

COST OPTIMISATION PLAN IN IMMUNOTHERAPY

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BACKGROUND AND IMPORTANCE

Three years ago, posology of nivolumab 3 mg/kg was modified in the Summary of Product Characteristics (SmPC) for a fixed dose (flat-dose) of 240 mg every two weeks or 480 mg every four weeks after showing equivalence.

AIM AND OBJECTIVES

To assess the potential cost savings if we use individualized dose by weight (3mg/kg) and apply flat-dose (240 mg or 480 mg) in those patients weighing 80 kg or more.

MATERIAL AND METHODS

Retrospective study conducted in a second-level general hospital that included all patients treated with nivolumab during one year (2020).

A database was designed with following variables: age, sex, weight, diagnosis, dosage regimen and drug costs expressed in laboratory sale price.

After applying the cost optimization plan, the dosage of the patients was grouped according to weight: ≥ 80 kg use of flat-dose and < 80 kg use of individualized dose of 3 mg/kg.

Costs of administering nivolumab according to an individualized dose of 3 mg/kg and the flat-dose regimen were calculated.

RESULTS

37 patients were treated with nivolumab, 29 received a fixed dose of 240 mg every two weeks and eight fixed doses of 480 mg monthly. Patients' mean weight was 71.1 kg (range 52-119). Drug's total cost was 1.258.560 € per year.

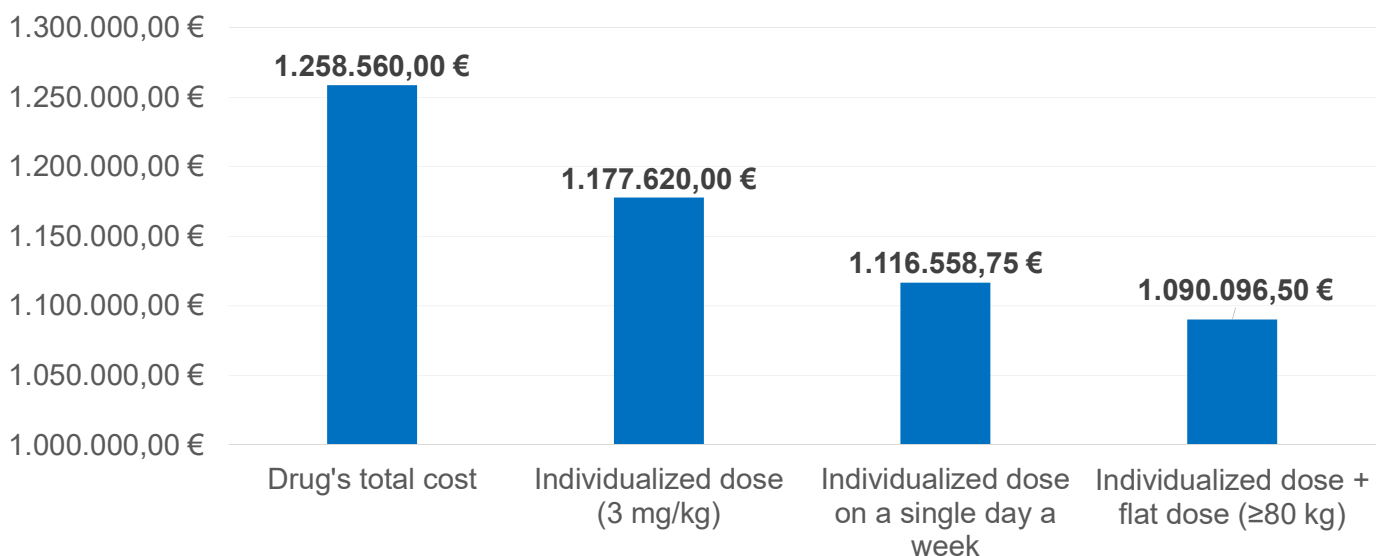
Applying the individualized dose of 3 mg/kg in all patients, the cost would be reduced to 1.177.620 €, generating a saving of 80.940 €.

Applying the individualized dose of 3 mg/kg and scheduling treatment's administration on a single day a week, the cost would be 1.116.558,75 €, obtaining a saving of 142.002 €.

In addition to the above measures, setting dose at 240mg in those patients weighing ≥ 80 kg, cost would be reduced to 1.090.096,5 €, generating a saving of 168.463,5 €.

Applying this method, based on body weight, only six patients would maintain flat-dose while 31 would require an individualized dose.

Cost / year



CONCLUSIONS

The use of individualized nivolumab doses may be a good strategy to optimize treatment costs. The combined use of flat-dose with individualized dose based on patients' weight, would reduce the cost associated to nivolumab by 13.4%, corresponding to about 168.000 € per year.