing representative

3.3.1. Foundation of the „Network Inpatient Transplant Nursing Care Switzerland“

In January 2011 the „Network Inpatient Transplant Nursing Care Switzerland“ has been constituted in a conference with national and international referees at the USZ. The meeting was a complete success last but not least because on this occasion a network could be founded in which all large transplant centres of Switzerland are actively represented.

The aim of the network is to improve the long-term success of transplantation and the quality of life of the transplanted people. The focus is on the creation of a structured platform for nursing care persons where expert knowledge and practical experience can be continuously exchanged and developed. This includes the development of evidence based guidelines, standards and nursing care concepts as well as the necessary support for their implementation.

In addition an international networking has been initiated, among others with the EUCAT (European Academy of Transplantation) in order to open the offered continuing education programmes on transplantation care to Swiss nursing care persons.

The connection to the ITNS (International Transplant Nurses Society) brought about a collaboration in the translation of their “Scope and Standards” into German so that these are also available to us. The linking-up with the “*Deutscher Arbeitskreis*” (German working committee) and the “*Österreichischer Pflegeverein für Transplantation*” (Austrian nursing association for transplantation) resulted in a cooperation which offers a nursing care symposium in parallel with the International Congress TTS in Berlin. The “Network Inpatient Transplant Nursing Care Switzerland” will be represented with several presentations.

In the future the organization of a yearly congress is planned. Links to the already existing congress of the STS (Swiss Transplant Society) and the SDTA (Swiss Donation & Transplant Society) are being considered in order to make use of synergies.

3.3.2. ANP project kidney transplantation

In 2011 the completion of the education brochures as well as the planning of the ANP interventions (advanced nursing practice) and of the evaluation study were the main topics.

Education brochures

The education brochures for kidney transplanted patients could be realized and will be integrated in the nursing processes in the future.

ANP nursing consultations

The objective was that all patients who had been transplanted after May 25 should receive one education session during the first 4-8 weeks after transplantation.

Of 62 patients who had been transplanted in the period from May 25 to December 9, 2011, 22 received a consultation to-date. In 5 patients no consultation was performed, as they already had the required knowledge and could perfectly transfer it into their everyday life. In 35 patients consultation is still pending.

First experiences demonstrates that a single consultation is not sufficient for some patients. In particular when a change of the health behaviour such as in the case of weight gain is required, several interventions may be necessary.

The nursing consultations for patients during the first year after kidney transplantation have been further developed based on systematic literature research on the topics of movement, prevention of weight gain and medication intake.

This will result in a systematic update of the education. Patients will receive a monthly (re)assessment and if necessary a short intervention by the ANP. The method of conversation will be "motivational interviewing". In patients who are challenged by changes in their health behaviour, a peer coach may intervene with the consent of the patient.

Programme „Transplanted patients support transplanted patients“

For the programme „Transplanted patients support transplanted patients“, transplanted peers (coaches) who will take over the supervision of freshly transplanted patients and support them in the change of their health behaviour, were recruited via the "Schweizerischer Transplantierten Verein" (Swiss Society of Transplanted Patients). 5 coaches could be trained in 2011; the assignment of freshly transplanted patients to the coaches will be made in 2012.

Planning of the accompanying study

The study „Impact of an Advanced Nursing Practice Education Programme in Patients during the first year after Kidney Transplantation on Weight Increase, Movement Behaviour and Medication Intake“ for the evaluation of nursing consultations during the first year after kidney transplantation has been planned in the first part of this year. On September 9, 2011 the study was submitted for evaluation and on November 11, 2011 the amendments were submitted to the Ethics Committee Zurich. The study is partly sponsored by Astellas (CHF 10'000.-). For the remaining CHF 112'800 applications have been submitted to several foundations at the end of 2011.

3.3.3. ANP project liver transplantation

Due to the start of the „ANP project liver transplantation“, we have come somewhat closer to our vision of accompanying transplanted patients in a patient-oriented, adapted and seamless process.

The project is an evidence-based patient-centred model for the care of patients and their families before and after liver transplantation, initially focused on living donations. The purpose is to achieve an improvement of the outcome in this patient group as well an improved commitment to the USZ as health service provider. The "Chronic Care Model" serves as a theoretical background.

In the second half of 2011 a concept draft has been elaborated. The realization of the theoretical objectives (implementation of a consultation under evidence-based guidelines, elaboration of an information brochure, proposal for the generation of third-party funds) will be further pursued in the course of the next year.

3.4. Infectious disease consult service of transplanted patients

Nicolas Müller – Infectious disease specialist

In 2011 more than 500 infectious disease consultations have been documented by our consult service in patients in connection with transplantation. This emphasizes the high significance of infectious disease treatment and prevention in recipients of a new organ or of stem cells or islets. In addition to this service on call all new patients on the waiting lists for kidney, pancreas or islet cells are routinely examined with regard to their serology and past infections. The regular participation in the weekly rounds of stem cell transplanted as well as freshly kidney- or pancreas transplanted patients ensures a continuous attendance and close cooperation.

The optimal infectious disease management is also ensured by regular revisions of different guidelines. In 2011 revised versions of the guidelines "General indication for liver transplantation" and the Zurich Guidelines 2012 for pancreas- and islet transplantation with or without kidney have been issued.

3.5. Dermatological follow-up of transplanted patients

Günther Hofbauer - Dermatology

Recipients of solid organs and also of bone marrow/stem cells are seen in the specialized consultation for immune suppressed patients of the Clinic of Dermatology. Under the guidance of PD Dr. Günther Hofbauer more than 1'900 consultations were held in the year 2011. The main focus of this consultation is on prophylaxis, early detection and treatment of the white skin carcinoma (spinocellular skin carcinoma), which represents the most frequent malignant tumour as consequence of long-term immunosuppression. On one hand existing tumours are detected and removed within the scope of the pre-transplant assessment. On the other hand transplanted patients are advised of the risk of white skin cancer and are taught prevention by appropriate behaviour, clothing, application of sunscreen and early detection.

As one of the largest of several centres worldwide, synthetic alpha MSH has been applied as internal sun-screen for the first time in Zurich in 2009. In the meantime far more than 30 recipients of solid organs have been included in this study, and within 2 years an assessment will be possible on whether a reduction of the risk of skin cancer by increased tanning and thus an increased sun protection of the skin can be obtained. A security analysis after one year has revealed no objections to the study medication even in the often polymorbid group of organ transplanted, so that we look forward with interest to the results of the study. Furthermore, since 2010 more than 30 organ-transplanted with actinic keratoses, i.e. early forms of white skin cancer, have been included in a second study in the Zurich Centre in order to test the effect a superior sunscreen product against white skin cancer. The recruitment should be concluded in 2012; running time of the study is two years.

In collaboration with Dr. Peter Karran, London, the photosensitivity of the skin to azathioprine has been tested in a clinical-experimental study as cooperation between Dermatology and Nephrology. Thereby we found that kidney transplanted are more photosensitive to azathioprine than the general population and react more intensely to lower amounts of UVA with damages of the DNS and tumour suppressor proteins. By means of substituting azathioprine for an alternative preparation like mycophenolate in these transplanted, the photosensitivity and the skin damages caused by it could be normalized. We therefore suppose that in view of the long-term development of skin cancer in organ-transplanted, it makes more sense to replace azathioprine by alternative preparations.

3.6. Psychosocial evaluation of transplant patients

Josef Jenewein / Angela Brucher – Psychiatry

The psychiatric-psychotherapeutic evaluation of transplant patients, donors and family members is conducted by the Division of Consultant and Liaison Psychiatry of the Clinic of Psychiatry and Psychotherapy of the USZ (Direction: PD Dr. Josef Jenewein).

Services

The psychiatric care in the transplant centre includes:

- Outpatient assessment, mentoring and treatment of patients and their family members before and after heart-, lung-, liver-, kidney, pancreas- or stem cell transplantation as well as of potential living donors in the scope of kidney or liver transplantation
- Inpatient assessment of patients before or after transplantation when they are hospitalized for evaluation before transplantation, for transplantation or within the scope of medical follow-up

Altogether more than 350 patients and donors, respectively, have been evaluated and treated in 2011, and more than 1500 consultations have been held. Approximately 40% of the consultations were made in patients or donors of the kidney programme.

Organization of the team

The team consists currently of two senior physicians with a medical speciality degree in psychiatry and psychotherapy (job extent in total 150%) and one psychologist (60%). Regrettably our long-standing colleague and senior physician supervisor of the team, PD Dr. Lutz Götzmann, has left the clinic at the end of August, 2011, as he has assumed the position of chief physician of the psychosomatic clinic Bad Segeberg, Germany. The supervision has been resumed by the two senior physicians Dr. Angela Brucher and Dr. Daniela Jordan.

Research

Two studies have been started in the course of 2011: A prospective study on psychic organ integration in patients after lung transplantation and an interventional study on stress reduction and improved psychic stabilization after transplantation (pilot phase).

4. The individual transplantation programmes

4.1. Allogeneic stem cell transplantation

Urs Schanz – Haematology

The pleasant development of allogeneic transplantation activities of 2010 (n=54) could be kept in 2011 (n=52) in spite of the leave of the long-time senior physician of stem cell transplantation, PD Dr. Georg Stüssi (appointment as chief physician haematology at the Istituto Oncologico della Svizzera Italiana, IOSI, Bellinzona). His function as senior physician of stem cell transplantation has been taken over by Dr. Gayathri Nair. For the first time more non-related (n=31) than related transplantations (n=21) (previous year 35/19) have been conducted. Non-related transplantations are more time- and energy-consuming than related transplantations, so that a significant activity increase could be achieved in 2011 as well.

The Zurich stem cell transplantation centre as a whole (autologous and allogeneic transplantations, n=148) remains the largest centre in Switzerland.

Due to the unchanged high activity of allogeneic stem cell transplantation with an expected increase during the next years, the present 8 beds ward has reached the limit of its capacity. A larger ward is planned; the opening is expected for 2015.

4.2. Autologous stem cell transplantation

Frank Stenner – Oncology

In the year 2011 96 patients (compared to 65 patients in 2010) have been treated with high dose chemotherapy and ensuing autologous stem cell retransfusion in collaboration with the City Hospital Triemli. Principal indication was multiple myeloma followed by recurrent lymphoma and recurrent germ cell tumours.

As in the previous years, the trend from double transplantation to single transplantation in the case of multiple myeloma has again been confirmed in 2011. This is due to the new therapy options for multiple myeloma, but on the other hand leads to a significant increase of the number of stored stem cell concentrates. This causes a discrepancy between returned (re-transfused) and stored preparations (see Table 2). Here logistical problems with regard to storage will have to be solved in the future.

Mortality of the autologous transplantation programme at the USZ of around 1% was again significantly below the worldwide reported average of around 5%.

In the sense of a quality control, therapies and survival rate of the patients within the scope of the autologous transplantation programme have been examined retrospectively and the results have been documented in a publication in Swiss Med. Weekly in 2011 (Validation of prognostic factors and survival of patients with multiple myeloma in a real-life autologous stem cell transplantation setting: a Swiss single centre experience. Samaras et al., doi: 10.4414/smw.2011.13203).

Table 2: Relation of autologous stem cell transplantations and collections

Autologous stem cell transplantations	96	+68 %
Stem cell collections	97	+21 %
Stem cell concentrates (cryoconserved)	393	+18 %

4.3. Heart transplantation

Markus Wilhelm – Cardiac surgery / Frank Ruschitzka – Cardiology

With 14 heart transplantations a further increase could be achieved in 2011. Hence the majority of all heart transplantations in Switzerland in the year 2011 have been conducted in Zurich. Since the start of the programme in 1985 the overall number of heart transplantations accomplished in Zurich has increased to 381. With a 30-days survival rate of 97.1% and a 1-year survival rate of 86.7% over the last 3 years the USZ can present an excellent result in the field of heart transplantation by international comparison (Fig. 1).

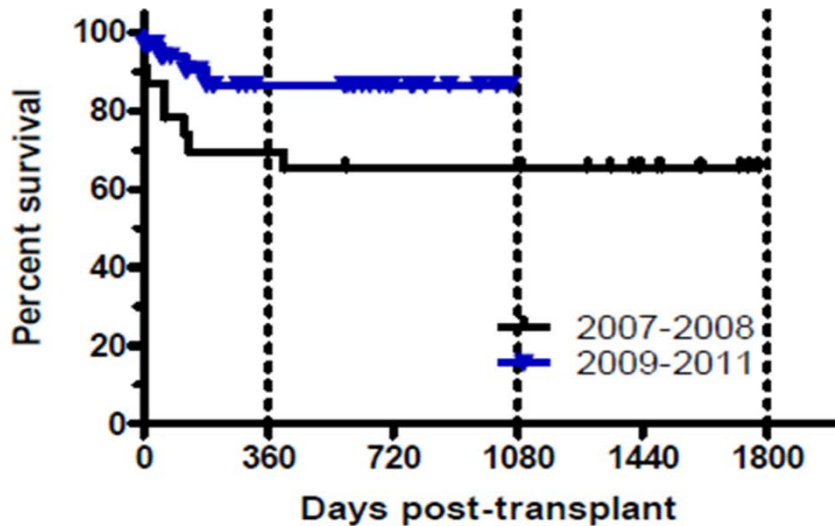


Fig. 1: Survival rate after heart transplantation of patients transplanted in the years 2009 – 2011

HTPL ZÜRICH - Im internationalem Vergleich

Überlebensrate nach HTPL-Zürich 1985-2011 (Kaplan-Meier)

Internationale Überlebensrate nach HTPL 1982-2010 (Kaplan-Meier)

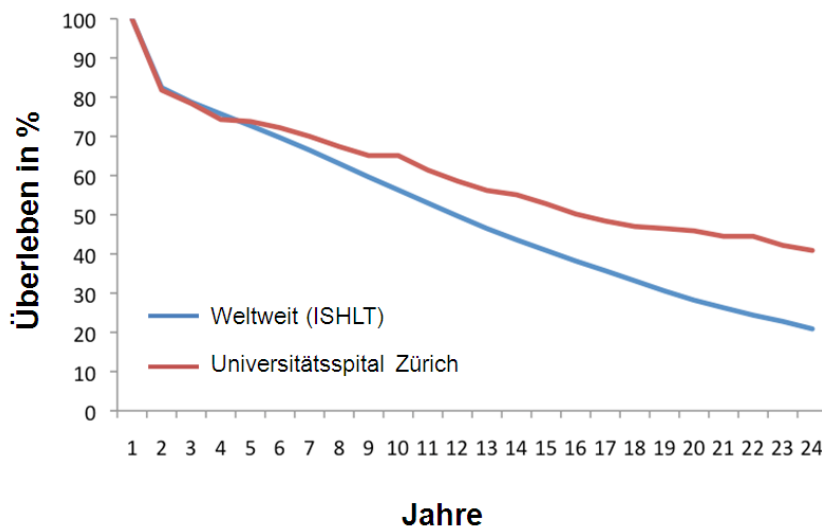


Fig. 2: Also in the long-term course survival rates are furthermore above international average

Due to the severity of their disease, more than one third of the transplanted patients (36%) had to be “bridged” with an artificial heart until transplantation was performed.

In seven patients an artificial heart has been implanted in 2011. The number of implantations of the up-to-date left-heart support system HeartWare® has been doubled compared to the previous year. Consequently the biventricular support system Berlin Heart EXCOR has been applied in a smaller number of patients. Altogether four of these artificial heart patients could be successfully transplanted; one patient is still expecting his heart transplantation. As in the previous years, the success rate of artificial heart therapy of 71% in the reporting year corresponds to international experience. Therapy with biventricular pace maker systems in patients with severe cardiac insufficiency (“cardiac resynchronisation therapy” (CRT)) could be further increased, first of all due to the expansion of the surgical capacities with the putting into service of a state-of-the-art hybrid operating room.

An extremely important factor of the therapy concept is the pre- and postoperative supervision in the specialised outpatient care. Here around 120 patients are regularly monitored after heart transplantation,

which leads to excellent results in the long-term course (Fig. 2). In the frame of the ceremonies “50 years of Cardiac Surgery at the University Hospital Zurich” the long-standing experience in the field of heart transplantation could be presented to a top-class international board of experts. In the area of clinical research experience with regard to resynchronisation therapy and to artificial heart explantation in reversible cardiac insufficiency has been published.

4.4. Lung transplantation

Sven Hillinger – Thoracic surgery / Macé Schuurmans - Pneumology

In the reporting year 2011 we have been able for the first time to perform 30 lung transplantations, again a considerable number considering the extremely demanding conditions. Thereof 28 recipients could be dismissed into outpatient care. The increased organ allocation to recipients in heavily reduced condition due to most advanced pulmonary disease at the time of transplantation, which had already been observed in 2009, was again continued in the reporting year.

For this reason we are still aiming at a somewhat earlier admission of patients to the waiting list by evaluating them in time. This requires on one hand a corresponding referral practice and on the other hand sufficient capacities in order to assess them on an ambulant and inpatient basis. Due to the tight bed situation on the pneumology ward, fewer patients could be evaluated than transplanted in 2011, which led to a reduction of patients on the waiting list, while on the other hand the list of patients waiting for an inpatient lung transplantation assessment has become considerably longer.

As in 2010, due to the drastically limited number of beds only the most critically ill lung transplanted patients could be hospitalized and numerous intravenous therapies had to be conducted on an outpatient basis. The willingness of cost-bearers to cover certain medication expenses or in part also short hospitalisations for patients with chronic rejection has again been very limited. In spite of numerous requests to health insurance companies this has led to short-term therapy modifications and to reduction of hospitalisations due to lacking reimbursement. Under the above circumstances the established system of surveillance bronchoscopies for the detection of rejection reactions during the first half-year after lung transplantation could no longer be maintained.

In the frame of the restart of the non-heart-beating-donor programme at the USZ we are “prepared” for this donor type as well. For the lung, however, no appropriate donor situation has arisen as yet. Similarly, we are in the starting blocks with regard to the ex-vivo perfusion of marginal or rather formally non-transplantable lungs. From these two options we are expecting an expansion of the donor pool of around 20%.

The pneumology team has been re-strengthened by the return of Prof. Annette Boehler from her sabbatical by the end of August, who re-assumed with new verve the direction of the pneumology transplant team. Dr. C. Benden was promoted to professor in the field of paediatric pneumology/lung transplantation and has left the team temporarily for a one-year sabbatical in Sidney/Australia. Dr. G. Fretz was promoted to senior physician, and Dr. Bruno Isenring moved as assistant physician from the ward team to the main outpatient care team.

One of the research subjects of the pneumology team is the epidemiologic examination of influenza infections in lung transplanted patients with the focus on the aspects that might influence prevention and optimize treatment. The tolerance and clinical efficacy of the influenza vaccination have been examined in the frame of the swine flu pandemic, since these two questions are frequently asked by lung transplanted patients and presumably also significantly influence the acceptance of vaccination. It turned out that severe side effects are extremely rare, while minor side effects are relatively frequent, and that all reactions to vaccination were reversible. The efficacy of the vaccination was found to be good with 97%. Further aspects of the influenza epidemiology are the frequency of vaccination in the cohort, the reasons for vaccination refusal in spite of clear recommendation and the virus elimination after documented infection.

Dr. M. Schuurmans has received an award for the best free communication at the Swiss Congress of Pneumology in Interlaken on the subject “Kidney transplantation improves lung function in lung transplant recipients”.

The dedicated ward of the transplant centre E Ost III is still very helpful and excels in high care competence and its closeness to the intensive care unit. Contrary to expectations, the permanent reservation of three beds on this specialized ward for newly admitted recipients before transplantation has so far – at

least from the point of view of the LuTPL – not led to a shortage for the admission of freshly transplanted patients from the intensive care unit. Considering the increasing rate of transplantations as in the previous year, however, this will very soon represent a serious problem.

Within the scope of the TNT seminars PD Dr. Wolfgang Jungraithmayr from our team has reported on aspects of chronic rejection as well as on the various animal models on this subject. In the reporting year he also started his SNF project entitled „The role of CD26/DPP IV and SDF-1 in pulmonary ischemic injury in mouse lung transplantation“. Furthermore he obtained the following awards for our clinic:

- ESTS-Grillo Award for the best abstract of the session Experimental/Innovative Techniques
- SGC-ARS Award for the best poster presentation
- SGT Award for the best publication 2011

Living related organ donation was in the focus of the autumn symposium of November 18, 2011. On the subject of the lung we have been able to welcome Prof. Shin Miyoshi from Okayama. In Japan brain death is socially less accepted than in the Western world and thus the rate of living related organ donation is up to 50%. Prof. Miyoshi has transplanted the first lung from a living donor in Japan and in his presentation has been able to report on clinical and ethical aspects against the background of a wide experience. Prof. Dirk van Raemdonck from Leuven, the representative of lung transplantation in our international advisory board, has again been able to participate as chairman and board member in this interesting and well attended symposium.

Lung transplantation remains furthermore one of our main focuses in clinical as well as in experimental research and in 2011 resulted in numerous predominantly international publications and scientific presentations.

4.5. Liver transplantation

Philipp Dutkowski – Visceral surgery / Beat Müllhaupt - Gastroenterology

In 2011 47 liver transplantations have been performed (vs. 45 in the previous year). The median MELD (Model for Endstage Liver Disease) score at the time of transplantation in 2011 was at 21, IQR 13-35 (in the previous year 22, IQR 11-30). Mortality after liver transplantation in 2011 was reduced with 4.2% (2/47) compared to 11% in 2010, in spite of the furthermore critical health state of the organ recipients. This is also the consequence of a consistent consideration of a new risk score for the prediction of the post-transplant outcome. By means of the largest worldwide database for liver transplantation (UNOS) a regression analysis has been calculated based on 37255 liver transplanted patients. By means of six donor and recipient factors a risk score (balance of risk, BAR score) with a point value from 0-27 has been developed. Above a point value of 18 this score shows an exponential increase of mortality, while mortality changes to a significantly lesser extent up to BAR 18 (Fig. 3). This new score turns out to be more predictive compared to the MELD score (or other models) with regard to post-transplant patient survival (Dutkowski & Müllhaupt et al, Ann Surg 2011) (see Tab. 3). The BAR score can easily be calculated before acceptance of an organ for transplantation (www.barscore.org).

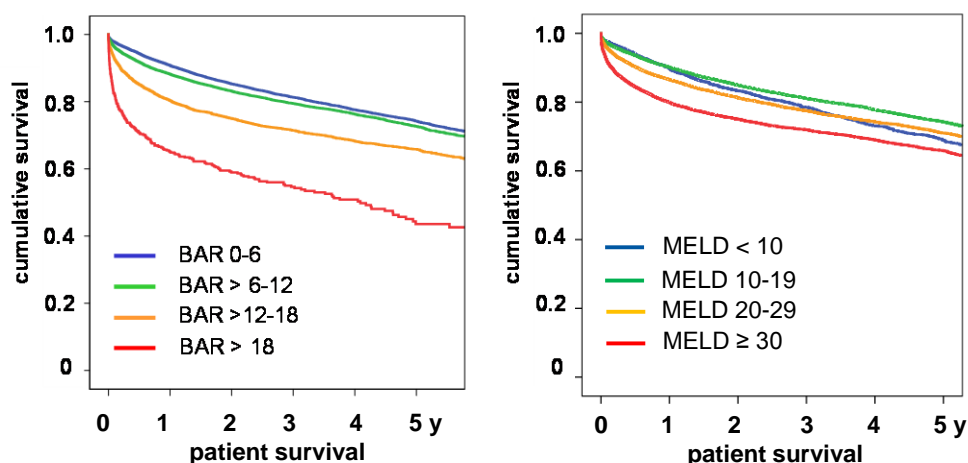


Fig. 3: Logistic regression model by means of UNOS database (n=37255)
The risk score sum of the 6 key factors yields the Balance of Risk (BAR) score: 0-27

Table 3: Components of the BAR score (Dutkowski et al 2011)

Predictor	Category	Regression Coefficient β	P	Reference Value W_i (Midpoint)	$B \times (W_{ij} - W_{ireference})$	Risk score $(B \times W_i - W_{ireference} /B\ddagger)$
Recipient age	≤ 40 y	0.021	<0.001	35.5 ($W_{1reference}$)	0	0
	$>40-60$ y			50.5	0.315	1
	>60 y			70.5	0.735	3
MELD score at transplantation	6-15	0.155	<0.001	10.5 ($W_{2reference}$)	0	0
	$>15-25$			20.5	1.550	5
	$>25-35$			30.5	3.100	10
	>35			40.5	4.650	14
Retransplantation	No	1.052	<0.001	0 ($W_{3reference}$)	0	0
	Yes			1	1.052	4
Life support pretransplant	No	0.800	<0.001	0 ($W_{4reference}$)	0	0
	Yes			1	0.800	3
Cold ischemia	0-6 h	0.042	<0.001	3.0 ($W_{5reference}$)	0	0
	$>6-12$ h			9.5	0.273	1
	>12 h			15	0.504	2
Donor age	≤ 40 y	0.008	<0.001	35.5 ($W_{6reference}$)	0	0
	$>40-60$ y			50.5	0.120	1
	>60 y			70.5	0.280	1

*Constant B corresponds to an important change of 8 hrs in cold ischemia, which is equivalent to a coefficient $8 \times 0.042 = 0.338$. Points rounded to the next integer. Shrinkage coefficient: 0.9945

4.6. Kidney transplantation

Marc Schiesser – Visceral surgery / Thomas Fehr - Nephrology

Clinical activities

Despite a slight decrease in the number of national organ donors a total of 103 kidneys were transplanted into 100 recipients in 2011. The mismatch of number of organs and recipients is due to the fact that two dual pediatric grafts and one dual renal transplant from an "extended criteria donor" (donor age > 80 years) were performed. The reason for the absolute and relative increase in renal transplants performed is the acceptance of more ECD and recipients with higher immunological risk profile based on more precise risk stratification with the routine use of Luminex antigen testing.

Thirty-two renal transplants were performed following living related donation. Additionally, the donation after cardiac death DCD program was successfully re-implemented in October 2011 providing 6 kidneys from 3 donors. To compensate for the potential higher risk of delayed graft function, the USZ purchased 2 LifePort systems, a hypothermic pulsatile machine perfusion preservation device. Herewith, an additional pretransplant assessment of kidney functionality might be possible as well.

Immunosuppressive regimens have been modified with introduction of induction therapy for all patients, which has led to a significant reduction in early rejection episodes.

Research activities

- POSTOP-study: an investigator – randomized trial in which denosumab is being investigated for prevention of bone mineral density loss after renal transplantation. The novel anti-osteoporotic drug denosumab (trade name Prolia) is a fully human monoclonal antibody against RANKL. It has been approved in Switzerland in 2010 for the treatment of postmenopausal women with osteoporosis to prevent vertebral and non-vertebral fractures. Furthermore, denosumab is approved as concomitant treatment in women with breast cancer under adjuvant treatment with aromatase inhibitors and in men with prostate cancer under hormonal ablation therapy. The drug is applied as subcutaneous injection of 60 mg every 6 months. All patients need to receive a sufficient amount of calcium and vitamin D.
- Re-continuation of the prospective evaluation of adrenal function pre and post living donor nephrectomy.
- As a collaboration of five Swiss kidney transplantation centers, the results of the first 60 ABO-incompatible kidney transplantations were analysed and presented at the European Society of Organ Transplantation (ESOT) meeting in Glasgow in September 2011

4.7. Pancreas transplantation

Jens Brockmann – Visceral surgery

In the reporting year there were a total of 11 pancreas whole organ transplants. These can be stratified into 9 simultaneous pancreas and kidney transplants (SPK), the first pancreas transplant alone (PTA) and one modified multivisceral transplant (mMVTx). It is of special note that 4 transplants were performed using paediatric donor grafts (donor weight 8-17kg) providing excellent results. Next to having utilized the youngest pancreatic donors the oldest donor within Switzerland being 56 years of age was transplanted successfully as well. By using very young donor pancreas and kidney grafts a novel transplant technique, the so called pancreas piggy back, has been developed and established in two cases.

It is of special note that it was possible to reduce the median waiting time for a pancreas allograft from more than 500 days in 2009 to around 100 days in 2011.

In addition, the immunosuppressive protocols for islet and pancreas whole organ transplantation have been not only modified but also unified to allow direct comparison between these patient groups in the future.

4.8. Islet cell transplantation and diabetologic care for solid organ recipients

Roger Lehmann – Clinic for endocrinology, diabetology and clinical nutrition

In the field of islet transplantation the year 2011 has been shaped by three different factors:

- In August 2011 a new common immunosuppression protocol has been developed in collaboration with the pancreas transplant program, which uses thymoglobulin and a short course of prednisone (4 days) as induction with tacrolimus (Prograf) and myfortic (mycophenolic acid) as maintenance therapy for islet and pancreas transplantations. The former steroid free Edmonton protocol from the year 2000 with tacrolimus (Prograf) and sirolimus (Rapamun) could thus be replaced (sirolimus had turned out to be inappropriate in the revascularisation of the islets). First experience with the new protocol, which also uses etanercept (Enbrel) and a GLP-1 analogue (liraglutid), is promising.
- Elaboration and successful submission of a multicentric international islet transplant study (NN221-3619) coordinated in Edmonton, which tests the effects of a GLP-1 therapy during in the isolation of islets and post islet transplantation in patients with maintained renal function. For the first time in Switzerland the induction therapy in islet transplantation will be conducted by means of Alemtuzumab (Campath). The study will start in March 2012 in Zurich and Geneva as the first centres worldwide.
- With regard to research the plates for the culture of pseudoislets developed by us could be improved by lamination with nanoparticles, and negotiations about the mass production of these plates by a company are well advanced. Currently we are aiming at improving the survival of islets in the liver in a large animal model (pig) by means of these plates. This project is conducted in collaboration with the University of Dresden (Dr. B. Armann).

In the year 2011 8 islet isolations have been performed, 6 of which could be transplanted (5 islet after kidney transplantations and one simultaneous islet-kidney transplantation). Hence the Zurich islet transplantation programme comprises 83 islet transplantations in 35 patients since the year 2000.

In the diabetological care and organization of the interdisciplinary rounds with representatives of Visceral Surgery, Nephrology, Infectiology and Endocrinology/Diabetology in the rooms of the new interdisciplinary ward, the assignment of an internist senior physician to the transplant ward has again proved of value in 2011. With the elaboration of a protocol, the blood glucose monitoring of transplanted patients could be significantly improved.

The interdisciplinary collaboration with the Clinic of Visceral Surgery under the guidance of PD Dr. J. Brockmann and the Clinic of Nephrology under the guidance of Prof. Th. Fehr with respect to the care for of islet- or pancreas- and kidney transplantations works extremely well.

4.9. Small bowel transplantation

Jens Brockmann – Visceral surgery

In the year 2011 for the first time a modified multivisceral transplantation (stomach, duodenum, pancreas and small bowel) has been performed at the USZ. Six years after colectomy in T2N0 colorectal carcinoma on the basis of an FAP, a patient of about 40 years suffered from a functional short-bowel syndrome next to other severe secondary complications due to monstrous mesenteric desmoid tumours.

Transplantation and early postoperative course were without complications. Shortly before dismissal the recipient suffered a severe rejection of the transplanted small bowel. Although this could be overcome in the long run, the small bowel did not recover functionally, so that a graft enterectomy became necessary. In addition, a PTLD in the ectomized small bowel was detected by histological examination. The further course was complicated by an additional pulmonary PTLD of other clonal differentiation. Reduction of the immunosuppression and additional Rituximab therapy led to a complete remission. Stable gastric and pancreatic transplant function provided a retransplantation is possible and scheduled after further outpatient rehabilitation.

5. Attachments

5.1. Staff of the Transplant Centre

	Direktorium	Kuratorium
Head	Coordinator Prof. Thomas Fehr	Chairman Prof. Pierre-Alain Clavien
Heart	Prof. Frank Ruschitzka PD Dr. Markus Wilhelm	Prof. Thomas Lüscher Prof. Volkmar Falk
Lung	Dr. Macé Schuurmans PD Dr. Sven Hillinger	Prof. Annette Boehler Prof. Walter Weder
Liver	PD Dr. Andreas Geier (till 12-31-11) Prof. Dr. Philipp Dutkowski	Prof. Beat Müllhaupt Prof. Pierre-Alain Clavien
Kidney	Prof. Thomas Fehr PD Dr. Marc Schiesser	Prof. Rudolf Wüthrich Prof. Pierre-Alain Clavien
Pancreas and islet cells	Prof. Roger Lehmann PD Dr. Jens Brockmann	Prof. Giatgen Spinas Prof. Pierre-Alain Clavien
Stem cells	PD Dr. Urs Schanz PD Dr. Frank Stenner	Prof. Markus Manz Prof. Christoph Renner
Consultant services	PD Dr. Nicolas Müller, Infections diseases PD Dr. Günther Hofbauer, Dermatology PD Dr. Josef Jenewein, Psychiatry	PD Dr. Urs Schwarz, Neurology
Anaesthesiology	Prof. Marco Zalunardo	Prof. Donath R. Spahn
Care	Béatrice Biotti	Carmen Oggier (till 11-31-11) <i>NEW: Prof. Regula Spirig (from 12-01-11)</i>
Transplant coordination	Werner Naumer	
Research	Prof. Rolf Graf	
Data manager	Uschi Schäfer	
Clinical manager	Andreas Käser	
Dean		Prof. Klaus Wilhelm Grätz

International Advisory Board	
Heart	Prof. Ernst Wolner, Vienna, Austria
Lung	Prof. Dirk van Raemdonck, Leuven, Belgium
Liver	Prof. Xavier Rogiers, Ghent, Belgium
Kidney	Prof. Ulrich Frei, Berlin, Germany
Pancreas and islet cells	Prof. Peter J. Friend, Oxford, Great Britain
Stem cells	Prof. Bob Lowenberg, CA Rotterdam ZH, Netherlands
Anaesthesiology and intensive care medicine	Prof. Christian Putensen, Bonn, Germany

Advisory Board of the Transplant Centre		
Bellinzona	Ospedale San Giovanni	Prof. Claudio Marone
Chur	Kantonsspital	Dr. Walter Brunner
Chur	Kantonsspital	PD Dr. Adrian Wäckerlin
Frauenfeld	Kantonsspital	Dr. Markus Hugentobler
Gais	Klinik Gais AG	Dr. Angelika Bernardo
Lachen	Spital	Dr. Andreas Hirlinger
Luzern	Kantonsspital Luzern	Dr. Pablo Muñoz
Münsterlingen	Kantonsspital	PD Dr. Thomas Neff
Seewis	Rehabilitationszentrum Seewis	Dr. Willhard Kotmann
St. Gallen	Kantonsspital St. Gallen	Dr. David Semela
Uster	Spital Uster	Dr. Christian Trachsel
Winterthur	Kantonsspital	Dr. Thomas Kistler
Zollikerberg	Spital Zollikerberg	Dr. Jörg Bleisch
Zürich	Klinik Hirslanden	Dr. Marianne Stiner
Zürich	Stadtspital Waid	Prof. Patrice Ambühl
Zürich	Kinderspital	Dr. Bernhard Frey
Zürich	Universitätsspital	PD Dr. Markus Béchir
Zürich	Universitätsspital	Prof. Reto Stocker
Zürich	Höhenklinik Wald	Dr. Matthias Hermann

5.2. List of network hospitals

GZO Spital Wetzikon
Hirslanden Klinik Aarau
Kantonsspital Chur
Kantonsspital Frauenfeld
Kantonsspital Glarus
Kantonsspital Münsterlingen
Kantonsspital Schaffhausen
Kantonsspital Winterthur
Kantonsspital Zug
Kinderspital Zürich
Klinik Hirslanden Zürich
Klinik im Park
Kreisspital Männedorf
Spital Bülach
Spital Lachen
Spital Limmattal
Spital Luzern
Spital Schwyz
Spital Uster
Spital Zimmerberg
Spital Zollikerberg
Stadtspital Waid
Stadtspital Triemli

5.3. Transplantation activities 2008-2011

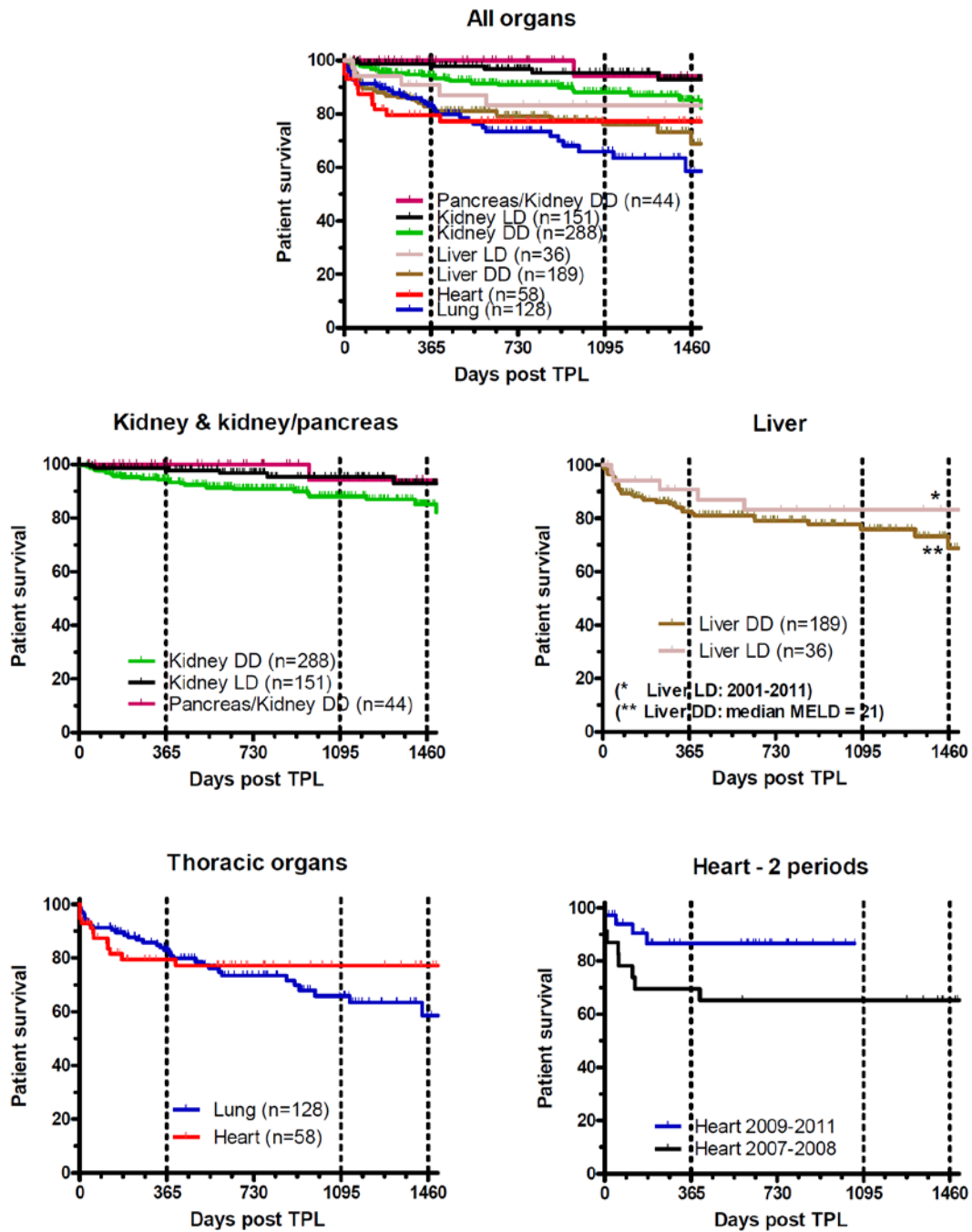
Organ	2008	2009	2010	2011
Heart total	9	9	12	14
- Heart and kidney	1	0	0	0
Lung total	25	26	26	30
Liver total	28	50	45	47
- NHBD single-liver	23	44	41	39
<i>thereof DCD</i>	0	0	0	1
- Living donor liver	4	4	2	7
- Liver and kidney	1	2	2	1
Kidney total	83	85	88	100
- NHBD single-kidney	42	47	44	57
<i>thereof DCD</i>	0	0	0	6
- Living donor kidney	29	29	30	32
- Kidney and pancreas	10	7	9	9
- Kidney and islet cells	0	0	3	1
- Kidney and heart	1	0	0	0
- Kidney and liver	1	2	2	1
Pancreas total	10	7	9	11
- Pancreas alone	0	0	0	1
- Pancreas and kidney	10	7	9	9
- Pancreas / small bowel (multivisc)	0	0	0	1
Islet cells total	7	5	9	6
- Islet cells alone	7	5	6	5
- Islet cells and kidney	0	0	3	1
Small bowel/multivisceral	0	0	0	1
Stem cells total	-	-	119	148
- autologous	(not at TPLZ)	(not at TPLZ)	65	96
- allogeneic	36	34	54	52

Multi-organ donations at the USZ	2008	2009	2010	2011
Donors from USZ	8	2	7	5
- thereof DCD	0	0	0	3
Donors from ZH network	7	10	3	7

5.4. Outcome organ transplantations 2007 – 2011

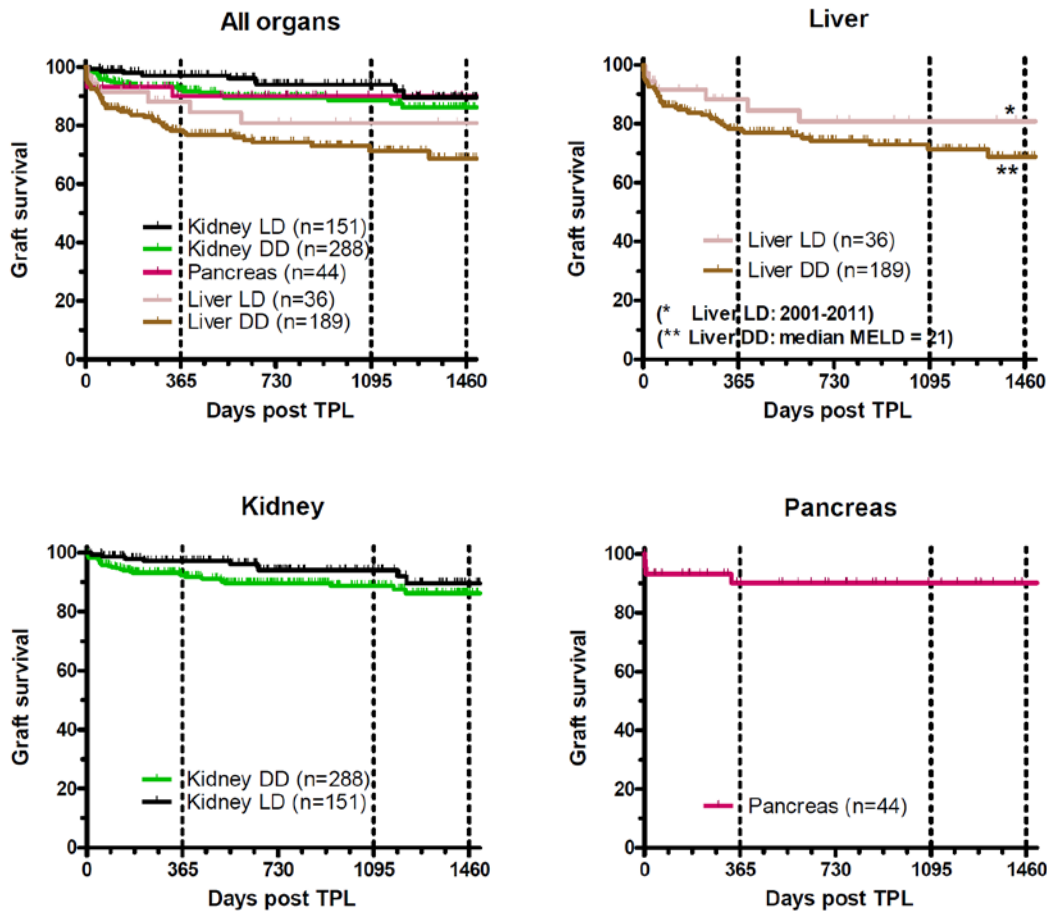
Thomas Fehr and Uschi Schäfer

5.4.1. Patient survival



LD: living donors
DD: deceased donors

5.4.2. Graft survival (death-censored)



LD: living donors
DD: deceased donors

5.4.3. Kaplan-Meier estimates for 1-, 3- and 4-year survival

Organ	Patient survival			Graft survival		
	1 year	3 years	4 years	1 year	3 years	4 years
Heart	79.5	77.2	77.2			
Lung	83	65.9	58.6			
Liver LD	90.8	83.2	83.2	88.2	80.9	80.9
Liver DD *	82.7	75.9	69	78.5	71.3	68.9
Kidney LD	98.7	95.4	92.9	97.2	94.1	89.6
Kidney DD	94.4	88.1	85.1	92.2	88.7	86.2
Pancreas	100	94.1	94.1	90.2	90.2	90.2

* The median lab MELD score within the period of observation was 21.

5.5. International Advisory Board (IAB) Meeting 2011

Thomas Fehr – coordinator TPLZ

In preparation of the 5th international autumn symposium on November 18th, 2011, a meeting of the International advisory board of our centre took place at Restaurant Plattenhof in Zurich. The subsequent members were present:

- *on behalf of IAB*: Bob Löwenberg, Christian Putensen, Dirk van Raemdonck, Ernst Wolner (excused: Ulrich Frei, Peter Friend, Xavier Rogiers)
- *on behalf of TPLZ*: Pierre-Alain Clavien (chairman), Thomas Fehr (coordinator), Annette Boehler, Volkmar Falk, Thomas Lüscher, Markus Manz, Beat Müllhaupt, Christoph Renner, Walter Weder, Rudolf Wüthrich

As an introduction Thomas Fehr (coordinator TPLZ) presented the events, numbers and facts of the year 2011 as starting point for discussion. The ensuing discussion was lead by Pierre-Alain Clavien (chairman). The following subjects were addressed:

Heart transplantation

Ernst Wolner, member of the IAB as well as of the commission for highly specialised medicine (HSM), comments on the future of the heart transplantation programme in Zurich. The decision on the location will be made in 2013, and until that time the USZ should be able to create itself a good position. With regard to the eventual decision in favour or against such a centre, according to Wolner not only the number of transplantations, but the following items are of central relevance:

- The heart transplantation programme should not stand isolated, but ought to be embedded into an integrated management of patients with severe cardiac failure, including modern medication therapy, defibrillation and resynchronisation devices, left ventricular support systems and cardiac stem cell therapy. Information on the latter should be included in the annual report as well.
- LVAD as destination therapy would also form part of it.
- A well integrated collaboration between cardiac surgery and cardiology and between the USZ and the referring hospitals is critical as well.
- Academic achievements/publications in the field of heart transplantation.

Thomas Lüscher of the TPLZ points out that all of the above conditions are fulfilled in Zurich: more than 600 patients are followed in the Zurich heart insufficiency programme, in addition to the largest cohort of chronic transplanted patients in Switzerland (around 120 patients). Collaboration with the cardiac surgery is excellent. Collaboration with other regions of Switzerland, e.g. with the Cardiocentro in Lugano, has been intensified in 2011.

In this context Bob Löwenberg mentions the possibility that operations may also be conducted in two locations by one single team (e.g. by one team for Zurich and Bern). The members of the TPLZ, however, do hardly consider this as feasible in Switzerland in view of the current medico-political situation in the field.

Systematic discussion of the needs of the different organs (except heart)

Under the conduct of Pierre Clavien the current needs of all TPL programmes were systematically discussed with the IAB experts, who support the subsequent requests:

- Liver: Due to the significant increase of the number of liver transplantations in the course of the past 2 years a shortage in the outpatient follow-up care has resulted, where a second hepatologist (next to Beat Müllhaupt) with the focus on transplantation would be urgently needed. In addition an intensified collaboration with a network of resident hepatologists should be aimed at.
- Lung: Also in the lung programme there are shortages particularly with regard to the outpatient follow-up care, where the number of patients is continuously increasing whereas the number of staff so far has remained constant. Here an integration of resident pneumologists is considered as a less promising strategy due to the complexity of the patients, in particular of those who have developed chronic rejections (BOS). The latter as well as the transplantations of DCD's expected for 2012 put enormous pressure on the present team. As in the case of the liver, according to Annette Boehler and Walter Weder an additional position of a transplantation pneumologist would be required.
- Kidney: The shortages consist in the limited possibilities of apheresis therapy in patients with immunologic incompatibilities. Preliminary talks in this respect have already been conducted by Thomas Fehr with the Clinic of Haematology in order use the resources of plasmapheresis (haematology) and immune adsorption (nephrology) in a more synergistic way.
- Stem cells: The substantial increase of stem cell transplantations during the past year has exhausted the resources of the Clinic of Haematology as well as of the stem cell transplant ward to the limit.

According to Markus Manz patients are becoming more and more complex due to accessory diagnoses such as e.g. lymphoma, HIV, etc, which in turn leads to increased complications.

Organ donation

The numbers of organ donations in Zurich and in Switzerland are still very low. However, Dirk van Raemdonck congratulates the TPLZ on the successful restart of the DCD programme. The latter has the potential to contribute to a substantial increase of the number of organ donations. The experience with the first three donors in 2011 has demonstrated, however, that the logistics of the USZ reaches its limits when lung, liver and 2 kidneys have to be transplanted simultaneously. Van Raemdonck confirms that the problems in Leuven are the same and that for this reason these operations take place mainly during the night. In the addendum to this meeting the TPLZ has therefore applied for extension of the OP capacity during the night and on weekends which would allow the use of an additional OP track during these flexible times.

A further problem consists in the ICU capacity. The ICU's of the USZ are busy to a very high percentage. Christian Putensen points out that for an optimal management of the ICU beds an overall concept would have to be elaborated, which makes available the capacities to potential in-house and external organ donors.

As in the past year the financial recompensation of the peripheral hospitals and their ICU's for the donation management is mentioned, which according to Dirk van Raemdonck and Christian Putensen is indispensable. This problem will have to be looked at in detail by means of the newly created position of a network coordinator and eventually be solved in collaboration with the SDI.

Research

Bob Löwenberg recommends that not only the list of publications be included in the annual report as documentation of the research output, but that also a separate chapter be added where the research focuses of the individual teams are described. This recommendation will be taken account of in the annual report 2011.

5.6. Scientific publications 2011

1. Restivo G, Nguyen BC, Dziunycz P, Ristorcelli E, Ryan RJ, Ozuysal OY, Di Piazza M, Radtke F, Dixon MJ, Hofbauer GF, Lefort K, Dotto GP. IRF6 is a mediator of Notch pro-differentiation and tumour suppressive function in keratinocytes. *EMBO J* 2011;30:4571-85.
2. Fritzsche FR, Pianca S, Gaspert A, Varga Z, Wang L, Farrell MP, Chen XB, Hirsch HH, Springer E, Fehr T, Myles J, Tubbs R, Moch H. Silver-enhanced in situ hybridization for detection of polyomavirus DNA in patients with BK virus nephropathy. *Diagn Mol Pathol* 2011;20:105-10.
3. Cippa PE, Kraus AK, Edenhofer I, Segerer S, Chen J, Hausmann M, Liu Y, Guimezanes A, Bardwell PD, Wuthrich RP, Fehr T. The BH3-mimetic ABT-737 inhibits allogeneic immune responses. *Transpl Int* 2011;24:722-32.
4. Tian Y, Graf R, El-Badry AM, Lesurtel M, Furrer K, Moritz W, Clavien PA. Activation of serotonin receptor-2B rescues small-for-size liver graft failure in mice. *Hepatology* 2011;53:253-62.
5. Fehr T, Cohen CD. Predicting an allograft's fate. *Kidney Int* 2011;80:1254-5.
6. Henschkowski J, Bischoff-Ferrari HA, Wuthrich RP, Serra AL. Renal function in patients treated with cinacalcet for persistent hyperparathyroidism after kidney transplantation. *Kidney Blood Press Res* 2011;34:97-103.
7. Wahrmann M, Schiemann M, Marinova L, Kormoczi GF, Derfler K, Fehr T, Stussi G, Bohmig GA. Anti-A/B antibody depletion by semiselective versus ABO blood group-specific immunoadsorption. *Nephrol Dial Transplant* 2011.
8. Chatzizacharias NA, Vaidya A, Sinha S, Sharples E, Smith R, Jones G, Brockmann J, Friend PJ. Risk analysis for deterioration of renal function after pancreas alone transplant. *Clin Transplant* 2011.
9. Budde K, Becker T, Arns W, Sommerer C, Reinke P, Eisenberger U, Kramer S, Fischer W, Gschaidmeier H, Pietruck F. Everolimus-based, calcineurin-inhibitor-free regimen in recipients of de-novo kidney transplants: an open-label, randomised, controlled trial. *Lancet* 2011;377:837-47.
10. Schmid-Mohler G, Albiez T, Schafer-Keller P, Fehr T, Biotti B, Spirig R. In-patient education after renal transplantation. *Pflege* 2011;24:317-28.
11. Wunderlich H, Brockmann JG, Voigt R, Rauchfuss F, Pascher A, Brose S, Binner C, Bittner H, Klar E. DTG procurement guidelines in heart beating donors. *Transpl Int* 2011;24:733-57.
12. Dutkowski P, Oberkofler CE, Bechir M, Mullhaupt B, Geier A, Raptis DA, Clavien PA. The model for end-stage liver disease allocation system for liver transplantation saves lives, but increases morbidity and cost: a prospective outcome analysis. *Liver Transpl* 2011;17:674-84.
13. Dutkowski P, Oberkofler CE, Slankamenac K, Puhon MA, Schadde E, Mullhaupt B, Geier A, Clavien PA. Are there better guidelines for allocation in liver transplantation? A novel score targeting justice and utility in the model for end-stage liver disease era. *Ann Surg* 2011;254:745-53; discussion 753.
14. Oberkofler CE, Stocker R, Raptis DA, Stover JF, Schuepbach RA, Mullhaupt B, Dutkowski P, Clavien PA, Bechir M. Same quality - higher price? The paradox of allocation: the first national single center analysis after the implementation of the new Swiss transplantation law: the ICU view. *Clin Transplant* 2011;25:921-8.
15. Yao FY, Breitenstein S, Broelsch CE, Dufour JF, Sherman M. Does a patient qualify for liver transplantation after the down-staging of hepatocellular carcinoma? *Liver Transpl* 2011;17 Suppl 2:S109-16.
16. Lesurtel M, Clavien PA. 2010 International Consensus Conference on Liver Transplantation for Hepatocellular Carcinoma: texts of experts. *Liver Transpl* 2011;17 Suppl 2:S1-5.

17. McCormack L, Dutkowski P, El-Badry AM, Clavien PA. Liver transplantation using fatty livers: always feasible? *J Hepatol* 2011;54:1055-62.
18. Mullhaupt B, Durand F, Roskams T, Dutkowski P, Heim M. Is tumor biopsy necessary? *Liver Transpl* 2011;17 Suppl 2:S14-25.
19. Frei P, Geier A, Dutkowski P, Mullhaupt B. [Liver transplantation]. *Ther Umsch* 2011;68:219-24.
20. Hofer M, Schmid C, Benden C, Speich R, Inci I, Weder W, Boehler A. Diabetes mellitus and survival in cystic fibrosis patients after lung transplantation. *J Cyst Fibros* 2011.
21. Inci I, Irani S, Kestenholz P, Benden C, Boehler A, Weder W. Donor predicted post-operative forced expiratory volume in one second predicts recipients' best forced expiratory volume in one second following size-reduced lung transplantation. *Eur J Cardiothorac Surg* 2011;39:115-9.
22. Schaellibaum G, Lammers AE, Faro A, Moreno-Galdo A, Parakininkas D, Schechter MG, Solomon M, Boyer D, Conrad C, Frischer T, Wong J, Boehler A, Benden C. Bilateral lung transplantation for pediatric idiopathic pulmonary arterial hypertension: a multi-center experience. *Pediatr Pulmonol* 2011;46:1121-7.
23. von Boehmer L, Draenert A, Jungraithmayr W, Inci I, Niklaus S, Boehler A, Hofer M, Stahel R, Soltermann A, van den Broek M, Weder W, Knuth A. Immunosuppression and lung cancer of donor origin after bilateral lung transplantation. *Lung Cancer* 2011;76:118-22.
24. Radtke T, Faro A, Wong J, Boehler A, Benden C. Exercise testing in pediatric lung transplant candidates with cystic fibrosis. *Pediatr Transplant* 2011;15:294-9.
25. Benden C, Aurora P, Edwards LB, Kucheryavaya AY, Christie JD, Dobbels F, Kirk R, Rahmel AO, Stehlik J, Hertz MI. The Registry of the International Society for Heart and Lung Transplantation: Fourteenth Pediatric Lung and Heart-Lung Transplantation Report--2011. *J Heart Lung Transplant* 2011;30:1123-32.
26. Christie JD, Edwards LB, Kucheryavaya AY, Benden C, Dobbels F, Kirk R, Rahmel AO, Stehlik J, Hertz MI. The Registry of the International Society for Heart and Lung Transplantation: Twenty-eighth Adult Lung and Heart-Lung Transplant Report--2011. *J Heart Lung Transplant* 2011;30:1104-22.
27. Kirk R, Edwards LB, Kucheryavaya AY, Benden C, Christie JD, Dobbels F, Rahmel AO, Stehlik J, Hertz MI. The Registry of the International Society for Heart and Lung Transplantation: Fourteenth Pediatric Heart Transplantation Report--2011. *J Heart Lung Transplant* 2011;30:1095-103.
28. Stehlik J, Edwards LB, Kucheryavaya AY, Benden C, Christie JD, Dobbels F, Kirk R, Rahmel AO, Hertz MI. The Registry of the International Society for Heart and Lung Transplantation: Twenty-eighth Adult Heart Transplant Report--2011. *J Heart Lung Transplant* 2011;30:1078-94.
29. Hertz MI, Aurora P, Benden C, Christie JD, Dobbels F, Edwards LB, Kirk R, Kucheryavaya AY, Rahmel AO, Rowe AW, Stehlik J. Scientific Registry of the International Society for Heart and Lung Transplantation: introduction to the 2011 annual reports. *J Heart Lung Transplant* 2011;30:1071-7.
30. Flammer AJ, Sudano I, Wolfrum M, Thomas R, Enseleit F, Periat D, Kaiser P, Hirt A, Hermann M, Serafini M, Leveques A, Luscher TF, Ruschitzka F, Noll G, Corti R. Cardiovascular effects of flavanol-rich chocolate in patients with heart failure. *Eur Heart J* 2011 Dec 15.
31. Hermann M, Enseleit F, Fisler AE, Flammer A, Luscher TF, Noll G, Ruschitzka F. Cyclosporine C0-versus C2-monitoring over three years in maintenance heart transplantation. *Swiss Med Wkly* 2011;141:w13149.
32. Vellenga E, van Putten W, Ossenkoppele GJ, Verdonck LF, Theobald M, Cornelissen JJ, Huijgens PC, Maertens J, Gratwohl A, Schaafsma R, Schanz U, Graux C, Schouten HC, Ferrant A, Bargetzi M, Fey MF, Lowenberg B. Autologous peripheral blood stem cell transplantation for acute myeloid leukemia. *Blood* 2011;118:6037-42.

33. Bettens F, Passweg J, Schanz U, Chalandon Y, Heim D, Gungor T, Stussi G, Nicoloso G, Baldomero H, Gratwohl A, Tiercy JM. Impact of HLA-DPB1 Haplotypes on Outcome of 10/10 Matched Unrelated Hematopoietic Stem Cell Donor Transplants Depends on MHC-Linked Microsatellite Polymorphisms. *Biol Blood Marrow Transplant* 2011;16:608-16.
34. Mueller RJ, Stussi G, Puga Yung G, Nikolic M, Soldini D, Halter J, Meyer-Monard S, Gratwohl A, Passweg JR, Odermatt B, Schanz U, Biedermann BC, Seebach JD. Persistence of recipient-type endothelium after allogeneic hematopoietic stem cell transplantation. *Haematologica* 2011;96:119-27.
35. Knols RH, de Bruin ED, Uebelhart D, Aufdemkampe G, Schanz U, Stenner-Liewen F, Hitz F, Taverna C, Aaronson NK. Effects of an outpatient physical exercise program on hematopoietic stem-cell transplantation recipients: a randomized clinical trial. *Bone Marrow Transplant* 2011;46:1245-55.
36. Samaras P, Blickenstorfer M, Siciliano RD, Haile SR, Buset EM, Petrusch U, Mischo A, Honegger H, Schanz U, Stussi G, Stahel RA, Knuth A, Stenner-Liewen F, Renner C. Pegfilgrastim reduces the length of hospitalization and the time to engraftment in multiple myeloma patients treated with melphalan 200 and auto-SCT compared with filgrastim. *Ann Hematol* 2011;90:89-94.
37. Samaras P, Blickenstorfer M, Haile SR, Siciliano RD, Petrusch U, Mischo A, Zweifel M, Honegger H, Schanz U, Stussi G, Taverna C, Bauer S, Knuth A, Stenner-Liewen F, Renner C. Validation of prognostic factors and survival of patients with multiple myeloma in a real-life autologous stem cell transplantation setting: a Swiss single centre experience. *Swiss Med Wkly* 2011;141:w13203.
38. Bahde R, Holzen JP, Wolters HH, Schmidt HH, Bock CT, Luger A, Spieker T, Senninger N, Brockmann JG. Course of a HBsAg positive liver transplantation in a hepatitis B and D virus coinfecting recipient. *Ann Hepatol* 2011;10:355-60.
39. Basset-Seguín N, Baumann Conzett K, Gerritsen MJ, Gonzalez H, Haedersdal M, Hofbauer GF, Aguado L, Kerob D, Lear JT, Piaserico S, Ulrich C. Photodynamic therapy for actinic keratosis in organ transplant patients. *J Eur Acad Dermatol Venereol* 2011;10:1468-3083.
40. Cippa PE, Fehr T. Spontaneous tolerance in kidney transplantation--an instructive, but very rare paradigm. *Transpl Int* 2011;24:534-5.
41. Hofbauer GF, Gjersvik P, Bouwes Bavinck JN. Report on the tenth annual meeting of SCOPE (Skin Care in Organ Transplant Recipients in Europe). *J Invest Dermatol* 2011;131:1192-3.
42. Hofer M, Boehler A. [Lung transplantation and patient evaluation]. *Ther Umsch* 2011;68:725-9.
43. Irani S, Schmidlin PR, Bolivar I, Speich R, Boehler A. Evidence for graft colonization with periodontal pathogens in lung transplant recipients. A pilot study. *Schweiz Monatsschr Zahnmed* 2011;121:1144-9.
44. Mueller NJ, Takeuchi Y, Mattiuzzo G, Scobie L. Microbial safety in xenotransplantation. *Curr Opin Organ Transplant* 2011;16:201-6.
45. Sailer E, Kamarachev J, Boehler A, Speich R, Hofer M, Benden C, French LE, Hofbauer GF. Persistent photodamage following drug photosensitization in a lung-transplant recipient. *Photodermatol Photoimmunol Photomed* 2011;27:213-5.
46. Schuurmans MM, Tini GM, Dalar L, Fretz G, Benden C, Boehler A. Pandemic 2009 H1N1 influenza virus vaccination in lung transplant recipients: coverage, safety and clinical effectiveness in the Zurich cohort. *J Heart Lung Transplant* 2011;30:685-90.
47. Sullivan M, Rybicki LA, Winter A, Hoffmann MM, Reiermann S, Linke H, Arbeiter K, Patzer L, Budde K, Hoppe B, Zeier M, Lhotka K, Bock A, Wiech T, Gaspert A, Fehr T, Woznowski M, Berisha G, Malinoc A, Goek ON, Eng C, Neumann HP. Age-related penetrance of hereditary atypical hemolytic uremic syndrome. *Ann Hum Genet* 2011;75:639-47.

48. Takizawa H, Schanz U, Manz MG. Ex vivo expansion of hematopoietic stem cells: mission accomplished? *Swiss Med Wkly* 2011;141:w13316.
49. Theiler M, Kempf W, Kerl K, French LE, Hofbauer GF. Disseminated molluscum contagiosum in a HIV-positive child. Improvement after therapy with 5% imiquimod. *J Dermatol Case Rep* 2011;5:19-23.
50. Wahlin S, Stal P, Adam R, Karam V, Porte R, Seehofer D, Gunson BK, Hillingso J, Klempnauer JL, Schmidt J, Alexander G, O'Grady J, Clavien PA, Salizzoni M, Paul A, Rolles K, Ericzon BG, Harper P. Liver transplantation for erythropoietic protoporphyria in Europe. *Liver Transpl* 2011;17:1021-6.
51. Zalunardo MP, Thalmann C, Seifert B, D'Cunja J, Weder W, Boehler A, Spahn DR. Impact of preoperative right-ventricular function and platelet transfusion on outcome after lung transplantation. *Eur J Cardiothorac Surg* 2011;39:538-42.

5.7. Transplantation awards 2011

On the occasion of the autumn symposium in November 2011 the awards of the Transplant Centre Zurich have been assigned for the second time.

TPLZ science award 2011: 2 awardees ex aequo

- PD Dr. Günther Hofbauer, Clinic of Dermatology, for his work „*Reversal of UVA Skin Photosensitivity and DNA Damage in Kidney Transplant Recipients by Replacing Azathioprine*“ Am J. Transplant 2012; 12(1):218-25.
- Dr. Pietro Cippà, Clinic of Nephrology, for his work „*The BH3-mimetic ABT-737 inhibits allogeneic immune responses*“ Transpl Int. 2011; 24(7):722-32.

TPLZ merit award 2011

Team of stem cell apheresis and stem cell processing at the USZ

5.8. Continuing education programme 2011

5.8.1. Spring Symposium „Climbing Mt. Kilimanjaro with a new lung“

5.8.2. Autumn Symposium „Transplantation from living donors“

5.8.3. Monthly seminar “Hot topics in transplantation” (TNT)

5.8.4. Symposium „Network inpatient transplant nursing care“

Mit neuer Lunge
auf den Kilimandscharo



Einladung zum Forum Organspende

15. Juni 2011, 18.30 Uhr, UniversitätsSpital Zürich



UniversitätsSpital
Zürich

Sehr geehrte Damen und Herren

Leben oder sterben? – Manchmal und ganz plötzlich liegen diese beiden Möglichkeiten sehr nahe beieinander. Vor allem auch, wenn das Warten auf ein neues Organ zu lange gedauert hat, weil kein geeigneter Spender zur Verfügung stand. Das Leid dieser Menschen und ihrer Familien geht uns nahe, macht betroffen. In der Schweiz warten immer noch sehr viele viel zu lange auf ein lebensrettendes Organ.

Zum Glück gehört auch Erfreuliches zu unserem Alltag. Erfolgreich durchgeführte Transplantationen und Menschen, die mit einem neuen Organ ein zweites Leben geschenkt bekommen. So auch Stephan Holderegger. Er wird am 15. Juni 2011 persönlich über seine Erfahrungen nach einer Lungentransplantation, von seiner Teilnahme an verschiedenen Triathlons und auch, wie er den Kilimandscharo bezwingt, berichten.

Mit dem Forum Organspende möchten wir Ihnen die Möglichkeit geben, sich zu informieren und mit diesem Thema auseinanderzusetzen.

Wir freuen uns auf Ihr Kommen.
Eine Anmeldung ist nicht notwendig.

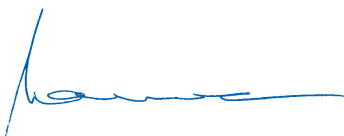
Herzliche Grüsse

Intensivmedizin



Markus Béchir

Transplantationskoordination



Werner Naumer

Organspende. Und ein Leben geht weiter.

Mittwoch, 15. Juni 2011, 18.30 Uhr

UniversitätsSpital Zürich, Grosser Hörsaal OST HOER B 10

Der Eintritt ist frei.

Programm

- 18.30 Uhr **Begrüssung und Einleitung**
Markus Béchir, Leiter Intensivstation
- 18.35 Uhr **Transplantation gestern und heute – ein Überblick**
Jens Brockmann, Transplantationschirurg
- 19.00 Uhr **Organspende – Wissenswertes**
Markus Béchir, Leiter Intensivstation
Werner Naumer, Leiter Transplantationskoordination
- 19.30 Uhr **Vom Glück einer neuen Lunge oder wie ich den Kilimandscharo bezwinde**
Stephan Holderegger, Lungentransplantiertes
- 20.00 Uhr **Diskussion und Fragen**
- Stehapéro**

Referenten

Dr. med. Markus Béchir
Leiter Intensivmedizin
UniversitätsSpital Zürich

PD Dr. med. Jens Brockmann
Transplantationschirurg
UniversitätsSpital Zürich

Stephan Holderegger
Lungentransplantierter und Marathonläufer

Werner Naumer
Leiter Transplantationskoordination
UniversitätsSpital Zürich

Veranstaltungsort

UniversitätsSpital Zürich
Grosser Hörsaal Ost HOER B 10
(Bitte Ausschilderung beachten.)

Organisation

UniversitätsSpital Zürich
Werner Naumer
Leiter Transplantationskoordination
Rämistrasse 100
8091 Zürich
Telefon 044 255 36 50
transplantationskoordination@usz.ch



**UniversitätsSpital
Zürich**



Organ donation.
The gift of life.

5th Annual Symposium of the Transplant Centre Zurich “Transplantation from living donors”

Friday, November 18th, 2011, 13.30–18.15
University Hospital Zurich, Grosser Hörsaal Ost



UniversitätsSpital
Zürich

Transplantation from living donors

from 12.15 WARM LUNCH (Dick & Davy)

13.30–13.40 **Welcome addresses**

Daniel Wyler, Zurich

Pierre-Alain Clavien, Zurich

13.40–14.00 **Transplant Centre Zurich: annual report**

Thomas Fehr, Zurich

Part I: Hematopoietic stem cell transplantation

Chairmen: Christian Putensen and Urs Schanz

14.00–14.30 **Allogeneic versus autologous stem cell transplantation for acute myeloid leukemia**

Bob Löwenberg, Rotterdam

14.30–15.00 **Combined kidney & stem cell transplantation for induction of donor-specific tolerance**

David Sachs, Boston

Part II: Living donation – the donor's perspective (I)

Chairmen: Ernst Wolner and Rudolf Wüthrich

15.00–15.30 **Is life after organ donation as it was before? – Long-term follow-up of 1400 Swiss living donors**

Jürg Steiger, Basel

15.30–16.00 COFFEE BREAK (Dick & Davy)



16.00–16.10 **Awards Zurich Transplant Centre**
Sponsored by Astellas Pharma (AG) Switzerland
Marc Schiesser, Zurich

Part II: Living donation – the donor’s perspective (II)

16.10–16.40 **Psychosocial evaluation in potential living kidney donors in Switzerland: first results of an observational multi-center study**
Alexander Kiss, Basel

Part III: Living donation of solid organs

Chairmen: Dirk van Raemdonck and Beat Müllhaupt

16.40–17.10 **Living donor liver transplantation: where are we?**
Philipp Dutkowski, Zurich

17.10–17.40 **Living donor lobar lung transplantation: the Japanese experience**
Shin Miyoshi, Okayama

17.40–18.10 **Operative techniques for live donor nephrectomy – which way to go?**
Jonas Wadström, Uppsala

18.10–18.15 Closing remarks
Pierre-Alain Clavien, Zurich

18.15 APÉRO (Dick & Davy)

Speakers

Prof. Philipp Dutkowski
Division of Visceral and Transplantation
Surgery, University Hospital Zurich

Prof. Thomas Fehr
Transplantation Centre Zurich, Division of
Nephrology, University Hospital Zurich

Prof. Alexander Kiss
Division of Psychosomatic Medicine
University Hospital Basel

Prof. Bob Löwenberg
Dept. of Hematology, Erasmus University
Medical Center, Rotterdam
Member of International Advisory Board

Prof. Shin Miyoshi
Dept. of General, Thoracic Surgery
Okayama University Graduate School of
Medicine

Prof. David H. Sachs
Director, Transplantation Biology
Research Center
Massachusetts General Hospital, Boston

PD Dr. Marc Schiesser
Division of Visceral and Transplantation
Surgery, University Hospital Zurich

Prof. Jürg Steiger
Division of Transplantation Immunology
and Nephrology, University Hospital Basel

Prof. Jonas Wadström
Department of Surgery
Uppsala University Hospital, Sweden

Chairmen

Prof. Pierre-Alain Clavien
Division of Visceral and Transplantation
Surgery, University Hospital Zurich

Prof. Beat Müllhaupt
Division of Gastroenterology
and Hepatology
University Hospital Zurich

Prof. Christian Putensen
Clinic for Anaesthesiology and Surgical
Intensive Care, Rheinische Friedrich
Wilhelms University of Bonn
Member of International Advisory Board

Prof. Dirk van Raemdonck
Dept. of Thoracic Surgery
University Hospital Gasthuisberg, Leuven
Member of International Advisory Board

PD Dr. Urs Schanz
Division of Hematology
University Hospital Zurich

Prof. em. Ernst Wolner
Division of Cardiothoracic Surgery
Vienna General Hospital
Member of International Advisory Board

Prof. Rudolf Wüthrich
Division of Nephrology
University Hospital Zurich

Prof. Daniel Wyler
Vice President for Medicine and Science
University of Zurich

Credits

SGC Swiss Society of Surgery: 3 points

SGIM Swiss Society of Internal Medicine: 4 points

SGAR Swiss Society of Anaesthesiology and Reanimation: 4 points

SGN Swiss Society of Nephrology: 4 points

SGL Swiss Society of Intensive Medicine: 4 points

SGG Swiss Society of Gastroenterology: 3.5 points

SGP Swiss Society of Pneumology: 3 points

Thanks to our sponsors





Datum	Topic	Thema	Referent	Affiliation	Host
31.1.2011	HLA/Nieren	Immunomonitoring of the allograft: anti-HLA antibodies and beyond	Peter Nickerson	Transplant center, Winnipeg, Canada	Th. Fehr
28.2.2011	Lunge	Chronic Rejection / clinical impact / animal models	Wolfgang Jungraithmayr	Klinik für Thoraxchirurgie, USZ	S. Hillinger
28.03.2011	Dermatologie	Nephrology meets dermatology: Renal graft number and vitamin D impact skin cancer	Jan Nico Bouwes Bavinck	Department of Dermatology, Leiden University Medical Center	G. Hofbauer
18.04.2011	Pankreas	<i>Fällt aus</i>	-	-	-
23.05.2011	Endokrinologie	<i>Fällt aus</i>	-	-	-
27.06.2011	Ethik	<i>Organspende: ethische Aspekte der Widerspruchs- versus Zustimmungslösung</i>	Tanja Krones	Klinische Ethik USZ / Institut Biomedizinische Ethik, Universität Zürich	G. Stüssi
22.08.2011 (Termin- änderung)	Infektiologie	Proactive management system to reduce risk of morbidity associated with post-transplant infections	Jens Lundgren	Department of International Health, Immunology and Microbiology; University of Copenhagen Denmark	N. Müller
26.09.2011	Insel/Xeno	Clinical trials of pig-to-human islet xenotransplantation	Robert Elliott	Living Cell Technologies Ltd; Auckland, New Zealand	M. Schneider
31.10.2011	Herz	<i>Fällt aus</i>	-	-	-
21.11.2011 (Kleiner Hörsaal PATH C 22)	Basic science	<i>Fällt aus</i>	-	-	-

Stand: Dezember 2011

UniversitätsSpital Zürich



Transplantationszentrum

Organisation: Prof. Thomas Fehr
PD Dr. Sven Hillinger
PD Dr. Nicolas Müller
PD Dr. Marc Schiesser
Dr. Mårten Schneider
PD Dr. Georg Stüssi

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Organspende.
Und ein Leben geht weiter.

Einladung zur Eröffnungsveranstaltung «Netzwerk Transplantationspflege»

Freitag, 21. Januar 2011, 9.00–16.30 Uhr
UniversitätsSpital Zürich, Aula Bildungszentrum



UniversitätsSpital
Zürich

Organspende. Und ein Leben geht weiter.

Liebe Leserin,
lieber Leser

Nebst der rasanten Entwicklung der Medizin sind zunehmend Auswirkungen des 2007 in Kraft getretenen Transplantationsgesetzes spürbar. Organempfängerinnen und -empfänger sind älter, häufig liegt eine Mehrfach- oder eine chronische Erkrankung vor, welche die Pflege nach der Transplantation anspruchsvoller und komplexer werden lässt.

Im Umfeld dieser Spitzen-Medizin ist eine Spitzen-Pflege Bedingung, um betroffenen Menschen Lebensqualität mit ihrem neuen Organ bieten zu können.

Die Transplantation wird zunehmend als Prozess verstanden, beginnend lange vor der Transplantation bis zur ambulanten Nachbetreuung.

Pflegende aus verschiedenen Organisationen haben sich intensiv mit der Pflege transplantierter Patientinnen und Patienten auseinandergesetzt, wichtige Erkenntnisse und Erfahrungen gesammelt und Programme entwickelt. Ziel dieser ersten Veranstaltung ist es, von diesem Wissen und Können zu lernen und Inputs für die eigene Arbeit im Patientenkontakt zu bekommen.

Eine gezielte Vernetzung der in TPL-Pflege aktiven Berufskolleginnen und Berufskollegen kann dieses Wissen bündeln und eine offizielle Plattform werden, um evidence based Richtlinien und Empfehlungen zu verfassen.

In diesem Sinne freue ich mich über Ihre Teilnahme.



Beatrice Biotti

Programm

- 9.00 **Begrüssung und Einleitung**
Beatrice Biotti, UniversitätsSpital Zürich
- 9.15 **Scope and Standards of Transplant Nursing: Die Rolle der Pflegenden in der Transplantation**
Prof. Dr. Sabina De Geest, Universität Basel
- 9.55 **Entwicklung eines Patientenpfades für die Nierentransplantation und die Aufgabe der Pflegenden**
Prof. Dr. Mathias Schwarzbach, Klinikum Frankfurt Höchst
- 11.00 **Arbeitsweise und Erfahrungen aus einem Netzwerk in Deutschland**
Barbara Gnatz; Dorothea Theune, Arbeitskreis Transplantationspflege e.V.
- 11.20 **Konstitution des Netzwerkes TPL-Pflege in der Schweiz**
Thomas Albiez, UniversitätsSpital Zürich
- 12.00 **Mittagspause, Stehlunch**
- 13.15 **Workshop 1** Moderation: Beatrice Biotti
Schlafqualität für Lebensqualität: Bedeutung von Tagesrhythmus und Schlaf bei Nierentransplantation
Hanna Burkhalter, Universität Basel
- 13.15 **Workshop 2** Moderation: Thomas Albiez
Pflegeplanung und Austrittsmanagement: Welche Informationen, Fähigkeiten und Fertigkeiten brauchen Patienten nach Organtransplantation zum Austritt
Karin Ritschard, Brigitte Eggimann, Inselspital Bern
- 15.00 **Rückmeldung aus den Workshops**
- 15.10 **Patientenedukation am Beispiel Nierentransplantation**
Gaby Schmid-Mohler, UniversitätsSpital Zürich
- 15.30 **Transplantation 360°, eine interaktive Plattform zur Förderung der Adhärenz**
Lut Berben, Universität Basel
- 15.50 **Nächste Schritte im Netzwerk und Schlusswort**



Allgemeine Informationen

Veranstungsdatum

Freitag, 21. Januar 2011, 9.00–16.30 Uhr

Veranstungsort

UniversitätsSpital Zürich
Aula, Bildungszentrum
Gloriastrasse 19
CH-8091 Zürich

Moderation durch den Tag

Prof. Dr. Rebecca Spirig, RN
Leiterin Zentrum Klinische Pflegewissenschaft
UniversitätsSpital Zürich & Institut für Pflegewissenschaft Universität Basel

Teilnahme

Um Anmeldung wird bis spätestens 10. Januar 2011 gebeten

Kontaktadresse und Anmeldung

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Bitte um Angabe Teilnahme Workshop 1 oder Workshop 2

Türöffnung

Willkommenskaffee ab 8.30 Uhr am Veranstaltungsort

Zum Stehlunch am Mittag und Kaffee in den Pausen sind alle Teilnehmenden herzlich eingeladen

Sponsoring

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