

Gender: F Age: 46
 Social Security Number:
 Patient ID/Case Number:



Date of Procedure:
 Date Received:

Clinical Information: Status: Relapse
 Diagnosis under consideration: Follicular Cell

Hematology Comprehensive Summary Report

Final Diagnosis: Mildly hypercellular marrow demonstrating trilineage hematopoiesis with maturation.
 Features of involvement by a lymphoproliferative disorder are not seen.
 A small lymphoid aggregate present, favor reactive.
 Mild increase in stainable iron.

Summary

Morphology: Bone marrow is slightly hypercellular. Erythroid elements are present in normal proportion. Maturing myeloid elements are mildly increased and exhibit maturation. Megakaryocytes appear mildly increased. Immunoperoxidase studies reveal that the lymphoid aggregate and scattered small lymphocytes are approximately 5% showing mixed staining for CD3 and CD20.
 Aspirate smears contain tiny spicules and are hypocellular. Scattered erythroid precursors show occasional dysplastic forms. Myeloid cells appear at various stages of development. Scattered megakaryocytes appear adequate.

Flow Cytometry: No clonal B cells detected. T cells with unremarkable phenotype noted. No increase in myeloblasts seen.

FISH: Negative for IGH/BCL2 Rearrangement.

Molecular Diagnostics: Not Ordered

Cytogenetics: Normal Female Karyotype: 46,XX[20]

Electronically signed out by:

Dr. Dongsheng Xu

(877) 258-9310

9/7/2016

End of Report

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Date of Procedure:
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Clinical Information: Status: Relapse
 Diagnosis under consideration: Follicular Cell

Morphology Report

Diagnosis: *Mildly hypercellular marrow demonstrating trilineage hematopoiesis with maturation.*

Features of involvement by a lymphoproliferative disorder are not seen.

A small lymphoid aggregate present, favor reactive.

Mild increase in stainable iron.

Submitted CBC Results: **Date performed:** 8/15/2016

WBC	Hgb	Hct	MCV	RDW	PLT
8.6	16.3	49	95	14.2	244
K/ul	g/dL	%	fL	%	K/ul

1: Bone Marrow Core

Microscopic Description

Bone marrow biopsy is slightly hypercellular for the age (30-40% fat). Erythroid elements are present in normal proportion. Maturing myeloid elements are mildly increased and exhibit maturation. Megakaryocytes (highlighted by PAS stain) appear mildly increased.

Scattered plasma cells are <5%. One small lymphoid aggregate comprising small lymphocytes is noted. No granuloma or metastatic carcinoma is seen. Bone trabeculae are unremarkable. Iron stain reveals that stainable iron is increased. Reticulin stain reveals that reticulin appears normal.

Immunoperoxidase studies performed on paraffin-embedded sections reveal that the lymphoid aggregate and scattered small lymphocytes are approximately 5% showing mixed staining for CD3 and CD20 with more T cells over B cells.

Gross Description

Received in a white cap container with formalin, labeled with patient's name and "Bone Marrow" is one bone marrow core biopsy measuring 2.0 cm in length. The entire specimen is submitted in one cassette and labeled "1A".

2: Bone Marrow Clot

Microscopic Description

Bone marrow biopsy is slightly hypercellular for the age (30-40% fat). Erythroid elements are present in normal proportion. Maturing myeloid elements are mildly increased and exhibit maturation. Megakaryocytes (highlighted by PAS stain) appear mildly increased.

Scattered plasma cells are <5%. No granuloma, lymphoid aggregate or metastatic carcinoma is seen. Immunoperoxidase studies performed on paraffin-embedded sections reveal that scattered small lymphocytes are <5% showing mixed staining for CD3 and CD20.

Gross Description

Received in a red cap container with formalin, labeled with patient's name and "Bone Marrow" is one clot measuring approximately 1.6 x 1.6 x 0.8 cm. The entire specimen is submitted in one cassette labeled "2A".

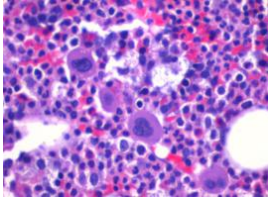
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3: Bone Marrow Cytology**Microscopic Description**

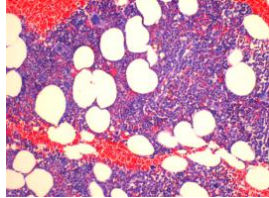
Description	
Cellularity	Aspirate smears contain tiny spicules and are hypocellular. Scattered erythroid precursors show occasional dysplastic forms. Myeloid cells appear at various stages of development. Scattered megakaryocytes appear adequate. Stainable iron appears adequate. No ring sideroblasts are noted.

Gross Description

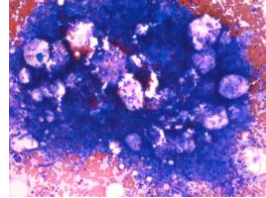
Received in plastic slide holders are 8 air-dried, unfixed and unstained bone marrow aspirate smears labeled with the patient's name, DOB "Bone Marrow". GD



Core Biopsy



Clot Section



Aspirate Smear

Comments

Follicular Lymphoma- IGH/BCL2,t(14;18) (FISH) and Cytogenetics Work-up are pending. A comprehensive summary report will follow.

Electronically signed out by:

Dr. Dongsheng Xu

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9/2/2016

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Some tests performed at CBLPath Inc have not been cleared or approved for specific uses by the U.S. Food and Drug Administration (FDA). The FDA has determined that such clearance or approval is not necessary. In accordance to CLIA '88 requirements, this laboratory has verified the validity and accuracy of these tests for clinical purposes. CBLPath is regulated under the Clinical Improvement Amendments Acts of 1988 (CLIA) as qualified to perform high complexity testing.

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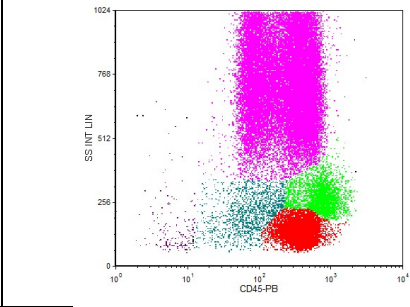
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Flow Cytometry Report

Interpretation
No clonal B cells detected.
T cells with unremarkable phenotype noted.
No increase in myeloblasts seen.

Specimen Type
 Bone Marrow Aspirate
Body Site:
 Bone Marrow
Viability
 99%



Findings
 Flow cytometric analysis performed on bone marrow revealed that lymphocytes comprised approximately 19% of total cells analyzed.
 There were 81% of CD2+, CD3+, CD5+, CD7+ T cells with a normal CD4/CD8 ratio, 7% of CD2+, CD16+, CD56+ NK cells and 4% of CD19+, CD20+, CD22+ polytypic B cells.
 In addition, approximately 1% of CD33+, CD34+, CD117+ myeloblasts were also detected.

T-Cell Related		
CD Marker	%	Intensity
CD5	78	Moderate
CD8	29	Moderate
CD2	88	Moderate
CD4	54	Dim
CD3	81	Dim
CD7	75	Dim

B-Cell Related		
CD Marker	%	Intensity
CD5/CD19	0	Negative
CD10/CD19	0	Negative
CD20	4	Dim
Kappa	2	Moderate
CD22	3	Dim
CD19	4	Dim
Lambda	1	Moderate
CD23	0	Negative

Myeloid Related		
CD Marker	%	Intensity
CD117	1	Negative
CD33	5	Negative
CD64	3	Negative
CD14	3	Negative
CD13	5	Negative
CD16	11	Dim

Miscellaneous		
CD Marker	%	Intensity
CD56	14	Dim
CD11b	23	Dim
CD45	99	Moderate
CD25	2	Negative
CD34	1	Negative
HLA-DR	26	Dim
CD10	0	Negative
CD38	19	Dim
CD138	0	Negative

Comments

Comments
 Follicular Lymphoma- IGH/BCL2,t(14;18) (FISH) and Cytogenetics Work-up are pending. A comprehensive summary report will follow.

Electronically signed out by:
 Dr. Dongsheng Xu (877) 258-9310 8/30/2016

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Atlantic Medical Imaging - Galloway
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CBLPATH

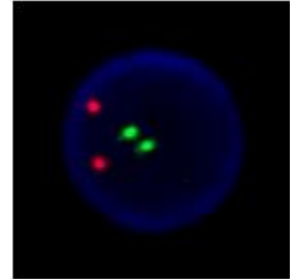
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Fluorescence in situ Hybridization (FISH) Report*

Interpretation: Negative for IGH/BCL2 Rearrangement.

TEST	Probe Results
Follicular Lymphoma- IGH/BCL2,t(14;18) (FISH)	A disomic signal pattern for the IGH/BCL2 dual-fusion probe set was observed within normal cut-off limits. This represents a NEGATIVE result.
	ISCN: nuc ish(IGH,BCL2)x2 [200]



IGH/BCL2

Specimen Type/Site: Bone Marrow Aspirate, Bone Marrow

Gross Description: Received 6 ml BM in heparin green top, labeled with patient's name and "Aspirate 2", submitted for Follicular Lymphoma- IGH/BCL2,t(14;18) (FISH). /sa

Methodology: Fluorescence in situ hybridization analysis was performed on nuclei derived from this Bone Marrow sample using the Follicular Lymphoma - IGH/BCL2,t(14;18) (FISH) (manufactured by Vysis/Abbott Molecular). A test is considered positive if the normal cut off value established at CBLPath, Inc. are exceeded in value. IGH/BCL2 (0.59%-5.05%)

Comments

Cytogenetics Work-up is pending. A comprehensive summary report will follow.

Case screened by: Cristina Steele, CG(ASCP)

Electronically signed out by:

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9/2/2016

FISH analysis can only identify abnormalities that are within the specific locus of the probe(s) used and may not detect small clonal populations of aberrant cells below the normal cut-off values; therefore, FISH results should be interpreted in the context of the patient's full clinical history and under most circumstances, in conjunction with histomorphological and/or cytogenetic evaluation. Images included in this report are for information only and are not intended for diagnosis. Some tests performed at CBLPath Inc have not been cleared or approved for specific uses by the U.S. Food and Drug Administration (FDA). The FDA has determined that such clearance or approval is not necessary. In accordance to CLIA '88 requirements, this laboratory has verified the validity and accuracy of these tests for clinical purposes. CBLPath is regulated under the Clinical Improvement Amendments Acts of 1988 (CLIA) as qualified to perform high complexity testing.

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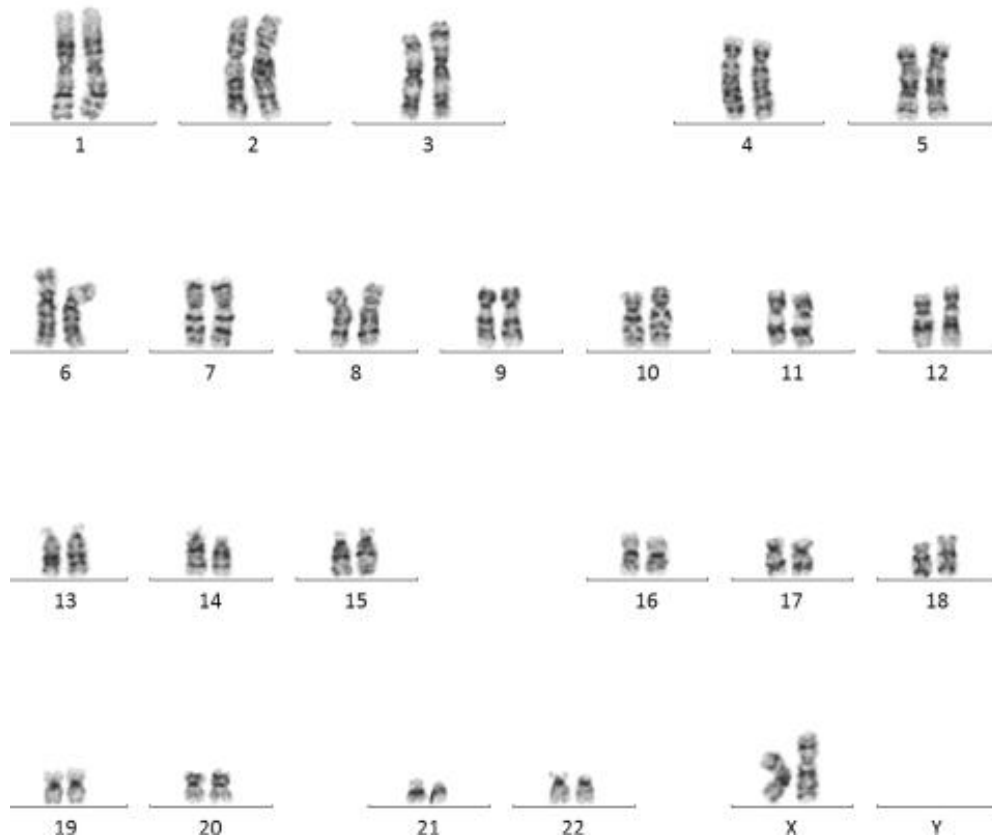
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Cytogenetics Report

Interpretation: Normal Female Karyotype

Final Karyotype: 46,XX[20]



Metaphases Analyzed: 20

Metaphases Karyotyped: 3

Band Resolution: 375-425

Specimen Type:	Bone Marrow Aspirate
Gross Description:	Received 8 ml BM in heparin green top, labeled with patient's name and "Aspirate 2", submitted for Cytogenetics Work-up.\the
Methodology:	Cytogenetic analysis was performed with two unstimulated cultures (24 and 48 hr). GTG banding was performed on this case.
Comments:	No chromosomal abnormalities were detected.

Electronically signed out by: Dr. Vundavalli Murty	(877) 258-9310	9/6/2016
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The karyotype test may not detect smaller deletions and cryptic rearrangements below the band-resolution of this procedure. A low frequency of karyotypic abnormalities may also be undetectable. A normal karyotype does not rule out cancer. Images included in this report are for information only and are not intended for diagnosis. Some tests performed at CBLPath Inc have not been cleared or approved for specific uses by the U.S. Food and Drug Administration (FDA). The FDA has determined that such clearance or approval is not necessary. In accordance to CLIA '88 requirements, this laboratory has verified the validity and accuracy of these tests for clinical purposes. CBLPath is regulated under the Clinical Improvement Amendments Acts of 1988 (CLIA) as qualified to perform high complexity testing.

End of Report