The appendix is considered as a vestigial organ, with no known physiological role, that has been accepted as the origin of a potentially life threatening but easily treatable inflammatory disease of the right lower quadrant of the abdomen only at the end of the nineteenth century. Appendectomy for acute appendicitis is since then still the most frequently performed emergency surgical procedure. Despite the fact that this surgical procedure is so frequently and easily performed, its indication was, till recently, the result of equilibrium between the negative appendectomy rate and the appendiceal perforation rate. It has been advocated that imaging could play an important role in ruling out acute appendicitis, preventing negative appendectomy and in confirming acute appendicitis. Nevertheless, even if various diagnostic imaging techniques, especially ultrasonography (US) and computed tomography (CT), are widely available and diagnostic features very well known in each technique, the impact of medical imaging on the clinical work-up of patients suspected of acute appendicitis remains a matter of debate. In addition, among the radiology community, there are still debates addressing the questions of the most appropriate technique (US vs. CT), in men or in women, in children or in adults, with or without intravenous contrast injection, at standard or at low radiation dose. In addition, the possible impact of imaging on cost-effective care has to be taken into account. Selected on the only basis of their scientific contributions in the field and on the impact of these contributions, recognized international experts have accepted to address all these issues in this handbook. This book, entirely dedicated to the appendix and acute appendicitis in adults and children, sets out to be a guide for radiologists, emergency physicians, and surgeons, beginners as well as experienced ones. We want to express our sincere gratitude to all renowned radiologists, emergency physicians, and surgeons who have contributed to this book with great enthusiasm and support.

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