Positive Prognosis Changed Patient's Cancer Treatment Plan

Case Presentation:

- 79-year-old female
- Previous smoker who quit 25 years ago
- Presented to clinic with a cough, fever, and chest pain

Diagnosis:

- Bronchoscopy determined mediastinal nodes were negative but the tumor invaded the left main stem. Pleuroscopic biopsy determined the pleural cavity was positive.
- Performed tumor debulking during bronchoscopy due to post-obstructive pneumonia signs and symptoms.
- Diagnosed as stage IV adenocarcinoma non-small cell lung cancer (NSCLC).

Molecular Testing and Test Results:

- Programmed cell death ligand-1 (PD-L1) expression: >50%
- GeneStrat® result: Mutation negative
- VeriStrat® result: Good

Patient Treatment Plan:

- Patient placed on a combination of platinum doublet chemotherapy and immunotherapy.

Patient Outcome:

- At time of publication, the patient's cancer has not progressed.

Key Considerations

- Biodesix Lung Reflex® testing identified a VeriStrat Good result and mutation negative.
- Although patient was diagnosed as stage IV, the VeriStrat Good result encouraged her to begin treatment on a triplet combination therapy regimen. Prior to this information, patient was considering no therapy despite good performance status.

VeriStrat Results Help Guide Patient Conversations

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Can you tell me a bit about your practice?
I am a part of the bronchoscopy program at an active high-volume center that performs diagnostic, therapeutic and staging procedures. We embrace cutting-edge technologies for our patients, including Biodesix® Lung Reflex (BLR) testing. Our chest oncology group has an active tumor board and is a multi-disciplinary group of thoracic surgeons, medical oncologists, radiologists, radiation oncologists, pathologists and pulmonologists.

How do you integrate liquid biopsy into your practice?
A recent case demonstrates how we integrate liquid biopsy in our institute. We had a patient who presented with metastatic disease that was diagnosed with adenocarcinoma. Given that the patient was a non-smoker, we suspected the patient had an actionable mutation. We performed the blood draw for the BLR test and received results confirming that the patient was EGFR mutation positive within two days. The remaining tissue from the patient was reserved and saved for later NGS testing. As the BLR results are available within 72 hours, we can provide results quickly to our patients.

How do you share the diagnosis and prognosis with your patients? Do you talk about potential treatments?
When a patient is first diagnosed with cancer, regardless of stage, the first thing they ask is how long do they have to live. Unfortunately, the overall survival rate for non-small cell lung cancer (NSCLC) stage IV adenocarcinoma is not good. This information is frightening to a patient.

However, this statistic represents the 85-year-old that just had a heart attack and elected to go into hospice as well as the 40-year-old that has a single targetable mutation. Using this statistic can fail an individual, as it doesn't share what a patient's individual response will be. We prefer a more personalized approach to discussing management and prognosis.

A VeriStrat result helps patient prognosis conversations as it identifies a patient's specific immune response to their cancer regardless of their ECOG performance status, mutation status and treatment choice. I use the VeriStrat® result during the decision-making process between myself and the patient.

For instance, if a patient is newly diagnosed with stage IV NSCLC, tested PD-L1 positive with an ECOG performance score 0-1 and has a VeriStrat Good result, I talk with them about the benefits treatment can provide. Meanwhile, if a patient has a VeriStrat Poor result, I know that standard of care therapies won't be as effective, so I have conversations with the patient and their family on what they would like to focus on. In this instance, a patient might consider alternative treatment options such as those found in clinical trials or palliative care. It is critical to have an informed discussion and decision with the patient.

Have you received VeriStrat results for a patient that didn't align to his/her ECOG performance status?
We have had instances in our practice where a patient had a good ECOG performance score but a VeriStrat Poor result. For these patients, we know that standard of care treatment, such as platinum-based chemotherapy, won't be as effective so we look to alternative treatment therapies.

What information do you bring to your multi-disciplinary meetings?
When discussing lung cancer cases, we share diagnosis, stage, performance status, molecular test results, lung function, and whether they should be a surgical candidate. VeriStrat testing provides important information and I usually communicate these results directly to the patient to help them determine their treatment plan. We look at the entire patient profile and VeriStrat adds one more piece of information to give us a complete picture.

How do you make referral decisions?
After the patient is diagnosed with cancer, I refer them onto our medical oncology, radiation oncology or thoracic surgery team depending on their cancer stage. A referral is decided collaboratively in our tumor board.

What was your most significant barrier in implementing BLR testing within your practice? How did you overcome this challenge?
Understanding reimbursement classification is one of the most significant barriers in routinely implementing any diagnostic test. Often, there is confusion on how the different diagnostic tests are reimbursed. For instance, when we first adopted BLR testing there was initial confusion on it conflicting with next-generation sequence (NGS) reimbursement. However, this was not the case.

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