Impact of a PD-L1 Learning Collaborative: outcomes from a mixed-methods evaluation

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BACKGROUND

Often, determining eligibility for immune checkpoint inhibitor therapy requires immunohistochemistry testing of the programmed death ligand-1 (PD-L1). However, performance of in-house PD-L1 testing is often hindered by the complexity of using different assays and platforms.

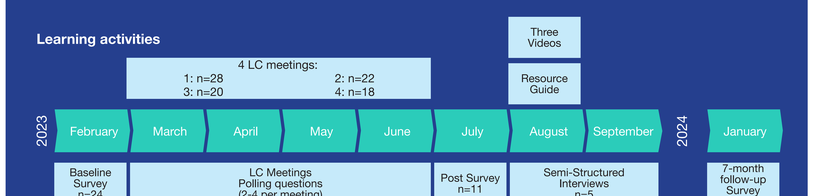
An ASCP PD-L1 Learning Collaborative (LC) was formed to:

1. Identify ways to streamline PD-L1 testing
2. Encourage members to locally implement changes
3. Develop a resource guide for the community

METHODS

The PD-L1 Learning collaborative: pathologists and laboratory professionals, taking part in three activities:

1. Four meetings to discuss current literature and practice
2. Three 30-minute for-credit videos, where LC members shared their experiences and summarized outcomes
3. Resource guide for streamlining PD-L1 testing

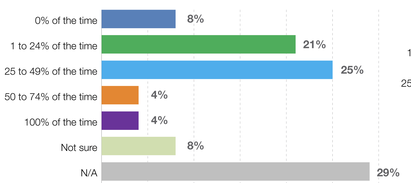


- Quantitative data was analyzed using descriptive and inferential analysis
- Qualitative data using a thematic analysis / inductive reasoning approach

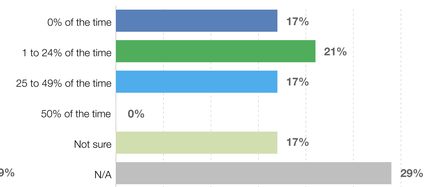
RESULTS

Baseline: Testing delays caused by unstandardized PD-L1 testing processes and suboptimal confidence in PD-L1 validation and methodologies

When you see an order for a PD-L1 test, how often do you need to clarify/confirm which antibody clone or interpretation method should be used? (baseline; n=24)



In your practice, how often do you feel that PD-L1 testing is delayed because the order contains incomplete information? (baseline; n=24)

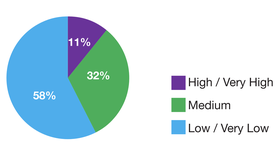


> ***"[…] the inconsistency with the requirements […] for validation is always off-putting a little bit in terms of not telling us what you have to do, and that's always been the case."***
>
> —Pathologist

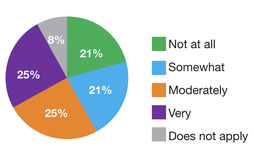
> ***"There was no consensus. Everybody would give a different answer because it's so subjective."***
>
> —Pathologist

Post-LC: Self-reported increase in knowledge and confidence levels regarding discussion of PD-L1 scientific evidence and best practices.

Rate your level of confidence on identifying a specific way to improve PD-L1 testing policies and procedures at your institution (n=19; meeting 2)



If your laboratory needed to perform PD-L1 antibody validation, how would you rate your confidence at overseeing this task? (n=24; baseline)



- 50% reported high / very high need for their "institution to improve or streamline PD-L1 testing procedures" (meeting 2, n=18)

7-month follow-up:

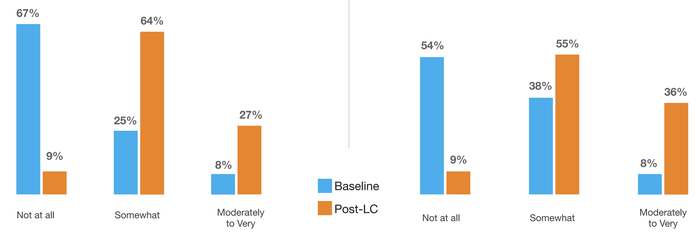
59% (n=10) of respondents reported at least one PD-L1-related practice change, and each of the following changes were reported by 29% of participants (n=5):

- Improving protocols for specimen acquisition, handling, or processing
- Improving communication with multidisciplinary care team
- Optimizing biomarker testing workflows

Confidence levels in discussing the scientific evidence regarding:

"Interchangeability" of using different PD-L1 assays in clinical practice (baseline n=24; vs. POST n=11, p=0.006)

Clinical use of laboratory-developed tests (LDTs) for PD-L1 (baseline n=24 vs. POST n=11, p=0.020)



CONCLUSIONS

- After participating in the LC, improvement in PD-L1 testing processes and related practices among a group of pathology professionals was reported
- The group successfully made available three panel videos and a resource guide, in addition to publishing key considerations for developing in-house PD-L1 testing as a poster at ASCP 2023
- Future initiatives should address remaining gaps and develop tumor-specific PD-L1 testing considerations.

Please scan these QR codes for study resources:

Three videos

Resource guide

Published key considerations

ACKNOWLEDGMENTS AND DISCLOSURES

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