

Burden of disease of the mastocarcinoma in Austria

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Objectives

Breast cancer or rather called mastocarcinoma, is a malignant growth of the mammary gland. With an incidence rate of 5,105 people in 2010, breast cancer is the most frequent cancer disease in Austria. Annually about 1,500 cases of death are registered, therefore breast cancer is the leading cause for death among women. As a result, enormous costs arise for the health care system. The aim of the analysis was to evaluate the cost and disease burden of breast cancer.

Methods

A burden of disease study, which evaluates all kinds of disease burden, like costs, quality adjusted life years (QALYs) and loss of disability adjusted life years (DALYs), was conducted. This analysis had an incidence based approach and projects costs over a time horizon of one year. Data were collected via literature review, published list prices and hospital records. Costs from published sources were reflected from the societal perspective. The direct costs include hospital, treatment and physician consultation costs. Indirect costs cover patient care giver costs as well as work absenteeism.

Results

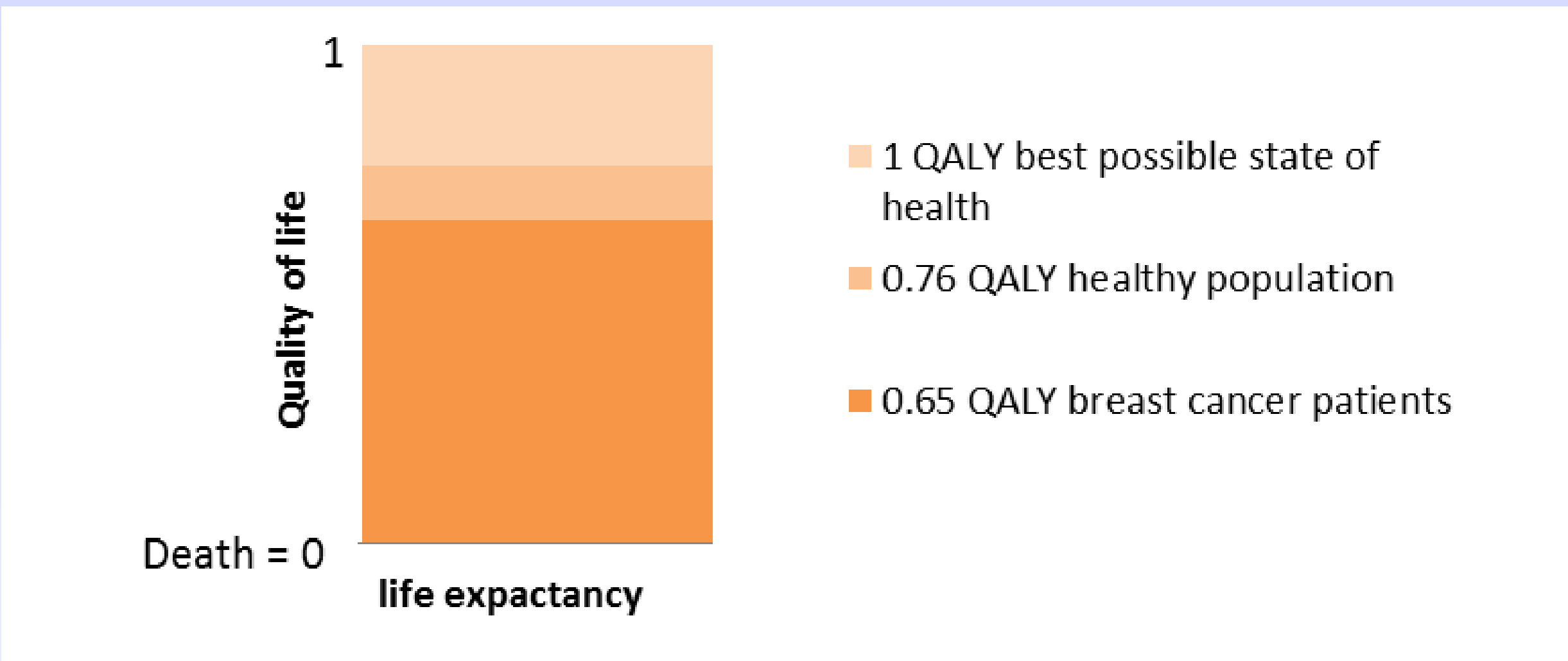
Mortality rate

In 2009 nearly 20,000 people died as a result of cancer disease. From this amount 1,502 women and 12 men died due to breast cancer. So the statistic shows that the female population is most frequently affected by breast cancer. Moreover it can be asserted, that the mortality rate of breast cancer conducts 7.7 percent of all cancer deaths in Austria.

Quality adjusted life year

Patients with breast cancer usually have a lower quality of life compared to the healthy population. While women with breast cancer have a QALY of 0.65, the general population has a QALY of 0.76. So compared to the healthy population, a breast cancer patient has average utility decrements of 0.11.

Fig. 1: Quality of Life in breast cancer patients



Source: Informa Health care, 2011; own calculations, 2013

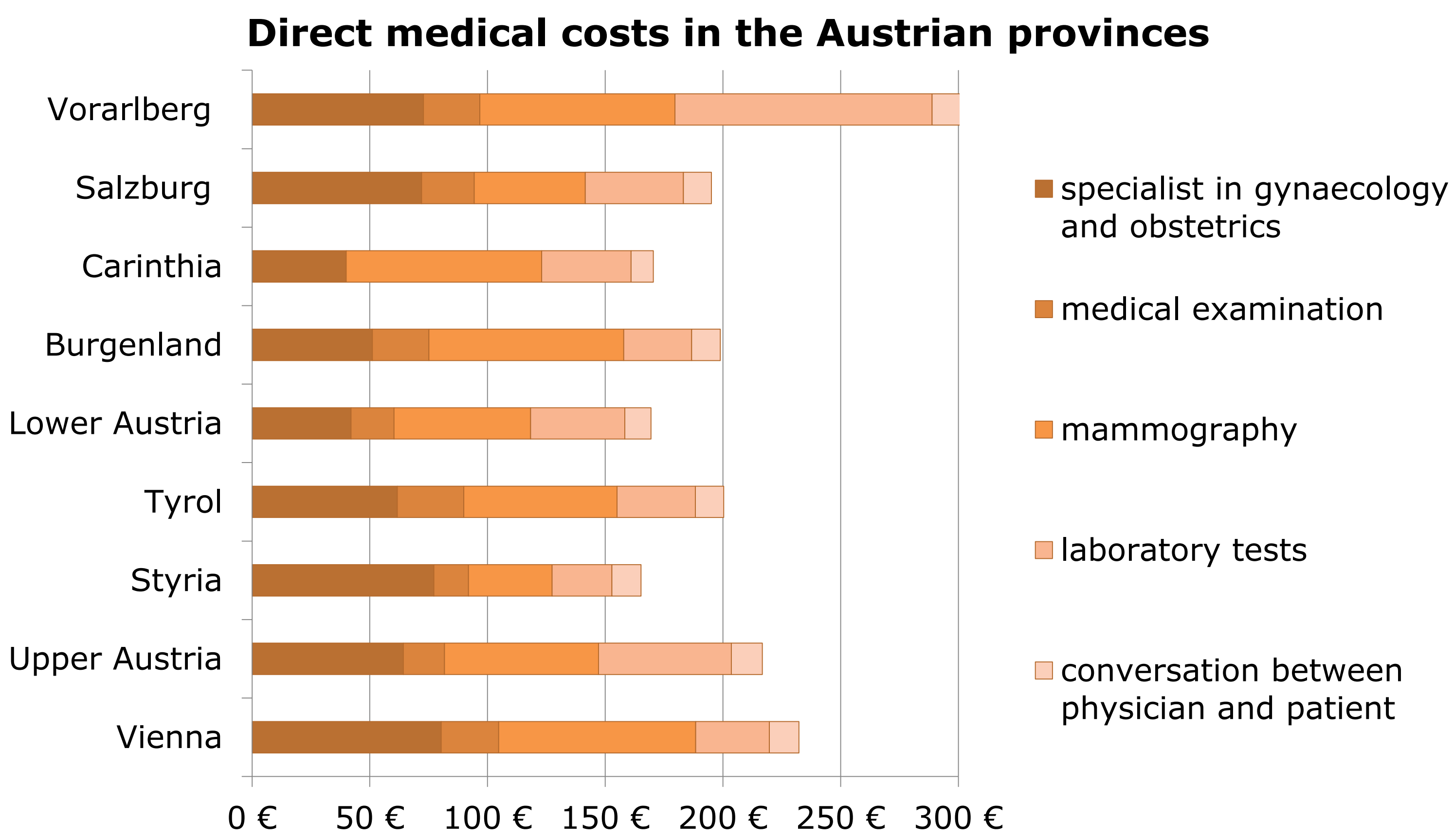
Disability adjusted life year

In 2004 135 DALYs were lost in Austria due to breast cancer. With regard to an incidence rate of 5,105 people in 2010, a breast cancer patient will lose 0.03 DALYs within one year.

Costs

Costs were calculated for one year after diagnostic identification. It is assumed that all incidence cases in the year 2010 received treatment. The direct medical costs include the primary care sector as well as the hospital sector. Figure 2 gives additional information about the composition of costs in the primary care setting. These costs were broken down among the Austrian provinces and were weighted after the share of population in each province (Table 1).

Fig. 2: Direct medical costs broken down among the Austrian provinces



Source: own calculations, 2013

Table 1: Annual costs in the primary care setting

Total annual costs in the primary care setting	
Physician visit	63.80
Gynecological examination	20.60
Conversation between physician and patient	12.06
Mammography and mamma sonography	64.83
Laboratory tests	41.60
Sum	202.89

Source: own calculations, 2013

Patients in the Austrian hospital setting are given a main diagnose for a hospital stay, which provide all subsequent treatments for the whole stay. Therefore the average breast cancer patient in the hospital setting causes 2,494.54 Euro. Afterwards these patients receive chemotherapy and 70% of them receive radiotherapy. The current literature suggests that only 15% of the total costs caused by cancer are direct medical cost. Hence, 85% are indirect costs, like patient care giver costs, work absenteeism and early mortality. Table 2 presents the total costs of breast cancer in the first year after diagnosis.

Table 2: Costs in the first year

Total costs in the first year		
	Cost per patient	Incidence
Direct costs		
Primary care setting	202.89	5,105
Hospital setting	6,423.91*	5,105
Indirect costs	37,551.87	5,105
Sum	44,178.67	225,532,114.34

* amount of main diagnosis (2,494.54), Chemotherapy (1,876.68) and radiotherapy (2,052.69)
Source: own calculations, 2013

Conclusion

The research showed that the treatment of new diagnosed breast cancer patients causes about 225.5 million EUR, including direct as well as indirect costs. Moreover patients had a lower QALY of 561.55 and a loss of 153.15 DALYs within one year.

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Additional Literature with the author