Lymphoma: Burkitt FISH for MYC

**Test Purpose**
Detection of MYC rearrangements in Burkitt Lymphoma or Diffuse Large B cell Lymphoma (DLBCL).

**Background Information**
Classification of Burkitt lymphoma, using the World Health Organisation (WHO) system, requires correlation between morphologic and genetic markers.

MYC gene (8q24) rearrangements are commonly seen in Burkitts Lymphoma involving a range of other partner genes 2q11 (IGK), 14q32 (IGH) or 22q11 (IGL).

**Clinical Indications**
MYC FISH analysis is specifically offered as a genetic marker for Burkitt Lymphoma. The results should be interpreted in context with other genetic, pathological, and clinical information.

**Principle of Test**
DNA is labeled with coloured tags that can be seen using a special fluorescence microscope. This technique is called Fluorescence In Situ Hybridization (FISH).

**Specimen Requirement**
Formalin Fixed Paraffin Embedded (FFPE) tissue:
The laboratory requires 6 x unstained slides from 4 micron sections on polylysine coated slides. At least 30 malignant cells must be available for analysis.

Slides must have 2 forms of ID: a laboratory number and a name or NHI.

A Referral Form should be completed and a histology report enclosed to assist in the interpretation of the result.

**Result Interpretation**
The laboratory uses the following combination of probes for this test.

1. MYC breakapart probe or
2. Combination of the MYC breakapart probe and MYC/IGH/CEP8 gene rearrangement probes.

Reference range:
*Normal Negative* = Less than 10% of nuclei show MYC gene rearrangement
*Abnormal Positive* = Greater than 10% of nuclei show MYC gene rearrangement

**Representative Image**

<table>
<thead>
<tr>
<th>Normal MYC</th>
<th>Rearranged MYC</th>
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<tbody>
<tr>
<td>Y= MYC</td>
<td>Y=MYC</td>
</tr>
<tr>
<td>G=3'MYC</td>
<td>R=5'MYC</td>
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**Limitations**
The MYC breakapart probe can detect MYC gene rearrangements, however cannot identify the partner gene involved. MYC/IGH/Cep8 fusion probe detects only the MYC/IGH gene fusion.

**Test Options**
FFPE 003.1 LymphomaBCL2/ FFPE 003.2 LymphomaBCL6
FFPE 003.7 LymphomaCCND1/ FFPE 003.4 LymphomaCLL

**References**


**Billing Code**
FFPE 003.0 LymphomaMYC