



Due at IQMH by:

You will not be able to submit results after this time and will be considered non-participating in the survey. Participation in proficiency testing programs is a condition of accreditation. (Note: at the close of the survey, any results that have been SAVED but not SUBMITTED will be evaluated as if they had been submitted.)

Testing material was posted on:

SURVEY INSTRUCTIONS:

Do not discuss results of this survey with another laboratory.

SURVEY DESCRIPTION

This is a web-based educational morphology survey. It is comprised of five clinical morphology cases with accompanying photomicrographs (Wright-Giemsa stain).

SCORING

This survey is for educational purposes and responses will not be scored.

Committee Comments will be posted in QView™ once analysis is completed.

REPORTING INSTRUCTIONS

- General instructions regarding web-based data entry are posted on QView™ in the Documents area in the folder "General – Proficiency Testing \ PT User Information \ Instruction – Submission of Web-based PT Survey Responses."
- Participants are asked to provide responses related to the multiple choice questions as indicated.
- Note when completing this form, required fields are highlighted with a **red border**.

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Case 1

The following images are taken from a peripheral blood smear in a 2-month old child. The child is in the emergency room with fever and cough.

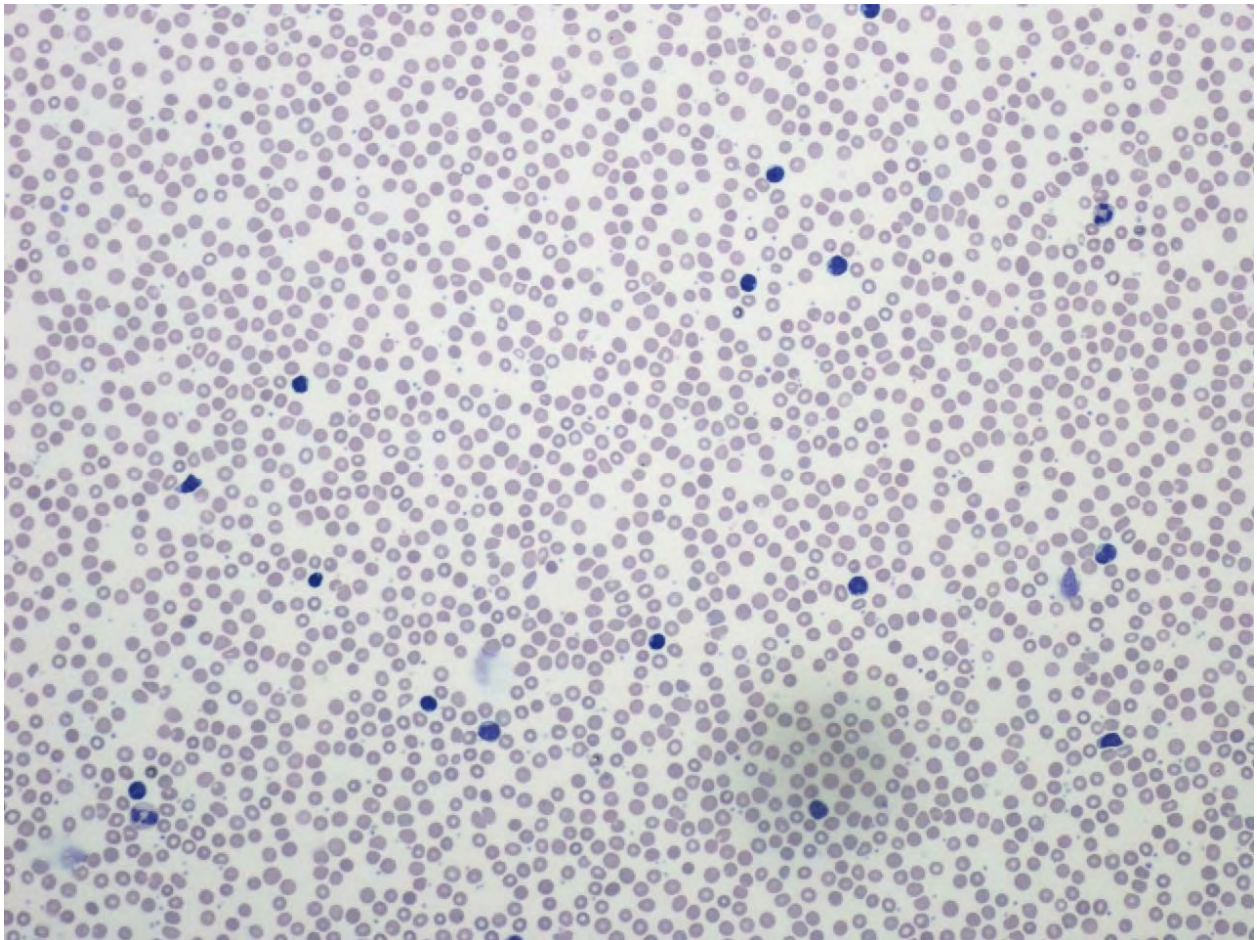


Figure 1: 200 x magnification



Case 1 (continued)

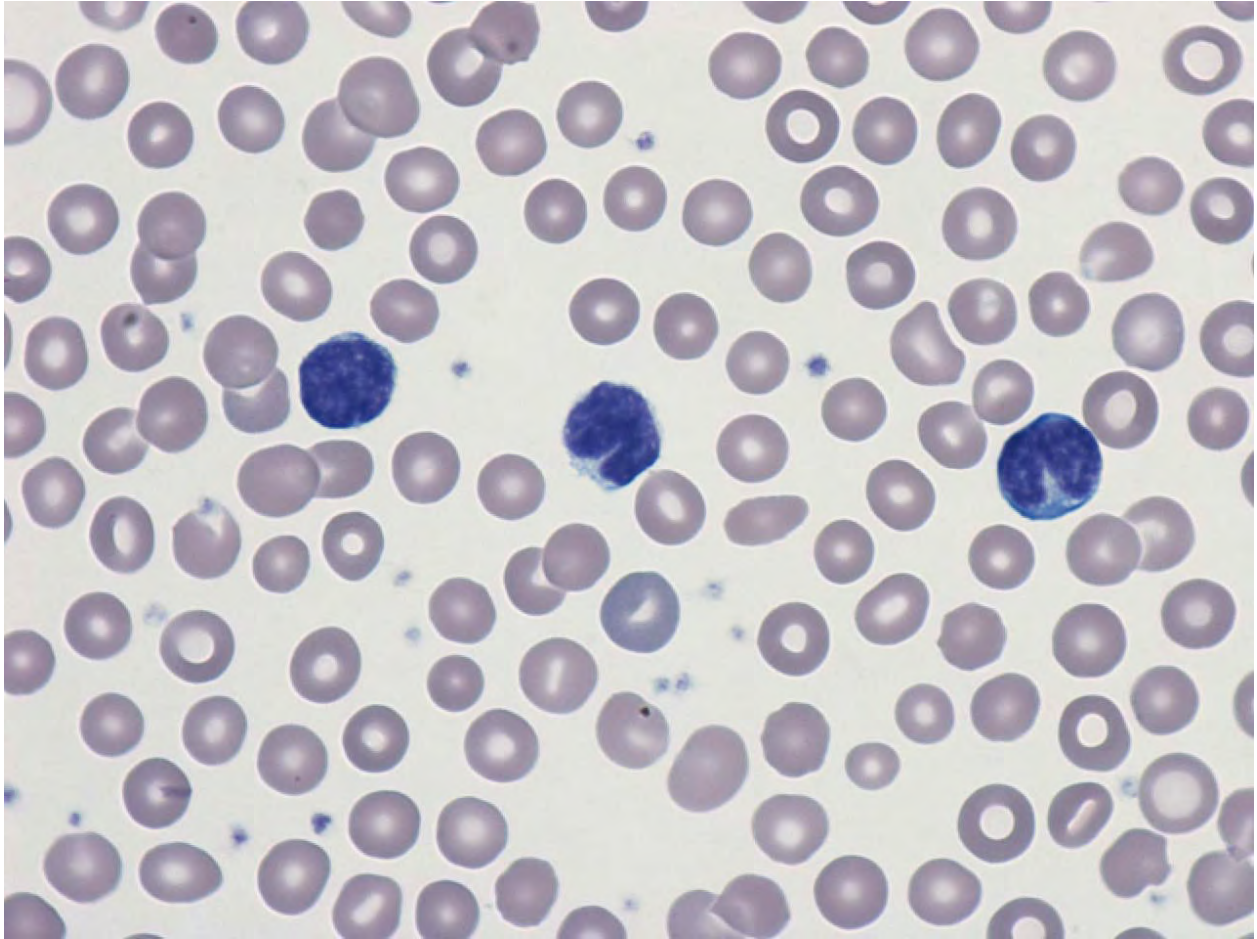


Figure 2: 1000 x magnification



Case 1 (continued)

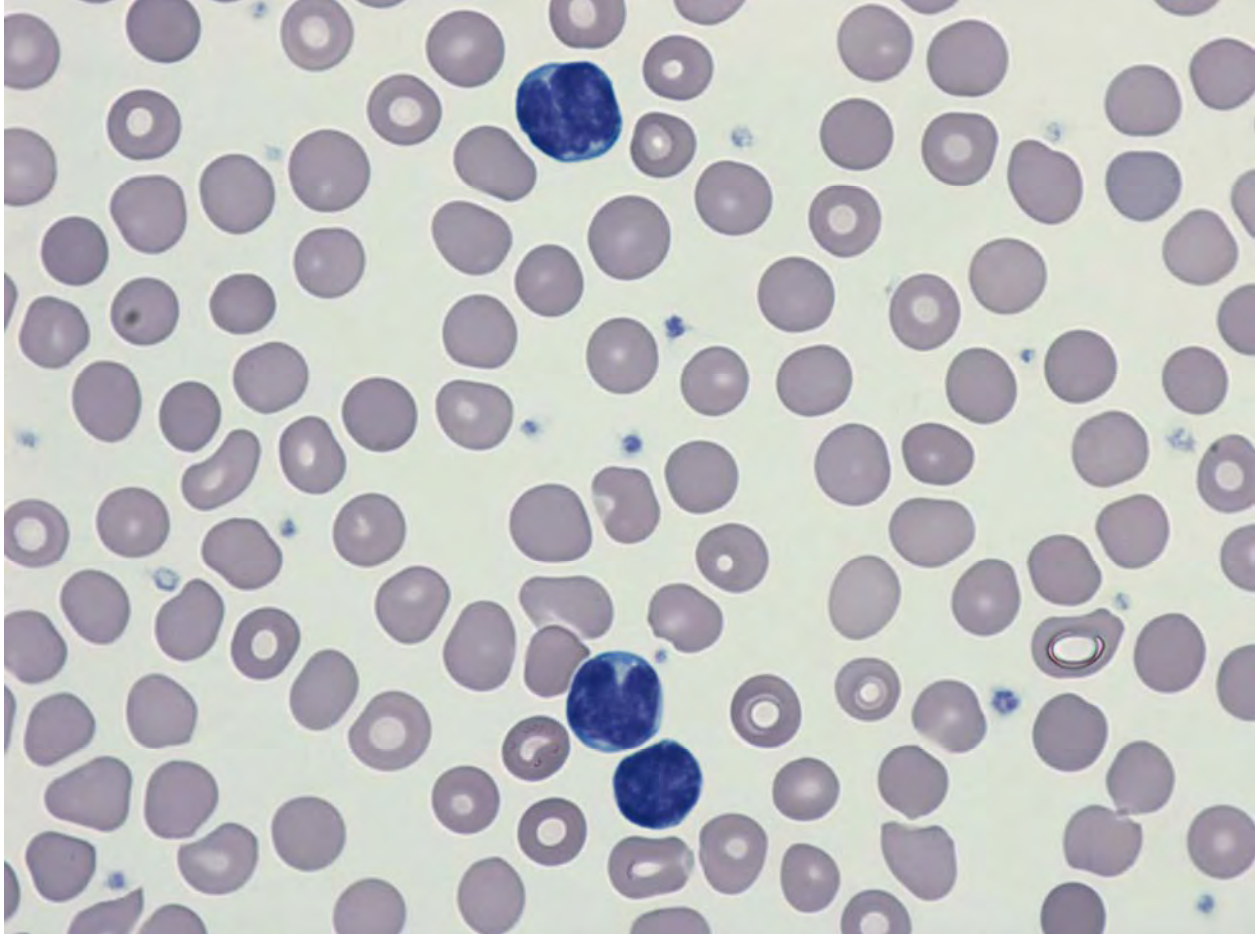


Figure 3: 1000 × magnification



Case 1 Questions:

1. Which of the following statements is/are true?
(Check all that apply)
 - a) Mature lymphocytes are the predominant WBC type in the peripheral blood of young children.
 - b) A transient neutropenia is often related to viral infections in young children.
 - c) The features shown in these images are typical of a bacterial infection.
 - d) The features shown in these images are typical of a viral infection.

2. Which of the following tests would be most useful in this situation?
(Check all that apply)
 - a) Peripheral blood immunophenotyping
 - b) Peripheral blood culture
 - c) Investigations for respiratory viruses
 - d) Bone marrow aspirate and flow immunophenotyping
 - e) Investigations for *Bordetella pertussis*



Case 2

This is a bone marrow aspirate from a 5 year old child with pancytopenia.

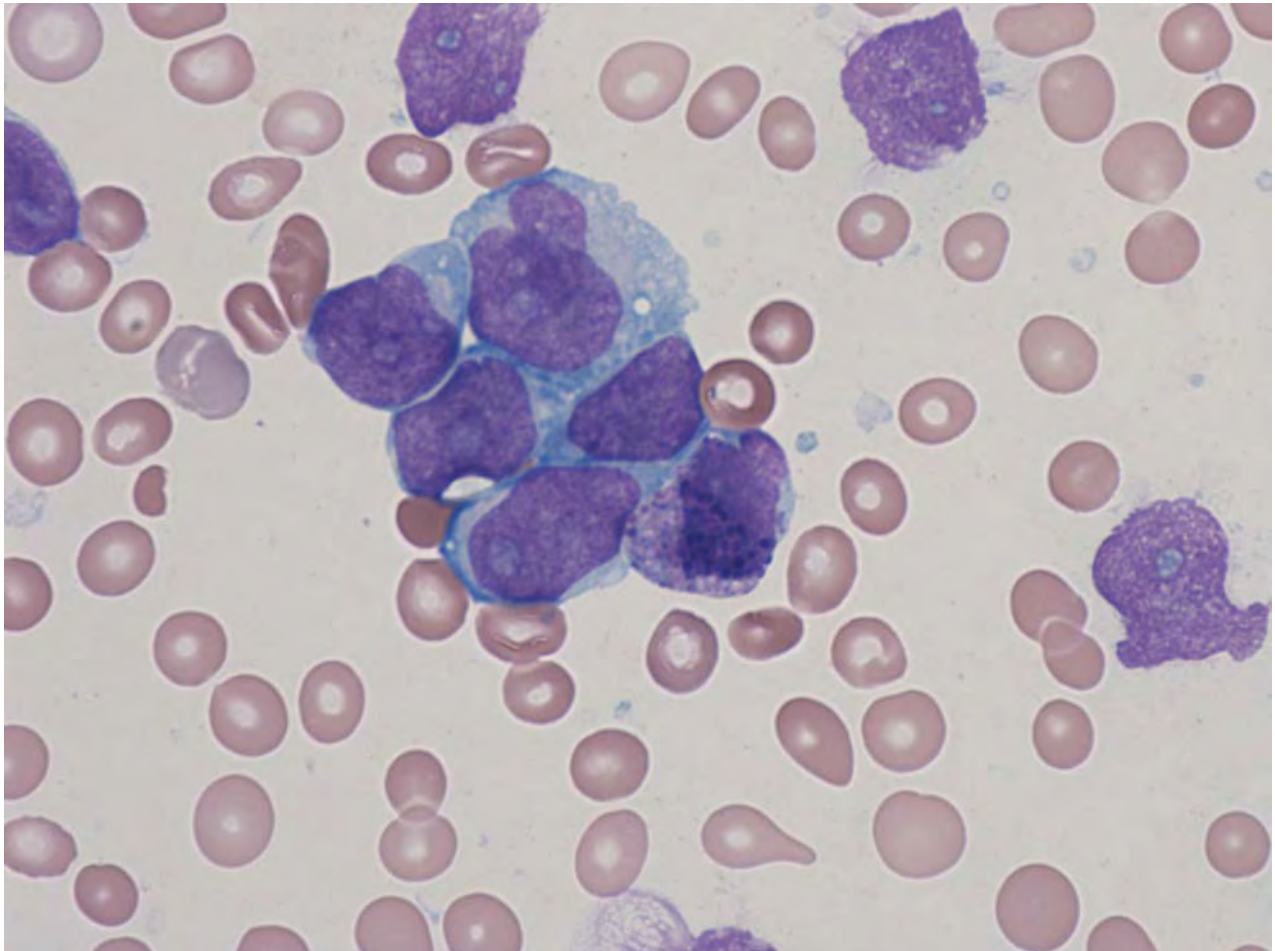


Figure 4: 1000x magnification



Case 2 (continued)

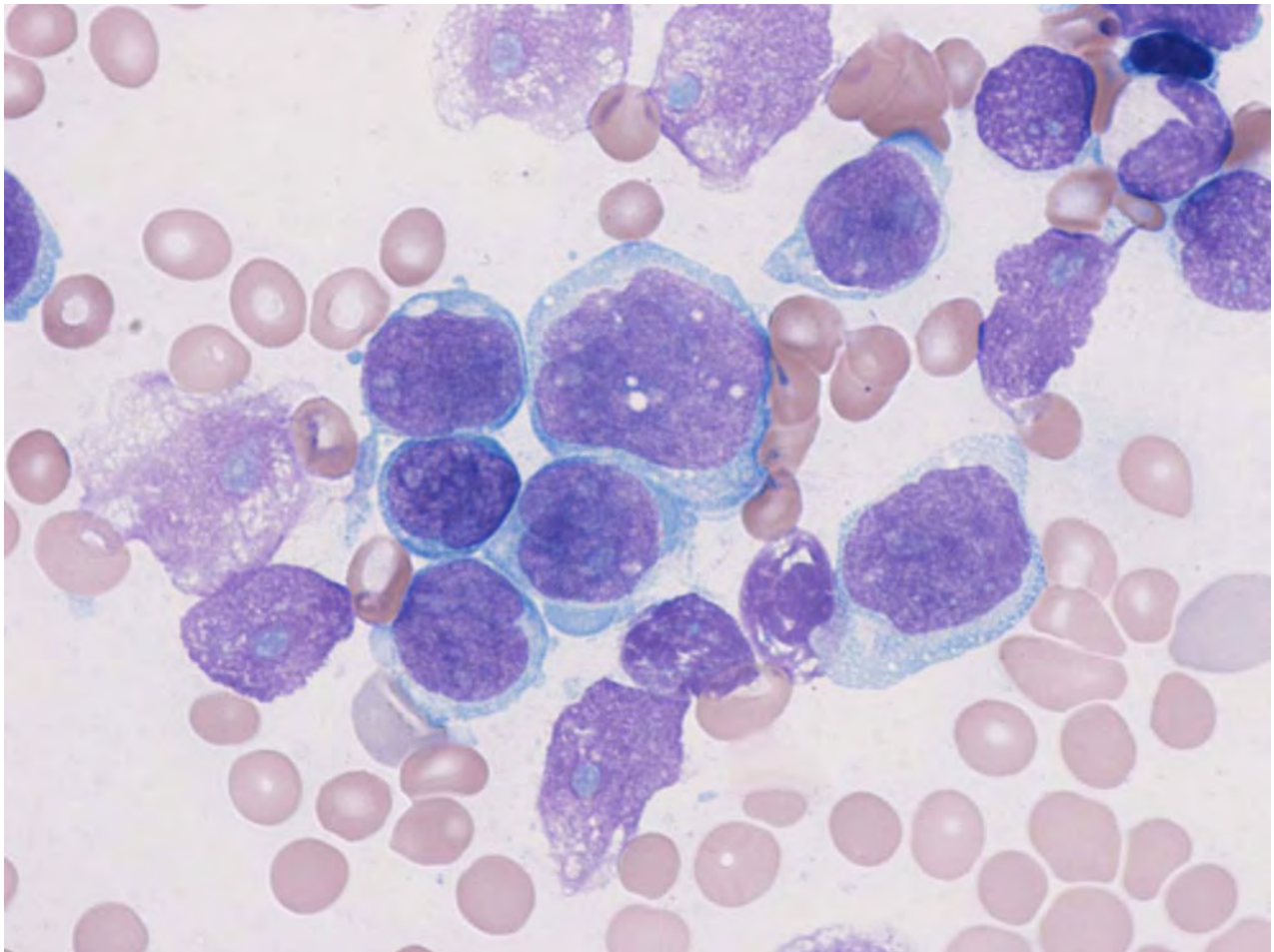


Figure 5: 1000 × magnification



Case 2 Questions:

3. These cells represent:
- a) Blasts – not further classified
 - b) Lymphoblasts
 - c) Myeloblasts
 - d) Monoblasts
 - e) Megakaryoblasts
 - f) Solid tumour cells
4. The most common haematologic malignancy in childhood is Acute Lymphoblastic Leukemia (ALL). In childhood, which of the following statements is/are FALSE?
(Check all that apply)
- a) T-lymphoblastic leukemia (T-ALL) is more common than B-lymphoblastic leukemia (B-ALL).
 - b) B-ALL in children is associated with a hyperdiploid karyotype (i.e. chromosome number > 50) in about 25% of cases.
 - c) T-lymphoblastic leukemia is often associated with a mediastinal mass and hyperleukocytosis, and should be considered a medical emergency.
 - d) Lymphoblasts may contain granules.
 - e) Vacuolization may be seen in lymphoblasts.



Case 3

The following is a peripheral blood smear from a two month old child from an outpatient clinic.

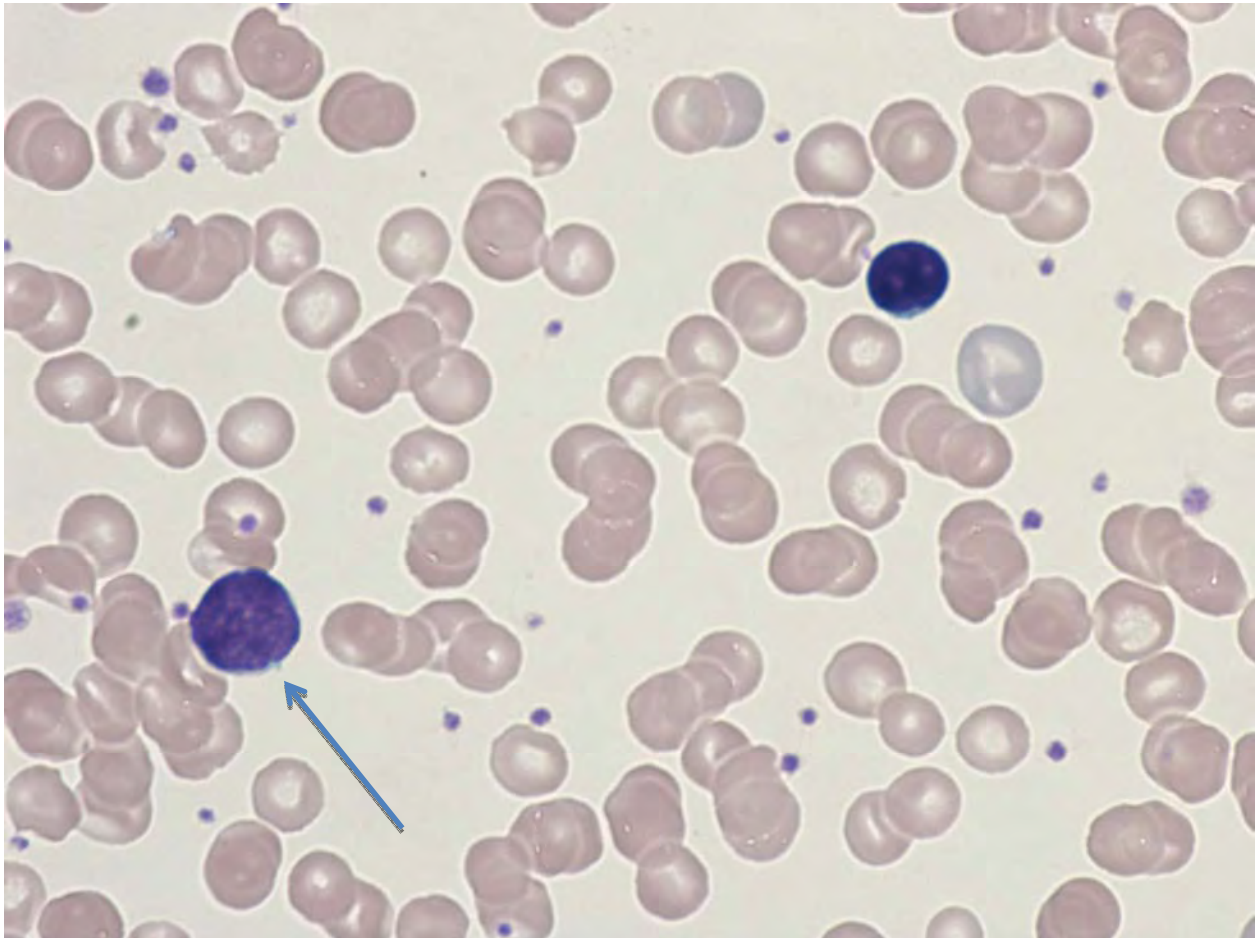


Figure 6: 1000 x magnification



Case 3 (continued)

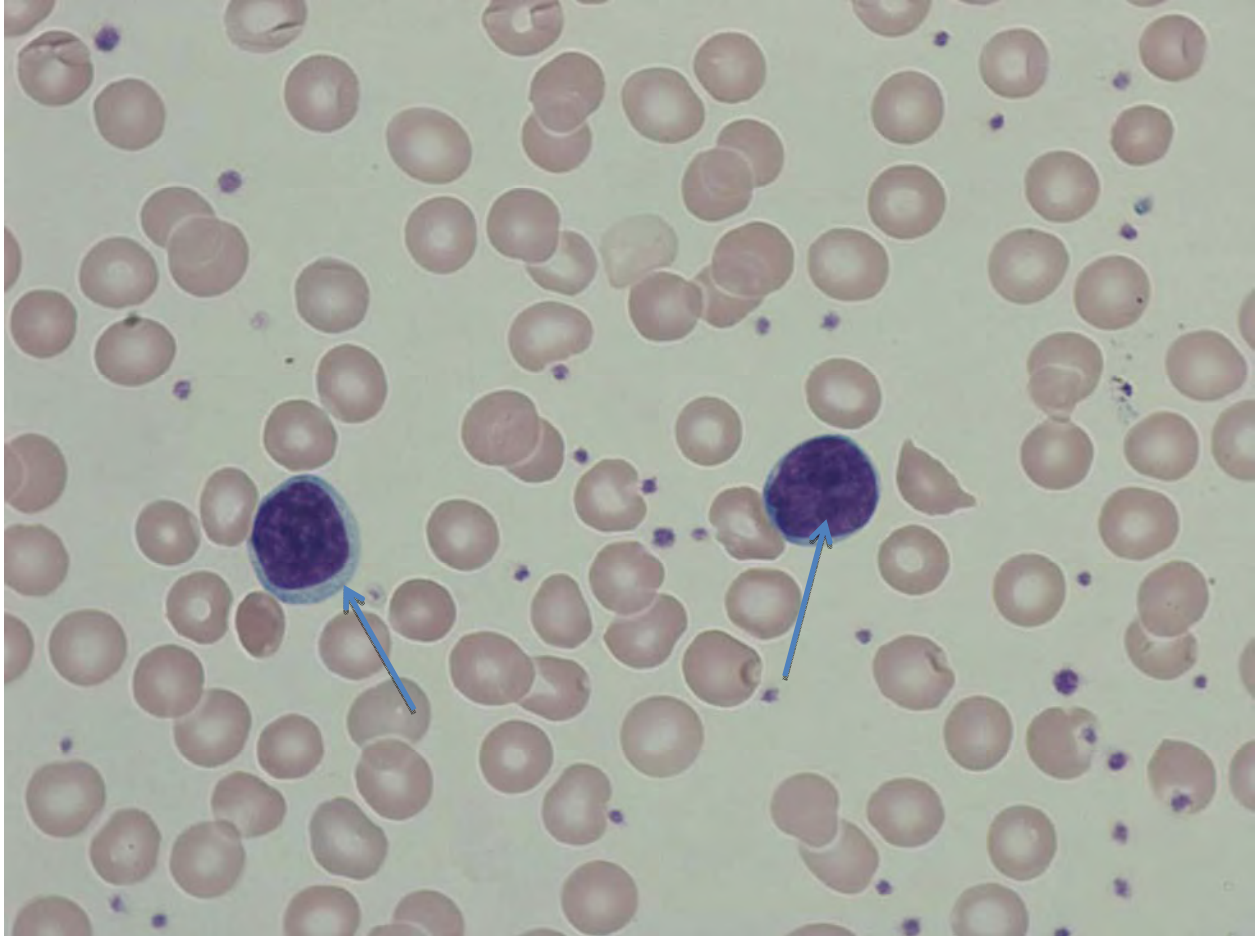


Figure 7: 1000 × magnification



Case 3 Questions:

5. The indicated cells represent:
 - a) Normal Lymphocytes
 - b) Lymphoblasts
 - c) Reactive lymphocytes
 - d) Haematogones

6. Another common finding in a two month old is:
 - a) Platelet count $< 150 \times 10^9/L$
 - b) Platelet count $> 400 \times 10^9/L$
 - c) Normocytic anemia
 - d) Iron deficiency anemia



Case 4

This smear is from a healthy one day old baby, born at term :

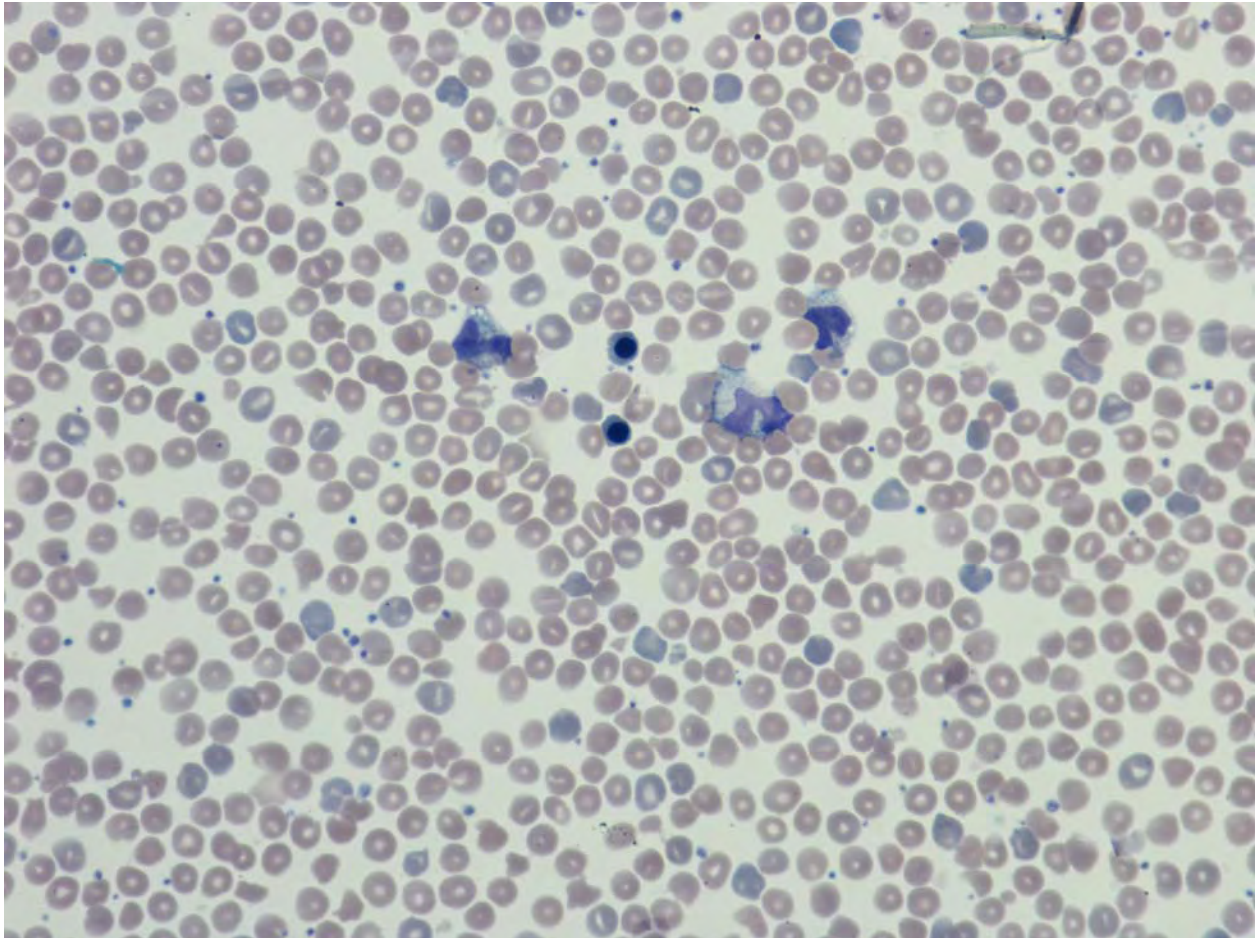


Figure 8: 400 × magnification



Case 4 (continued)

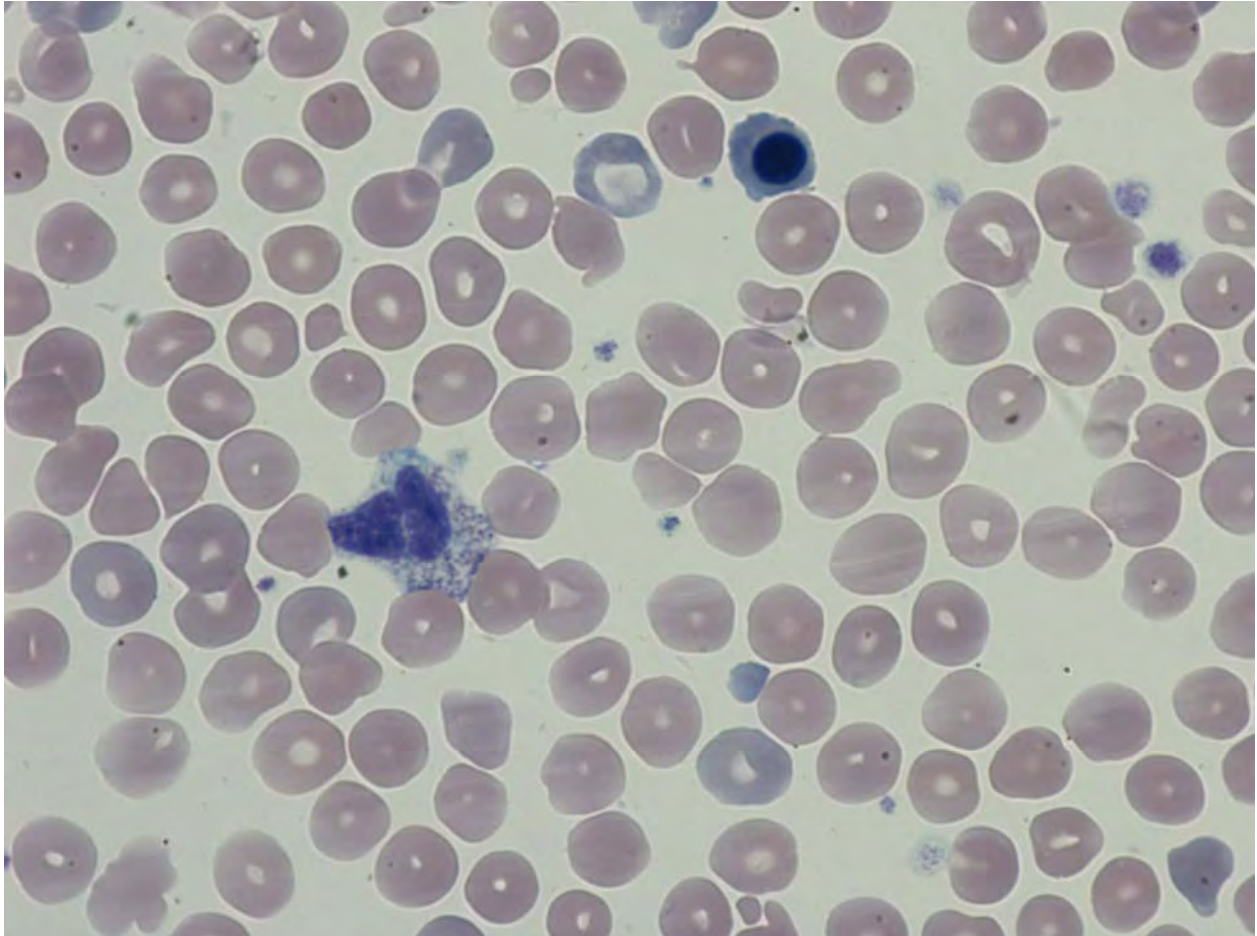


Figure 9: 1000 x magnification



Case 4 Questions:

7. For this case, figures 8 and 9 represent what is: Expected Abnormal
8. Typical findings in a blood smear from a one day old baby would include:
(Check all that apply)
- a) Elevated WBC count with a neutrophilia
 - b) Mild toxic granulation
 - c) NRBC
 - d) Macrocytosis (i.e. MCV > 95 fL)
 - e) Occasional acanthocytes and spherocytes
 - f) Polychromasia



Case 5

This smear is from a 1 year old child with a history of easy bruising and nosebleeds.

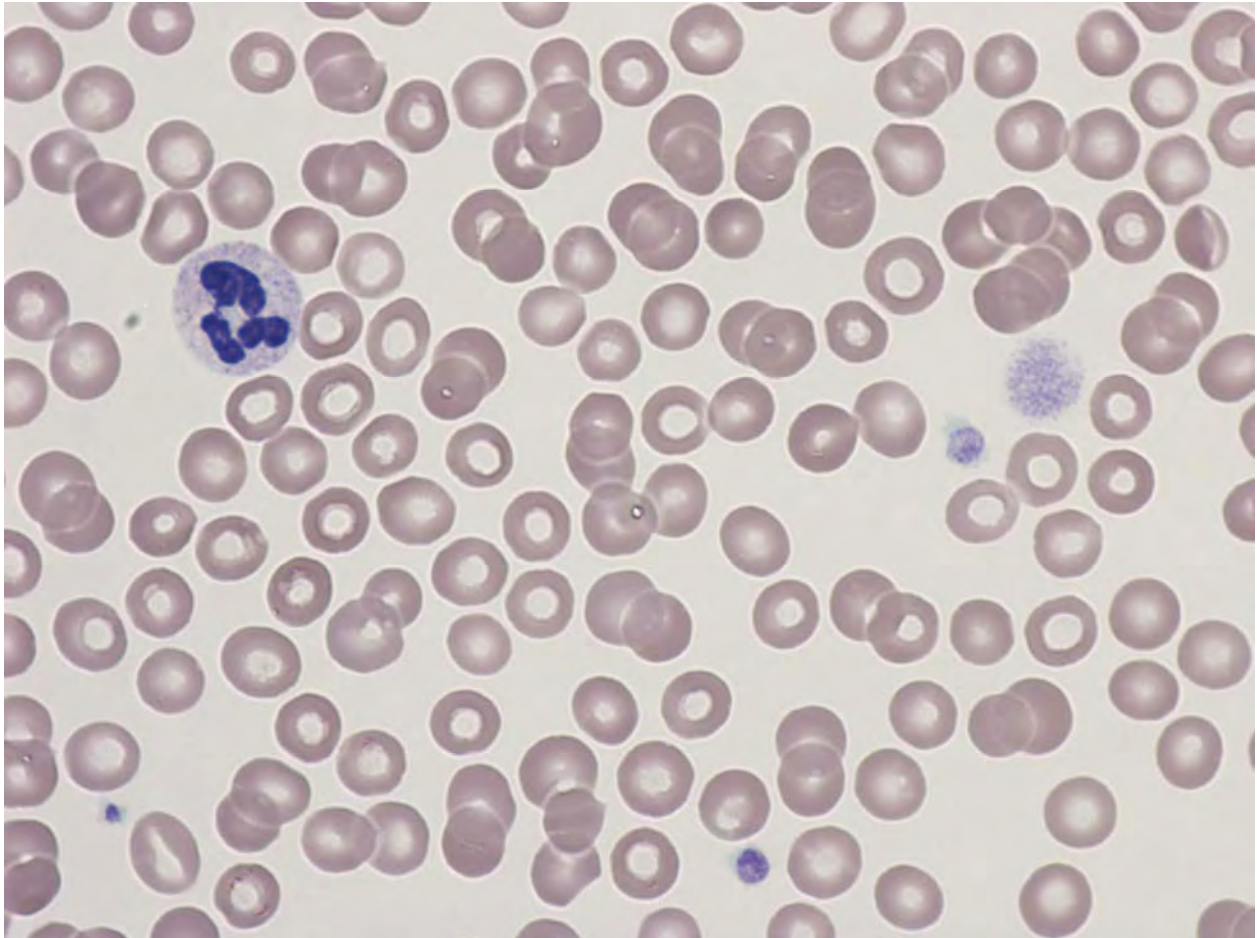


Figure 10: 1000 × magnification



Case 5 (continued)

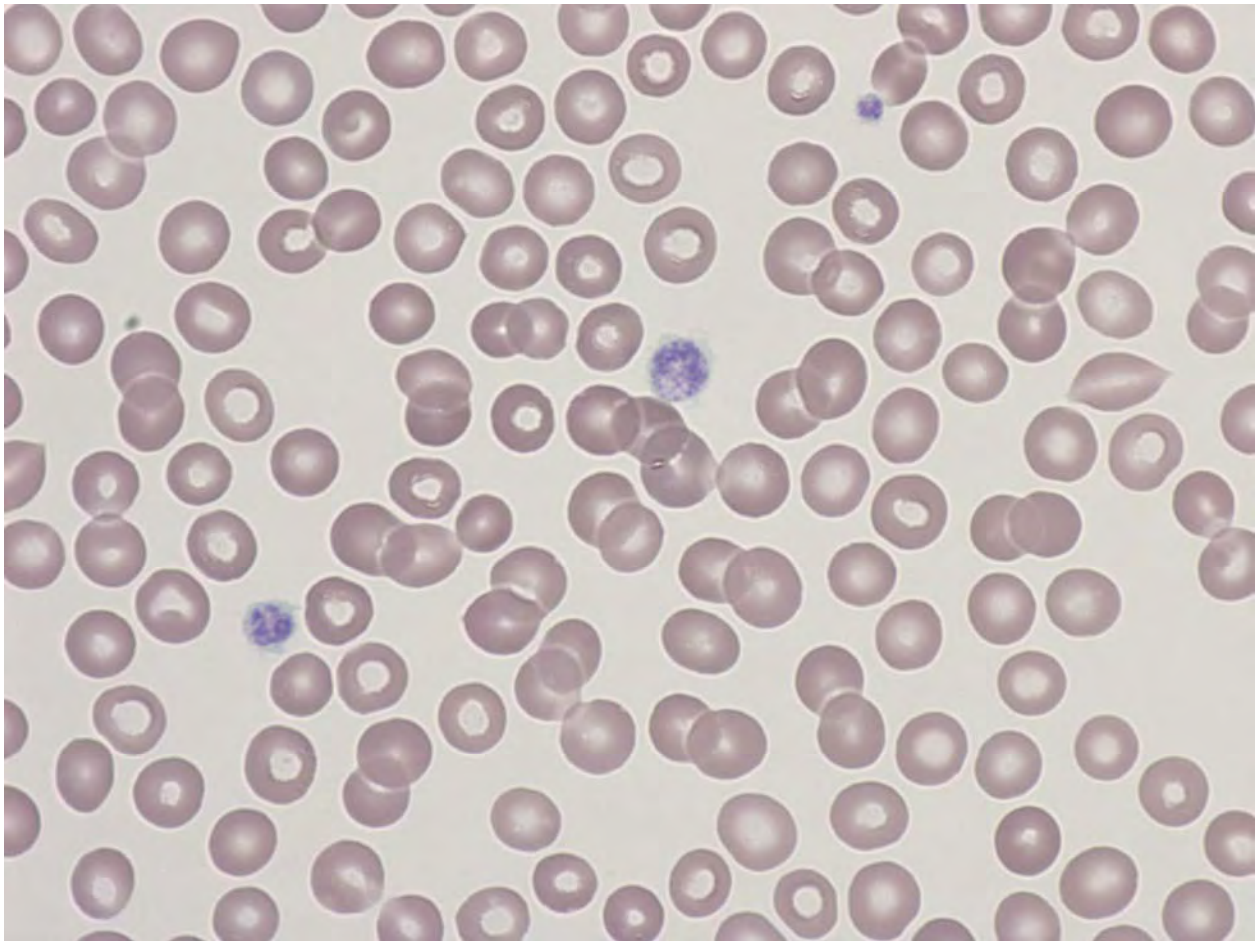


Figure 11: 1000 x magnification



Case 5 Questions:

9. What condition(s) can cause this finding?
(Check all that apply)
- a) Immune Thrombocytopenia (ITP)
 - b) Bernard-Soulier Syndrome
 - c) Myeloproliferative Disorders
 - d) MYH9 mutations (e.g. May-Hegglin anomaly)
 - e) Post-splenectomy
10. What other peripheral blood features can be seen in a hyposplenic/asplenic state?
(Check all that apply)
- a) Acanthocytes
 - b) Blister Cells
 - c) Howell-Jolly bodies
 - d) Elliptocytes
 - e) Target Cells
11. May-Hegglin anomaly is associated with:
(Check all that apply)
- a) Malignant transformation to MDS/leukemia
 - b) Bone marrow failure
 - c) Döhle bodies in leukocytes (leukocyte inclusions).
 - d) An elevated MPV on CBC parameters
 - e) Marked bleeding diathesis



COMMENTS

Contact Person:

Telephone:

Extension:

Email:

Save

The "Save" button allows you to save any completed fields in the form thus far, and later re-open the form to modify or complete any information.

IMPORTANT: Required fields must be completed before Saving, but may also be modified when re-opening the form.

Submit

The "Submit" button allows you to submit the complete and final form.

IMPORTANT: Modifications cannot be made after Submit.