

# COST OF VENOUS THROMBOEMBOLIC DISEASE IN PATIENTS WITH LUNG AND PROSTATE CANCER: COSTECAT STUDY

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## Background

Patients with cancer are at significantly higher risk of developing venous thromboembolism (VTE). Main guidelines established LMWH as the standard of care for cancer-associated VTE (CAT)<sup>1,2</sup>. CAT is a resource intense condition resulting in a significant economic burden<sup>3</sup>. Knowledge about treatment patterns, resource use and cost of CAT is currently limited in Spain.

## Objectives

The aim of the present study is to determine the number of admissions and the cost of the management of VTE events occurring in patients with lung cancer (LC) or prostate cancer (PC) who were treated with LMWH in Spain.

## Methods

This is a multicenter, observational, ambispective pharmaco-economic study involving 6 third level hospitals in Spain. Patients with LC or PC who suffered a first episode or a symptomatic or incidental VTE recurrence and who were receiving treatment with LMWH were included. Data collection included sociodemographic, clinical and resource use variables in order to capture the main implications of VTE and its treatment. The data was obtained through the medical records and directly from an interview to the patient (during the study visit and from a patient diary during the follow-up period (6 months).

Costs related to VTE (primary diagnosis or related diagnosis) were recorded. This comprised hospitalizations, outpatient visits and tests, drug costs and ambulance transportation. Anticancer therapy was not collected. All unit costs were obtained from national databases<sup>4,5</sup> and expressed in €2018.

## Results

Data on 55 patients was collected from October 2017 to April 2018. A greater presence of lung cancer (47 patients; 85,4%) than prostate cancer (8 patients; 14,46%) was observed. Overall, 43 (78.2%) patients had known metastases and the ECOG performance status was 0 or 1 in 40 (72.7%). Regarding the LMWH treatment, most patients (51.8%) were receiving enoxaparin, followed by tinzaparin (29.6%) and bemiparin (18,5%) (Figure 1).

Inpatient stays and visits to A&E were registered by (43.6% and 52.7%, respectively), reporting a mean of 1.33 and 1.41 visits per patient in the follow-up period, respectively. The mean length of stay for hospitalizations was 6.07 days (SD=10.6). Imaging (76.4%) or laboratory test (78.2%) were performed in the follow-up period. Visits to healthcare professionals were registered by 60.0% of the patients, with a mean of 2,24 visits per patient. Professionals most visited were GPs (25.9%), followed by internal medicine (18.5%) and hematologists (13.0%). Only 14.6% received healthcare visits at home, although the mean frequency of visits was high (22,88 visits) and no patient used rehab services. Ambulance services were requested by 23.6% of the patients during the 6-month follow-up.

The total costs derived for the study period are displayed in Table 1. Main cost drivers were inpatient stays (47.8%) and HBPM costs (30.4%), as shown in Figure 2. Mean cost per patient of LMWH (€) during study period is represented in Figure 3.

Table 1. Mean and total costs per patient (€) during the study period

Cost	Average (SD)
LMWH	2,239.98 (638.93)
<i>Bemiparin</i>	2,707.75 (902.10)
<i>Enoxaparin</i>	2,446.54 (389.44)
<i>Tinzaparin</i>	1,586.15 (163.81)
Tests	
<i>Imaging</i>	591.89 (883.39)
<i>Laboratory</i>	468.18 (642.83)
Inpatient stays	3,520.76 (5987.63)
Healthcare visits	
<i>Specialist visits</i>	297.2 (610.73)
<i>A&amp;E attendances</i>	116.26 (152.49)
<i>Home visits</i>	134.31 (673.72)
Ambulance transportation	20.54 (58.12)
<b>Total cost</b>	<b>7,359.47 (6,083.26)</b>

Figure 2. Mean costs per patient (€) during study period in the main cost categories.

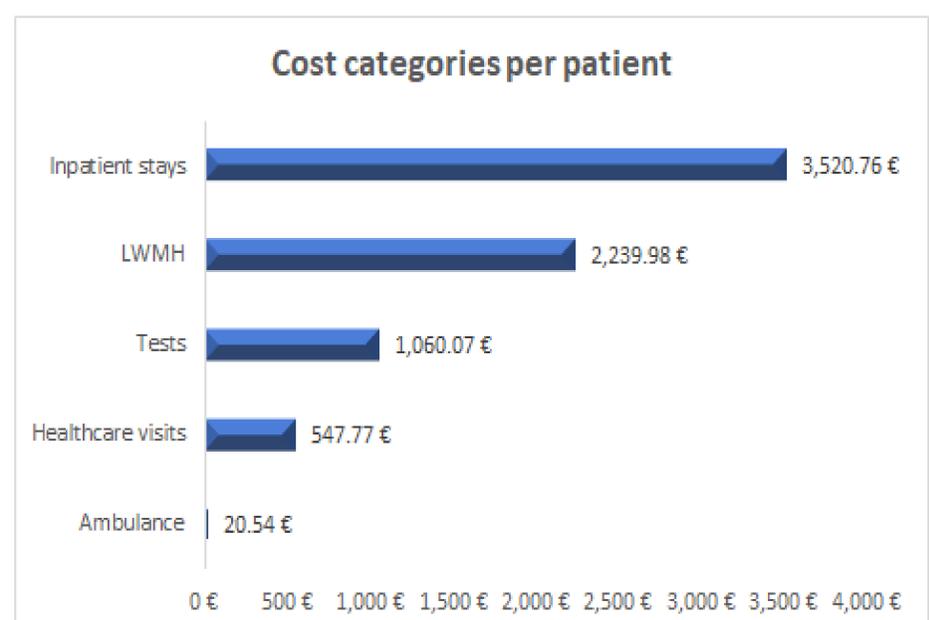


Figure 1. Use of LMWH (%patients) during study period

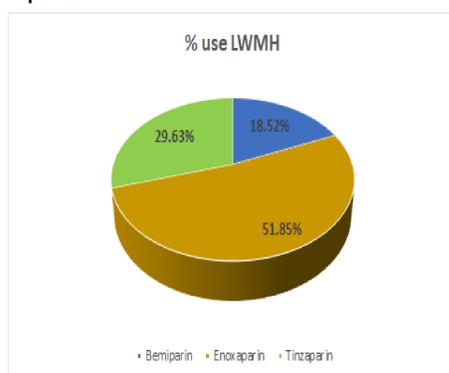
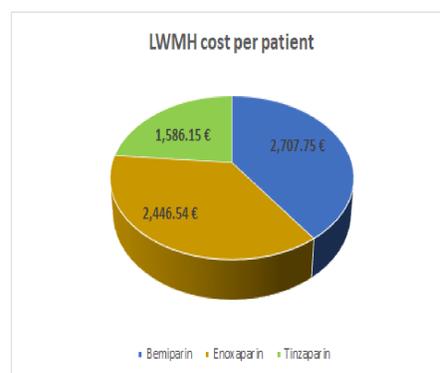


Figure 3. Mean cost per patient of LMWH (€) during study period



## Conclusion

VTE episodes in patients with lung or prostate neoplasia pose considerable economic implications to patients and healthcare systems. This burden is mainly derived from the costs associated to hospitalizations and LMWH.

## References

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