

Title: COST COMPARISON BETWEEN OPEN ANTEGRADE RADICAL PROSTATECTOMY AND ROBOTIC PROSTATECTOMY IN A PUBLIC UNIVERSITY HOSPITAL

Introduction and Objective:

Radical prostatectomy (RP) is considered the gold standard for the treatment of localized prostate cancer. Although robotic RP has been widely adopted, there is still no clear evidence of its superiority over open RP. Some studies suggest cost-effectiveness advantages of the robotic approach. The objective of this study is to analyze costs based on hospital invoices for robotic RPs compared to open antegrade RPs.

Method:

Hospital invoices in Brazilian Reais (R\$) were evaluated for twelve patients who participated in a prospective study comparing open antegrade RP with robotic RP. The baseline calculation for invoices consisted of the amount paid by the Unified Health System (SUS) for oncological RP, plus some additional inputs and extra expenses. It is important to note that these invoices do not represent the actual costs, as it is not possible to calculate that value due to a lack of transparency in SUS payments. For robotic surgeries, the costs of robotic instruments and supplies, such as sterile covers for robotic arms, were included, while the cost of the robot (equipment) was not accounted for.

Results:

The costs in Brazilian Reais for both surgeries are presented in the table below:

Pacientes	PR Aberta Anterógrada	PR Robótica	PR Robótica + Insumos Robô
1	5.436,80	10.430,00	27.430,00
2	5.364,29	9.917,69	26.917,69
3	9.942,90	5.372,29	22.372,29
4	9.984,69	9.805,34	26.805,34
5	5.445,77	9.781,34	26.781,34
6	5.397,07	5.364,29	22.364,29
Média	6.928,58	8.445,15	25.445,16
Total	41.571,52	50.670,95	152.670,95

The costs of robotic RP are higher than those of open antegrade RP, even without considering the robotic instruments and supplies. There are other factors that could not be evaluated in this study due to the lack of transparency in SUS payments, such as operating room time and the presence of specialized professionals, favoring open antegrade RP, and length of hospital stay, which is unfavorable for open antegrade RP. However, the significant difference in costs raises questions about the cost-effectiveness of robotic RP in the Brazilian public healthcare system.

Conclusion:

The costs of robotic RP are significantly higher than those of open antegrade RP in a Public University Hospital.