

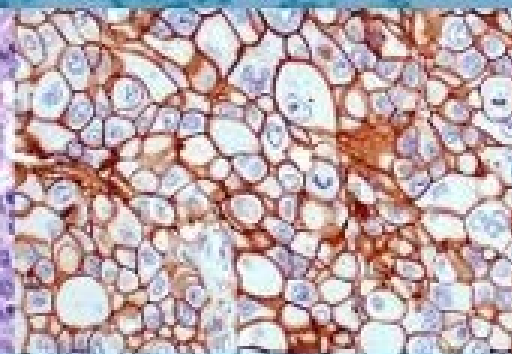
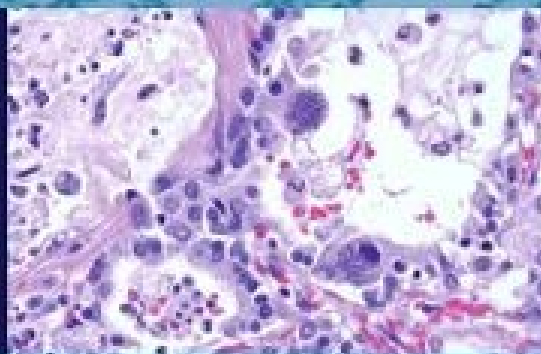
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 **HIGH-YIELD PATHOLOGY**

# Thoracic Pathology

Aliya N. Husain



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Thoracic Pathology

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High-yield pathology

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## Dedication

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*To **Dr. Edward Garrity** (Professor, Pulmonary Medicine), who, at Loyola University Medical Center 20 years ago, asked if I would be the dedicated pathologist looking at tissue from lung transplant recipients, which launched my career in pulmonary pathology.*

*To **Dr. Vinay Kumar** (Chairman of Pathology), who challenged me to prove myself. He asked, “How does one make this line drawn in the sand smaller without touching it?”*

*To **Dr. Thomas Krausz** (Director of Anatomic Pathology) for, “Get on with it...now,” thus providing encouragement, support, and an excellent collegial environment at the University of Chicago.*

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There are several excellent recent texts published in the field of pulmonary pathology, so why another? First, this book covers the whole thorax (lung, pleura and pericardium, heart, thymus, and mediastinum), as well as vascular diseases, including vasculitis. Second, its format of bulleted text and extensive illustrations is designed to make it an easy reference for a trainee or practicing pathologist looking up the common and not-so-common diseases when faced with a diagnostic question.

Within each organ, the contents are organized by disease categories such as congenital, inflammatory, infectious, and neoplastic. The text gives the salient facts in pathogenesis, epidemiology, and clinical features. Diagnostic elements of gross and microscopic pathology are emphasized. These are illustrated by gross pictures and low-, intermediate-, and high-power photomicrographs. Special stains and immunohistochemical stains are given extensively so that users can compare with their own results easily. Because electronic references are so easily accessible, only a few specific references are given.

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I would like to thank the residents and pathology assistants who, over the years, have taken many of the gross photographs included in this book. They remain unnamed but are gratefully acknowledged.

Aliya N. Husain, MD

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A

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Normal Lung



# Stages of lung development

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## **Embryonic (4-8 weeks)**

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- The lower respiratory system starts from a bud arising from the laryngotracheal groove; this branches into primary and secondary bronchopulmonary buds by the end of 5 weeks
- Repetitive branching continues and a primordial bronchial tree with five lobes is formed by the end of 8 weeks

## **Pseudoglandular phase (5-17 weeks)**

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- The primordial system of passage (air-conducting bronchial tree) with the terminal bronchioles is formed and is initially lined with cuboidal epithelium
- These precursor cells later differentiate into ciliated epithelium and secretory cells in respiratory ducts and also develop into type II pneumocytes in terminal bronchioles
- At this stage, the lung is composed of tubular glandular structures surrounded by undifferentiated mesenchyme



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