

Cost Analysis of Surgical Treatment for Chronic Rhinosinusitis with Nasal Polyps (CRSwNP) Refractory to Clinical Therapy in Brazil

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Butelli, G¹; Barbosa A¹; Magro F¹; Zanotto BS²; Oliveira V²; Azeredo-da-Silva ALF² - [1] Sanofi, São Paulo, Brazil [2] HTAnalyze, Porto Alegre, Brazil; **Contact details:** Greice Buttelli Email: greice.buttelli@sanofi.com

INTRODUCTION

Chronic rhinosinusitis with nasal polyps (CRSwNP) is a persistent inflammation of the paranasal sinuses that significantly impact patients' quality of life. Surgical intervention is frequently required and often has to be repeated, contributing to significant healthcare expenditures due to recurrence rates^{1,2}. Limited data are available regarding the economic burden of these procedures within Brazil's private healthcare system.

OBJECTIVE: Estimate the costs associated with the surgical management of refractory CRSwNP patients, using the Delphi methodology to achieve expert consensus on real-world practices from the Brazilian private healthcare system.

METHODS

A three-round Delphi process was conducted with eight experts ((16.3 years average experience) in nasal polyp surgery to capture opinions on components affecting the costs of nasal polyp surgery. Data collected on: clinical criteria, surgical practices and complication rates.

Consensus was defined as $\geq 60\%$ agreement by responders³⁻⁵.



METHODS

Costs were calculated using the Brazilian Hierarchical Classification of Medical Procedures (CBHPM, Range III,2024)^{6,7}, SIMPRO consumables list (May/June 2024)⁸, and data from the Brazilian National Union of Self-Management in Healthcare Institutions (UNIDAS)⁹. All costs are presented in US dollars (\$) at a conversion rate of 1 USD = 5.81 BRL.

RESULTS

Total surgery cost was estimated at **\$9,045.97** (\$ 8,218 – 12,835) in patients without complications, **\$9,194.07** (\$8,366 - \$ 12,984) in patients with minor complications (5% of patients) and **\$10,522.97** (\$ 9,695 - \$ 14,312) in patients with major complications (<1% of patients). Costs are mostly concentrated in the perioperative period (medical fees, hospital care fees and hospital charges).

RESULTS

Perioperative period, material and Orthoses, Prostheses, and Special Materials (OPSM) and postoperative period, correspond to 60% (\$5,392), 18% (\$1,613) and 12% (\$1,091) of the total cost for patients without complications, 60% (\$5,541), 18% (\$1,613) and 12% (\$1,091) for patients with minor complications, and 65% (\$6.869), 15% (\$1,613) and 10% (\$1,091) for patients with major complications (Fig. 1).

CONCLUSIONS

Nasal polyp surgery in refractory CRSwNP patients places a considerable economic burden on Brazil's private healthcare system. Estimating this impact is essential for decision-making aimed at optimizing the patient journey, especially considering disease recurrence and the frequent need for new interventions.

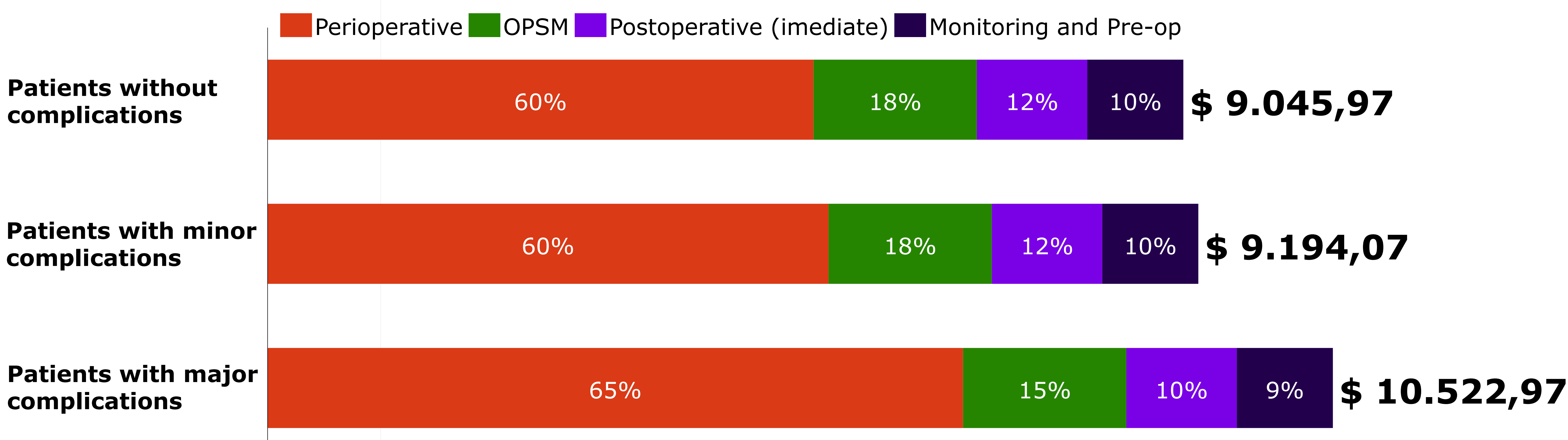


Fig 1. Surgery total cost analysis per patient (without complication, minor complications and major complications).

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