CASE SCENARIO:

Improving Send-Out Tests to Reference Laboratories

BACKGROUND

Biomarker testing is critical for guiding precision oncology decisions. At many cancer centers, particularly in the community setting, complex test menus and the lack of standardized workflows may result in delays or errors when send-out tests are ordered.

To address this challenge, a cancer center may incorporate a laboratory professional dedicated to Biomarker Testing Stewardship (BTS) within its pathology and laboratory operations. This case describes how this person may improve order management for send-out biomarker tests.

SETTING AND PROBLEM DESCRIPTION

The fictitious center diagnoses 1,200 new cancer patients each year. Prior to the intervention, the laboratory reported frequent issues related to send-out test ordering, including:

- Incomplete or incorrect orders for NGS panels and IHC tests
- Redundant orders due to lack of visibility about the status of send-out tests
- Delays in turnaround time (TAT) due to incorrect requisition forms or missing clinical information
- Miscommunication between ordering clinicians, pathology, and the reference lab

INTERVENTION AND OUTCOMES

A laboratory professional dedicated to Biomarker Testing Stewardship was hired with expertise in pathology workflows and trained in test requisition protocols for major reference labs. This person's responsibilities included:

- Reviewing all orders for molecular and immunohistochemical send-outs
- Verifying completeness of clinical data and appropriate specimen labeling
- Checking for prior test results to avoid redundancy
- Coordinating directly with pathologists, oncologists, and the reference lab
- Creating and maintaining a testing log to track pending orders and results

As a result of this intervention, the cancer center observed decreases in incomplete biomarker orders, reductions in the TAT for send-out tests, and an increase in satisfaction among physicians and laboratory staff regarding the quality of communication when ordering tests and receiving results.

ILLUSTRATIVE EXAMPLE

An oncologist ordered NGS and PD-L1 for a patient with advanced non-small cell lung cancer. The laboratory professional dedicated to Biomarker Testing Stewardship reviewed the order and saw that the oncologist had not ordered HER2 by IHC nor c-MET by IHC. This person checked with the oncologist and added these IHC tests, ensuring that the order included all actionable biomarkers.

CONCLUSION

This case illustrates the value of embedding a laboratory professional dedicated to Biomarker Testing Stewardship into laboratory operations. By improving the accuracy and coordination of send-out biomarker test orders, this person reduced delays, avoided redundant testing, and enhanced communication between clinical and laboratory teams. This role is essential in ensuring high-quality, efficient precision oncology care.