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Cost Matters

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Commentary

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Abbreviations: ICI: Immune Check Point Inhibitors; TT: Targeted Therapy; AEs: Adverse Events.

We aimed to 1-Estimate costs of the Immune check point inhibitors (ICI), targeted therapy (TT) and other cancer branded trade names 2-Define the conditions and terms of cost legitimacy. A case is being presented to highlight the cost of extended therapy. This 65 yo Caucasian female presented in 2014 with metastatic non-small-cell lung cancer (a/m-NSCLC), ALK +, metastatic to brain, liver, and bone. She was started on Alectinib (Alect) 600 mg po bid. Two weeks later she developed pneumonitis, hospitalized, treated with antibiotics, responded, and discharged. She remained asymptomatic, on Alec. Adverse events (AEs) were constipation and mild lower leg swelling. CT scans revealed marked improvements in liver and brain lesions. Last seen on 1-8- 2023, preparing to fly on vacation with husband to Australia. Despite lengthy discussion between patient, husband and oncologists, no decision could be made to stop Alect. Adequately ensured, the patient still pays $700 a month for Alect coverage. Estimated monthly cost was $16,570, one year $198,840 and 8- year $1,590,720 [1].

The rising costs of cancer drugs continue to raise serious economic concerns and risks. We have previously demonstrated that the 2-year ICI costs were justified in the treatment of a/m/NSCLC. The 3-approved ICI: Pembrolizumab (Pembro), Atezolizumab (Atezo) and Cemiplimab (Cemi) have consistently demonstrated significant OS [2-6]. Unless proof of positive outcomes emerges, continuation of therapy beyond 2- years is costly and inadvisable.

Many attempts have been forwarded to control cancer drug costs e.g., cost bundling [7]. The main limitation of our cost platform [2] was the lack of appropriate modeling for imaging, relapse, and treatment toxicities. Such approaches require pharmaceutical participation and governmental approval. Previously, routine use of test animals was expensive and inhumane. At present, artificial intelligence is widely practiced, saving time and cost. Neoadjuvant therapy [8], still at an early phase of discovery and utilization, is being investigated as cost-saving approach (in preparation). The promising neoadjuvant cost-saving power seems an appropriate way to adopt and follow. Unfortunately, some physicians and patients overlook drug costs. Based on 2021 US census of 332,278,200, if 1,000 US TT-treated patients, at $228,000 median cost, the 3-year price tag would be $684,000,000. In 2020 Europe census of 747,636,045, treatment cost of 2,000 patients mounts to $1,368,000,000 [2].

Drug outcomes and safety should be considered first, with cost to follow. Value has been extensively studied by the pharmaceutical companies prior to marketing [9-11]. The present communication attempted to portray OS, safety and costs between the 3-approved ICI as close and overlapping. The competition between pharmaceutical companies is characterized by being fierce and healthy. Each is trying hard to advance their product by finding valid and favorable advantage e.g., superior combinations or new indications. Better still is the use of cost. Reducing the ICI purchase price by 10-20% would indeed be a legitimate basis for promoting sales. More importantly, low-income countries and patients would enjoy the ICI distinct therapeutic benefits.

TT therapy x 2 years is justified because of disease hopelessness and absence of alternatives. Moving forward, it would be strategic and prudent to include few hours of cost management in the curriculum of future medical students, practicing physicians and oncologists to limit the financial stakes of high drug costs [12,13].

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