Appropriate Use of Immune Checkpoint Inhibitors in Advanced NSCLC: Effectiveness of Unique Case-Based Education on Clinical Decision Making

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BACKGROUND

2008 and 2009 witnessed unexplained and ongoing changes in treatment approaches for patients with advanced non-small cell lung cancer (NSCLC) that have greatly improved overall survival and quality of life. Although these changes in care include use of immune checkpoint inhibitors (ICI), the best approach in this setting is still being defined. The present investigation evaluated oncologists from sufficient knowledge and skills to successfully manage NSCLC patients, effecting the mandated level of ICI education in an online format. The objective of the study was to evaluate oncologists’ educational performance in the use of ICI in the management of advanced NSCLC and the impact of innovative education on decision-making in clinical practice.

METHODS

Use of a unique online education environment that employs video vignettes to simulate an oncologist’s clinic (Figure 5) was examined in an opportunity to participate in future of downstream treatment scenarios. Interactive scenarios included 3 different case-based activities and make real-world clinical decisions regarding the personalized management of patients with advanced NSCLC who are being considered for and/or treated with ICI.

ASSESSMENT SURVEY

Each activity consisted of case-based scenarios, with associated performance assessment, self-efficacy, and demographic questions. Each multiple-choice performance assessment question was associated a learning objective and derived from recognized clinical guidelines, and current evidence-based citations. Each individual learner answered the same set of questions, but tailored their responses to the scenarios. For each activity, participants who received minimal clinical education were asked whether they believe their knowledge and skills were sufficient to manage NSCLC patients, effecting the mandated level of ICI education in an online format. The objective of the study was to evaluate oncologists’ educational performance in the use of ICI in the management of advanced NSCLC and the impact of innovative education on decision-making in clinical practice.

ANALYSIS

The Microsoft Excel software was used to generate histograms for calculations of the mean, median, and standard deviation. Participants responses to performance assessment, self-efficacy, and demographic questions were compared to their clinical knowledge and skills in the online environment.

RESULTS

2,399 oncologists participated in at least one of the 3 activities. At the time of data collection responses of the 325 participants who answered all questions in 1 or more activities during the study period were included. Upon completion of the activities, improvements were observed in oncologists’ ability to:

- Order biomarker testing prior to selecting therapy for a patient who progressed on anti-PD-L1 therapy (Figure 2).
- Counsel patients on the expected effectiveness of ICI based on clinical trial data (Figure 3).
- Select the most appropriate monitoring strategy to detect immune-related adverse events in patients receiving an ICI (Figure 4).
- Order appropriate labs to identify the eligibility of symptoms that appear during treatment (Figure 5).
- Properly manage immune-related adverse events due to treatment with ICI (Figure 6).

In addition, comfort with prescribing ICI also increased (Figure 7).

CONCLUSION

Use of online, case-based CME utilizing video vignettes to simulate practice improved competence and performance of participating oncologists, showing that use of unique platforms that simulate patient care can be an effective tool to improve clinical decision-making in the rapidly changing environment of advanced NSCLC disease management.

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