# Budget Impact Analysis of Atezolizumab in 1st Line Treatment for Patients with PD-L1 High Metastatic NSCLC from a French Payor Perspective



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## Objectives

Lung cancer is the second most common cancer for men and the third for women with 46,363 newcasesin Francein 2018. Nonsmall-cell lung cancer (NSCLC) the predominant

The main goals of treating people with NSCL Care to prolong survival and improve quality of life. The choice of treatment is dependenton biological markers (e.g. presence of mutations in epidermal growth factor receptor-tyrosine kinase, anaplasticlymphomakinase or antiprogrammedcell death ligand-1 [PDL1] status), histology (squamousor non-squamous) and previoustreatment experience

Atezolizumab(Tecentrion) is a humanized, PDL1 monoclonal antibody involved in the blockade of immunesuppressionand the subsequentreactivation of anergic T-cells. It is administeredntravenously

Atezolizumab as monotherapy received a favorable opinion by the Transparency Commissiorin October 2021 (SMRimportant and ASMRIV) for the 1st line treatment of metastatic NSCLCwhose tumors have a PDL1 expression ≥50% tumor cells or ≥ 10% tumor-infiltrating immune cells and who do not have EGFR mutant or ALK-positive NSCLC1.

The objective of this analysis is to estimate the budget impact of the introduction of atezolizumab in this indication from the French payer perspective.

## Methods

A budget impact model was developed on Excel®to compare worlds with and without atezolizumab considering both 1st and 2nd treatment options.

The target population estimation was aligned with the Transparency Commission's opinion (n=6,100 patients per year)1. The analyses considered squamous and non-squamous patients together, therefore comparators were all regimens recommended in France to treat squamous and non-squamous patients (see table 1).

Population's characteristics and clinical data were obtained from clinical trials of atezolizumab and its comparators (IMpower1102, KEYNOTE-0242, KEYNOTE-4073, KEYNOTE-1894).

The following costs were considered (inflated to 2021 where needed):

- drugs' acquisition: from SmPC of each drugs and valued with public prices [Journal officiel, Basedes Médicament set Informations Tarifaires
- drugs' administration: from SmPC of each drugs and discussed during experts' interviews, valued with hospitalization rate [GHM 28Z07Z « chimiothérapie en séance »] and
- disease management: from experts' interviews and valued with Codage des actes biologiques(NABM)9 and Codagedes actes médicaux(CCAM) 10
- end of life costs: from French study (Chouaid et al, 2004<sup>11</sup>)

Market shares in the two scenarios derived from an internal forecast, atezolizumab is expected to take market shares from pembrolizumab (monotherapy and in combination).

Table 1. Main structural choices of the model

| World compared                        | Without atezolizumab irftline of treatment     With atezolizumab astline treatment                                                                                                                                             |                                                                                                                                                                                                                                                                |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Perspective                           | French National Health Insurance                                                                                                                                                                                               |                                                                                                                                                                                                                                                                |
| Time horizon                          | 3 year                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                |
| Therapeutic strategies considered     | 1st line Atezolizumab Pembrolizumab Pembrolizumab + carboplatin +paclitaxel Pembrolizumab + pemetre xed + platinum drug Chemotherapy (platinum + pemetre xed) Chemotherapy (platinum + 3rd generation drug except pemetre xed) | <ul> <li>2nd line</li> <li>Atezolizumab</li> <li>Pembrolizumab</li> <li>Nivolumab</li> <li>Chemotherapy (without pemetrexed or bevacizumab)</li> <li>Chemotherapy (including pemetrexed + bevacizumab)</li> <li>Chemotherapy (including pemetrexed)</li> </ul> |
| 2 <sup>nd</sup> line transfer<br>rate | 60 %                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                |

#### Results

The total cumulative cost of patients with PD-L1 high metastatic NSCLC today in France is approximately 1.3 billion € in first line and 351 million € in second line (see Figure 1).

Over the three-year horizon and at a list price of 3,496.101 € excluding VAT and using the hypothetical market shares, for a cumulated number of 18,300 patients in 1st line, the availability of atezolizumab in the new indication would result in a decrease in total expenditure for the French National Health Insurance estimated at 74,486,446 € (with an annual incremental cost of 16,446,339 €, 25,773,611 € and 32,266,497€ for years 1 to 3 respectively, see Figure 2).

This budgetary impact corresponds to a decrease of approximately 4.35% of current Health Insurance expenditure in this indication due to lower drug acquisition costs.

Per patient, this would translate into a 12,211€ reduction.

Figure 1. Cumulative total costs with and without atezolizumab

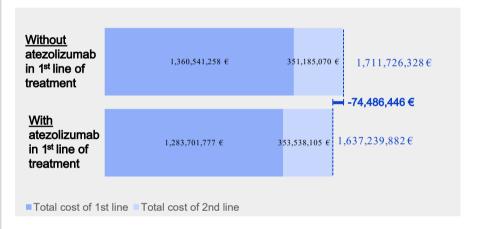
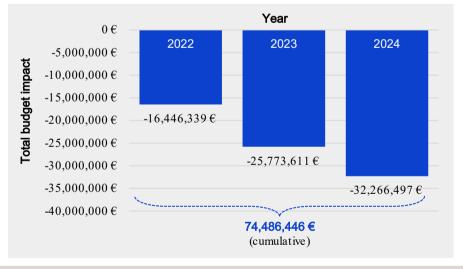


Figure 2. Total budget impact of the atezolizumab as a 1<sup>st</sup> line



# Conclusions

In addition to the direct benefit linked to the efficacy of atezolizumab in terms of overall survival, this therapeutic option allows savings for French Health Insurance expenditures.

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