

Precision Medicine in **Solid** Tumors



The goal of matching the right patient to the right therapy at the right time is a reality, due to our improved understanding of tumor biology¹⁻³



Diagnostic, prognostic, and predictive biomarkers
inform treatment decisions^{4,5}

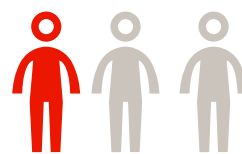
The therapeutic landscape has been reshaped through an increase in the number of predictive biomarkers to inform therapy decisions, transforming patient care⁶⁻⁸

As of 2024, there are

83 biomarkers recognized by the US FDA or recommended in professional guidelines for predictive biomarker testing⁶

103 FDA-approved precision oncology therapies, including targeted therapies and ICIs^{6,7}

11 ICIs approved⁷



1 in 3 patients

with cancer may be eligible for biomarker-informed therapy^{9,10}



Hurdles in the diagnostic journey prevent some patients from receiving recommended testing¹¹⁻¹⁴

Common challenges and potential solutions throughout the diagnostic journey

	Challenge	Potential solution
Test Ordering*	Patient Presentation	- Initial biopsy not performed (patient medically unfit or tumor inaccessible)¹⁴⁻¹⁶ - Use liquid biopsy¹⁷ - Use FNA and cytology¹⁸
	Sample Acquisition	- Insufficient sample collected^{11,14,19} - Implement rapid on-site evaluation (ROSE)¹⁷ - Involve pathologist during sample collection^{11,13,17}
	Sample Processing, Diagnostic Testing	- Sample degradation from inappropriate tissue handling/processing^{11,17,18,20} - Overestimated tumor content¹⁴ - Consider downstream biomarker testing during initial tissue processing¹¹ - Utilize microdissections¹⁷
	Biomarker Testing	- Appropriate test not ordered^{4,14} - Long turnaround time¹⁴ - Tissue exhaustion preventing further testing^{14,18,20} - Use NGS-based testing if possible¹⁷ - Implement reflex testing¹⁷ - Use minimal tissue for diagnosis²⁰ - Cut slides up front²⁰
	Testing Results Reporting	- Report missing information²¹ - Report difficult to interpret^{17,21,22} - Complete report with essential elements included²¹ - Clearly identify actionable biomarkers²²
	Treatment Decisions	- Treatment initiated before test results returned¹⁴ - Treatment not matched to positive test results¹⁴ - Wait for test results^{4,17,23} - Stay current with guideline recommendations^{4,11,15}

Disparities in biomarker testing

Rates of biomarker testing may be impacted by:

 Academic vs community hospitals^{24,25}

 Technology and resources²⁶

 Geographic location²⁵

 Race and ethnicity²⁷

 Socioeconomic status²⁸

Solutions start with
a conversation

Take action and speak to
J&J Precision Medicine

*Includes reflex testing.

FDA, Food and Drug Administration; ICI, immune checkpoint inhibitor; NGS, next-generation sequencing.

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