

A COST EFFECTIVENESS ANALYSIS OF NIVOLUMAB COMPARED WITH PEMETREXED FOR THE TREATMENT OF NON-SMALL CELL LUNG CANCER IN REAL PRACTICE



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Objectives

A total of 1.6 million new cases of lung cancer are diagnosed each year, with 1.4 million deaths annually. **Nivolumab (NIV)**, a **programmed death 1 (PD-1) immune checkpoint inhibitor antibody**, has demonstrated **improved survival in previously treated advanced NSCLC**.



Evaluation of the **incremental cost effectiveness ratio (ICER)** for **NIV** compared with **pemetrexed (PMX)** for previously treated advanced NSCLC in our hospital

Rating of the findings of the manufacturer submitted **indirect treatment comparison (ITC)** of the **relative efficacy** of **NIV** versus **PMX** in advanced NSCLC patients receiving secondline or higher-line therapy.

Material and methods

A **retrospective observational study** carried out to estimate our population **progression free survival (PFS)**, measured by the **response evaluation criteria in solid tumours (RECIST)**.

15 months (July 2015–September 2016)

all **0–1 ECOG** performance status and patients included in the **Expanded Access Programme for NIV**.

Total drug costs calculated from the ex-manufacturer; administration, indirect or social costs were not considered.

Results

	Group A	Group B	Total patient sample
	NIV	PMX	
Patients	12	11	23
Median age (years)	74 (range 55–80)	70 (range 51–79)	
Median dose (mg)	200	700	
Median PFS (months)	7 (range 1-13)	3 (range 1-14)	
Median number of cycles	12 (2-29)	3 (1-7)	
Median cost of C¼ per patient (€)	32.160	5.762	



	ICER
NIV compared with PMX	C ¼ 6.600/PFS month

Discussion

NIV is more effective than PMX but its ICER is high from the payer's perspective, with a significant impact on spending, according to the manufacturer submitted ITC.

Conclusion

Evaluation of the economic impact of these agents on the health system is necessary to guarantee sustainable access to new medicines.