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Reaction Patterns of the Lymph Node

Part 2 Reactions Associated with Neoplasia
and Immune Deficient States

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Preface

This second volume reports on the reaction patterns of lymph nodes in neoplastic and immunodeficient diseases. Based on the contents of volume 1, it presents a detailed survey of lymph node structures and their cellular components under these conditions.

The patterns of nodal reactions to the development and spread of cancer have recently been investigated and discussed by several authors. Here, the immediate interactions between tumor tissue and the regional nodes have been assessed in experimental models and in human material. Using modern morphological methods such as immunohistochemistry on the light and electron microscopic level, new insights have been gained into the stepwise process of lymphogenous metastasis. Macrophages/reticulum cells were found to play a significant role in this process, which is duly emphasized. Based on appropriate animal models, one chapter focuses on various subtypes of these cellular elements and their role in the two separate phases of tumor spread and the development of true metastases. The induction of fibronectin in lymph nodes is effected by tumor cells forming a special part of the extracellular matrix. The multifunctional fibronectin molecule serves as a mediator between tumor cells and fibroblasts, furthering the formation of tumor stroma.

This volume also contains a comprehensive survey of primary immunodeficiency syndromes and their nodal manifestations, reference being made to the most recent immunological knowledge. The chapter in question focuses mainly on the antigen-directed specific immune apparatus, including defects of phagocytes and of the complement system. Special insight is provided into the genetic and molecular background of these diseases.

The last part of the volume is devoted to immunological phenomena in lymph nodes that are associated with AIDS and AIDS-related complex. The mechanisms of immunological dysregulation in the nodes caused by these viruses are analysed. Distinct morphological changes could be identified in detail during the different stages of the diseases. Here, too, modern techniques such as in situ hybridization and immunohistochemistry are presented, with a discussion of their value for the identification of the viral genome and viral antigens and for specific phenotyping. Thus, our knowledge

on the nodal reaction in patients with immunodeficiencies has improved considerably, and a better understanding has been achieved of the complex functions of the lymph node in its special role within the human immune systems.

Münster, November 1990

EKKEHARD GRUNDMANN
EKKEHARD VOLLMER

Contents

Reaction Patterns of Lymph Nodes in the Development and Spread of Cancer With 24 Figures and 4 Tables E. VOLLMER, V. KRIEG, F. SHIMAMOTO, and E. GRUNDMANN	1
Patterns of Fibronectin Induction in Lymph Nodes Affected by Metastatic Growth of Adenocarcinomas With 6 Figures N. BECK, D. LORKE, and P. MÖLLER	35
Macrophages/Reticulum Cells in Early and Late Phases of Lymphogenous Metastasis With 23 Figures and 4 Tables E. VOLLMER, F. SHIMAMOTO, V. KRIEG, and E. GRUNDMANN	49
Primary Immunodeficiency Syndromes and Their Manifestations in Lymph Nodes With 2 Figures and 11 Tables H. COTTIER, R. KRAFT, and F. MEISTER	81
Immunological Dysregulation of Lymph Nodes in AIDS Patients With 7 Figures and 5 Tables G. R. F. KRUEGER, D. V. ABLASHI, P. LUSSO, and S. F. JOSEPHS	157
Lymph Node Reaction Patterns in Patients with AIDS or AIDS-Related Complex With 26 Figures and 1 Table J. DIEBOLD, J. AUDOUIN, A. LE TOURNEAU, S. PREVOT, and G. SZEKERES	189
Subject Index	223
Indexed in ISR	