2.075-17.734) p=0.001], age [OR=0.93(IC95%, 0.87-0.994) p=0.032]. inhaled-beta2-adrenérgic [OR=0.101 (IC95%, 0.017-0.589) p=0.021] SGRQ-Impact scale [OR=1.064 (IC95%, 1.014-1.117) p=0.012], SGRQ-Activity scale [OR=0.96 (IC95%, 0.924-0.997) p=0.034]. **CONCLUSIONS:** The performed intervention improves adherence in patients with COPD.

PRS5

ANALYSIS OF EFFICACY AND SAFETY OF DORNASE ALFA IN THE TREATMENT OF CYSTIC FIBROSIS

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OBJECTIVES: To assess efficacy and safety of dornase alfa in the treatment of cystic fibrosis (CF) in children and adults. **METHODS:** Systematic review of Medline, EmBase, CENTRAL and clinicaltrials.gov databases was conducted. The references from relevant articles and abstracts from conferences were also examined to identify any additional studies. Each full-text article was critically appraised with use of the Jadad Scale. Clinical practice and CF treatment procedures in Poland were consulted with clinical experts. Placebo and treatment without dornase were identified as potential comparators. Changes in FEV_1, FVC, and $FEF_{25\%-75\%}$, exacerbation of respiratory symptoms, body mass change, use of drugs, number of days spent at home due to CF, hospitalizations (number and length), ambulatory visits, quality of life, mortality rate, treatment acceptance by patient and safety were assessed and compared based on the review results. **RESULTS:** Among 294 reports found, 17 publications concerning 12 randomized clinical trials were included in the analysis. The meta-analysis of available data regarding changes in FEV_1 after 1, 3, 6 months and 1 and 2 years showed better results with dornase therapy. The use of dornase also improved pulmonary function measured in FVC. Exacerbations of respiratory symptoms were less frequent (by 20% when dornase alpha was administered once daily and by 34% when administered twice daily), which resulted in fewer hospitalizations. Patients treated with dornase required less frequent courses of intravenous antibiotics and spent fewer days at home due to CF. Safety analysis showed a higher risk of rash, voice alteration and pharyngitis with dornase. Mortality was similar among groups. **CONCLUSIONS:** Dornase alfa is an effective (improves respiratory function, reduces CF symptoms, dyspnea and respiratory system exacerbations) and safe therapeutic option.

PRS6

MORTALITY TRENDS IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE: DATA FROM A STRUCTURED LITERATURE REVIEW

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OBJECTIVES: Chronic obstructive pulmonary disease (COPD) is a chronic respiratory disease characterised by a decline in lung function over time. The objectives of this literature review were to quantify COPD burden worldwide in terms of incidence, prevalence, mortality and identify trends in these data over time, in eleven countries: Australia, Canada, France, Germany, Italy, Japan, The Netherlands, Spain, Sweden, the UK, and the United States. Here, we focus on mortality in COPD. **METHODS:** A structured literature search (January 2000-September 2011) of PubMed, and EMBASE was conducted to identify English-language articles reporting prevalence, incidence and/or mortality of COPD. Of 2,838 articles identified, 299 full-text articles were reviewed, and data extracted from 133 publications. **RESULTS:** Mortality data were extracted from 58 articles (numbers include 7 multi-country studies that provide data for specific countries): Australia (n=6); Canada (n=6); France (n=3); Germany (n=1); Italy (n=2); Japan (n=2); The Netherlands (n=4); Spain (n=5); Sweden (n=7); UK (n=4); USA (n=30). In Sweden and the UK, patients with COPD were reported to have a mortality rate almost double that of the general population, and COPD mortality was two to three times greater in females than males in the The Netherlands, Italy and Germany. More recently, one retrospective US study conducted in 2000-2005, reported an increase in mortality rate in women (54.4 to 56.0 per 100,000) but a decrease in men (83.8 to 77.3 per 100,000). **CONCLUSIONS:** This is the first structured literature review to compile data on COPD mortality. Although COPD mortality rates have increased over time, more recently rates have declined, indicating improvements in COPD management. However, the mortality rate in women with COPD has increased, while it has decreased in men. This can probably be explained by the relative differences in smoking patterns between men and women.

PRS7

EFFICACY AND SAFETY OF SILDENAFIL ABOVE 60 MG DAILY IN PULMONARY ARTERIAL HYPERTENSION TREATMENT - A SYSTEMATIC LITERATURE REVIEW

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OBJECTIVES: Maximum sildenafil dose dispensed by the Brazilian public healthcare system for pulmonary arterial hypertension (PAH) treatment is 60 mg daily. According to clinical practice, higher doses have been prescribed by most physicians. This systematic review aims to evaluate sildenafil efficacy and safety in doses above 60mg daily in PAH treatment. **METHODS:** A systematic review was conducted in May 2011 through Cochrane Collaboration, Medline, EMBASE, and Lilacs databases. Inclusion criteria's considered were meta-analysis, systematic reviews, randomized clinical trials, and observational studies using sildenafil above 60mg for any etiology PAH on WHO/NYHA functional classes II-IV patients over 12 years old. The exclusion criteria's were sample size below 10. Only sildenafil as monotherapy was considered. Outcome measures were distance walked in six minutes (6MWD), functional classification, and satisfactory adverse events profile, defined as similar to doses up to 60mg daily. Two independent reviewers selected articles qualitatively rated according to Oxford Center for Evidence-Based Medicine classification. **RESULTS:** Of 337 titles found, 45 articles evaluated and 16 selected (1 meta-analysis, 5 randomized trials and 10 observational studies). All but one demonstrated the benefit of sildenafil higher doses in 6MWD with satisfactory safety profile . In a 3-year follow up (SUPER 2), 46% of patients increased 6MWD and 60% maintained or improved their functional classification with 240mg daily compared to lower doses baseline. Two studies evaluated optimal sildenafil dose. Chocklingman (2005) found that 100mg daily improved 6MWD (234±44 vs. 377±128 meters, p=0.001) and WHO/NYHA class (3.8±0.4 vs. 2.4±0.5, p=0.002), from baseline. Garg (2007) tested from 37.5mg to 300mg daily and 6MWD increased from 247.4±74.4 to 366.3±93.8 meters (p=0.0001). Optimal dose appeared to be 150mg daily, with some additional benefit by increasing up to 225mg. **CONCLUSIONS:** Literature review supports that sildenafil in doses above 60mg daily is safe and may provide additional benefit to patients with PAH functional classes II-IV.

PRS8

PREDICTED SURVIVAL FOR NORTH AMERICAN PATIENTS WITH CYSTIC FIBROSIS ADJUSTED FOR COHORT SPECIFIC COVARIATES

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BACKGROUND: Cystic Fibrosis (CF), the most common hereditary disease in Americans of European descent, affects 30,000 children and adults in the US. An important measure of the effectiveness of a new medicine for CF is its ability to extend survival past the result expected with the current standard-of-care. However, predicting what the natural median survival is for a cohort is not simple. Patient cohorts that have lived long enough that the median survival can be directly observed are not relevant to people born in the past twenty years as the standard-of-care has advanced significantly. On the other hand, with the resulting improvements in survival, post-1990 cohorts still have greater than 90% survival and it will take several decades before the median survival can be directly observed. **OBJECTIVES:** To estimate median survival for average North American patients with CF as a function of covariates, including age, gender, weight-for-age z-score, infection status and lung function. **METHODS:** A review of survival curves published by Canadian and US CF registries yielded 19 survival curves representing different birth cohorts. A Weibull function was fitted to the data. Using odds ratios the average survival curve could be adjusted to accommodate cohorts with non-average characteristics. **RESULTS:** A closed form equation was developed that estimates the survival function of cohorts with different clinical and demographic characteristics. It predicts, on average, patients with CF born today may live past forty years. **CONCLUSIONS:** The estimated survival function agreed well with historic data. By translating clinical results into survival, we believe the model can aid in evaluation of the value of new therapies. Supported by Vertex Pharmaceuticals Incorporated.

Respiratory-Related Disorders – Cost Studies

PRS9

BUDGET IMPACT ANALYSIS OF IMMUNOTHERAPY IN PATIENTS WITH GRASS POLLEN ALLERGIC RHINITIS

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OBJECTIVES: A budget impact analysis was conducted to estimate the impact of Oralair® on a market of selected number of relevant grass allergens. **METHODS:** In this analysis the hypothetical market for grass allergens consisted of those compounds for which efficacy data of comparable high-quality evidence have been published. These compounds were Oralair®, Grazax® and ALK Depot SQ®. Actual German market data from 2008-2010 served as a basis for future estimates of market share development. Future predictions were made on market uptake and market dynamics (i.e. which drug increases their market share at the expense of another drug). German drug acquisition costs were taken from the Lauer-Taxe; average annual treatment related costs have been extracted from a supportive cost-effectiveness analysis. The analysis perspective was that of the German Statutory Health insurance (SHI). Three scenario analyses were conducted over a 5-year time horizon. **RESULTS:** The total market budget in 2010 for these 3 therapies was estimated at €48,209,211. The budget decreased with €7,049,756 over a 5-year period in the first scenario, when the annual uptake of Oralair® was set at +5% with market dynamics of 10%/90% (Grazax®/ ALK Depot SQ®). These savings represent 2.9% of the total cumulative reference budget varying from 1.0% in 2011 to 4.8% in 2015. In the second scenario market uptake for Oralair® was varied from +2% to +6% annually. Accordingly, the budget was reduced by €2,819,902 to €8,549,707. In the final scenario, shifting market dynamics from 0%/100% to 20%/80% (Grazax®/ ALK Depot SQ®) showed a reduction of €5,389,170 to €8,710,342. **CONCLUSIONS:** In all scenarios, an increase of Oralair's® market share at the expense of Grazax® and ALK Depot SQ® was estimated to result in a decrease of the budget varying from €2,819,902 to €8,710,342 over 5 years. This results in Oralair® being a budget-saving treatment option.

PRS10

A COMPARATIVE HEALTH ECONOMIC EVALUATION OF TWO TREATMENTS FOR GRASS POLLEN INDUCED ALLERGIC RHINOCONJUNCTIVITIS

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