P3062
Cytomegalovirus (CMV) infection – Correlation between CMV-DNA PCR in bronchoalveolar lavage (BAL), CMV pp65 antigen load in PBMCs and clinical symptoms in lung transplant recipients
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Introduction: Cytomegalovirus (CMV) is a significant cause of morbidity and mortality in lung transplant recipients (LTRs) either by causing pneumonitis or by contributing to the development of bronchiolitis obliterans or chronic rejection.

Objectives: Aim of our study was to compare the correlation between CMV-DNA PCR in BAL and CMV pp65 antigen load in peripheral blood mononuclear cells (PBMCs) with the clinical symptoms of LTRs assessed by a clinical score.

Methods: We analyzed 950 BAL samples taken from 73 LTRs during 2007-2009 using PCR and CMV pp65 antigen load in PBMCs. We used a clinical score from 0-6 (defined as symptoms including cough, sputum, dyspnea, exercise capacity, auscultation, temperature) to define a symptomatic or asymptomatic patient. Especially, we compared the clinical score in patients with CMV pp65=0 (n=62) to patients with CMV pp65>0 (n=11).

Results: 73 of the 950 samples (7.7%) were positive either for CMV-DNA PCR in BAL or CMV pp65 antigen. We found no association between CMV-DNA PCR in BAL and the clinical score. There was a significant correlation between the positivity of PBMCs for CMV pp65 antigen and the clinical score (r=0.31; p=0.006). In patients without CMV pp65 antigen detection the clinical score was 2.0±2.1 whereas in patients with CMV pp65 detection the clinical score was 3.7±2.2.

Conclusion: Assessment of CMV-DNA PCR in BAL does not correlate with the symptoms of CMV infected LTRs. Our results suggest that CMV pp65 is the better predictive marker for symptomatic CMV infection. Further prospective studies to identify patients who need antiviral treatment are necessary.

P3063
Vitamin D deficiency in lung transplant patients: Is it important?

Introduction: Vitamin D deficiency is getting a lot of attention lately in various pulmonary disorders like COPD and asthma due to its immunomodulatory effect. Moreover a link between disease progression and vitamin D deficiency has been reported. The aim of this study is to evaluate vitamin D deficiency in LTx patients and to examine effect on lung function.

Methods: Serum 25-hydroxyvitamin D (25-OH-D) levels in blood and lung function (%predicted) were measured in 132 lung transplant patients during their yearly check-up post transplant stay (median (IQR) 1067 (371-1448)d).

Results: Vitamin D deficiency (<30 ng/ml) occurred in 63/132 patients (47.7%),
Introduction: We investigated the association between CT and spirometric changes in chronic lung allograft dysfunction (CLAD) treated with azithromycin (AZI).

Methods: A cohort of 107 patients with CLAD treated with AZI was retrospectively analyzed for inspiration and end-exhalation thin-section CT findings, as well as spirometry, before and after 3 to 12 months of therapy. CTs were scored by a single observer blinded for the spirometric data. CT and spirometric changes during treatment were correlated using Spearman rank test.

Results: A total of 100 patients had combined CT and spirometric data available at the start and after a median of 6.9 (4.7-11.4) months of treatment. Overall, all evaluated CT changes significantly correlated with the observed spirometric changes, except for pre-treatment centrilobular abnormalities.

Conclusions: CT imaging may be of additional value in phenotyping CLAD and may predict response to azithromycin treatment.

P3066 Montelukast as a rescue therapy for bronchiolitis obliterans syndrome (BOS) after lung transplantation
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Bronchiolitis Obliterans syndrome (BOS) is a major cause of mortality and morbidity after lung transplantation (LTX). Montelukast has been shown to be effective in small case series in patients with BOS after LTX and bone marrow transplantation. A retrospective single center analysis of all patients treated with Montelukast since 1.10.2010 as a rescue therapy for progressive BOS. Montelukast was used in a dose of 10 mg daily as a long-term therapy. All patients with at least 3 weeks of therapy were included. Response and progression were defined as a confirmed FEV1 of >90% and >110% baseline, respectively. Broncho-alveolar lavage (BAL)-neutrophilia was recorded at baseline. 38 patients (17 female, 31 double LTX recipients, median age 52 years,) were included with a median follow-up of 74 (interquartile 73-95) days. Median FEV1 at baseline was 55 (33-69)% best. Previous BOS treatment consisted of azithromycin in 100% (3 initial responders) and photopheresis (ECP) in 13 (34%, 2 responders). Median neutrophils in BAL at baseline was 20 (55, 10-55) x 10^9/l. 5 patients responded to montelukast above 15%. Four patients responded to montelukast after 21-66 days, 10 patients were progressive after 20-100 days, 4 pts died from respiratory failure during follow up. Neutrophils in BAL was not different between responder and non-responder to montelukast. Response to azithromycin, montelukast or ECP was highly variable. 8 (21%) of progressive BOS pts. responded to any form of therapy. Montelukast is an additional treatment option in LTx recipients with BOS refractory to other treatment options. BAL-neutrophils did not predict response.

P3067 Bronchial carcinoma after lung transplantation, a sobering truth
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The prevalence and mortality due to solid organ tumors after lung transplantation (LTX) steadily increases and we specifically investigated the development of primary bronchial carcinoma (BC) and its outcome after LTXs. Out of 470 L and heart-LTXs (Jan 2000 to Dec 2010), 12 patients (2.6%, 8 males) developed a BC at 37.8 ±24.3 m after LTX. They were transplanted at a mean age of 57.5 ±5.1 y; 8 for emphysema and 4 for IPF; 8/86 single LTX patients (9.3%, 2.5% for emphysema or fibrosis) developed a BC (p=0.021). At diagnosis, 4 patients were in stage I-II, whereas all others in stage III-IV. There were 11 NSCLC (6 adenoca) and 1 SCLC. Five patients were surgically treated, however, I had unforeseen N2 disease with pleural metastasis at surgery. All other patients (except 2 who died very soon after diagnosis) were treated with chemotherapy ± radiotherapy. The median survival after diagnosis was only 7.5 m, with an almost significant survival difference between patients with stage I-II and stage III-IV disease (p=0.052). The latter patients had a median survival of only 5.5 m versus 21.5 m for the lower stage BC patients (fig).
We conclude that BC especially of the native lung after SLTX is a significant problem and that the survival after diagnosis is very poor, although patients with stage I-II operable disease, tend to do better.

P3068
12 month follow-up of lung recipients with chronic allograft dysfunction treated with extracorporeal photopheresis (ECP)
Nadia Solani1, Valentina Conto1, Tiberio Oggionni1, Claudia Del Fante2, Cesare Perotti2, Gianluca Viarengo2, Monica Morosini1, Simona Miserere1, Federica Meloni1. 1Haematological Pneumological and Cardiovascular Sciences, Section of Pneumology, Foundation IRCCS San Matteo & University of Pavia, Pavia, Italy; 2Immunohaematology and Transfusion Service, Foundation IRCCS San Matteo, Pavia, Italy. A few studies suggest that extracorporeal Photopheresis (ECP) is effective in improving/stabilising graft function in chronic dysfunction of transplanted lung, in analogy to its well documented efficacy in graft versus host disease. At our institution ECP is routinely offered as rescue therapy in all macroside-resistant CAD patients. Twenty-two pts are currently undergoing monthly ECP treatment, 17 of which have reached a ≥12 month follow-up. The overall response (defined as a further graft function decline either in FVC or in FEV1 < 15% than basal) was 47% at 12 months (8/17 responders). Since ECP mechanism of action in this setting is not clearly defined frequencies of γIFN and IL17 peripheral producing cells, as well as the number of CD4+CD25highCD127dim Treg cells and plasma levels of several cytokines and chemokines (γIFN, IL6, IL10, IL17, MIP1α, TNFα, IP10, IL12) during treatment were assessed. We did not find any significant variation of cytokine plasma levels in the study groups. ECP unresponsive pts, however, showed an increase in IL17 (≥ 200 fold) and stable frequencies of γIFN producing cells during treatment, while responders had a decrease of γIFN (mean D=50%) and IL17 (mean D=33%) clones after 9 ECP cycles. Moreover, as previously reported an increase in peripheral CD4+CD25highCD127dim Treg cells was confirmed in ECP responders (2.5±0.8 versus 2.0±0.8 prior ECP treatment). In conclusion, 12 month ECP response in CAD is 47%, and response seems to correlate with a stabilization in the frequency of γIFN, IL17 peripheral clones as well as an increase in peripheral Treg cells.

P3069
Inhaled tobramycin for the prevention of airway stenosis after lung transplantation: A pilot study
Lomy Varmaz1, Ashish Shab1, Christian Merlo1, Jon Orens1, David Feller-Kopman1, John McDyer1. 1Pulmonary and Critical Care, The Johns Hopkins University, Baltimore, MD, United States; 2Cardiac Surgery, The Johns Hopkins University, Baltimore, MD, United States. Purpose: Airway stenosis post lung transplantation (LT) continues to be a significant problem with anastomotic structuring occurring in up to 40% of cases. Despite this data, there is a gap in the literature pertaining to preventative therapies. In this pilot study we examined if inhaled Tobramycin (TOBI) in the postoperative period will decrease the incidence of post transplant airway stenosis. Methods and Materials: All LT performed between 5/05 and 5/10 at The Johns Hopkins Hospital by a single surgeon were reviewed retrospectively. Using this cohort, patients with and without airway complications were matched for age, gender, diagnosis lead to transplant and use of inhaled TOBI in the immediate postoperative period. Patients in the treatment arm received TOBI (≥80mg) for the first 7 days post transplant. Results: 98 patients underwent LT (86 bilateral, 7 left, 5 right). TOBI was administered to 22 (22.4%) of the 98 patients, 35 (35.7%) developed airway stenosis at a median of 16 weeks (range 1 to 164 weeks following surgery).

Of the 22 patients who received inhaled TOBI 31.8% developed airway complications, 68% of the patients in this cohort who did not receive TOBI developed airway stenosis (p<0.034).

Conclusions: The use of TOBI appears to show a decrease in the development of post operative stenosis in this cohort. Prospective, randomized studies are needed to determine the full efficacy of this therapy.

P3070
Does single lung transplantation actually alleviate the donor pool?
Anne Olland1, Nicola Santelmo1, Pierre-Emmanuel Falcoz2, Christelle Cantrelle1, Richard Dorent2, Gilbert Massard1. 1Lang Transplantation Group, University Hospital Strasbourg, Strasbourg, France; 2Department of Thoracic Surgery & Diseases of the Esophagus, University Hospital Marseille, Marseille, France. Objective: Access to lung transplantation is restricted owing to lack of donor organs. Single lung transplantation hypothetically increases the pool of lung grafts as two recipients can be treated with one donor. In this retrospective study, we evaluated how often both organs were used for single lung transplants. If only one lung was transplanted, we analysed cause of no-use of the opposite lung.

Method: On the registry run by the “Agence de biomedecine”, we reviewed all single lung transplantsations performed in France from 1998 to 2008. Causes of refusal were recorded as follows: second lung not offered by coordinators, lack of blood-group matched single lung recipient, lack of logistic support, size inadequacy regarding the recipient. We compared cause of refusal to the quality of the grafts. Definition of ideal donor included the following: age under 55 years, ventilated less than 48 hours, clear tracheal secretions, PaO2 over 300 mmHg (FiO2 100%, PEEP ScH 60s), clear chest radiograph.

Results: Lung harvest from 297 donors led to 387 single lung transplants: both lungs were used for 2 different recipients in 90 donors (180 recipients). In 207 donors, only one lung was transplanted. In 115 donors, the opposite lung was deemed unsuitable for dissymmetrical quality reasons. In the remaining 92 donors, both lungs were ideal in 34%, and acceptable in 66%. Reasons for no-use were: not offered by the coordinator in 23%, lack of blood-group matched single lung recipient in 19%, size inadequacy in 20%, team logistics in 10% of cases and miscellaneous reasons in 28%.

Conclusion: Communication on organ sharing might increase the number of available donor organs, thus reducing the death rate on waiting list.

P3071
Recipient dependent factors for outcome in a twinned single lung transplantation model
Anne Olland1, Nicola Santelmo1, Bastien Orsini1, Pierre-Emmanuel Falcoz2, Christelle Cantrelle1, Richard Dorent2, Pascal Thomas2, Gilbert Massard1. 1Lang Transplantation Group, University Hospital Strasbourg, Strasbourg, France; 2Department of Thoracic Surgery & Diseases of the Esophagus, University Hospital Marseille, Marseille, France. Objective: Immediate outcome of lung transplantation will depend on graft quality, surgical conditions and recipient factors. Twinned single lung transplantation is defined as two recipients being treated with lung grafts from the same donor. Recipient dependent factors of outcome can be studied more accurately as graft quality is supposed equal for both recipients.

Methods: We reviewed all single-lung transplantation performed in France between 1998 and 2008. Complete data for the donors were retrieved from the database of the agence de biomedecine. Data concerning the recipient and follow-up after transplantation were retrieved by individually reviewing each medical record. Twinned were identified and compared. Outcome end-points were primary graft dysfunction (PGD) grade 3.

Results: A total of 387 single lung transplantations were performed in 10 French centers; 90 donors led to 180 twinned recipients. Surgical and medical follow-up did not differ between centers. All used grafts were of good and gender matching quality. There was no outcome difference between left and right transplantation. Thirty pairs opposed a fibrosis recipient to an emphysema twin: PGD was significantly higher (p<0.05) in fibrosis. In 28 pairs (31%) outcome was discordant for PGD: fibrosis was significantly more often involved compared to emphysema (p=0.04). Two pairs showed PGD in both recipients while 60 pairs were free of PGD.

Conclusion: Recipient’s prior respiratory disease is a major determinant of outcome. Fibrosis is associated with an increased risk for PGD grade 3. Twinned single lung transplantation could help building risk factor scores for lung transplantation.

P3072
Hyper expanded native lung treated with intra bronchial valves in single lung transplant recipients
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We report four single lung transplant patients, with hyperinflation of the native emphysematous lung, treated with bronchoscopic lung volume reduction using Spiration Intra Bronchial Valves (IBV®). Hyperinflation of the native lung is a common complication to single lung transplantation when treating emphysema. The hyperinflation can lead to compression of the graft and cause respiratory failure. The IBV®’s where used to block airflow in specific parts of the native lung.

Methods: We used a protocol consisting of a Kyston SPECT-scan to assess
which lung segments in the native lung had least function. The IBV®‘s were placed in the segment or sub-segment. Endpoints were changes in lung function test, 6-minutes-walk-test (6-MWT) and changes in the Krypton SPECT-scan at 3 months follow-up.

Results: Preoperative mean forced expiratory volume in 1 second (FEV1) was 0.62 l (Range 0.45-0.80 l), mean residual volume was 4.57 l (Range 4.01-5.73 l) and one patient was 189 m (Range 98-258 m). One patient reported marked improvement of dyspnoe and had a plausible change in lung function but a 6-MWT identical to the preoperative 6-MWT and no changes on Krypton SPECT-scan. The three other patients did not report any clinical changes and did not show any change in lung function. A patient had a marked increase in 6-MWT from 258 m to 360 m, but only a slight improvement on Krypton SPECT-scan. No complications were observed.

Conclusions: This report shows that bronchoscopic lung volume reduction of an emphysematous native lung in single lung transplants using IBV® is feasible and seems safe, although further experience is needed.

P3073 The role of a murine model of brain death for mechanistic studies on treatment for donor lung injury
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Introduction: Only 15-25% of brain death (BD) donors match the ideal donor criteria. BD is a severe form of type I hypotension. The mechanisms of BD-related lung injury are not fully understood and justify further research.

Materials and methods: Brain death in mice was induced by rapid inflation of a subdural balloon catheter. Animals were randomly divided into 4 groups (n=6 each): 2h sham (S2), 2h BD (BD2), 4h sham (S4), 4h BD (BD4). Heart rate (HR), mean arterial pressure (MAP) and cortical activity (EEG) were continuously monitored. At the end of the experiment, bronchoalveolar lavage (BAL) was performed and collected for histological analysis.

Results: In both BD groups, the reflex change was characterized by a rapid increase in MAP from induction (85 ± 6 mmHg vs. 26.0 ± 2.0 mmHg) to hypertensive peak (121.6 ± 7.3 mmHg vs. 50.6 ± 3.5 mmHg) with normalization of MAP 10 min after BD confirmation (88.6 ± 4 mmHg vs. 4.1 ± 1.7 mmHg). After BD, HR increased significantly (from 322.8 ± 16.8 bpm to 503.5 ± 26.8 bpm) and remained high during the rest of the experiment. In the sham groups, HR and MAP remained constant after balloon inflation. A higher number in BAL neutrophils were seen in [BD2] (28.6 ± 3.0%), [S2] (1.4 ± 1.1%) and [S4] (1.8 ± 1.6%). More neutrophilic infiltration, interstitial oedema and congestion were seen on histology in [BD2] (27.2 ± 2.7%) and [S2] (2.2 ± 1.3%) compared to [BD4] (12.2 ± 2.0%) and sham (0.0 ± 0.0%).

Conclusion: The creation of a BD model in mice to study lung injury was successful facilitating further mechanistic studies to attenuate lung injury at a morphological level using knock-out animals. A 4-hour period after BD is needed to observe significant inflammatory changes in BAL and lung histology.

P3074 Determinant factors for bronchial ischemia after lung transplantation
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Objective: Bronchial ischemia is a frequent problem encountered after lung transplantation. The resulting stenosis will delay functional recovery of the graft, reduce effective secretions drainage and lead to repetitive invasive endoscopy sessions needed for donor lung injury.

Methods: Among 387 single lung-transplantations, 106 patients had an ischemic bronchus. Animals were randomly divided into 4 groups (n=6 each): 2h sham (S2), 2h BD (BD2), 4h sham (S4), 4h BD (BD4). Heart rate (HR), mean arterial pressure (MAP) and cortical activity (EEG) were continuously monitored. At the end of the experiment, bronchoalveolar lavage (BAL) was performed and collected for histological analysis.

Results: In both BD groups, the reflex change was characterized by a rapid increase in MAP from induction (85 ± 6 mmHg vs. 26.0 ± 2.0 mmHg) to hypertensive peak (121.6 ± 7.3 mmHg vs. 50.6 ± 3.5 mmHg) with normalization of MAP 10 min after BD confirmation (88.6 ± 4 mmHg vs. 4.1 ± 1.7 mmHg). After BD, HR increased significantly (from 322.8 ± 16.8 bpm to 503.5 ± 26.8 bpm) and remained high during the rest of the experiment. In the sham groups, HR and MAP remained constant after balloon inflation. A higher number in BAL neutrophils were seen in [BD2] (28.6 ± 3.0%), [S2] (1.4 ± 1.1%) and [S4] (1.8 ± 1.6%). More neutrophilic infiltration, interstitial oedema and congestion were seen on histology in [BD2] (27.2 ± 2.7%) and [S2] (2.2 ± 1.3%) compared to [BD4] (12.2 ± 2.0%) and sham (0.0 ± 0.0%).

Conclusion: The creation of a BD model in mice to study lung injury was successful facilitating further mechanistic studies to attenuate lung injury at a morphological level using knock-out animals. A 4-hour period after BD is needed to observe significant inflammatory changes in BAL and lung histology.

P3075 Transbronchial lung biopsy after lung transplantation: Different A and B scores in different lobes
Peter Jakusch1, Axel Scheel1, Silvana Geleff2, Gerhard Dekan2

Results: A-biopsies with identical grades were seen in 252 of 298 (85%) specimens, a single-grade difference was noted in 43 of 298 (14%) probes. Three cases demonstrated two grade differences on biopsies taken from two separate lobes (higher grade in the lower lobe).

Conclusions: If limitations on the site for transbronchial biopsy exist, biopsies of the lower lobes appear more informative.

P3076 Long term outcome of lung recipients bridged with extracorporeal devices
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Recent evolution in extracorporeal supports allowing bridging to lung or heart and lung transplant in a consistent number of cases. However, long term results of these patients have been rarely reported. Aim of present study was to analyse early and long term results in a small n° of lung transplant recipients (LTR) which have been bridged with extracorporeal devices. Nine patients (8 males, mean age 39.5 years) have been transplanted (4SL, 2DL, 3HL). Transplant indications were: UIP (5), PAH (3), bronchiectasis (1). This latter patient (HL) died 3 days after surgery of MOF due to sepsia. 8 patients are alive at a mean of 16 months (min 3.5 - max 33).

Early complications included: Re-op for bleeding (1/8) CRYMINE (5/8), slow weaning with need of tracheotomy, Pericentroxy (7/8), graft infections (1/8), acute renal failure with need for renal replacement therapy in ICU (4/8). Medium long term complications included: AR=2 (2/8), CMV pneumo-nia/reactivation (4/8), Thrombosis (2/8), EBV related haemophagocytic syndrome (1/8); colonization with P. aeruginosa or A. fumigatus (2/8) end stage renal failure (RF) (1/8). Two out of 8 patients had an increased in anti HLA class I or II antibodies titre (>10%). At last follow up visit graft function was >90% of best in 6/8 patient while patients 2BOS-0. Mean GFR (MDRD formula) was 54nl/min range between 15 and 85.

Conclusion: long term survival of ECMO bridged LTR is satisfactory, with good graft function. However, early post transplant period is almost invariably complicated by CRYMINE and slow weaning, and a high degree of chronic RF is detected.

P3077 Management of total cicatricial stenoses of a trachea by replacement of trachea produced by technologies of the regenerative medicine
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Background: The use of transbronchial lung biopsy to monitor and diagnose acute cellular rejection in the lung allograft is a routine procedure in most TX centres. There is consensus in the minimum number of specimens being obtained and mostly biopsies are taken from more than one lobe. Are there differences in rejection grading at different anatomic sites? We examined our clinical data from the last 10 years to investigate the distribution of rejection grading of the lung allograft monitored by TBLB.

Methods: A retrospective study was done reviewing the pathology files and slides of TBLB performed on lung allograft recipients. In 99 patients 298 transbronchial biopsies were taken from more than one lobe and were histologically graded following ISHLT guidelines. Corresponding B scores were just available in 207 investigated cases.

Results: A-biopsies with identical grades were seen in 252 of 298 (85%) specimens, a single-grade difference was noted in 43 of 298 (14%) probes. Three cases demonstrated two grade differences on biopsies taken from two separate lobes (higher grade in the lower lobe).

Conclusions: If limitations on the site for transbronchial biopsy exist, biopsies of the lower lobes appear more informative.
eration which is carried out with the individual centers, except for that after this procedure the patient should receive for life immunosuppression.

**Aims:** To study an opportunity of use of a trachea received by methods of regenerative medicine for treatment of patients with total tracheal lesion.

**Materials and methods:** The female 25 y.o. with complaints to constant difficulty breath, weakness, cough. CT and endoscopy have revealed a picture of total cicatricial lesion of a trachea. Each 2-3 days patient required in bouginage of trachea.

Indications to transplantation of a trachea are exposed. It was used cadaveric decellularized trachea prepared by techniques of regenerative medicine. The total resection of a trachea was executed. Into a wall of a donor trachea are entered stem cells of the patient and factors of growth of cells. Anastomosis with own trachea were performed by vicryl 3/0. From abdomen the part of the big omentum was moved by which the donor trachea with anastomosis was completely covered.

**Results:** The early postoperative period was accompanied by the moderate respiratory insufficiency, hemoptysis, expressed bronchial secretion. By the moment of discharge breath was free, a gleam of trachea on all extent was satisfactory. Patient does not require immunosupression.

**Conclusions:** Regenerative medicine for preparation of the trachea with the aim of transplantation can cardinally change philosophy of thoracic surgery particularly in management of patients with total incurable stenoses of a trachea.

**P3078**

**Benefit of pulmonary rehabilitation in candidates for lung transplantation**

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**Background:** The benefit of pulmonary rehabilitation (PR) before lung transplantation (LTx) is unknown. Candidates for LTx reveal drawbacks due to chronic pulmonary diseases (COPD, interstitial lung disease (ILD), cystic fibrosis (CF), pulmonary hypertension (PH), bronchiolitis obliterans syndrome post LTx (BOS), others).

**Hypothesis:** An inpatient 3-week PR improves functional status (forced expiratory volume in 1 sec. (FEV1), vital capacity (VC), 6 min walk distance (6-MWD), peak work load in bicycle exercise testing (PWL)), activities in daily life (ADL: Barthel’s Index) and health related quality of life (HRQOL: Short Form (SF) 36 questionnaire and Hospital Anxiety and Depression Scale (HADS)) in candidates awaiting LTx.

**Methods:** 168 patients (m/f: 74/94, age 49.4±12.0 yrs.) before LTX (COPD n = 68, ILD n = 39, CF n = 27, PH n = 3, BOS n = 18, other n = 13) attended a 3 week inpatient PR. Functional status, ADL and HRQOL (SF 36, HADS) were assessed at admission and completion of PR.

**Results** (mean ± SD): 6-MWD (250±118 to 284±118 m, p < 0.001), PWL (38±15 to 41±16 Watt, p < 0.001), ADL (96±6 to 98±5, p < 0.001) and HRQOL (all SF 36 domains and HADS (p < 0.02) but SF36 “bodily pain” (p = 0.1)) improved significantly. FEV1 (30±16 to 30±16) and VC (53±19 to 53±21)% predicted) kept unchanged. Improvement in 6-MWD, PWL and ADL was regardless of causative pulmonary disease (ANOVA p > 0.26).

**Conclusion:** A 3-week inpatient PR has a remarkable benefit in patients with end stage pulmonary disease awaiting LTx. Functional status and HRQOL improve significantly. Inpatient PR must be regarded as part of best practice management to optimize physical condition and mental health in candidates for LTx.

**P3079**

**WITHDRAWN**