

## NIVOLUMAB WEIGHT-BASED DOSING VS FLAT DOSE ECONOMIC ANALYSIS

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### BACKGROUND

Nivolumab, on June 2015 was authorised to treat Melanoma, Renal Cell Cancer (RCC) and Non-Small-Cell Lung Cancer (NSCLC) administered in weight-based dosing (BW) schedules at **3mg/kg every 2 weeks**. On May 2018 the European Commission approved **240 mg Flat Dose (FD)** every 2 weeks based on pharmacokinetics parameters.

### PURPOSE

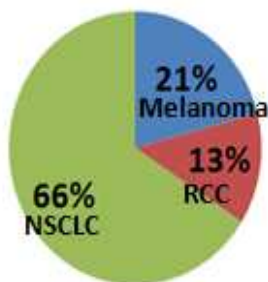
**Compare the financial impact of FD methodology versus the BW in our population.**

### MATERIAL AND METHODS

Patients treated with nivolumab for Melanoma, RCC, NSCLC in 2017 in our hospital were included in the analysis. Patients with the treatment started before the drug was commercialized were excluded. We analyzed prescriptions on our informatic application to obtain the personal data of patients (age, sex, weight). We calculated the number of drug's vials needed to fill a single prescription and the hypothetical waste drug. We used tender price (11,8 euro/mg) to calculate the hypothetical cost of BW and FD.

### RESULTS

**91 patients:** Age: 68 years (DS±8,7); Weight: **71kg** (DS±15,8); M 63%

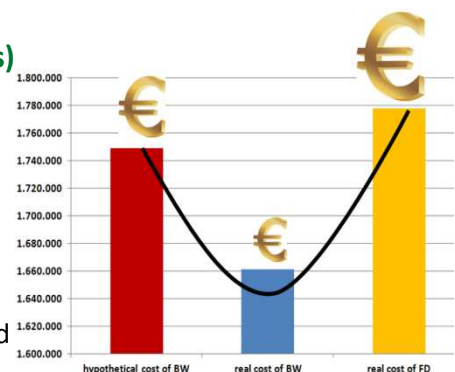


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**79% patients weight <80kg (75% doses)**

In our centralized unit we use processing residue drug during the compounding to minimize waste.

This policy allowed us to save **87.778 € (-5%)**.

If the same patients received the FD, no waste would have been produced but the cost would be greater **1.777.950 € (+7%)**.



### CONCLUSION

FD simplifies prescribing, preparation, inventory and billing but the costs would be greater. In our cohort the median patient's weight **was less than 80kg so we would used less vials using BW versus FD protocol**. For the future (unresolved issues): what is the better dose in cancer immunotherapy? FD or BM?

### REFERENCES

Zhao X et al. Assessment of nivolumab benefit–risk profile of a 240-mg flat dose relative to a 3-mg/kg dosing regimen in patients with advanced tumors. *Annals of Oncology*. 2017.