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BOVINE LEUKEMIA; ETIOLOGIC, PATHOGENETIC  
AND DIAGNOSTIC STUDIES

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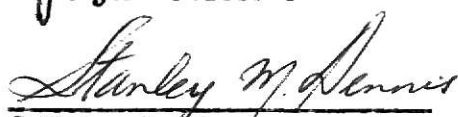
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ABSTRACT

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## INTRODUCTION

Bovine leukemia (lymphosarcoma, leukosis, pseudoleukemia, malignant lymphoma, lymphadenosis) is a chronic neoplastic disease of cattle characterized by malignant proliferations of lymphoid cells, progressive cachexia and high mortality. Diffuse or nodular, the neoplastic growths are gray, soft and often multicentric. Once introduced, the disease is usually well-established in a cattle population, it is sporadic and commonly affects mature cattle.

This disease is a neoplasia of lymphoid tissue termed lymphosarcoma or malignant lymphoma. The designation leukemia may be misleading since an increased lymphocyte count (persistent lymphocytosis), while common, is not a constant feature. However, the word leukemia is useful in referring to the bovine leukemia virus (BLV) now associated with lymphosarcoma of cattle so that the virus may be considered along with the other known leukemic viruses of chickens, mice and cats.

### Definition

Although the term leukemia seems at first glance to be readily understood, its exact definition is difficult. Leukemia (white blood) implies a condition of the blood characterized by a greatly increased leukocyte count. Furthermore, what is fundamentally abnormal in leukemia is not the blood but rather the tissues - the several tissues which produce the blood cells and the many tissues in which leukemic cells may settle and accumulate. Indeed, blood is of secondary importance in leukemia. Blood may be considered as a "traffic stream" through which cells pass from their site of origin in the blood-forming organs to tissues all over the body, and so to their eventual destruction.