

REAL-WORLD EFFICACY AND COST DATA ON PATIENTS WITH METASTATIC NON-SMALL CELL LUNG CANCER TREATED WITH CHECKPOINT INHIBITORS IN AN ITALIAN UNIVERSITY HOSPITAL IN SEPTEMBER 2016-2020

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BACKGROUND AND IMPORTANCE

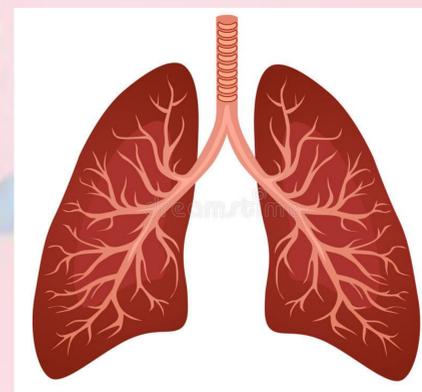
Non-small-cell lung carcinoma (NSCLC) accounts for 85–90% of all forms of lung cancer. In recent years, the development of immune checkpoint inhibitors has completely changed the therapeutic landscape of NSCLC and changed treatment standards. Immunology is a promising therapeutic option based on the use of synthetic antibodies, as nivolumab e pembrolizumab, able to improve both the survival of patients. All this represents a valid new approach but the high cost requires a specific evaluation of health outcomes.

102 selected patients

Carcinoma : Non-small-cell lung (NSCLC)
Treatment : Immune checkpoint inhibitors
Time : from September 2016 to September 2020
Where : University Hospital

AIM AND OBJECTIVES

The main aim of this retrospective observational study is to analyze the characteristics of NSCLC patients, the treatment outcomes and costs of patients with advanced stage NSCLC treated with nivolumab and pembrolizumab in an Italian Teaching Hospital on a cohort of **102 selected patients**.



MATERIAL AND METHODS

A retrospective, observational analysis was conducted on patients treated with **immune checkpoint inhibitors from September 2016 to September 2020 at University Hospital "Mater Domini" in Catanzaro, Italy**. Data sources were medical records, internal prescription cards and reports of adverse reactions.

RESULTS

One hundred and two patients (**89,2% male**) were diagnosed with advanced NSCLC, **69.6% characterized by a non-squamous histology, 30.4% squamous**. First-line treatment with **pembrolizumab was administered to 53 patients for an average of 11.5 months**, 9 of which are in innovative treatment with pembrolizumab + pemetrexed at the first line with an **average annual patient cost of € 4.915,78**, while **49 patients** were treated with **nivolumab** for an average of **16.5 months** with an **average annual patient cost of € 11.306,08**. Data showed a **survival rate of 64,8% after 12 months**, 57,9% after 24 months and 48,1% after 36 months. Most patients received immunotherapy as a first-line and others as subsequent treatment.

University Hospital	102 PATIENTS	
Patients	89,2% male	10,8% female
Histology	30,4% Squamous	69,6% Non Squamous
Treatment	Pembrolizumab (53 patients)	Nivolumab (49 patients)
Average Treatment	11,5 months	16,5 months
Average Annual Patient Cost	€ 4.915,78	€ 11.306,08
Survival rate after 12 months	64,8 %	
Survival rate after 24 months	57,9 %	
Survival rate after 36 months	48,1 %	

CONCLUSION AND RELEVANCE

Nowadays there are numerous clinical studies in NSCLC but there is no study comparing immunotherapy treatments. From this study, based on real world data, it emerged that the impact on budget is greater for nivolumab which has a higher survival value than pembrolizumab. This analysis was a first step in assessing the impact of introducing a significant new class of treatments, immunotherapy, comparing two drugs that have totally changed the prognosis of NSCLC patients.

References and/or acknowledgements

1 NCCN guidelines insights: NSCLC, version 5.2018.