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Successive waves of therapeutic innovation in oncology since 2011 have modified the natural history and prognosis of many cancers. This is excellent news for patients but questions about the rationality of prices and the budgetary sustainability of health insurance systems have arisen, throwing a stone of controversy into public debate. However, the debate is centered on commonly held beliefs and there is a lack of evidence of long-term perspectives over price evolution of these new treatments.

AIMS : Describe and analyze the evolution of the price and cost of cancer treatments in hospitals in France for innovative treatment (listed out of the DRG list).

METHODS

This study analyzed public data concerning the use of the **42 hospital anticancer molecules (specialties and associated generics) financed by the national social security fund between 2010 and 2016**. The analysis was based on the Program of Medicalization of Information Systems by crossing the databases relating to the activities of Medicine, Surgery, Obstetrics and drug consumption on the extra-DRG list (FICHCOMP) during the study period. The prices reported in the study are prices per patient per year, net of discounts granted to hospitals, established on the basis of actual consumption and population-weighted.

RESULTS

THE WEIGHT OF ANTICANCER DRUGS IN THE SPREAD :

Cancer treatments accounted for 50% of the overall budget of the extra-DRG list over the period. The cost of these treatments increased by 26% compared to a 21% increase in the cost of other treatments on the extra-DRG list. (Figure 1)

THE WEIGHTED AVERAGE PRICE AND THE REGISTRATION PRICE :

The average launch price of a new anticancer treatment was €18,658 for the period. This price increased significantly between 2010 and 2016 (from €6,152 to €23,555). The average registration prices were lower in 2015-2016 than in 2013-2014. (Figure 2)

The weighted average cost for cancer treatments was €12,318 for the period: from €10,135 in 2010 to €13,130 in 2016. This price stabilized from 2012. (Figure 3)

FACTOR AFFECTING PRICE CHANGE :

More innovative products: the weight of ASMR 1 to 3 (innovative products) was higher in 2013-2014 (67%) than in 2010-2012 (17%). For the period 2015-2016, products with an ASMR of 1 to 3 represented more than 50% of first-time registrations. (Figure 4)

The target population: the size of the target populations decreased over the study period: 75 % of the products had a target population of under 3,000 patients in the 2015-2017 period. (Figure 5)

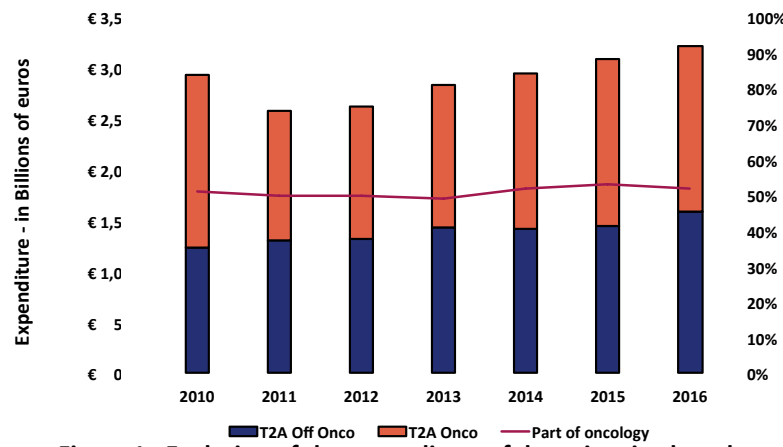


Figure 1 : Evolution of the expenditure of drugs invoiced on the extra-DRG list

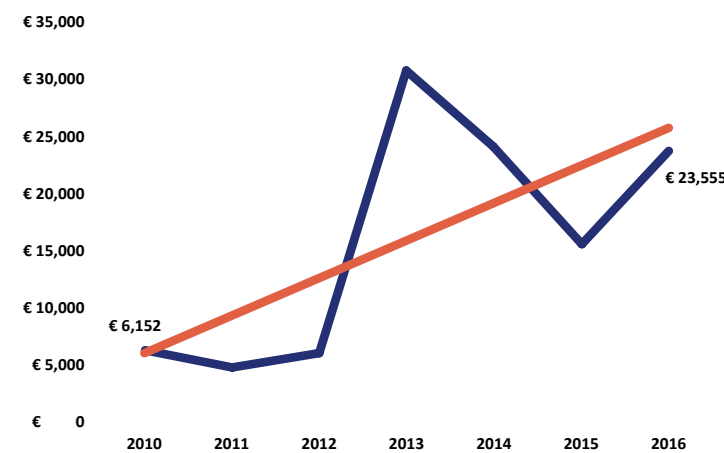


Figure 2 : Evolution of the average launch price of new anticancer treatments from 2010 to 2016

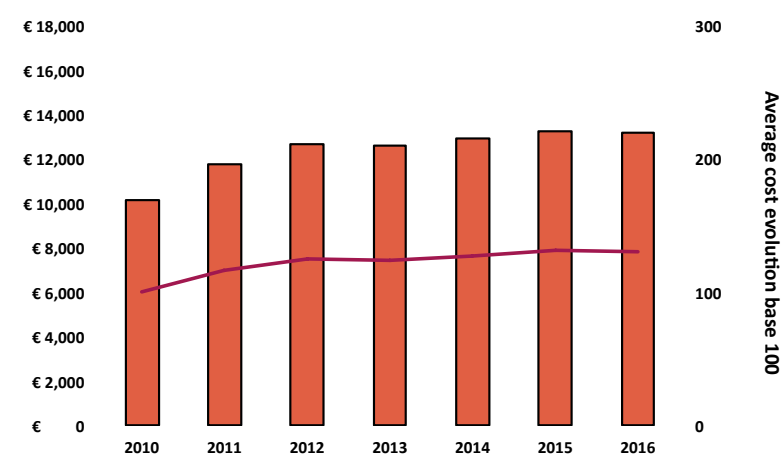


Figure 3 : Evolution of the weighted average cost of cancer treatments from 2010 to 2016



Figure 4 : Distribution of ASMR by period (first-time product)

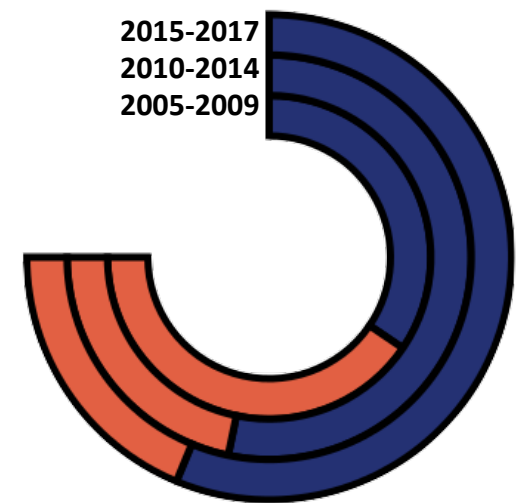


Figure 5 : Distribution of target populations

CONCLUSION

The **weighted average price** stabilized from 2012 after 2 years of growth with a weighted price at 12,318 € over the period. The moderate budget growth of the list is linked to economic regulation of the list and commercial discounts negotiated with hospitals. The **registration price** increase from 6,152 in 2010 to 23,555 € in 2016 (with an average of €18,658 over the period). Its significant increase between 2010 and 2016 can be explained by the increase in the proportion of products attributed an ASMR of 1 to 3 and the decrease in target populations, two concepts taken into account in the price determination by the economic committee for health products. These results, looking not only to the registration price but also to the weighted average price of innovative anticancer drug, challenge the claims often found in the media of an uncontrolled increase in the cost and prices of cancer treatments as well as the propensity-to-pay for payers and regulators.

LIMITATIONS

These analysis, limited to the field of hospital treatments of the extra-DRG list over the period studied deserves to be completed in the coming years and extended to the outpatient field to reflect issues that characterize the future of oncology: the arrival in successive waves of innovations (immunotherapies, gene therapies), strategy therapeutics combining several of these treatments, the expected development of biosimilar drugs and the probable chronicization of the pathologies leading to longer treatment durations.