Predicting Response to Neoadjuvant and Perioperative Chemoimmunotherapy

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**Dr. Awad:**
This is CME on ReachMD. I'm Dr. Mark Awad.

Today I'm going to review and discuss how we evaluate response to neoadjuvant and perioperative chemoimmunotherapy in specific subgroups of patients with resectable non-small cell lung cancer. Namely, we'll focus on the benefit of these regimens according to stage of disease, as well as according to PD-L1 expression levels.

Here we can see the event-free survival reported by pathologic stage across a number of neoadjuvant-only trials like CheckMate 816, as well as the perioperative trials including KEYNOTE-671, AEGEAN, CheckMate 77T, and others. And you can see here that whether looking at stage II or stage III disease, the EFS [event-free survival] benefit was seen across the board among patients receiving neoadjuvant chemoimmunotherapy, and in some cases, continuing that immunotherapy in the adjuvant setting.

We do see the effect size for EFS benefit seem stronger, more consistently among patients with stage III disease than stage II disease. But this is an important point of discussion, and we've seen data recently presented at ASCO from the AEGEAN study, as well as CheckMate 77T among patients with N2 disease, and in some cases, we saw reported data for single-station versus multistation N2 disease. And again, whether we're talking about, stage II or stage III disease or N2-positive disease, across these trials we saw a benefit among patients receiving perioperative chemoimmunotherapy. So when I'm seeing patients in clinic, whether they have stage II or III disease, we're generally discussing the use of chemoimmunotherapy unless there are contraindications for that regimen in specific subgroups of patients.

Here, we are looking at event-free survival according to PD-L1 expression levels in our resectable lung cancer population. And again, what's been reported across the CheckMate 816, as well as the perioperative studies, KEYNOTE-671, AEGEAN, and 77T, is that in general, whether the cancer is PD-L1 negative or positive, the benefit is in favor of the use of chemoimmunotherapy rather than chemotherapy alone. We do see a benefit among PD-L1-negative lung cancers, albeit not as high or strong a benefit as compared to PD-L1-positive cancers. And we see, whether you're using a PD-L1 cutoff of less than 1% or among the PD-L1-positive cancers greater than 1%, 1 to 49, or greater than or equal to 50%, we see that the higher the level of PD-L1 expression, in general, the greater the benefit with chemoimmunotherapy than with chemotherapy alone.

Similarly, when we look at pathologic complete response and major pathological response rates according to stage or PD-L1 expression levels, again, we see across these trials benefits favoring chemoimmunotherapy over chemotherapy, and we see benefit in stage II, but especially stage III non-small cell lung cancer, as well as benefits across PD-L1 levels, but especially among PD-L1-positive non-small cell lung cancer.

So we try to incorporate all of these data together when we're meeting patients or in clinic to discuss the optimal perioperative strategy for treatment.

Well, our time is up. I hope you've found the information presented here to be helpful and informative for your practice. Thank you so much for listening.

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