



# BCR-ABL1-LIKE B-LYMPHOBLASTIC LEUKEMIA/LYMPHOMA SCREENING ASSAY AND DIAGNOSTIC ALGORITHM

TriCore Reference Laboratories now offers a screening assay and diagnostic algorithm for the identification of *BCR-ABL1*-like B-lymphoblastic leukemia/lymphoma (B-ALL) (or “Ph-like” ALL). This entity accounts for 10-20% of pediatric B-ALLs and 20-30% of adult cases. Unlike other B-ALLs with recurrent genetic abnormalities, there is not a single, discreet cytogenetic or molecular abnormality that defines *BCR-ABL1*-like B-ALL. To date, there have been over 60 different rearrangements and gene mutations associated with this entity. However, all of these changes give rise to a characteristic gene expression profile, which has been used in Children’s Oncology Group (COG) and adult trials to screen for *BCR-ABL1*-like B-ALL. Identifying these cases is important because the majority of the mutations converge on pathways that are potentially amenable to the addition of tyrosine kinase inhibitors (TKIs), including ABL-class and JAK/STAT pathways inhibitors such as dasatinib or ruxolitinib, to conventional chemotherapy.

Because of the spectrum of genetic abnormalities associated with the disease, several methods and approaches to diagnosing *BCR-ABL1*-like B-ALL have been described. Gene expression profiling remains the gold standard. COG and adult trials have utilized a low density array (LDA) assay to quickly and efficiently screen cases for the characteristic gene expression signature. In positive cases, additional work up to identify the specific mutation is then performed. TriCore Reference Laboratories offers this same simple and comprehensive approach, starting with screening using the LDA assay. We then reflex as necessary to additional assays including FISH rearrangements in high-incidence genes, a RNA gene fusion panel, and a multiplex next generation sequencing panel evaluating a large number of genes known to be associated with *BCR-ABL1*-like B-ALL.

To assist pathologists and clinicians in using this screening assay and diagnostic algorithm, each case will be accompanied by an integrated interpretive comment, crafted by our team of hematopathologists and molecular genetic pathologists. This report will incorporate available clinical, cytogenetic, and molecular genetic findings. TriCore’s algorithm is the first commercially and clinically available option to screen for *BCR-ABL1*-like B-ALL and will become an integral part of your workup for B-ALL.

## CONTACT

TriCore Pathology Engagement | Phone 505-938-8540 | Fax 505-938-8520 | pathconnect@tricore.org

### BCR-ABL1-LIKE B-LYMPHOBLASTIC LEUKEMIA/LYMPHOMA SCREENING ASSAY

Test Code.....MDPALL	Testing Performed.....Tuesday and Friday
CPT Code.....81479; G0452-26*	Methodology.....Real Time PCR
	Reported.....Reported in 3-7 days
*Additional CPT codes may apply when ordering the full diagnostic algorithm.	
<b>COLLECTION</b>	
Specimen	Preferred: Whole Blood or Bone Marrow
Collection Containers - screening assay	Preferred: Lavender (EDTA) Acceptable: Pink(EDTA) / Blue (NaCitrate) / Green (NaHeparin)
Collection Containers - diagnostic algorithm	One Lavender (EDTA) or Pink (EDTA) <b>AND</b> one Green (NaHeparin)
Collection Amount	Preferred volume: 5.0mL Minimum volume: 2.0mL
<b>PROCESSING</b>	
Specimen Processing Instructions	Do not centrifuge. Do not open or share tube.
<b>SHIPPING/TRANSPORT AND STORAGE</b>	
Stabilities/Storage: (Collection to initiation of testing)	<b>Temperature</b> <b>Stability</b> Ambient:            1 days Refrigerated:      2 days Frozen:              Unacceptable
Shipping Instructions	Ship ambient and overnight for Monday-Saturday receipt.
Rejection Criteria	Frozen Samples

