

Name : Z774			Collected: 01-09-2017
Lab No. : 135091528	Age : 25 Years	Gender: Male	Received: 01-09-2017
A/C Status :	Ref by : --		Reported: 01-09-2017
			Report status: Final

Fluorescence in-situ Hybridization (FISH)

PML/RARA t(15;17) Translocation Assay

Specimen : Bone marrow

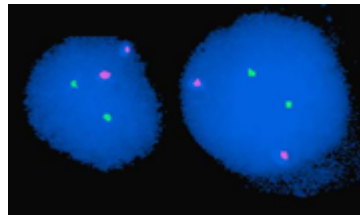
Clinical Indication : ? AML

Result : nuc ish(PMLx2)(RARAx2)[200]
 : 200/200(100%) interphase nuclei show normal 2O 2G signals for PML/RARA

Interpretation : Specimen is Negative for t(15;17)(q22;q21.1)

Interphase nuclei analyzed	Normal nuclei	Abnormal nuclei
	2 Orange 2 Green signals	1 Orange 1 Green 2 Yellow signals
200	200	00

Cut off for the normal individual is 3%



Probe: ZytoLight SPEC PML/RARA1 Dual Color Dual Fusion Probe

Comments: The vast majority of cases of Acute Promyelocytic Leukemia (APL) have a t(15;17)(q22;q12-21) which fuses the Promyelocytic gene (PML) on chromosome band 15q22 to the Retinoic Acid Receptor Alpha (RARA) gene at 17q12-q21. The PML/RARA fusion is associated with a good response to all-trans Retinoic Acid therapy.

Name : Z774			Collected: 01-09-2017
Lab No. : 135091528	Age : 25 Years	Gender: Male	Received: 01-09-2017
A/C Status :	Ref by : --		Reported: 01-09-2017
			Report status: Final

Fluorescence in-situ Hybridization (FISH)

ETO(RUNX1T1)/AML1(RUNX1) or t(8;21)(q21.3;q22)

Specimen : Bone marrow

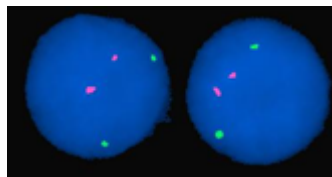
Clinical Indication : ? AML

Result : nuc ish(RUNX1T1x2),(RUNX1x2)[200]
: 200/200 (100%) interphase nuclei show 2O 2G signals for
RUNX1T1(ETO)/RUNX1(AML1)

Interpretation : Specimen is negative for t(8;21)(q21.3;q22)

Interphase nuclei analyzed	Normal nuclei 2 Orange 2 Green signals	Abnormal nuclei 1 Orange 1 Green 2 Yellow signals
200	200	00

Cut off for the normal individual is 3%



Probe: Vysis LSI RUNX1T1(ETO)(8q21.3) S. Orange / LSI RUNX1(21q22) S. Green, Vysis, Abbott Molecular Inc .

Comments: Acute myeloid leukaemia (AML) with t(8;21) generally shows maturation arrest in the neutrophilic lineage. The (8;21) translocation is the most common structural abnormality in AML and results in the fusion of *AML1* (also known as core-binding factor- α [*CBF α]*) at 21q22 and the *ETO* gene, a transcription factor, at 8q22. The *AML1/ETO* fusion protein is predominantly located in the nucleus of the leukemic cell and inhibits transcription. t(8;21) is found in about 5–20% of AML cases and in one-third of the karyotypically abnormal cases of AML with maturation. It occurs predominantly in younger patients. The presence of t(8;21) is prognostically significant, which is usually associated with a good prognosis when patients are treated with chemotherapy.

Name	: 2774	Collected:	01-09-2017
Lab No.	: 135091528	Received:	01-09-2017
	Age : 25 Years	Gender:	Male
A/C Status	:	Reported:	01-09-2017
	Ref by : --	Report status:	Final

Fluorescence in-situ Hybridization (FISH)

CBFB Gene Break Apart Rearrangement Assay

Specimen : Bone marrow

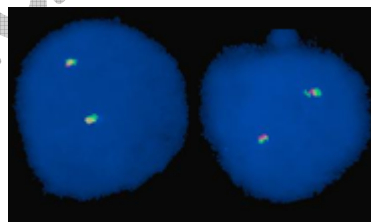
Clinical Indication : ? AML

Result : nuc ish(5'CBFB,3'CBFB)×2(5' CBFB con 3' CBFB ×2)[200]
 : 200/200(100%) nuclei show 2Y fusion signals for CBFB gene

Interpretation : Specimen is Negative for CBFB gene rearrangement or t(16;16)(p13;q22)

Interphase nuclei analyzed	Normal nuclei	Abnormal nuclei
	2 Yellow signals	1 Orange 1 Green 1 Yellow signals
200	200	00

Cut off for the normal individual is 3%



Probe: Vysis LSI CBFB Dual color, Break Apart Rearrangement probe, Vysis, Abbott Molecular Inc.

Comments: Aberrations of chromosome 16q22 have been found to be associated with acute myeloid leukemia (AML). A favourable outcome in AML has been associated with inversion (16) and t(16;16).

Name : 2774			Collected: 01-09-2017
Lab No. : 135091528	Age : 25 Years	Gender: Male	Received: 01-09-2017
A/C Status :	Ref by : --		Reported: 01-09-2017
			Report status: Final

Fluorescence in-situ Hybridization (FISH)

MLL Gene Break Apart Rearrangement Assay

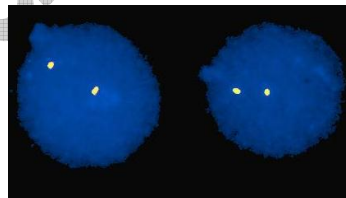
Specimen : Bone marrow

Clinical Indication : ? AML

Result : nuc ish(5'MLL,3'MLL)×2(5'MLLcon 3'MLL×2)[200]
 : 200/200 (100%) interphase nuclei show normal 2Y fusion signals for MLL gene

Interpretation : Specimen is negative for MLL gene rearrangement

Interphase nuclei analyzed	Normal nuclei	Abnormal nuclei
	2 Yellow signals	1 Orange 1 Green 1 yellow signals
200	200	00



Method: FISH analysis performed on 200 Interphase nuclei.

Probe : LSI MLL Dual color, Break Apart Rearrangement probe.

Comments: Translocations involving the mixed-lineage leukemia (MLL) gene located at chromosomal band 11q23 occur in both acute lymphocytic leukemia (ALL) and acute myeloid leukemia (AML). MLL rearrangements have been associated with a poor prognosis. The *MLL* gene at 11q23 is involved in a number of translocations with different partner chromosomes.

Name	: 2774	Collected:	01-09-2017				
Lab No.	: 135091528	Age	: 25 Years	Gender:	Male	Received:	01-09-2017
A/C Status	:	Ref by	: --	Reported:	01-09-2017	Report status:	Final

REPORT OF CHROMOSOME ANALYSIS FOR HEMATOLOGICAL MALIGNANCY

SPECIMEN : Bone marrow
INDICATION : ? AML
MEDIUM USED : RPMI – 1640, Hi-Karyol RPMI
METHOD : 24-hr unstimulated cultures with appropriate serum and antibiotics.
BANDING RESOLUTION : 450-550
BANDING TECHNIQUE : GTG (G bands by Trypsin and Giemsa)

CYTOGENETIC PROFILE:

Metaphases counted : 20
Metaphases analysed : 20
Metaphases karyotyped : 02
Metaphases photographed : 02

KARYOTYPE : 46,XY[20]

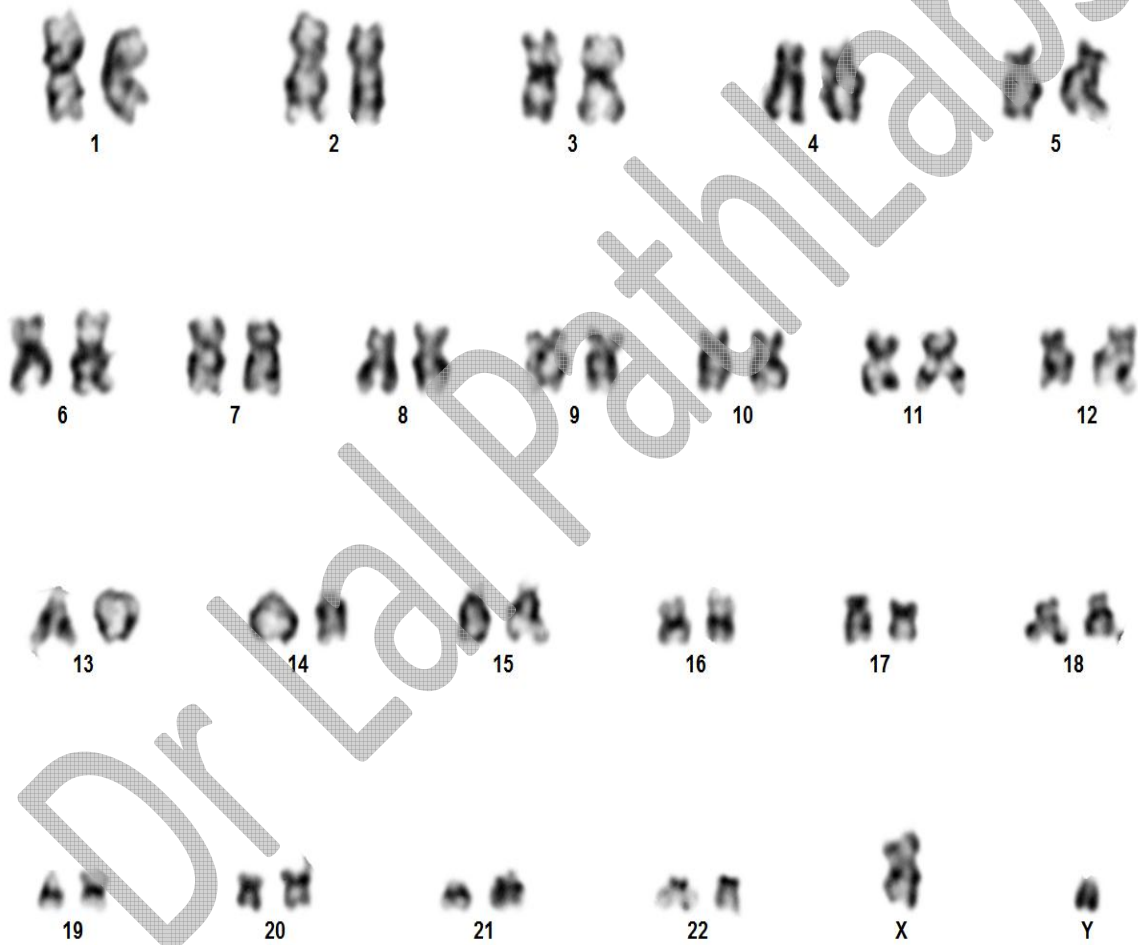
INTERPRETATION :

Normal karyotype. None of the AML associated chromosomal abnormalities are seen. Kindly correlate

These results with clinical and hematological findings.

KARYOGRAM ATTACHED

Name	: 2774	Collected:	01-09-2017				
Lab No.	: 135091528	Age	: 25 Years	Gender:	Male	Received:	01-09-2017
A/C Status	:	Ref by	: --	Reported:	01-09-2017	Report status:	Final



Saurabh

Dr. Saurabh Kumar Bhattacharya
Ph. D Cytogenetics
HOD