

**January 26, 2023**  
**Introduction to Human Pathology**  
**Reading assignment**

Dear BIOM 502 students,

On January 26, 2023, I will give you an Introduction to Human Pathology. My intent is to provide you a framework of general pathologic mechanisms some of which you will learn about in much more detail with the specific diseases you will study throughout this course.

I will also talk to you about how we obtain and process human tissues and cells for diagnostic and research purposes. Finally, we'll go through 2 cases to demonstrate how mechanisms of disease direct the work up and diagnosis of the disease and also the approach to treatment.

This is a very broad topic and there is no perfect 'overview' reference for you to read before attending the session. I am directing you to several pages in "**Robbins Basic Pathology, 10th Edition**" textbook. This is one of the classic Pathology textbooks used in medical schools.

This book is available as an e-book through the Biomedical Library. In the e-book search box type in "Robbins Basic Pathology" and look for this exact title. When I search it comes up as #5. There are several "Robbins" pathology texts – **be sure to look at the "Basic Pathology" text** – it is the shortest.

"Pathologic Mechanisms" are covered in the first 8 chapters in this book. Each Chapter title is a "pathologic mechanism" involved in the development of disease.

Take a look at the table of contents and outline for each chapter.  
The sections marked "overview" provide a short summary. There is also a blue box at the end of each section, summarizing the key points. These are good sections for you to read.

If you read what is below, you will have a background to all of the pathologic mechanisms that should be able to help you follow the lecture. It ends up being about 10 pages total. Feel free to keep reading as much as interests you!

**Chapter 1: Cell Injury, Cell Death and Adaptations**  
Introduction to Pathology  
Overview of Cellular Responses to Stress and Noxious Stimuli  
Metaplasia  
Overview of Cell Injury and Cell Death  
Summary box at end of section on Mechanisms of Cell Injury  
Apoptosis summary box at end of the section

**Chapter 2: Inflammation and Repair**  
Overview of Inflammation and Repair (about 2 pages)  
Overview of Tissue Repair  
Factors that Influence Tissue Repair

**Chapter 3: Hemodynamic Disorders, Thromboembolism and Shock**  
Introduction (first 2 paragraphs)

**Chapter 4: Diseases of the Immune System** (Mentioned but not covered in this session)

Introduction (first 2 paragraphs).

**Chapter 5: Neoplasia**

Introduction (first 2 paragraphs)

Nomenclature

Carcinogenesis: The molecular basis of cancer

(just the intro paragraphs – read more if you are interested)

**Chapter 6 & 7 Genetic & Pediatric Diseases and Environmental & Nutritional Diseases**

Not covered in this session

**Chapter 8 General Pathology of Infectious Diseases**

Intro paragraphs and chart of categories of infectious agents.

I'll be going over the following 2 cases and if you are interested, read about these before class.  
Just look up the topics in the Basic Pathology textbook

**Cases:**

Myocardial infarction

Lung cancer

I am looking forward to meeting you.  
Feel free to contact me if you have any questions.

Carolyn L. Cambor, MD

215-614-1428

Carolyn.Cambor@pennmedicine.upenn.edu