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 asthma patients. The aim of the study was to simulate costs and health outcomes associated with step down of controlled patients on high dose fluticasone/salmeterol (FS/500/100 µg) daily dry powder to either extrafine beclometasone/formoterol (BDFP/400/24 µg) pMDI or medium dose FS/500/100 µg BDP/F 400/24 µg. Transition probabilities and healthcare resources costs were derived from patient-level data of a real-world multinational clinical trial performed in 6 regions. 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 Health Care System perspective, over a six-month time horizon. Probabilistic sensitivity analysis was performed to address budget impact uncertainty. The analysis was conducted using an ICER (Incremental Cost-Effectiveness Ratio) of 57,300 GBP/QALY (Quality Adjusted Life Year) associated with high dose FS/500/100 µg versus extrafine BDFP/400/24 µg and an ICER of approximately 86,300 GBP/QALY associated with medium dose FS/500/100 µg versus general 0.05 µg/kg of roflumilast in COPD, the following regional-specific input parameters 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/F versus Fen/IB treatment was considered a cost-effective option in the UK to maintain control of asthma patients stepped down from high dose FS/500/100 µg daily.

CONCLUSIONS: From a societal perspective the ICER for LABA + ROFL versus LABA was €18,000 per QALY. The probability that LABA + ROFL was cost-effective using a €50,000 threshold was 99%. The ICER for LABA + ROFL vs LABA + ICS was €14,500. ROFL + 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.