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# Biomarker Testing Program Resource Grid

Designed to support health care organizations' biomarker program growth and development

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# Overview of Advisory Board's research

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## About this program resource grid

The following document is based on Advisory Board's original research and analysis of literature and primary research interviews with health care executives, clinicians, and stakeholders in the biomarker testing process.

The grids in the following document, as well as the program features, resources, and accompanying prioritization, are designed to provide a starting framework for initial discussions around biomarker testing program implantation. It is based on a synthesis of Advisory Board's research calls, literature review, and internal expert analysis, and cannot be attributed to a single organization or piece of literature. The program resource grids and accompanying recommendations do not reflect the opinions or suggestions of AstraZeneca.

## About Advisory Board research

Advisory Board is a best practice research firm serving the health care industry. We provide strategic guidance, thought leadership, market forecasting, and implementation resources. For more information about our services—including webinars, analytics, expert insights, and more—visit [advisory.com](http://advisory.com).

## About Advisory Board's research process

Our research process is member-driven. We conduct 80+ research interviews with health system executives and service line leaders across the country to understand program challenges and identify and vet best practice solutions. The results from these interviews are then published in white papers, webinars, conference presentations, and data tools.

# Biomarker Testing Program Resource Grid

Molecular biomarker testing is integral to cancer care and precision medicine. One study of 5,954 patients with refractory malignancy showed that 37.6% of these patients had therapeutically actionable genetic alterations, meaning they can be matched to approved targeted drugs, across several different cancer types.<sup>1</sup> Advisory Board research shows there is a large opportunity for health care organizations to use biomarker testing to help get the right patients on the right drugs at the right time.

However, biomarker testing practices and overall adoption varies across hospitals, health systems, and community sites. This variability is often due to insufficient resources dedicated to the biomarker testing process – from staffing, to education, to technology support.<sup>2</sup>

Therefore, oncology program leaders should consider investing in the resources needed to advance their biomarker testing process and prepare to advocate to leadership for additional support when necessary.

## What is this resource and how do I use it?

This grid outlines the resources recommended by Advisory Board, based on its proprietary research and analysis, to develop basic, intermediate, and advanced biomarker testing programs. However, the categories listed are not mutually exclusive. A biomarker testing program can have resources listed across all categories (e.g., an “intermediate” program can have several “advanced” resources). The resources listed in each program level are not an exhaustive list but rather offer suggestions for organizations looking to advance their biomarker testing process. The grid can also serve as a way to identify current program processes and guide future investment.

Use this resource grid to understand where your program stands and to lead discussions on what resources to invest in to advance your biomarker testing program.

### Program levels

Bearing in mind that organizations have various resource constraints and patient populations, Advisory Board uses these definitions to describe the three program levels:

- **Basic:** Organizations that offer the standard of care; the “must have” oncology biomarker testing resources and services
- **Intermediate:** Organizations that actively incorporate biomarker testing into their oncology and precision medicine programs
- **Advanced:** Best-in-class biomarker testing programs; offer industry-leading services, provide cutting edge treatments, drive research and forward innovative approaches

### Ratings

Finally, the grid includes a numerical rating, ranking the importance of each element from least important (1) to most important (4) based on Advisory Board research and analysis.

Take these ratings as suggestions for how to prioritize areas of improvement or allocation of additional resources.





Program Feature	Basic	Intermediate	Advanced
4 <b>Leadership</b> <sup>3</sup>	<input type="checkbox"/> Ad hoc based on specific cases or program needs	<input type="checkbox"/> Physician champion leader	<input type="checkbox"/> Dedicated precision medicine and/or biomarker testing leadership <input type="checkbox"/> Regular communication and meeting cadence with all stakeholders
4 <b>Education</b> <sup>3</sup>	<input type="checkbox"/> Organization-wide access to nationally recognized guidelines (e.g., NCCN, AMP, or CAP)	<input type="checkbox"/> Optional, physician-led education sessions (e.g., lunch and learns) <input type="checkbox"/> Staff member(s) dedicated to monitoring changes to clinical guidelines or pathways and communicating with team	<input type="checkbox"/> Mandatory, organization-sponsored education sessions (e.g., lunch and learns, education checkpoints) <input type="checkbox"/> Dedicated library for biomarker testing education materials
4 <b>Testing and treatment protocol</b> <sup>4</sup>	<input type="checkbox"/> Organization recognizes appropriate guidelines	<input type="checkbox"/> Complete adoption of nationally recognized guidelines or clinical pathways <input type="checkbox"/> Actively track adherence to nationally recognized guidelines or clinician pathways	<input type="checkbox"/> Actively looks for new technologies such as: concurrent testing, automated clinical trial enrollment system, next-gen sequencing machines <input type="checkbox"/> Uses the latest tests, technologies, and methodologies to assess the need for further lines of treatment
3 <b>Clinical Staffing</b> <sup>3</sup>	Dedicated frontline clinicians including: <input type="checkbox"/> Oncologist <input type="checkbox"/> Pathologist Support staff including: <input type="checkbox"/> General hospital administration	Dedicated support from: <input type="checkbox"/> Oncology staff <input type="checkbox"/> Oncology-focused data team Multidisciplinary group dedicated to discussing biomarker testing includes: <input type="checkbox"/> Oncologist <input type="checkbox"/> Lab staff <input type="checkbox"/> Pharmacist <input type="checkbox"/> Pulmonologist <input type="checkbox"/> Radiologist <input type="checkbox"/> Administrative staff	Dedicated precision medicine expertise from: <input type="checkbox"/> Pharmacogenomics (PGx) specialist <input type="checkbox"/> Geneticist <input type="checkbox"/> Genetic data specialists <input type="checkbox"/> Bioethicist Dedicated biomarker testing staff: <input type="checkbox"/> Genetic counselors
3 <b>Data tracking</b> <sup>3</sup>	<input type="checkbox"/> Manual biomarker testing data entry (e.g., via excel)	<input type="checkbox"/> Automated electronic biomarker testing data entry (e.g., through EHR or vendor platform)	<input type="checkbox"/> Dedicated data team tracks, analyzes, and informs future processes using biomarker testing data <input type="checkbox"/> Pilot new data tracking tools and methods <input type="checkbox"/> Collects metrics including: <ul style="list-style-type: none"> <li>• Number of patients receiving testing</li> <li>• Number of patients who receive therapy</li> <li>• Turnaround time</li> <li>• Quality Not Sufficient (QNS) rate</li> <li>• Progression free survival rate</li> </ul>



	Program Feature	Basic	Intermediate	Advanced
3	<b>Standardization<sup>5</sup></b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Protocol enforced by clinicians-leaders</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Site-wide biomarker testing protocols</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> System-wide biomarker testing protocols</li> </ul>
2	<b>EHR capabilities<sup>5</sup></b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Basic EHR that can upload PDF of biomarker test results</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> EHR is standardized across sites of care</li> <li><input type="checkbox"/> EHR is integrated with lab vendor ordering processes</li> <li><input type="checkbox"/> Built-in alerts and prompts to provide clinical decision support</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> EHR directly integrates genetic testing results into relevant fields</li> <li><input type="checkbox"/> Built-in alerts proactively flag patients with actionable biomarkers</li> </ul>
2	<b>Financial Services<sup>5</sup></b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Ad hoc process for biomarker testing reimbursement and pre-authorization (PA)</li> <li><input type="checkbox"/> Frontline clinicians connect patients with financial services</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Frontline clinicians execute formal reimbursement process</li> <li><input type="checkbox"/> Established process for submitting PA</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Dedicated reimbursement team</li> <li><input type="checkbox"/> Lab vendors handle PA process</li> <li><input type="checkbox"/> Dedicated financial navigators support patients</li> </ul>
2	<b>External Partnerships<sup>5</sup></b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Ad hoc relationships with lab vendor, technology partners, and payers</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Therapeutic area or site-level lab agreement(s) with partners</li> <li><input type="checkbox"/> Site-level partnerships with local payers</li> <li><input type="checkbox"/> Site-level partnerships with technology vendors</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> System-level lab agreement(s)</li> <li><input type="checkbox"/> System-level partnerships with local payers</li> <li><input type="checkbox"/> System-level partnerships with technology vendors</li> <li><input type="checkbox"/> Local community partnerships to advance testing knowledge</li> </ul>
2	<b>Patient Engagement<sup>6</sup></b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Staff provide education materials to patients</li> <li><input type="checkbox"/> Online patient navigation resources</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Biomarker testing expertise help patients navigate journey</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Dedicated biomarker testing personnel to help patients through process</li> </ul>

Sources: 5 Data on File, US-57118, AstraZeneca Pharmaceuticals LP; 6, Advisory Board Oncology Roundtable, "Lung Cancer Program Resource Grid," 2020, advisory.com.



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