

PROSTATECTOMY: A COMPARISON OF COST-BENEFIT ANALYSIS BETWEEN OPEN SURGERY AND ROBOTIC TECHNIQUES

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OBJECTIVES: Among the therapeutic practices for prostate cancer, open-surgery is the most frequent technique. Recent studies have shown that robotics allows a recovery of the function more rapid than the classic open-surgery, although the costs are not yet clear. Purpose of this project is to explain from the economic point of view about the future urologic surgery.

METHODS: In order to analyse the laparotomy and robotics techniques, we approached costs and revenues. The formers are standardized for each kind of surgery, starting from a common case study led by the two hospitals of Modena. The latter are extracted punctually from the internal database. Finally we focused on the benefits and complications for the patients for the two kinds of techniques.

RESULTS: In 2014 the hospitals have provided 91 robotic surgeries and 25 in open-surgery. Revenues for robotic activities are about 623.539€ while those for open-surgery are 162.045€, with an average value for each patient respectively of 6.852€ (A) and 6.481€ (B).

	Robotic	Open surgery
n. patients in 2014	91	25
Total revenues	623.539 €	162.045 €
Avg value	(A) 6.852 €	(B) 6.481 €
Lenght of stay (days)	6	10
Total surgical costs	(D) 6.000 €	(E) 2.000 €

The average hospitalization for robotic activities is about 6 days, versus the 10 days for the open-surgery.

From the analysis above, the surgical costs of robotics are about 6.000€ (D), while the open-surgery 2.000€ (E).

CONCLUSIONS: The results show economic differences between the two techniques. As highlighted in the graph below, the more the *length of stay* increases, the more the economic advantage of the robotic technique appears massive. This advantage starts after 13 days of recovery if the average cost per day of hospitality is about 400 € and even after only 5 days of recovery if we consider an average daily cost of 1.000 €.

Moreover, according to clinical point of view, robotics strong clinical benefits are evident. As explicated by the literature, the accuracy of robotics technique, combined with a more rapid learning curve, guarantee a more rapid recovery of urinary tract functionality. Despite the goodness, the simulated analysis embeds limits: there is no warranty of transferability.

