# Clinical and Economic Evaluation of Atezolizumab + Vemurafenib + Cobimetinib Combination in Treatment of Adult Patients with Metastatic Braf-Positive Melanoma

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EE206

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**OBJECTIVES: The aim of the study was to conduct a pharmacoeconomic evaluation of the atezolizumab, vemurafenib and cobimetinib (ATZ+VM+COB) combination and the nivolumab and ipilimumab (NIVO+IPI) combination for the treatment of BRAF-positive metastatic melanoma in adult patients.**
**METHODS: By means of mathematical modeling a pharmacoeconomic cost-effectiveness analysis (CEA); a budget impact analysis (BIA); a sensitivity analysis to the changes in the initial parameters of the model, were carried out.**

**RESULTS: The analysis of literature showed that the ATZ+VM+COB, compared to the NIVO+IPI, has a greater clinical efficacy in terms of a progression-free survival (PFS) - 15.1 and 11.2 months, respectively in patients with metastatic melanoma. The cost of ATZ+VM+COB per course was lower compared to the NIVO+IPI (€92,520.72 vs €79,697.24 and €12,823.48 difference). CEA showed an advantage of ATZ+VM+COB compared to IVO+IPI combination. The cost-effectiveness ratios (CERs) for 1 year of PFS were €63,335.56 and €99,360.00, retrospectively, and €36,024.45 difference (Table and Figure 1).**

***Table. Cost-effectiveness analysis***

| Parameter | ATZ+VM+COB | NIVO+IPI |
|---|---|---|
| ***Cost analysis*** | | |
| Treatment duration (months) | 9.2 | 7.5 |
| Total treatment cost | € 79,697.24 | € 92,520.72 |
| Treatment cost per month (per patient) | € 6,641.43 | € 7,710.06 |
| ***Effectiveness analysis*** | | |
| Progression free surveillance (months) | 15.1 | 11.2 |
| Cost-effectiveness ratio, per year of PFS (per patient) | € 63,335.56 | € 99,360.00 |
| Economy in the case of ATZ+VM+COB option | **€ 36,024.45** | |

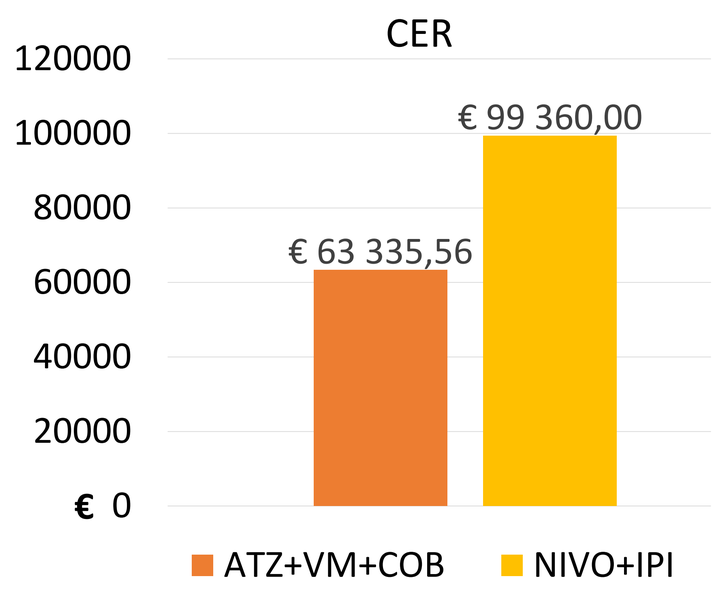


***Figure 1. Cost-effectiveness ratios***

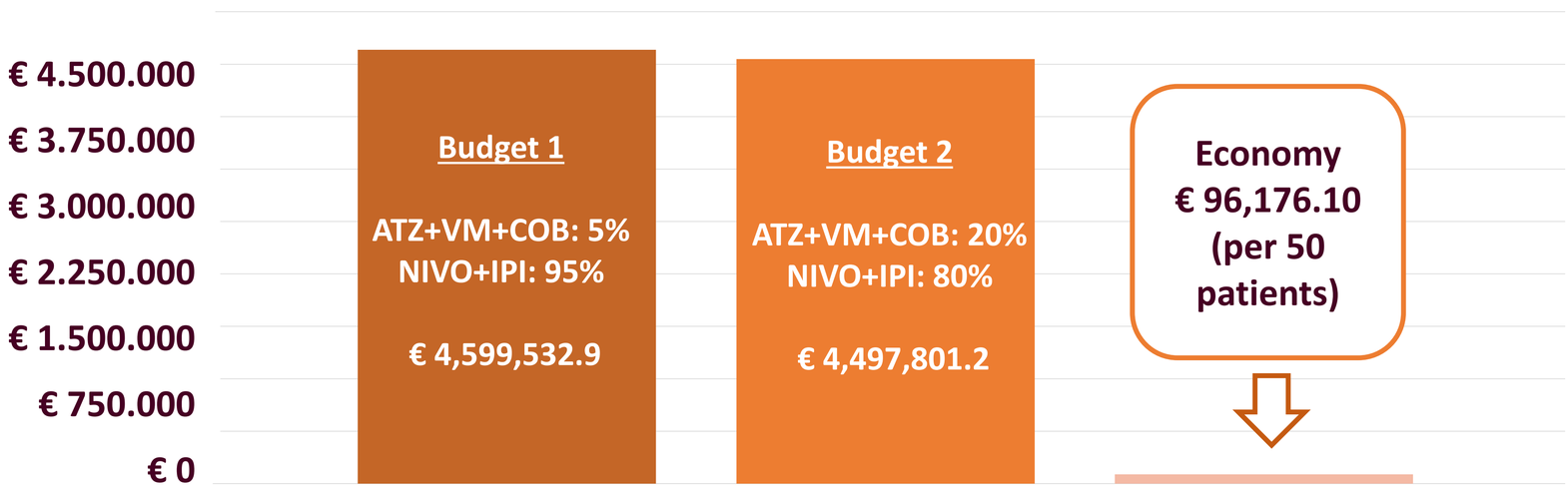


***Figure 2. Budget-impact analysis for the treatment course in the cohort of 50 patients***

**The sensitivity analysis demonstrated the stability of the developed model to an increase in the ATZ+VM+COB cost up to +16%, a decrease in the NIVO+IPI cost up to -13%, and a reduction in the PFS up to -37% during ATZ+VM+COB treatment. The BIA showed possibility of reducing budget expenses by €96.176,10 with an increase in the proportion of the patients treated by the ATZ+VM+COB from 5% to 20%, with simultaneous decrease in the proportion of the patients treated by NIVO+IPI from 95% to 80% (Figure 2).**

**CONCLUSIONS: The triple combination of ATZ+VM+COB is a clinically cost-effective option for the treatment of adult metastatic melanoma patients with a confirmed BRAF mutation in Russian healthcare system.**

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