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This practical manual provides a comprehensive yet concise guide to state-of-the-art molecular techniques and their applications. It starts with an overview of the essential principles of molecular techniques, followed by separate chapters detailing the use of these techniques in particular tissues and organs, and describing recommended treatment plans. Each chapter covers the tests available, their advantages, limitations, and use as diagnostic and prognostic tools, with key learning points at the end of each topic. Using both histologic and cytologic samples, it discusses how to interpret test results in a pathologic context and enables trainees and practicing pathologists to gain an in-depth understanding of molecular diagnostic techniques and how to incorporate them into routine diagnostic practice. Aiding the daily practice of refining diagnosis, as well as offering a didactic approach, this book is an essential reference for practicing pathologists and cytopathologists as well as trainees in pathology.

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About the cover:



The cover format of each volume of *Infection Control & Hospital Epidemiology* honors one of the many professionals throughout history who recognized not only how disease might be spread but also how the principles of epidemiology could be applied to reduce healthcare-associated infections.

Joseph Lister (1827–1912) was born to a Quaker family in the outskirts of London. His father, Joseph Jackson Lister, worked as a wine merchant by day and pursued the study of optics as a hobby. His work helped found modern microscopy, for which he was elected to the Royal Academy in 1832.

Young Lister decided to become a surgeon at an early age. Due to his religious affiliation, Lister was barred from attending older universities of greater prestige and settled upon study at the University of London, from which he received his medical degree and Fellowship in the Royal Academy of Surgeons. Lister moved to Edinburgh in 1853 to work under Mr. Syme, one of the preeminent British surgeons of the day. In Edinburgh, Lister made important observations on the pathogenesis of inflammation. He also gained a wife, Syme's daughter, Agnes, but in doing so had to become a member of the Church of England. Agnes worked closely beside Lister for many years, recording his experiments in great detail.

By 1856, Lister assumed professorship in surgery at the University of Glasgow, where he began to develop his principles of antiseptic surgery. At the time, surgical morality rates from sepsis ranged from 23% to 60%, and it was assumed that putrefaction and purulent infection of wounds originated from tainted air. Based on the work of his colleague, Louis Pasteur, Lister performed a series of meticulous experiments in which he used antiseptics and developed optimal wound dressing techniques that focused on keeping wounds clean rather than excluding air. Lister traveled widely in the United Kingdom, Europe, and the United States promoting his wound-care techniques. He returned briefly to Edinburgh before assuming the Chair of Clinical Surgery at King's College in London. In 1891, Lister became a Founder of the British Institute for Preventive Medicine, the first academic medical research institute in the United Kingdom. He served as the Institute's President, and the organization was ultimately renamed in his honor. Lister served as President of the Royal Society of London and was appointed to the House of Lords. After his death, Lord Lister chose not to be buried in Westminster Abbey but rather was laid to rest next to his wife.

Cover image: Detail of Lister Introduces Antisepsis, from "The History of Medicine" by Robert Thom, used with permission from University of Michigan Museum of Art.