OBJECTIVES: According to international guidelines on the management of asthma (GINA), step down to the lowest dose of treatment that maintains control should be considered for controlled patients. The aim of this analysis was to estimate the costs and health outcomes associated with step down of controlled patients on high dose fluticasone/salmeterol (FP/S 1000/100μg daily) dry powder to either extrafine beclometasone/formoterol (BDP/F 400/24μg) pMDI or medium dose FP/S (500/100μg) dry powder in the UK setting. **METHODS:** A patient-level simulation Markov model was defined to perform the simulation of a cohort of patients along three comparative arms (FP/S 1000/100, FP/S 500/100, BDP/F 400/24). Transition probabilities and healthcare resources costs were derived from patient-level data of a recent multinational clinical trial comparing the three treatments. Direct costs and health state utilities were sourced from published literature and UK current prices and tariffs. The analysis was conducted from the UK National Healthcare System perspective, over a six–month time horizon. Probabilistic sensitivity analysis was conducted. **RESULTS:** The analysis showed an ICER (Incremental Cost-Effectiveness Ratio) of 57,300 GBP/QALY (Quality Adjusted Life Year) associated with high dose FP/S 1000/100μg versus extrafine BDP/F 400/24μg and an ICER of approximately 86,300 GBP/QALY associated with medium dose FP/S 500/100μg versus BDP/F 400/24μg. **CONCLUSIONS:** International guidelines recommend that when asthma control is achieved and stabilized, treatment can be stepped down to the lowest possible dose maintaining control. This analysis shows that maintaining controlled patients on high dose FP/S is not a cost-effective strategy. Extrafine BDP/F 400/24μg daily can be considered to be a cost-effective option in the UK to maintain control of asthmatic patients stepped down from high dose FP/S 1000/100μg daily.

PRS37

THE IMPACT OF REGIONAL DATA ON COST-EFFECTIVENESS RESULTS OF SALMETEROL/
FLUTICASONE PROPIONATE (SAL/FP) + FENOTEROL/IPRATROPIUM BROMIDE (FEN/IB) VERSUS FEN/IB ONLY IN COPD TREATMENT

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OBJECTIVES: In order to assess cost-effectiveness of SAL/FP + Fen/IB versus Fen/IB only in chronic obstructive pulmonary disease (COPD) treatment in different Russian regions we developed PHACTOR pharmacoeconomic model. **METHODS:** Our model was based on the constant disease-specific data such as number of COPD exacerbations and health care resource utilization data obtained from PHACTOR (multicenter observational research of severe and very severe COPD). The methodology of PHACTOR research was published in 13th ISPOR Annual European Congress (Research Abstract #PRS31). The following region-specific input data were taken into account: drug prices (from the List of Vital and Essential Pharmaceuticals), medical tariffs (from regional government regulations), gross domestic product (GDP) per capita and average salary (from statistics service). SAL/FP + Fen/IB was compared with Fen/IB only. ICERs (cost per COPD exacerbation avoided) were calculated for all 83 Russian regions. Regional willingness to pay (WTP) was assumed as three regional GDP per capita. **RESULTS:** Average yearly drug costs varied from 29,539 RUR (Belgorod) to 35,264 RUR (Yakutia) for SAL/FP + Fen/IB treatment and from 7,877 RUR (Altai Republic) to 9,442 RUR (Yakutia) for Fen/IB treatment. Estimated yearly costs of COPD exacerbation treatment significantly varied from 6,552 RUR (Evreyskaya AO) to 63,053 RUR (Chukotka) for SAL/FP + Fen/IB treatment and from 12,592 RUR (Evreyskaya AO) to 109,019 RUR (Chukotka) for Fen/IB treatment. SAL/FP + Fen/IB treatment was cost-saving (dominating) in 9 regions and cost-effective in 74 regions (ICER < WTP; in this regions ICERs were from 74 RUR to 4,605 RUR per COPD exacerbation avoided). **CONCLUSIONS:** This analysis demonstrated that regional data had the biggest impact on final cost-effectiveness results. In general case SAL/FP + Fen/IB treatment was cost-effective in most Russian regions and cost-saving in some regions.

PRS38

THE COST-EFFECTIVENESS OF ROFLUMILAST FOR COPD IN SWEDEN

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OBJECTIVES: Daxas (roflumilast) is a new PDE4-inhibitor which targets the underlying inflammation in COPD. It is indicated for treating severe and very severe COPD associated with chronic bronchitis and a history of frequent exacerbations. The objective was to assess the incremental cost-effectiveness of using roflumilast in a Swedish health care setting.The clinical trials for roflumilast have shown that it consistently reduces exacerbations by approx. 20% and that it also provides a lung function benefit of between 46-81 mL in addition to long-acting bronchodilators. **METHODS:** A Markov model with a life time time horizon, one month cycles and a discount rate of 3% was constructed using Treeage and an Excel interface. The model uses comparator treatments relevant to Swedish guidelines including long acting β-2 agonist (LABA), inhaled corticosteroids (ICS) and long-acting muscarinic antagonists(LAMA). All input parameters on costs and epidemiology were from Swedish sources. Clinical effectiveness was based on results from clinical trials along with indirect comparisons to address other comparators relevant to the reimbursement authorities. The analysis had a societal perspective and included lost productivity using a human capital approach. Outcomes were measured in QALYs. Uncertainty was addressed both through probabilistic sensitivity analysis and one-way analyses of central variables. **RESULTS:** Treatment with roflumilast (ROFL) as an add-on to LABA resulted in an incremental gain of 0.35 QALY. From a societal perspective the ICER for LABA+ROFLU versus LABA was €18,000 per QALY. The probability that LABA+ROFLU was cost-effective using a €50 000 threshold was 97%. The ICER for LABA+ROFLU vs LABA+ICS was €14,500. ROFLU+LAMA+LABA+ICS vs LAMA+LABA+ICS was €19,000. **CONCLUSIONS:** The ICERs calculated were all well below commonly accepted willingness to pay for a QALY in Sweden for all different comparator scenarios. The results were stable when central variables were varied. Roflumilast is a cost-effective treatment for severe and very severe COPD.

PRS39

COST-EFFECTIVENESS OF ROFLUMILAST IN COMBINATION WITH BRONCHODILATOR THERAPIES IN PATIENTS WITH SEVERE AND VERY SEVERE COPD IN SWITZERLAND

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OBJECTIVES: Chronic obstructive pulmonary disease (COPD) represents a considerable burden on patients and health systems. Frequent exacerbations in patients with COPD result in high healthcare costs. Roflumilast, an oral, selective phosphodiesterase-4 inhibitor, has been shown to reduce exacerbation rates and improve lung function in patients with severe COPD. The objective of this analysis is to estimate the long-term cost and outcomes of roflumilast added to several bronchodilator regimens in management of severe COPD from a health payer perspective in Switzerland. **METHODS:** A Markov cohort model was constructed to simulate the progression of disease, mortality, and exacerbation rates in patients with COPD. Transition probabilities between severe and very severe COPD were determined from the published literature. Background mortality was expressed through the risk of death in the general population and standardised mortality ratios (SMR); hospital mortality was based on the published literature. A cost-effectiveness analysis was conducted for roflumilast as add-on treatment to LAMA, LABA/ICS and LAMA+LABA/ICS, with the relative ratios of exacerbations rates derived from a recently published multiple-treatment-comparison. Direct costs were sourced from published Swiss data; utilities and disutilities of exacerbations were based on published data. Analysis was conducted from the payer perspective in Switzerland, for a lifetime horizon, with costs and outcomes discounted at 2.5% pa. A range of sensitivity analyses were conducted. **RESULTS:** The added quality-adjusted life years (QALY) and exacerbations avoided were: (0.275 and 2.56); (0.289 and 2.69); and (0.278 and 2.59) for roflumilast added to LAMA, LABA/ICS, and LAMA+LABA/ICS respectively. The incremental cost-effectiveness ratios (ICER) were CHF 18,512 per QALY in LAMA+roflumilast vs. LAMA, CHF 17,083 per QALY in LABA/ICS+roflumilast vs. LABA/ICS, and CHF 19,470 per QALY in LAMA+LABA/ICS+roflumilast vs. LAMA+LABA/ICS. **CONCLUSIONS:** For patients with severe COPD who continue to exacerbate in clinical practice in Switzerland roflumilast can be a cost-effective treatment option.

PRS40

COST-UTILITY OF FLUTICASONE COMPARED WITH BECLOMETHASONE AND BUDESONID IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) IN POLAND

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OBJECTIVES: To evaluate cost-utility of fluticasone compared with beclomethasone and budesonide in COPD treatment in Poland. **METHODS:** A discreet event simulation (DES) model was used to estimate utilities and costs of treatment (medicines, standard hospitalization, ambulatory visit cost for patients with COPD) on fluticasone therapy in comparison to beclometasone and budesonide. Analysis was performed from public payer's perspective with a time horizon of 10 years. Measures of medical effects of the therapies were obtained from a systematic review of RCTs. The range of possible outcomes in the model included: exacerbation, death, FEV_1. Based on the systematic review fluticasone is more effective than beclomethasone and budesonide in terms of FEV_1 improvement. Differences in costs and effects are presented per individual patient, described as statistically significant (SS) or non-significant (NS) and discounted at 5% and 3.5% respectively. Probabilistic sensitivity analysis was performed to estimate the probability that fluticasone is cost-effective in Polish conditions (threshold about 105,000 PLN/QALY). **RESULTS:** The QALY difference between fluticasone and beclomethasone was 0.136 QALY (SS), and the cost difference was 4544 PLN (NS). In deterministic analysis incremental cost per QALY for fluticasone compared with beclometasone was 33,333 PLN. The probability of fluticasone being cost-effective was 88.1%. The QALY difference between fluticasone and budesonide in 10 years perspective was 0.071 (NS). The cost difference was 9,027 PLN (SS). In deterministic analysis incremental cost per QALY for fluticasone compared with budesonide was 127,190 PLN and exceeded the threshold. There was 44.9% chance that the fluticasone therapy was cost-effective in comparison with budesonide therapy. **CONCLUSIONS:** Fluticasone therapy is more effective than beclomethasone (SS) and budesonide (NS). It offers to patients with COPD an additional, pay-off therapeutic option.

PRS41

COST-EFFECTIVENESS ANALYSIS OF IMMUNOTHERAPY IN PATIENTS WITH GRASS POLLEN ALLERGIC RHINITIS

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