



Cost-Minimization Analysis to Two Surgical Treatments of Benign Prostatic Hyperplasia in the Brazilian Private Health Sector



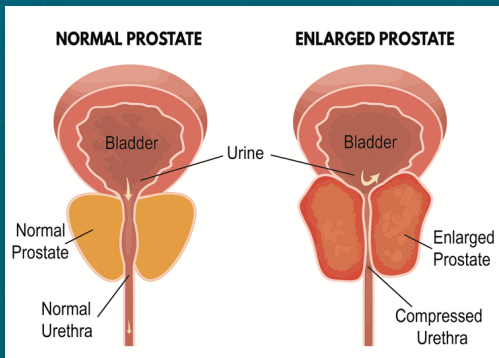
Boston
Scientific

MT5

Rodrigues S¹, Tortelet H², Contó M¹

¹Boston Scientific, São Paulo, Brazil, ²Boston Scientific, Santo André, SP, Brazil

BENIGN PROSTATIC HIPERPLASIA



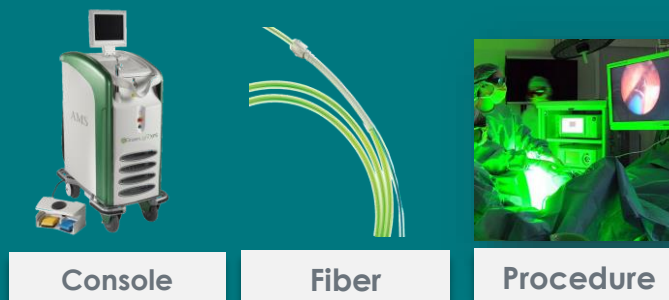
OBJECTIVES

This analysis aims to evaluate the economic impact of Laser Photovaporization of the Prostate (PVP) in the treatment of BPH within the Brazilian health private sector.

METHODS

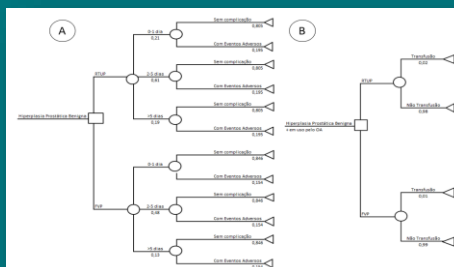
This study carried out a cost-minimization analysis using a decision tree model to compare PVP to TURP. This economic evaluation also included a subgroup analysis of patients with higher surgical risk (higher risk of bleeding due to the use of anticoagulant/antiplatelet therapies).

RESULTS



Technologies using laser have emerged as an alternative to meet the challenges in treating BPH patients with efficacy and safety superior to the Transurethral Resection of the Prostate (TURP), the current gold standard.

Decisio Tree Model



Budget Impact Analysis

Patients at risk of bleeding

Scenario without laser vaporization	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
PVP	120,174,783.69 BRL	120,201,556.13 BRL	120,201,958.72 BRL	120,201,964.78 BRL	120,201,964.87 BRL
TURP	120,174,783.69 BRL	120,201,556.13 BRL	120,201,958.72 BRL	120,201,964.78 BRL	120,201,964.87 BRL
TOTAL	120,174,783.69 BRL	120,201,556.13 BRL	120,201,958.72 BRL	120,201,964.78 BRL	120,201,964.87 BRL

Scenario with laser vaporization

Procedure	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
PVP	2,100,505.45 BRL	4,041,966.49 BRL	6,416,101.99 BRL	10,535,374.25 BRL	12,651,965.51 BRL
TURP	114,166,044.51 BRL	108,259,134.10 BRL	96,300,299.15 BRL	90,412,984.40 BRL	84,440,288.45 BRL
TOTAL	116,266,550.15 BRL	112,454,100.59 BRL	104,717,031.08 BRL	100,948,360.65 BRL	97,100,153.97 BRL

Patients with low risk of bleeding

Scenario without laser vaporization	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
PVP	242,290,675.77 BRL	242,344,653.09 BRL	242,345,464.78 BRL	242,345,476.99 BRL	242,345,477.17 BRL
TURP	242,290,675.77 BRL	242,344,653.09 BRL	242,345,464.78 BRL	242,345,476.99 BRL	242,345,477.17 BRL
TOTAL	242,290,675.77 BRL	242,344,653.09 BRL	242,345,464.78 BRL	242,345,476.99 BRL	242,345,477.17 BRL

Scenario with laser vaporization

Procedure	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
PVP	9,492,723.17 BRL	19,003,320.90 BRL	38,004,630.77 BRL	47,612,054.43 BRL	57,177,029.44 BRL
TURP	230,176,141.99 BRL	218,266,910.92 BRL	194,157,347.22 BRL	182,286,353.39 BRL	170,260,617.50 BRL
TOTAL	239,668,865.15 BRL	237,270,231.42 BRL	232,161,978.99 BRL	229,898,407.82 BRL	227,437,646.94 BRL

*1 USD = 4.92 BRL

*1 USD = 4.92 BRL

CONCLUSIONS

The incorporation of PVP for the surgical treatment of BPH both in patients with higher medical risk and patients with no risk restriction is cost-saving, resulting in savings higher than US\$ 4 thousand and near US\$ 1 thousand respectively per treated patient. In the sensitivity analysis, the variable with higher influence in the results was the length of stay that is greatly correlated to the intercurrents caused by bleeding and other adverse events. Further, the budgetary impact analysis showed savings of over US\$ 13 million for the 5-year time horizon considering that high-risk patients and US\$ 8 million for patients with no risk restriction.

FURTHER INFORMATION

Please see: <https://www.ispor.org/heor-resources/presentations-database/presentation/intl2023-3665/127073> for abstract information or contact: sarah.rodriques@bsci.com

ACKNOWLEDGEMENTS

HEGA department and Boston Scientific Brasil for the support in this work.