آغا خان یونیورسٹی ہسپتال، کراچی
The Aga Khan University Hospital, Karachi

Plasma cell proliferative disorders including multiple myeloma by FISH

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The information contained in this flyer is intended for healthcare professionals.

Department of Pathology and Laboratory Medicine

What's New

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This test is designed to support diagnosis of multiple myeloma or other plasma cell proliferative disorders using bone marrow specimens. Best results are obtained when the bone marrow demonstrates at least 20% involvement by a plasma cell proliferative disorder.
The FISH panel includes analysis for the following chromosomal abnormalities :
11q13, CCND1 (11q13 break apart gene rearrangement)
t(14;16)(q32;q23), IGH/MAF fusion
t(4;14)(p16.3;q32), FGFR3/IGH fusion
17p-, TP53/D17Z1

Introduction:

There are 4 main categories of plasma cell proliferative disorders: monoclonal gammopathy of undetermined significance (MGUS), monoclonal immunoglobulin deposition diseases (amyloidosis), plasmacytoma, and multiple myeloma.
Multiple myeloma is a hematologic neoplasm that generally originates in the bone marrow and develops from malignant plasma cells.
Multiple myeloma is increasingly recognized as a disease characterized by marked cytogenetic, molecular, and proliferative heterogeneity. This heterogeneity is manifested clinically by varying degrees of disease aggressiveness. Multiple myeloma (MM) patients with more aggressive disease experience suboptimal responses to some therapeutic approaches; therefore, identifying these patients is critically important for selecting appropriate treatment options.
Multiple myeloma FISH panel aids in stratifying individuals with newly diagnosed multiple myeloma into risk groups for prognosis and selection of therapy. It is also useful in following up remission or relapse status. The presence of t(4;14), t(14;16), or deletion 17p is classified as high-risk MM in the Revised International Staging System (R-ISS).

Intent of Use:

Aiding in the diagnosis of new cases of multiple myeloma or other plasma cell proliferative disorders using a fixed cell pellet derived from bone marrow

Important Note:

- Test results should be interpreted in the context of clinical findings, history and other laboratory data.
- A neoplastic clone is detected when the percent of cells with an abnormality exceeds the normal reference range for any given probe.
- The absence of an abnormal clone does not rule out the presence of a neoplastic disorder.
- Each probe was independently tested and verified on unstimulated peripheral blood and bone marrow specimens.

Specimen Type:

2 ml Bone marrow aspirate in Sodium Heparin Tube.

Principle:

Fluorescent in situ Hybridization (FISH)

Charges:

t(14;16)	39,000/
t(4;14)	45,000/
11q13	46,000/
17p-, TP53/D17Z1	17,100/

*Revisions may apply

Schedule:

Specimens are processed upon receipt and reports are issued every four working days.

For more information please call: 021 3486 1620
or Email: laboratory@aku.edu

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