Preface

Magnetic resonance imaging (MRI) of the gastrointestinal tract was not an upfront obvious development as the gastrointestinal tract is a challenging organ system for MRI. Obtaining good image quality of a tube with a few millimeter thin wall is demanding, while peristalsis and respiration further increase difficulties. These hurdles have been largely overcome by hardware and software improvements.

At present, MRI is an important diagnostic technique of especially small bowel (e.g. Crohn's disease), colon (e.g. rectal cancer), and anus. The combination of high intrinsic contrast resolution, lack of ionizing radiation, and no invasiveness is crucial for this role.

Now MRI techniques widely used in other fields, such as diffusion and perfusion MRI, make their way to clinical application in MRI of the gastrointestinal tract. Also dynamic MRI and MRI of motility have been introduced. MRI of the gastrointestinal tract at high field is studied.

The book is intended as an up to date overview of MRI of the gastrointestinal tract. Initial technical chapters are followed by clinical orientated chapters of all parts of the gastrointestinal tract and closely related structures. By presenting both basic and advanced knowledge, this book is intended to be instructive for the novice while simultaneously offering experienced practitioners further insights into the value of MRI of the gastrointestinal tract. I hope that readers will find this book useful when starting or improving their use of MRI in patients with gastrointestinal diseases.

I thank all the distinguished experts in the field who contributed to this book. I am very pleased that they were willing to share their insights and expertise. I thank Professor Baert for his invitation to contribute a book dedicated to MRI of the gastrointestinal tract for the renowned Medical Radiology series. Ursula Davis, her successor Daniela Brandt, and colleagues at Springer are thanked for the always timely and friendly communication and very effective production process.

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