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Vaccum-assisted biopsy for breast carcinoma diagnosis: Cost-minimization analysis

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Objective: The objective of this study was to carry out the cost-minimization analysis between the vacuum-assisted biopsy (VAB) and the e-lumpectomy. **Methodology:** The analysis was based on a retrospective evaluation of 1,833 VAB at Pérola Byington Hospital (PBH), including the pathological results and proportion of patients requiring a lumpectomy after the procedure. It was analyzed from three perspectives: PBH (direct medical costs), the Unified Health System – SUS (Sigtap), and the Brazilian Society (Sigtap and indirect costs). The VAB cost kit (needle, guide clip, marker, and reservoir) was estimated at R\$ 2,173. The cost of lost productivity was based on gross domestic product per capita (R\$ 120 per business day). **Results:** From an HPB perspective, the average total cost for a patient who undergoes a VAB is R\$ 3,667 and for a lumpectomy is R\$ 4,313 (average savings of R\$ 646). Under the SUS perspective, the average cost for VAB is R\$ 2,987 and for a lumpectomy is R\$ 2,700 (an increase of R\$ 287). The analysis from the perspective of society resulted in a savings of R\$ 128 per patient (fewer days away from patients undergoing VAB). **Conclusion:** Cost minimization found that VAB is cost-saving compared with lumpectomy (from the perspective of the PBH), which exclusively sees SUS patients, as well as the perspective of society. When analyzed from the perspective of SUS, there is a small increase in cost, but the cost of the VAB kit used may have overestimated the costs and an incorporation could decrease the material costs.

Keywords: breast cancer; diagnosis.