

Fluorescent In Situ Hybridization

INTRODUCTION

- Fluorescent in situ hybridization (FISH) is the cytologic characterization of molecular changes in cancer cells
- FISH is critical in diagnostic and prognostic characterization, as well as in the evaluation of response to treatment for hematologic disorders and solid tumors
- FISH can be performed on fresh and archival material, blood, bone marrow, lymph nodes & solid tumors
- Interpretive reports are provided by the pathologist including references, with sensitivity and specificity data provided

INDICATIONS

Hematopathology:

Myeloid disorders:

Chronic myeloid leukemia

BCR/ABL (for 9;22 translocation)

Acute myeloid leukemia, de-novo and secondary

PML/RARA (for 15;17 translocation)

CBFB (for inv 16)

Myelodysplastic syndrome

Panel includes 5q-, 7q-, +8, & 20q-

Mixed Lineage Leukemia

MLL (translocations of 11q23)

Lymphoid disorders:

Acute lymphocytic leukemia

BCR/ABL (for 9;22 translocation)

TEL/ETV6 (12;21 translocation)

Lymphomas

MYC (for translocations associated with Burkitt's lymphoma)

IGH/CCND1 (for 11;14 translocation associated with mantle cell lymphoma)

IGH/BCL2 (for 14;18 translocation associated with follicular & other B-cell lymphoma)

Chronic lymphoid lymphoproliferative disorders

Panel includes p53 (17p-), ATM (del 11q22.3-q23.1), D13S319(13q-)& +12

Multiple Myeloma

Panel includes p53 (17p-), ATM (del 11q22.3-q23.1), D13S319 (13q-)& +12

Solid Tumors:

Bladder carcinoma

UroVysion Bladder Cancer Kit: (trisomy 3,7,17 & 9p-)

Brain tumors

EGFR

Deletion 1p36 & 19q13

Breast carcinoma

PathVysion HER-2

Ewings sarcoma

EWSR1 disruption associated with 11;22 & other translocations

Germ cell tumors

+12

Lung carcinoma

EGFR

Neuroblastoma

N-MYC amplification

Sarcoma

EWSR1 disruption associated with 11;22 & other translocations

SYT disruption of 18q11.2 associated with synovial sarcoma

FKHR disruption of 13q14 associated with alveolar rhabdomyosarcoma sarcoma

FUS/CHOP translocation 12;16 associated with liposarcoma

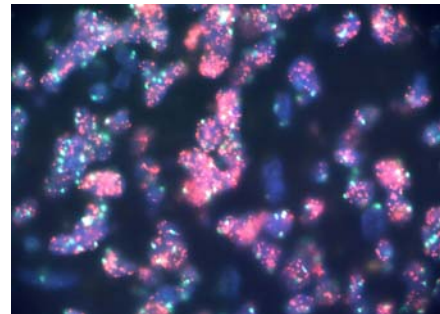
SPECIMEN REQUIREMENT

Blood or bone marrow in EDTA, ACD or sodium heparin

Fresh tissue

Formalin fixed paraffin-embedded tissue

Cytology specimens



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