

ASCO estimates that 87 thousand years of life for non-small cell lung cancer patients are at risk due to the Most Favored Nation Model

December 16, 2020

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Introduction: On November 20, 2020, the Centers for Medicare and Medicaid Services (CMS) released the Most Favored Nation (MFN) Interim Final Rule¹. The MFN Model will lower the Medicare payment amount for commonly used drugs based on a price that reflects the lowest per capita Gross Domestic Product-adjusted (GDP-adjusted) price of any non-U.S. member country of the Organization for Economic Co-operation and Development (OECD) with a GDP per capita that is at least 60% percent of the US GDP per capita. The MFN Model will result in cuts to Medicare payment amounts of 65% for 50 drugs included in the model, 38 of which are used to treat cancer patients.

CMS has projected that up to 19% of Medicare beneficiaries will forgo treatment due to lack of access to a provider able to purchase and administer the drugs included in the MFN Model. This poses a significant threat to the health and life of Medicare beneficiaries with cancer. Using CMS' assumptions, the American Society of Clinical Oncology (ASCO) sought to estimate the impact of this policy on the survival of patients diagnosed with certain cancers who might lose access to these treatments. We chose the use of immune checkpoint inhibitors (ICIs) in non-small cell lung cancer (NSCLC) for analysis.

Methods: Approximately 229,000 patients are diagnosed annually with lung cancer, with NSCLC accounting for 85% of these diagnoses². More than half of these (~53%) are advanced or metastatic NSCLC, which translates to approximately 100,000 patients annually who could potentially receive an ICI to treat their lung cancer³. Approximately 23% of these patients are estimated to have high PDL1 expression and would be treated with an ICI in the first line setting, and the remaining patients with low or no PDL1 expression would receive it in the second line setting⁴.

Based on published reports, one-year survival in first line patients treated with chemotherapy alone is 55% versus 70% with an ICI. In patients treated in the second line, we assume one-year survival of 40% in patients treated with chemotherapy alone vs. 50% in patients treated with an ICI. Previous research estimates long-term response to ICIs in the first line of about 25%, as compared to only 1% on chemotherapy alone, and about 10% long-term response to an ICI in the second line setting compared to 1% on chemotherapy alone^{5,6,7,8,9,10}. We further assume that incidence rates of lung cancer are higher for Black men (82 per 100k) and White men (62 per 100k) as compared to Black women (47 per 100K) and White women (52 per 100K)³; 67% of NSCLC patients are 65 or older²; and that 12% of the US population is Black. Life expectancies by age and gender were obtained from the Social Security Administration and expected differences by race were calculated using statistics from the Centers for Disease Control^{11,12}.

This method utilized the same approach and assumptions as were used in our prior analysis of years of life saved if all patients diagnosed with advanced or metastatic NSCLC in 2018 could be treated with ICIs, as reported in ASCO's Clinical Cancer Advances 2018¹³.

Results: Of the 67,300 patients 65 and older with advanced or metastatic NSCLC, we assume 30% are in Medicare Advantage and an additional 7% will be otherwise excluded due to treatment at a Critical Access Hospital or PPS-Exempt Cancer Hospitals. This leads to approximately 42,400 patients 65 or older with advanced or metastatic NSCLC that have ICIs indicated for their cancer care annually subject to the MFN Model implications.

Using CMS's assumptions on forgone care¹, we estimate that 3,816 (9%) of patients with NSCLC will lose access to ICIs in year one of the MFN Model, 5,936 (14%) in year two, and 8,056 (19%) in each of years three through seven, totaling 50,032 patients.

We simulated life expectancy under two conditions for each patient: (1) treatment with chemotherapy alone, and (2) treatment with ICI treatment. Given the difference in the life expectancy under the two conditions, we estimate that the mean difference in years of life comparing the two treatments is 1.75 years. Taken across the 50,032 patients without access to these ICIs, this translates into 87,556 years of life lost over the seven-year duration of the MFN Model.

Conclusion: The MFN Model impacts Medicare beneficiaries' access to therapies which have demonstrated significant survival benefit. The loss of access to these drugs will result in meaningful loss of life.

References:

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