As a neophyte to acid-base analysis, you will generally consider this a pretty daunting topic. You will notice that arterial blood gas results are frequently ordered on ill patients but little comment is made on these in the patient record. It is certain that a lot of relevant clinical information is lost because of a lack of understanding of acid-base analysis. A particular aim of this book is to develop the subject gradually and systematically, and to lead you to a practical structured approach to analysis of blood gas results which you can use in your clinical practice. Because of the interaction of acid-base physiology with respiratory, cardiovascular, and renal systems and substrate metabolism, in particular, a set of blood-gas results can be a very useful teaching aid.
5: Metabolic Acidosis

6: Respiratory Alkalosis

7: Metabolic Alkalosis

8: Major Types of Metabolic Acidosis
Microscopic view of a histologic specimen of human lung tissue stained with hematoxylin and eosin. (CC BY 2.0; Snek01).