

## PP48 Cost-Effectiveness Of Mepolizumab In Children And Adolescents With Refractory Severe Eosinophilic Asthma In Brazil

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**Introduction:** Asthma affects individuals of all ages and is the most common chronic disease among children. The Brazilian Unified Health System (SUS) reimburses the use of mepolizumab as an additional maintenance treatment for severe eosinophilic asthma in adults. This study aimed to evaluate the cost-effectiveness of expanding the reimbursement of mepolizumab to patients aged six years and older.

**Methods:** The model included patients aged six years and older refractory to inhaled corticosteroid (ICS) plus long-acting beta-agonist (LABA) treatment. Baseline characteristics and outcomes were based on clinical trials and national hospitalization data. A Markov model with monthly cycles considered the health states without exacerbation, with exacerbation (including the need for oral steroids, emergency room admission, or hospitalization), and death. Direct medical costs (rate: USD1=BRL4.93) associated with all treatments were estimated from public health reimbursement sources. Quality-adjusted life years (QALY) was the primary outcome. Deterministic (Tornado) and probabilistic (Monte Carlo simulations) sensitivity analyses were conducted using Microsoft Excel.

**Results:** Considering the current mepolizumab price (USD964.49) reimbursed by the Ministry of Health (MOH), the incremental cost-effectiveness ratio (ICER) was USD137,384.92/QALY (95% confidence interval: USD92,625.64, USD208,542.44), exceeding the USD24,333.86 threshold proposed by the National Committee for Health Technology Incorporation (Conitec). Using the average price from local public purchases (USD417.74), the ICER was USD96,673.51/QALY. Considering the past proposed discount from the manufacturer (USD390.93) and dose fractionation in children up to 12 years, the ICER was estimated in USD50,574.06/QALY. The most impactful parameters were the utility without exacerbation, mepolizumab cost, and relative reduction in exacerbation rate.

**Conclusions:** Considering current reimbursement prices, mepolizumab use in children and adolescents with refractory severe eosinophilic asthma is not cost effective in Brazil. Alternative scenarios with price discounts and dose fractionation may alter these conclusions.

## PP49 Prescribing Trends And Economic Impact Of Somatostatin Analogues In Acromegaly: A Threat To Brazil's Public Health System Sustainability

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**Introduction:** First-generation somatostatin analogues (SSA) are indicated as a first-line medical treatment for acromegaly in patients with persistent disease after surgery or who are not eligible for surgery. These drugs are the largest contributor to the direct medical cost of acromegaly management worldwide. We analyze the patterns of prescription and costs of SSA for the treatment of acromegaly in Brazil.

**Methods:** The first-generation SSA, octreotide LAR (OCT-LAR) and lanreotide autogel (LAN-ATG), are available in Brazil to treat acromegaly through the Specialized Component of Pharmaceutical Assistance policy. The public records of the nationwide database (DATASUS) were accessed to identify the drug use patterns during the year 2022. The current values of the drug acquisition costs of each medication in 2022 were consulted at the national prices database (BPS). Results were converted in purchase power parity (PPP) dollars according to the World Bank rates.

**Results:** The acquisition cost of each octreotide (OCT-LAR) ampoule was USD492.33 (10 mg), USD537.04 (20 mg), and USD703.79 (30 mg); for lanreotide (LAN-ATG), each ampoule was USD394.74 for the 60 mg dosage, and USD418.48 for the 90 mg and 120 mg dosages. The average annual cost of a monthly 30 mg dosage of OCT-LAR would be estimated as USD8,445.48 against an average annual cost of USD5,021.76 for a monthly 120 mg dosage of LAN-ATG. Thus, we estimate that USD15,520,747.59 was spent on first-generation SSA to treat acromegaly in Brazil's Unified Health System (SUS) in the year 2022; of this, 79 percent was attributed to OCT-LAR.

**Conclusions:** Life-long treatment with SSA is related with a high economic burden in Brazil. There is a predominance of OCT-LAR prescription, where expanding the use of LAN-ATG may help reduce costs to the SUS. Nevertheless, studies and investments in other treatments, such as pituitary surgery and radiotherapy access, at a national level are also essential to improve acromegaly treatment costs.