Triamcinolone Acetonide Injectable Suspension, for Suprachoroidal Use, for the Treatment of Macular Edeema Associated with Uveitis in the United States: A Budget Impact Analysis

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Background

• Non-infectious uveits (NIU) is a serious, sight-threatening ophthalmic condition characterized by inflammation of the uvea (iris, ciliary body, and choroid) with a prevalence of 121 cases per 100,000 US adults (2016)  

Macular edema (ME), characterized by abnormal thickening of the macula, is one of the most common complications of NIU.  

A budget impact model (BIM) using an incidence-based approach comparing scenarios with and without triamcinolone acetonide injectable suspension, for suprachoroidal use, for ME-NIU in the US from the Commercial and Medicare perspectives.

Methods

• A budget impact model (BIM) using an incidence-based approach comparing scenarios with and without triamcinolone acetonide, for suprachoroidal use, was constructed using Microsoft® Excel.  

Model Overview (Figure 1):  

- Acquisition: Adult patients (≥18 years) with ME-NIU  
- payer perspective and eligible population size: US Commercial (18-64 years) and Medicare (≥18 years) plans, each with a hypothetical 1 million member-patient population  
- Time Horizon: 5 years  
- Treatment scenarios: With triamcinolone acetonide injectable suspension for suprachoroidal use without triamcinolone acetonide injectable suspension for suprachoroidal use  

Model inputs:  

- Epidemiology: Annual incidence (over 5-year study horizon) of patients with ME-NIU eligible for triamcinolone acetonide injectable suspension, for suprachoroidal use, was estimated based on US census data, published literature, and claims-based US prevalence of NIU and ME-NIU (Table 1).  

- Market share assumptions are based on the expected uptake rate of triamcinolone acetonide injectable suspension for suprachoroidal use  

- Effect of triamcinolone acetonide injectable suspension, for suprachoroidal use, is based on data from the Phase 3 FEATHERS trial (Table 2). It was conservatively assumed that there would be no further vision improvement beyond 24 weeks and that no additional injections would be required in the first year.  

- Two injections per year are the standard of care based on the Phase III FEATHERS trial.  

- In the absence of treatment, it was assumed that 70% of patients would require re-treatment and 30% of patients would require 2 injections per year on average.  

- Injections per year to be able to maintain the vision improvement gained in the first 24 weeks of treatment.  

- Costs:  

- Wholesale Acquisition Cost:Adult patients with ME-NIU  

- Drug-administration cost: $100 (assumption)  

- Healthcare utilization costs including eye-related outpatient, ophthalmic emergency department (ED) costs, non-eye-related medical costs (including inpatient, ED costs, pharmacy costs, and non-eye-related costs) by vision loss status.  

- Model outputs: Plan-level and per member per month (PMPM) costs in 2020 USD  

- Sensitivity/Scenario analysis: The impact of the BIM was performed as per the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) best practices guidelines.  

- The model was developed in accordance with recommendations from the IQVIA Task-Force Report: Budget Impact Analysis.