ALEXANDRIA, Va. - An update of the American Society of Clinical Oncology (ASCO) clinical practice guideline clarifies the role of immunotherapy in the treatment of patients with advanced non-small-cell lung cancer (NSCLC). The update also provides new recommendations on the use of targeted therapies for patients with changes in tumor EGFR, ALK, and ROS1 genes.

"Treatment for lung cancer has become increasingly more complex over the last several years. This guideline update provides oncologists the tools to choose therapies that are most likely to benefit their patients," said Nasser Hanna, MD, co-chair of the Expert Panel that developed the guideline update.

ASCO published the last guideline on systemic therapy for stage IV NSCLC in 2015. To develop this update, an Expert Panel with multidisciplinary representation reviewed medical literature published between February 2014 and December 2016. Fourteen randomized controlled clinical trials provided the evidence base for the recommendations.

"Our patients rely on us to keep up with the most effective and best tolerated therapies to help manage this devastating disease," said Gregory Masters, MD, FACP, FASCO, co-chair of the Expert Panel that developed the guideline update. "Knowing when to use targeted therapies or immunotherapy in place of more toxic chemotherapy can help improve the quality of life of our patients."

Key recommendations from the guideline update:

First-line therapy

- For patients with EGFR mutation-negative, ALK rearrangement-negative and ROS1 rearrangement-negative tumors:
  - For patients with high PD-L1 expression in the tumor, pembrolizumab alone is recommended.
  - Other checkpoint inhibitors, combinations of checkpoint inhibitors, and immune checkpoint therapy with chemotherapy are not recommended.
  - If the patient has low PD-L1 expression, clinicians should offer standard chemotherapy.
- For patients with EGFR mutation-positive, ALK rearrangement-positive or ROS1 rearrangement-positive tumors:
  - First-line recommendations for targeted therapy from the 2015 guideline remain the same.

Second-line therapy
• For patients with high PD-L1 expression in the tumor, if no prior immunotherapy, clinicians should use single-agent nivolumab, pembrolizumab, or atezolizumab; if the tumor has low PD-L1 expression or the PD-L1 expression level is unknown, clinicians should use nivolumab, atezolizumab, or chemotherapy.

• Other checkpoint inhibitors, combinations of checkpoint inhibitors, and immune checkpoint therapy with chemotherapy are not recommended.

• For patients who received immune checkpoint inhibitors as first-line therapy, clinicians should offer standard chemotherapy. For patients with sensitizing \textit{EGFR} mutation and progression following first-line \textit{EGFR} targeted therapy, osimertinib is recommended if the tumor has T790M mutation; if the tumor lacks the T790M mutation, then chemotherapy is recommended.

• Patients with \textit{ROS1} gene rearrangement without prior crizotinib may be offered crizotinib, or if they had prior crizotinib may be offered chemotherapy.

• There are insufficient data to recommend for or against immunotherapy in the third-line setting.

• Concurrent \textit{palliative care} is recommended starting at diagnosis.

The \textit{Systemic Therapy for Stage IV Non-Small Cell Lung Cancer: American Society of Clinical Oncology Clinical Practice Guideline Update} was published today in the \textit{Journal of Clinical Oncology}.

The guideline update is available at \url{asco.org/practice-guidelines/quality-guidelines/guidelines/lung-cancer#/10201}.

Information for patients about lung cancer is available at \url{cancer.net/lung}.

ASCO encourages feedback on its guidelines from oncologists, practitioners, and patients through the ASCO Guidelines Wiki at \url{asco.org/guidelineswiki}.

For an embargoed copy of the guideline update, please contact Amanda Narod at \url{amanda.narod@asco.org} or 571-483-1795.

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