

R. Hohenfellner

J.-U. Stolzenburg

**Manual Endourology**

R. Hohenfellner  
J.-U. Stolzenburg

# Manual Endourology

With 135 Figures

**Rudolf Hohenfellner, MD, PhD**

Professor Emeritus of Urology  
University of Mainz  
Department of Urology  
Langenbeckstraße 1  
55101 Mainz, Germany

**Jens-Uwe Stolzenburg, MD, PhD**

Associate Professor of Urology  
University of Leipzig  
Department of Urology  
Liebigstraße 20  
04103 Leipzig, Germany

Library of Congress Control Number: 2005929874

ISBN-10 3-540-25622-9 Springer Berlin Heidelberg New York  
ISBN-13 978-3-540-25622-9 Springer Berlin Heidelberg New York

Bibliographic information published by Die Deutsche Bibliothek  
Die Deutsche Bibliothek lists this publication in the Deutsche Nationalbibliografie;  
detailed bibliographic data is available in the Internet at <<http://dnb.ddb.de>>.

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilm or in any other way, and storage in data banks. Duplication of this publication or parts thereof is permitted only under the provisions of the German copyright Law of September 9, 1965, in its current version, and permission for use must always be obtained from Springer Medizin Verlag. Violations are liable for prosecution under the German Copyright Law.

**Springer Medizin Verlag.**

**A member of Springer Science+Business Media**

[springer.de](http://springer.de)

© Springer Medizin Verlag Heidelberg 2005  
Printed in Germany

The use of general descriptive names, registered names, trademarks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

Product liability: The publisher cannot guarantee the accuracy of any information about dosage and application thereof contained in this book. In every individual case the user must check such information by consulting the relevant literature.

SPIN 11377139

Cover Design: deblik, Berlin, Germany

Typesetting: TypoStudio Tobias Schaedla, Heidelberg, Germany

Printed on acid free paper

2111 – 5 4 3 2 1 0

# Preface

---

With the first cystoscopy performed by Maximilian Nitze more than 100 years ago, endoscopy developed step by step to become eventually a subspecialty in urology now called endourology.

*Manual Endourology* addresses young trainees in urology and is written by experts in this field who are also experienced teachers. It is hoped that the book will be helpful to prepare the trainee in the first steps of these still fascinating techniques but will also prevent the newcomer from mistakes and common complications.

In 12 chapters, he or she will find the typical procedures, which are also the gold standard and therefore performed in almost every urological department. The text is written from all the authors in Simplified Basic English in order to facilitate the study in countries where English is the scientific but not the native language.

The pictures presented are a careful selection of several thousand photos. Of the highest possible quality, the majority of them are self-explanatory. The same is true for the video clips found on the DVD.

The structure of the text in each chapter is the same. It starts with Indications, Limits, Risks and Contraindications and proceeds to the Step by Step procedure. Common Complications are mentioned and Do's and Don'ts as well as special comments from the author.

At the beginning, the trainee will observe his instructor who performs the operation step by step and will follow the operation on the screen. Later on he or she will gain experience using a simulator program and eventually will perform the first operations under the supervision of the teacher.

Well prepared for the first steps in endourology, we wish to encourage the trainee to ask his supervisor the right questions and thus start the process of interaction or »How to teach the teacher to teach.«

We also wish to encourage the trainee to establish a personal computer checklist to document all operations step by step in detail in a personal data bank. Completed by the complications encountered, the steps to be corrected to avoid complications can be delineated.

However, remember when starting the first endourologic procedures alone, stop immediately if there is the slightest resistance regarding which instrument to use. Any disproportion of your instrument may cause urosepsis or a lifelong obstruction.

We wish to thank here all the unnamed co-workers of the different institutions without whom this book could never have been published. The same is true for the companies, which assisted in producing the pictures and videos.

Furthermore we wish to thank the Deutsche Gesellschaft für Urology for the support of the training program initiated by GESRU (German Society of Residents in Urology).

Last but not least Dr. Rüttinger from Springer for his understanding helps, advice and coordination is given our warmest appreciation.

Rudolf Hohenfellner  
Jens-Uwe Stolzenburg  
Mainz, Leipzig  
July 2005

# Contents

---

<b>Endourological Training Models.....</b>	<b>1</b>
<i>Maurice-Stephan Michel, Herbert Leyh</i>	
<b>Urethrotomy.....</b>	<b>9</b>
<i>Herbert Leyh, Roger Paul</i>	
<b>Urethrocystoscopy.....</b>	<b>17</b>
<i>Herbert Leyh, Roger Paul</i>	
<b>Rare findings in Cystoscopy.....</b>	<b>27</b>
<i>Hassan Abol-Enein</i>	
<b>Pediatric Endoscopy.....</b>	<b>35</b>
<i>Marcus Riccabona, Ulrike Necknig</i>	
<b>Laparoscopy for the Undescended Testicle.....</b>	<b>47</b>
<i>Ulrich Humke, Stefan Siemer, Roland Bonfig, Mark Koen</i>	
<b>Transurethral Resection of Bladder Tumours.....</b>	<b>55</b>
<i>Armin Pycha, Salvatore Palermo</i>	
<b>Surgical Anatomy of the Prostate Sphincter Complex.....</b>	<b>71</b>
<i>Lutz Trojan, Maurice-Stephan Michel</i>	
<b>Transurethral Resection of the Prostate.....</b>	<b>77</b>
<i>Jens-Uwe Stolzenburg, Kossen M.T. Ho, Thilo Schwalenberg</i>	
<b>Minimal Invasive Transurethral Resection of the Prostate.....</b>	<b>89</b>
<i>Jan Fichtner</i>	
<b>Percutaneous Nephrolithotomy and Percutaneous Nephrostomy.....</b>	<b>93</b>
<i>Jens-Uwe Stolzenburg, Chris Anderson, Evangelos N. Liatsikos, Thilo Schwalenberg</i>	
<b>Ureterorenoscopy.....</b>	<b>105</b>
<i>Thomas Knoll, Maurice-Stephan Michel</i>	
<b>Subject Index.....</b>	<b>117</b>

# List of Contributors

---

## Hassan Abol-Enein, MD, PhD

Professor of Urology  
Director of Urology & Nephrology  
Center  
Mansoura University  
Gomhoria Street  
35516 Mansoura, Egypt

## Chris Anderson, MD

St. George's Hospital Tooting  
Queen Mary's Hospital  
Roehampton  
Department of Urology  
35 Wimple Street  
London W1G 8GY, Great Britain

## Roland Bonfig, MD

Julius-Maximilians-University  
Hospital  
Department of General and  
Pediatric Urology  
Oberdürrbacher Straße 6  
97080 Würzburg, Germany

## Jan Fichtner, MD

Associate Professor of Urology  
Johanniterklinikum, Department  
of Urology  
Steinbrinkstraße 96a  
46145 Oberhausen, Germany

## Kossen M.T. Ho, MD

University of Leipzig  
Department of Urology  
Liebigstraße 20  
04103 Leipzig, Germany

## Ulrich Humke, MD

Professor of Urology  
Klinikum Stuttgart,  
Katharinenhospital  
Department of Urology  
Kriegsbergstr. 60  
70174 Stuttgart, Germany

## Thomas Knoll, MD

University Hospital of Mannheim  
Department of Urology  
Theodor-Kutzer-Ufer 1–3  
68167 Mannheim, Germany

## Mark Koen, MD

Department of Pediatric Urology  
Krankenhaus der Barmherzigen  
Schwestern  
4010 Linz, Austria

## Herbert Leyh, MD

Professor of Urology  
Klinikum Garmisch-Partenkirchen  
Department of Urology  
Auenstraße 6  
82467 Garmisch-Partenkirchen,  
Germany

## Evangelos N. Liatsikos MD, PhD

University of Patras  
Department of Urology  
26500 Rio, Patras, Greece

## Maurice-Stephan Michel, MD

Associate Professor of Urology  
University Hospital of Mannheim  
Department of Urology  
Theodor-Kutzer-Ufer 1–3  
68167 Mannheim, Germany

## Ulrike Necknig, MD

Klinikum Garmisch-Partenkirchen  
Department of Urology  
Auenstraße 6  
82467 Garmisch-Partenkirchen,  
Germany

## Salvatore Palermo, MD

Central Hospital of Bolzano/Bozen  
Department of Urology  
Lorenz-Boehler-Str. 5  
39100 Bolzano/Bozen, Italy

## Roger Paul, MD

Associate Professor of Urology  
Department of Urology  
Technische Universität München  
Klinikum rechts der Isar  
Ismaninger Straße 22  
81675 München, Germany

## Armin Pycha, MD

Professor of Urology  
Central Hospital of Bolzano/Bozen  
Department of Urology  
Lorenz-Boehler-Str. 5  
39100 Bolzano/Bozen, Italy

## Marcus Riccabona, MD

Professor of Urology  
Department of Pediatric Urology  
Krankenhaus der Barmherzigen  
Schwestern  
4010 Linz, Austria

## Thilo Schwalenberg, MD

University of Leipzig  
Department of Urology  
Liebigstraße 20  
04103 Leipzig, Germany

**Stefan Siemer, MD**

Associate Professor of Urology  
University Hospital of Saarland  
Department of General and  
Pediatric Urology  
66421 Homburg/Saar, Germany

**Jens-Uwe Stolzenburg, MD, PhD**

Associate Professor of Urology  
University of Leipzig  
Department of Urology  
Liebigstraße 20  
04103 Leipzig, Germany

**Lutz Trojan, MD**

University Hospital of Mannheim  
Department of Urology  
Theodor-Kutzer-Ufer 1–3  
68167 Mannheim, Germany