

NEOPLASTIC DISEASES OF LEUCOCYTES (LEUKEMIA)

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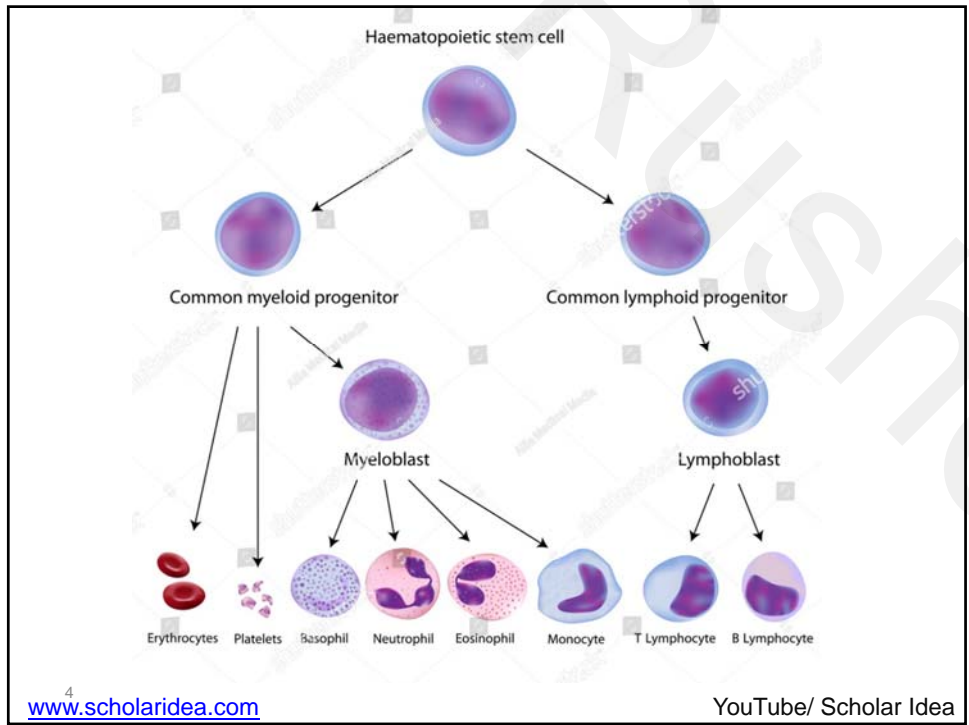
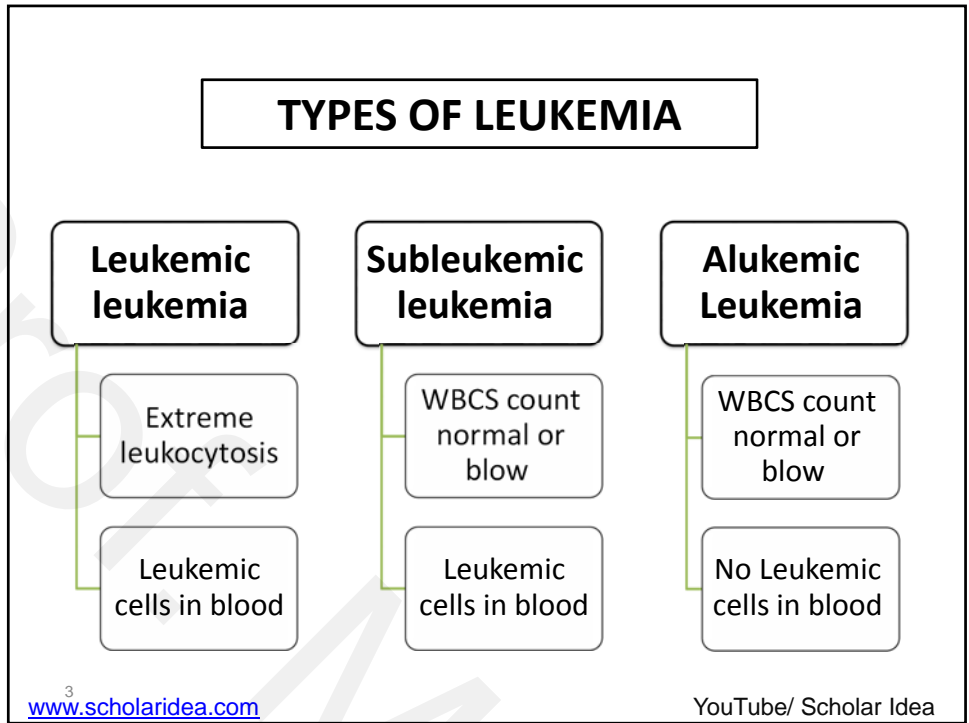
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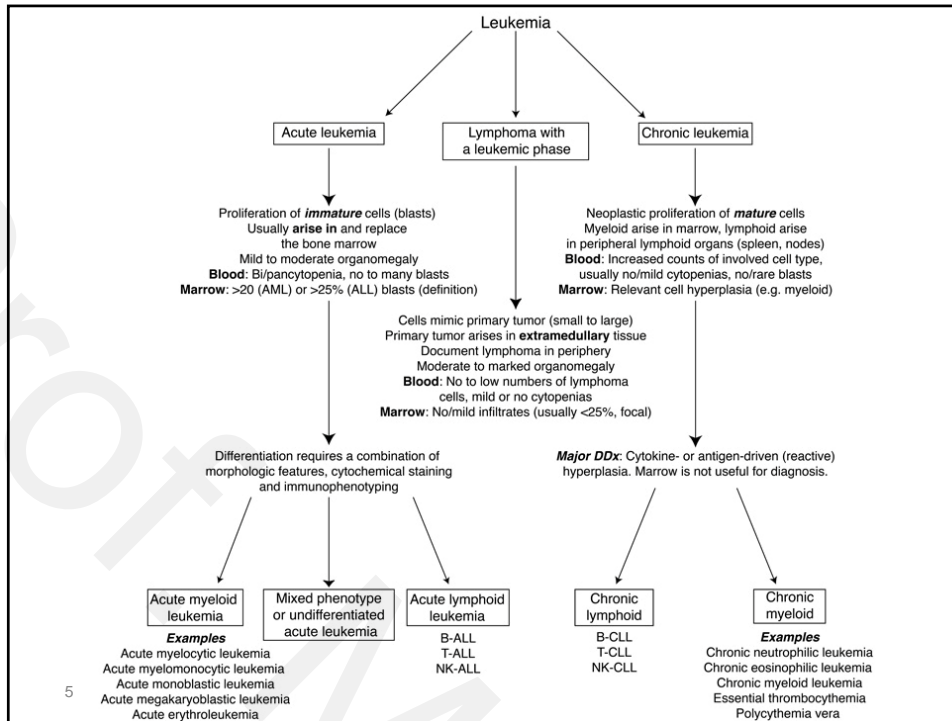
LEUKEMIA

A Neoplastic disease arising in hemopoietic tissues in which increased numbers of immature or abnormal white blood cells appear in the blood or are disseminated diffusely through the bone marrow.

Theories regarding the etiology of leukemia

- Viral infection.
- Genetic influence.
- Ionizing radiations.





Classification of leukemia

1. According to the duration
2. According to the type of cells
 - A. Myelogenous leukemia
 - B. Lymphocytic leukemia
3. According to the clinical signs

Types of leukemia

1. Bovine leukaemia
2. Ovine leukaemia
3. Equine leukaemia
4. Canine leukaemia
5. Feline leukaemia

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1. Bovine leukemia

Lymphocytic in origin

Bone marrow, Lymph node

Spleen

Thymus

Malignant Lymphoma

Multicentric

All lymph nodes enlarged

Lymphosarcoma

Unicentric

Spread by metastasis.

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1. Bovine leukaemia

Bilateral enlargement of all superficially located lymph nodes

Enlargement of tissues normally rudimentary as thymus

Splenomegaly, hepatomegaly and enlargement of the heart

The pressure of neoplastic masses on nerves or spinal cord may produce partial or complete paralysis

Presence of immature lymphocytes in blood as lymphoblast and prolymphocytes.

2. Ovine leukemia

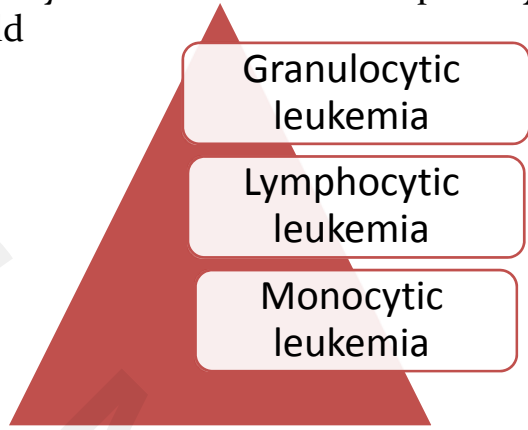
- Leukemia in sheep is rare than in cattle this because the life span of sheep is small (2-6 years).
- Clinical signs as in bovine leukaemia in addition to presence of subcutaneous collection of lymphatic tissues.

3. Equine leukemia

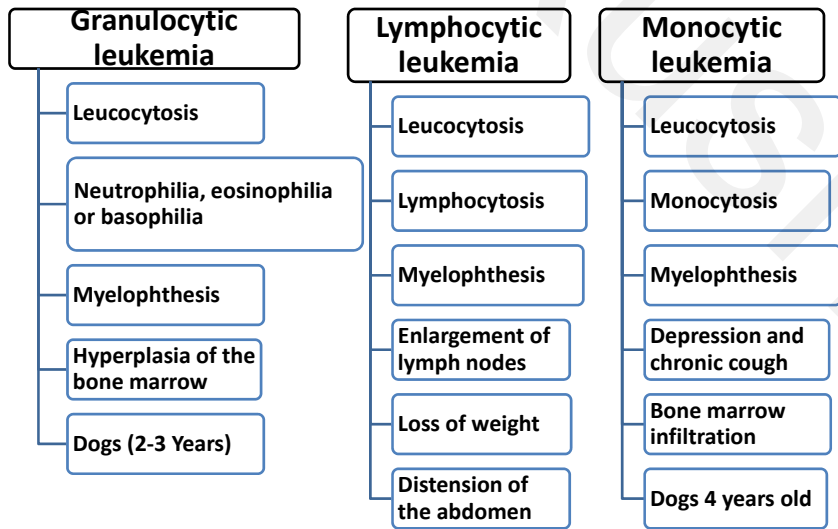
As in bovine leukemia.

4. Canine leukemia

Commonly occurs in canine especially at 7 years old



4. Canine leukaemia



DIAGNOSIS OF LEUKEMIA

In all aleukemic and subleukemic leukaemias, bone marrow examination is essential to establish diagnosis

Confirmation of leukemia is made by:

1. Total leukocytes count.
2. DLC.
3. PCV.
4. Bone marrow examination.

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