PRECIPIO EXPECT MORE.
203-787-1717
203-901-1289

FLOW CYTOMETRY

Patient: John A. Doe
DOB/Gender: 10/10/44 (74 yrs) - Male
Patient ID/MRN: 123456
Date Collected: 01/03/2024

Case# XX-00000
Status: Preliminary

Provider: Jane Smith, M.D.
Hospital Oncology Center
Tel: 800-123-4567
Fax: 800-765-4321

PENDING STUDIES: Comprehensive assessment

Your patient's next appointment is on 01/08/2024.

DIAGNOSIS:

Bone marrow, aspirate:
Expanded population of CD34+, CD38+, HLA-DR+, CD117+, and CD13+ myeloid blasts, 31% of the total sample, consistent with a high grade myeloid neoplasm, acute myeloid leukemia (AML)

INTERPRETATION

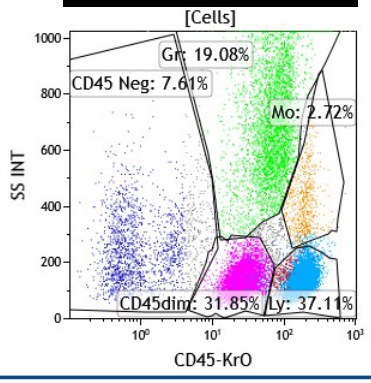
No aberrant myeloid antigen expression suggestive of dysmyelopoiesis is identified. The granulocytes exhibit a normal pattern of expression of CD11b, CD13, and CD16. There is a total of 31% CD34+ cells identified which are positive for CD38, HLA-DR, CD117, and CD13. The lymphocytes (37%) include 9% lambda predominant B-cells, 88% mature T-cells with a normal CD4/CD8 ratio, and 1% natural killer (NK) cells. The CD138+ plasma cells (<1%) have a kappa/lambda polyclonal phenotype.

Result

Analysis Time: 11/13/2024 15:57 | Viability: 98% (Normal > 80%) | Specimen: BM, green-top tube

Flow Differential

[redacted]

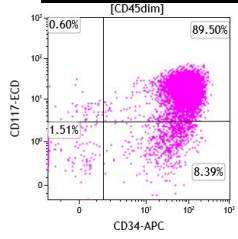


Flow Cytometry Differential

Lymphocytes	37%
Granulocytes	19%
Monocytes	3%
Plasma Cells	<1%
CD45 Dim	32%
CD45 Negative	8%

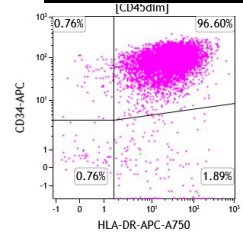
CD34 Vs CD117 Dim CD45

[redacted]



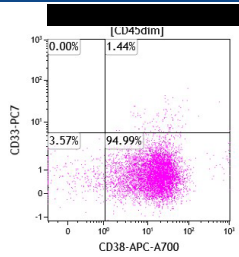
CD34 Vs HLA-DR Dim CD45

[redacted]



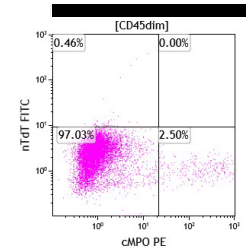
CD33 Vs CD38 Dim CD45

[redacted]



NTdT Vs CMPO Dim CD45

[redacted]



Patient: John A. Doe

Case #: XX-00000

dim CD45

Antibody	%
cCD3	<1
CD2	1
CD3	<1
CD4	1
CD5	1
CD7	1
CD8	<1
CD10	1
CD11b	4
CD13	95
CD14	<1
CD15	<1
CD16	1
CD19	1
CD20	<1
CD22	<1
CD33	3
CD34	96
CD38	96
CD45	100
CD56	<1
CD61	1
CD64	2
CD117	87
CD123	4
cMPO	2
HLA-DR	95
nTdT	<1

Lymphocyte

Antibody	%
CD2	89
CD3	88
CD4	42
CD5	87
CD7	74
CD8	41
CD10	<1
CD11c	1
CD19	9
CD20	9
CD23	3
CD25	<1
CD34	<1
CD38	9
CD43	4
CD45	100
CD103	<1
CD200	6
CD3-CD56+	1
cKappa	24
cLambda	76
FMC7	7
Kappa	22
Lambda	77
TCR gamma/delta	6
ZAP70	<1

Granulocyte

Antibody	%
CD4	12
CD10	66
CD11b	90
CD13	85
CD14	11
CD15	90
CD16	71
CD19	5
CD33	3
CD34	2
CD38	6
CD45	100
CD56	14
CD64	22
CD117	6
CD123	2
HLA-DR	7

Plasma Cell

Antibody	%
CD19	83
CD20	69
CD38	100
CD56	87
CD138	99
cIgG	39
cKappa	68
cLambda	32

Electronically Signed By: Frank Bauer, MD, Precipio, Inc. (01/04/2024 14:23)

DIAGNOSIS:

Bone marrow, aspirate:
High grade myeloid neoplasm with increased blasts (~30%) consistent with acute myeloid leukemia (AML).

COMMENT

The aspirate findings are consistent a high grade myeloid neoplasm with increased blasts, and together with the corresponding flow cytometry data, support emerging acute myeloid leukemia (AML). Prognostic FISH, molecular and NGS testing is in progress per protocol

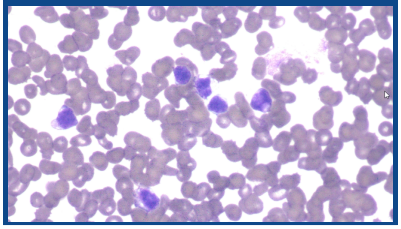
SMEAR REVIEW

Aspirate smears are predominantly hypocellular and show apparent dysplastic granulocytic and erythroid alterations with increased blasts (~30%). Myeloid maturation is left shifted. Megakaryocytes are decreased in number with occasional small hyposegmented dysplastic forms. Moderate dyserythropoiesis is evident.

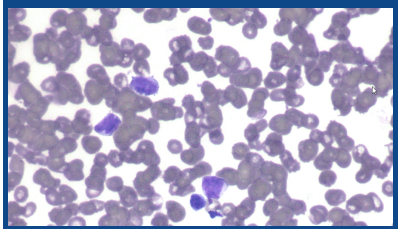
Number of cells counted: 200

Cell Type	Percent	Ref. Range
Blasts	30 % ↑	0.3 - 3.0 %
Immature Myeloid	11 % ↓	12.0 - 21.0 %
Mature Myeloid	15 % ↓	35.0 - 55.0 %
Eosinophils	2.0%	1.0 - 3.0 %
Basophils	0.0%	0.0 - 1.0 %
Lymphocytes	23 % ↑	10.0 - 15.0 %
Plasma Cells	0.0%	0.0 - 1.0 %
Monocytes	4 % ↑	0.0 - 1.0 %
Pronormoblasts	2.0%	0.0 - 2.0 %
Erythroid	13 % ↓	15.0 - 20 %

Aspirate 100X Magnification



Increased Blasts



Electronically Signed By: Frank Bauer, MD, Precipio, Inc. (01/04/2024 15:16)

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State Licenses: CT# CL-0679 • FL# 800028169

CLINICAL DATA

ICD-10: D64.9, D72.818, D75.9, Z13.79. Anemia, unspecified. Other decreased white blood cell count. Encounter for other screening for genetic and chromosomal anomalies. New diagnosis.

Received CBC, reported on 12/29/2023: WBC 2.46; RBC 2.91; HGB 8.8; HCT 27.0%; MCV 92.8; MCH 30.2; MCHC 32.6; RDW 19.0%; PLT 80; MPV NP; LYM 62%; GRAN NP; MID NP; MON 2%; NEU 32%; EOS 0%; BAS 4%; (NP = not provided)

Disclaimer: The adequacy of staining is verified by the appropriate positive and negative controls. The reagents used for these assays (flow cytometry, cytogenetics, molecular, IHC & histology) are analyte specific reagents (ASR) or research use only (RUO). Their performance characteristics have been validated by Precipio, Inc., in its locations (New Haven, CT & Omaha, NE). They have not been reviewed by the FDA. The FDA has deemed that such approval is unwarranted. These assays are for clinical use and should not be viewed as experimental or "research use only". This laboratory is CLIA & CAP certified to perform high complexity clinical testing. Images that may be included within this report are representative of the patient but not all testing in its entirety and should not be used to render a result. For BM biopsy, IHC provides additional information for diagnosis that is not provided by Flow Cytometry and the samples for each procedure are derived from different specimens (biopsy and aspirate, respectively).

Patient: John A. Doe
Received: 01/04/2024 11:09
Case #: XX-00000
Reported: 01/04/2024 16:04
Received Information: 1 lavender-top tube(s), 10 BM smear(s), 2 slide(s), 2 formalin container(s), 1 green-top tube(s)