Pathology Encyclopedia Article

Pathology

The following sections of this BookRags Literature Study Guide is offprint from Gale's For Students Series: Presenting Analysis, Context, and Criticism on Commonly Studied Works: Introduction, Author Biography, Plot Summary, Characters, Themes, Style, Historical Context, Critical Overview, Criticism and Critical Essays, Media Adaptations, Topics for Further Study, Compare & Contrast, What Do I Read Next?, For Further Study, and Sources.

(c)1998-2002; (c)2002 by Gale. Gale is an imprint of The Gale Group, Inc., a division of Thomson Learning, Inc. Gale and Design and Thomson Learning are trademarks used herein under license.

The following sections, if they exist, are offprint from Beacham's Encyclopedia of Popular Fiction: "Social Concerns", "Thematic Overview", "Techniques", "Literary Precedents", "Key Questions", "Related Titles", "Adaptations", "Related Web Sites". (c)1994-2005, by Walton Beacham.

The following sections, if they exist, are offprint from Beacham's Guide to Literature for Young Adults: "About the Author", "Overview", "Setting", "Literary Qualities", "Social Sensitivity", "Topics for Discussion", "Ideas for Reports and Papers". (c)1994-2005, by Walton Beacham.

All other sections in this Literature Study Guide are owned and copyrighted by BookRags, Inc.

Contents

Pathology Encyclopedia Article.....1

Contents.....2

Pathology.....3

Pathology

Pathology is the scientific study of disease processes that affect normal **anatomy** and **physiology**. Anatomical and physiological changes are pathological changes when they result from an underlying disease process or abnormality.

Pathologists play an increasingly important role in diagnosis, research, and in the development of clinical treatments for disease. A specialized branch of pathology, **forensic pathology**, offers a vast array of molecular diagnostic techniques (including **DNA** fingerprint analysis) toward identification of remains, gathering of evidence, and identification of suspects.

Modern pathology labs rely heavily on **molecular biology** techniques and advances in biotechnology. During the last two decades, there have been tremendous advances in linking changes in cellular or **tissue** morphology (i.e., gross appearance) with genetic and/or intracellular changes. In many cases, specific molecular tests can definitively identify disease process, and of critical importance to the treatment of disease, and make a correct diagnosis at an earlier stage in the disease process.

Pathologists attempt to relate observable changes to disease process. Whether the changes are evident morphologically--or are distinguishable only via sophisticated molecular tests--the goal is to determine the existence and/or etiology of disease (the cause of disease). Once the etiologic agents are identified, the general goal of research is to document and gather evidence of the pathogenesis of disease (i.e., the mechanisms by which etiologic agents cause disease).

On a daily basis, pathologists perform a broad spectrum of tests on clinical samples to determine anatomical and physiological changes associated with a number of disease processes, including the detection of cancerous cells and **tumors**.

Major branches of pathology include the study of anatomic, cellular, and molecular pathology. Specific clinical studies often focus on transplantation pathology, neuropathology, immunopathology, virology, parasitology, and a number of clinical subspecialties (e.g. pediatric pathology).