**Clinical Indication and Relevance**
- Aids in the diagnosis of B-cell non-Hodgkin lymphoma.
- May be used to monitor minimal residual disease following therapy.

**Methodology**
DNA is isolated and amplified by PCR using primers specific for a region in exon 3 of the \( BCL-2 \) gene, known as the major breakpoint region (MBR), and the JH region of the IgH gene; or primers specific for a region 3' of the BCL-2 gene, known as the minor cluster region (MCR), and the JH region of the IgH gene. Results are reported as \( BCL-2 \) (MBR or MCR) positive or negative.

**Sensitivity**
The assay sensitivity is \( 10^{-3} \) or \( 10^{-4} \) for BCL-2 MBR or BCL-2 MCR respectively.

**Turn-around Time**
Five to seven working days

**Sample Requirements**

**Collect**
- Peripheral blood (PB): 3-5 mL, in purple top (sodium EDTA) tube; yellow top (ACD) tube acceptable.
- Bone marrow (BM): 1-3 mL, drawn into a syringe containing anticoagulant and then delivered in purple top tube.
- Fresh or frozen tissue: fresh tissue should be obtained in a sterile manner, and a minimum 3 mm\(^3\) of tissue is required. Fresh tissue should be placed in culture medium for transport or snap frozen (see transport section below).
- Formalin-fixed, paraffin-embedded (FFPE) tissue blocks: send tissue block to the lab, or contact lab for instructions regarding cutting paraffin sections for molecular studies.

**Transport**
- PB or BM sample, deliver immediately at 2-8°C (wet ice or cold packs). Do not freeze.
- Tissue samples should be delivered at room temperature in RPMI culture medium to the lab within 3 hours of collection, or snap frozen in liquid nitrogen at -70°C and packed in dry ice for delivery. Please do not allow frozen tissues to thaw.
- Formalin-fixed paraffin-embedded tissue blocks can be delivered at room temperature.

**Stability**
PB or BM samples: ambient - 1 hour; refrigerated - 48 hours.

**Unacceptable Samples**
- Serum or plasma; frozen PB or BM; clotted blood; severely hemolyzed samples
- Paraffin tissue fixed in Zenker's, B5, or Bouin's fixatives
- Bone marrow biopsy decalcified in formic acid

**CPT Code(s)**
- 83891 Isolation or extraction of highly purified nucleic acid
- 83898 x 2 Amplification of patient nucleic acid, each nucleic acid sequence
- 83894 Separation by gel electrophoresis
References