ClinicalPath

Appropriate use of precision oncology

Data and guidance for a new treatment paradigm

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Challenge

Health systems are managing an explosion of knowledge, specifically in oncology treatment. New drugs and therapies are coming to market quickly, with many classified as precision oncology therapeutics. They offer a promising opportunity to improve patient outcomes, but can complicate your decision-making and drive up your costs.

The literature on actionable biomarkers and genetic variants changes frequently, as does the approved indication for targeted therapies, resulting in a high level of variation in biomarker testing and appropriate utilization of targeted therapies — adding more difficulties to using this treatment method. Also, newly published biomarkers often are under-tested.

Using Non-Small Cell Lung Cancer (NSCLC) as an example, optimized use of precision oncology is currently hindered by:

- Frequent field advances — As the number of molecular biomarkers and targeted therapies for NSCLC grow, so do the associated companion and complementary tests, resulting in unwarranted variation in clinical practice.
- Inappropriate testing — An analysis of real-world patterns of EGFR testing and treatment based on a random sample of patients with NSCLC found that less than 25% of stage IV, adenocarcinoma patients received EGFR testing.[i]
- Inappropriate use of targeted therapies — A recent study found that only 11% of NSCLC patients were tested for PD-L1 expression before receiving either nivolumab or pembrolizumab.[ii]

Opportunity

With the growth of targeted therapies in clinical practice, appropriate biomarker testing will become increasingly important for patient outcomes and reimbursement approval. Your institution can be ready — and ahead of the curve — if you put in place the tools needed to overcome barriers and expedite success in this new field.

When ClinicalPath pathways were modified to capture NSCLC biomarker test results, appropriate targeted agents were selected for 92% and 87% of patients who were ALK translocation positive and EGFR sensitizing mutation positive, respectively.[iii]

How ClinicalPath can help

For your providers:

- Pathway recommendations identify the appropriate treatment regimen, based on efficacy, toxicity, and cost, ensuring the appropriate use of targeted therapies and applicable resources.
- Where a test's results have not yet been received, providers can "pause" the pathway, allowing them to pick up at the relevant step when the results are in.
- Based on the biomarker testing results, the pathway identifies the optimal treatment regimen, ensuring the appropriate use of targeted therapies.

For your patients:

- Enhance patient outcomes by helping to ensure targeted therapies are used appropriately.
- Incorporate information for patients — including treatment consent forms, treatment plans that outline disease staging and biomarker results, drug-specific patient education and patient assistance forms for subsidized drug access — ensuring they are informed about their cancer and contributing to treatment compliance.

For your institution:

- Detailed analytics on biomarker testing rates, assay results and on- and off-pathway use of targeted therapies, supports your leadership team's reporting requirements for quality programs and reimbursement approvals.
- Your leadership team can use this information to standardize precision oncology practices across sites, aligned to the latest evidence.

For breast cancer patients who had ER-positive, HER2Neu-negative disease with zero to three positive nodes, 93% had diagnostic testing for the use of adjuvant chemotherapy. Where chemotherapy followed by hormone therapy was indicated, pathway adherence was 97%.[iv]

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Resources

i. Real-World Patterns of EGFR Testing and Treatment with Erlotinib for Non-Small Cell Lung Cancer in the United States, PLoS One, June 13, 2016, https://pubmed.ncbi.nlm.nih.gov/27294665/

ii. Rates of PD-L1 expression testing in U.S. community-based oncology practices (USCPs) for patients with metastatic non-small cell lung cancer (mNSCLC) receiving nivolumab (N) or pembrolizumab (P), Journal of Clinical Oncology, published online May 30, 2017, https://ascopubs.org/doi/abs/10.1200/JCO.2017.35.15_suppl.11596

iii. Actionable biomarkers in a non-small cell lung cancer (NSCLC) clinical pathway (CP), Journal of Clinical Oncology, presented February 26, 2016, https://meetinglibrary.asco.org/record/121367/abstract

iv. Pathways Clinical Decision Support for Appropriate Use of Key Biomarkers, Journal of Oncology Practice, June, 2016, https://pubmed.ncbi.nlm.nih.gov/27221995/