The story of the discovery of this rare tumor and of the subsequent controversies that arose about its causation by specific forms of commercial asbestos is long and complex. It could fill an entire book. This chapter focuses on the early history of the discovery, from 1767 to 1900; on the histologic controversies, from 1900 to 1942; and on the diagnostic controversies and the role of asbestos, from 1943 to 1973 (Table 1.1). The period from 1972 through the 1980s and 1990s could be characterized by advances in the industrial hygiene assessment of exposures, case-control studies, and other major epidemiologic studies concerning health effects in asbestos end-product users, paraoccupational exposures, household exposures, school and building exposures, and the role of specific asbestos fiber types, fiber characteristics, and lung fiber burden analysis. The 1970s to 1990s was also the period when the role of environmental exposure to erionite, tremolite, and ceramic fibers was discovered, and molecular and cellular biology focused on the characteristics of fiber carcinogenicity. In the final period, from the late 1990s to the present, the focus has been on the viral contribution to pathogenesis such as SV40 and human genetics and treatment strategies. The history of the discoveries after 1973 is covered by other authors in other chapters in this book.

Early Discovery, 1767 to 1900

The history of the term mesothelioma has entailed more than 100 years of controversy. The earliest mention of a possible tumor of the chest wall was by Joseph Lieutaud (1), generally regarded as the founder of pathologic anatomy in France according to Wolf (2), as quoted by Robertson (3). Lieutaud published a study of 3000 autopsies, among which were two cases of “pleural tumors.” The published account mentions a boy who suffered from marked dyspnea following trauma, who at postmortem showed fleshy masses adherent to the pleura and the ribs. Laennec (4) in 1819 is also said by Robertson to have suggested that there was an entity of primary malignancy of the pleura based on
the epithelial nature of these pleural cells. In 1843, von Rokitansky (5) actively opposed the idea of primary cancer of the pleura, and stated that pleural cancer always was secondary to a primary focus elsewhere. Ironically von Rokitansky in 1854 described what were called primary tumors of the peritoneum, which he called “colloid cancer” and most likely were peritoneal mesotheliomas. This strong opinion on the metastatic origin of pleural mesotheliomas by the German pathologists was to remain the opinion of many pathologists up through the mid-20th century as stated by Willis (6). There were further reports in the early 19th century of what could be considered pleural-based cancers. It was Wagner in 1870 who first described a lesion, which he classified as “Das Tuberkelähnliche Lymphadenom.” He felt this was a primary malignancy of the pleura in a 69-year-old woman in whom an epithelial-based malignancy was found. Wagner had described lymph channels filled with tumor. Schultz (7) in 1875 reexamined the preparations of Wagner and emphasized the neoplastic nature of the process and renamed it endothelial cancer. The tumor was thought to arise from the lymph vessels and was commonly called an endothelioma. This was not questioned until 1891, when Engelbach (8) first raised the question of whether these tumors arose from the endothelium of the lymph vessels or from the surrounding serosal surfaces.