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**Lab Dept:**                      **Anatomic Pathology**

**Test Name:**                      **GENE REARRANGEMENT, T & B CELLS, BONE MARROW**

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***General Information***

**Lab Order Codes:**                      GRBM

**Synonyms:**                      Gene-T; T-Cell Receptor Rearrangement; Gene-B; Immunoglobulin Gene Rearrangement

**CPT Codes:**                      81261 – IGH@, gene rearrangement analysis to detect abnormal clonal populations; amplified methodology  
81342 – TRG@, gene rearrangement analysis, evaluation to detect abnormal clonal populations

**Test Includes:**                      T-Cell: DNA amplification by PCR for detection of T-Cell receptor beta and gamma chain gene rearrangement. If requested, Southern transfer technique for analysis of T-Cell receptor beta, gamma, and delta chains performed at a separate charge.

B-Cell: DNA amplification by PCR for detection of immunoglobulin heavy chain (JH framework 2 and 3), and bcl-2 gene rearrangement. Confirmation of bcl-2 allele specific oligonucleotide hybridization (slot blot) when appropriate. If requested, Southern transfer technique for analysis of immunoglobulin heavy (IgH), kappa, lambda chains, and/or bcl-2, c-myc and n-myc performed at separate charge

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***Logistics***

**Test Indications:**                      Evaluation for clonal rearrangement in lymphoma and leukemia.

**Lab Testing Section:**                      Anatomic Pathology - Sendouts

**Referred to:**                      Fairview University Diagnostic Laboratories (FV Test: CMRTPCR)

**Phone Numbers:**                      MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:**                      For best results, specimens should arrive by 2:00 PM Friday

**Turnaround Time:**                      Results available in 7-14 days.

**Special Instructions:**                      Indicate on request form if Southern transfer technique is desired.

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***Specimen***

<b>Specimen Type:</b>	Bone marrow
<b>Container:</b>	Syringe with ACD (or EDTA) solution
<b>Draw Volume:</b>	5 mL (Minimum: 2 mL) bone marrow
<b>Processed Volume:</b>	Same as Draw Volume
<b>Collection:</b>	Routine Bone marrow aspiration
<b>Special Processing:</b>	Lab Staff: Store at room temperature. <b>Do Not freeze.</b> Contact laboratory prior to shipping. Ship bone marrow at room temperature to arrive within 24-hours
<b>Patient Preparation:</b>	None
<b>Sample Rejection:</b>	Clotted bone marrow; frozen specimen; mislabeled or unlabeled specimens

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### ***Interpretive***

<b>Reference Range:</b>	Results are reported as negative (germline or no rearrangement noted) or positive (clonal rearrangement indicating clonal cell populations present). Correlations with immunophenotypic, histopathologic, and cytogenetic data will be included with the interpretation of the molecular data when available.
<b>Critical Values:</b>	N/A
<b>Limitations:</b>	N/A
<b>Methodology:</b>	Amplification of DNA and confirmation by RFLP (restriction fragment length polymorphism) analysis using Southern transfer technique when appropriate.
<b>References:</b>	Fairview University Diagnostic Laboratory Web Page <a href="http://labguide.fairview.org/diagnostic.asp">http://labguide.fairview.org/diagnostic.asp</a> January 2018
<b>Updates:</b>	1/18/2006: CPT 2006 updates 1/10/2007: CPT 2007 updates 2/6/2013: CPT 2013 updates