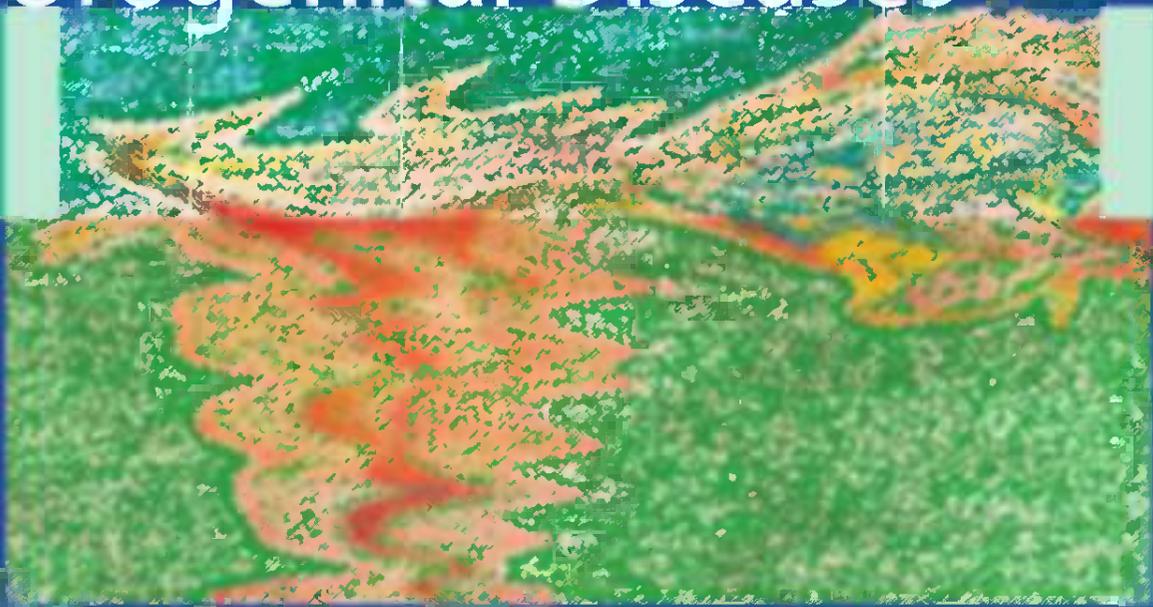


Lucio Olivetti  
Luigi Grazioli  
*Editors*

# Imaging of Urogenital Diseases



A Color Atlas

*Foreword by*  
Roberto Pozzi Mucelli

 Springer

## **Imaging of Urogenital Diseases**

**Lucio Olivetti • Luigi Grazioli**

*Editors*

# **Imaging of Urogenital Diseases**

A Color Atlas

 Springer

*Editors*

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*To my daughter Elena*  
L.O.

*... forever your splendor...*  
L.G.

# Foreword

This work presents the entire urogenital system in a methodical and thorough fashion. It is a highly topical book given that the progress achieved by diagnostic imaging in this body system has profoundly changed our way of operating and examining urogenital disease.

The most evident example of this change in diagnostic imaging is intravenous urography. Until a few years ago this technique was considered the reference examination for many renal and urinary tract diseases, whereas today it has largely been replaced by ultrasonography, CT urography and MR urography.

This is not to suggest that urography has completely disappeared from the radiologic scene, because its imaging characteristics can be transferred to CT urography and MR urography. It is however clear that the CT and MR studies are able to provide – in a single examination – information regarding the renal parenchyma and the collecting system, the adjacent organs and structures, and functional and vascular characteristics, all of which cannot be captured in a simple urographic examination.

This change has come about not only in intravenous urography, but also in other forms of imaging of the urinary tract, such as antegrade and retrograde pyelography, which today is limited to only a few and principally interventional or intraoperative applications. However, the most important change in the imaging of the urogenital system, as with other organs and systems, is the broadening of the diagnostic imaging spectrum. Today the radiologist is involved on a number of fronts, from diagnosis – intended as the identification of a lesion, its characterization and, in the case of oncologic disease, its staging – to prognosis and follow-up. Added to these are functional evaluations such as can be obtained with Doppler ultrasonography, spectroscopy and dynamic studies with contrast media.

In this work Olivetti and Grazioli manage to provide thorough and up-dated information on all of these aspects, with a highly topical and modern interpretation of contemporary radiology of the urogenital system.

The book is divided into nine sections, beginning with the anatomy of the urinary tract which is accompanied by excellent illustrations, some of which can be found in the later chapters. The presentation of normal anatomy is followed by radiologic anatomy, which includes urography, angiography, standard ultrasonography, color Doppler and contrast enhanced ultrasonography, computed tomography complete with CT urography, magnetic resonance with MR angiography and MR urography. This is followed by chapters on the normal human anatomy and radiologic anatomy of the male and female reproductive systems which, are organized in the same way as the previous chapters.

The following sections deal with clinical features and imaging of the various organs and systems. Particularly worthwhile in terms of content and images are the sections dedicated to malformations, lithiasis, and renal and urinary tract neoplasms. In the oncologic setting special attention is paid to the problems associated with tumor recurrences in the male and female reproductive systems. Similarly interesting and

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topical is the section on female pelvic floor dysfunction and its evaluation with new technologies. The last section deals with interventional radiology in its various forms and includes chapters on biopsies, the treatment of varicocele, drainage and embolization.

My sincere congratulations go to Olivetti and Grazioli for this fine book which clearly reflects not only their professionalism, but also their passion and enthusiasm for our discipline.

*Verona, February 2009*

*Prof. Roberto Pozzi Mucelli*  
Radiology Section  
University of Verona

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# Preface

Like every book worth its salt, *Imaging of Urogenital Diseases: A Color Atlas* has the obligation of a preface. This was the warm suggestion of the publisher and so it was decided.

After a year of solid commitment, L.O. and L.G. face this final task with relief, a task which is the most demanding and thankless of the entire book. It forces them to justify (first and foremost to themselves) the reasons which prompted them to write a medicine book, and especially on a topic like the urogenital system, which is not nearly as popular as, for example, the thorax or liver.

On the back cover the reader will probably have discovered that this book aims to fill a gap in medical publishing by presenting in a single volume the state of the art in clinical practice and diagnostic imaging of a disease spectrum of undisputed incidence and social importance and therefore of great interest. At least that is how it seems to the two editors. During their undergraduate studies one dreamt of becoming a gynecologist, the other a urologist. Both ended up radiologists, with some regrets... financial regrets first and foremost.

Perhaps this is one of their primary motivations: the aspiration, having passed fifty years of age (even though L.G. obstinately points out that he falls short of that mark by a few months), to regain possession by an alternative route of a specialization they wanted to practice when they were (somewhat) younger. Added to this is a touch of narcissism, a bit of boredom with the daily clinical routine (with no intention of belittling its importance) and the presumption of being able to write something different, or at least the same things in a different way, by exploiting their experience and extensive image bank (only a portion of which is reproduced here) acquired throughout their lengthy activity, and recently reorganized for conferences and courses held in Cremona and Brescia.

Looking back over the drafts, L.O. and L.G. believe they are offering the reader (but the reader will be the final judge) a splendid work. To be honest, they could have done better (one always can) if more time had been available and not stolen from their respective families, to whom this book is also dedicated.

In the certainty, as is always the case, that no-one will read this preface (the book, hopefully, will be read by many), L.O. and L.G. bid their volume farewell and wish it luck.

“To diagnose the presence of a bladder stone, Rolando advises: *the doctor should seat the patient on his own lap. With the left hand, introduce two fingers into the patient's anus. Then with the right fist strongly compress the bladder region. If you feel a hard mass, it is a stone. If you feel a fleshy mass, then this is obstructing urination.* Avicenna advises palpating the anus of a virgin, the vulva of a deflowered woman”.  
(Penso G., 1991, *La medicina medioevale*, p. 296)

Have we written something new and more up-to-date?

L.O. and L.G. look at each other, smile and nod with satisfaction.

### **Note for the Reader**

The topics covered are classified according to the colored box surrounding the page number, as follows:



Anatomy



Clinical Medicine



Imaging



Interventional Radiology

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