

# World Health Organization Classification of Tumours

WHO



OMS

International Agency for Research on Cancer (IARC)

## **Pathology and Genetics of Tumours of the Urinary System and Male Genital Organs**

Edited by

John N. Eble

Guido Sauter

Jonathan I. Epstein

Isabell A. Sesterhenn

*IARC Press*

Lyon, 2004

## **World Health Organization Classification of Tumours**

Series Editors Paul Kleihues, M.D.  
Leslie H. Sobin, M.D.

### **Pathology and Genetics of Tumours of the Urinary System and Male Genital Organs**

Editors John N. Eble, M.D.  
Guido Sauter, M.D.  
Jonathan I. Epstein, M.D.  
Isabell A. Sesterhenn, M.D.

Coordinating Editors Figen Soylemezoglu, M.D.  
Wojciech Biernat, M.D.

Editorial Assistant Stéphane Sivadier

Layout Lauren A. Hunter  
Allison L. Blum  
Lindsay S. Goldman

Illustrations Thomas Odin

Printed by Team Rush  
69603 Villeurbanne, France

Publisher IARC*Press*  
International Agency for  
Research on Cancer (IARC)  
69008 Lyon, France

This volume was produced in collaboration with the  
International Academy of Pathology (IAP)

The WHO Classification of Tumours of the Urinary System and Male Genital Organs presented in this book reflects the views of a Working Group that convened for an Editorial and Consensus Conference in Lyon, France, December 14-18, 2002.

Members of the Working Group are indicated  
in the List of Contributors on page 299.

The WHO Working Group on Tumours of the Urinary System and Male Genital Organs pays tribute to Dr F. Kash Mostofi (1911-2003), outstanding pathologist, who through his vision, teachings and personality influenced generations of physicians worldwide.

Published by IARC Press, International Agency for Research on Cancer,  
150 cours Albert Thomas, F-69008 Lyon, France

© International Agency for Research on Cancer, 2004, reprinted 2006

Publications of the World Health Organization enjoy copyright protection in  
accordance with the provisions of Protocol 2 of the Universal Copyright Convention.  
All rights reserved.

The International Agency for Research on Cancer welcomes  
requests for permission to reproduce or translate its publications, in part or in full.  
Requests for permission to reproduce figures or charts from this publication should be directed to  
the respective contributor (see section Source of Charts and Photographs).

The designations used and the presentation of the material in this publication do not imply the  
expression of any opinion whatsoever on the part of the Secretariat of the  
World Health Organization concerning the legal status of any country, territory, city,  
or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The mention of specific companies or of certain manufacturers' products does not imply  
that they are endorsed or recommended by the World Health Organization in preference to others  
of a similar nature that are not mentioned. Errors and omissions excepted,  
the names of proprietary products are distinguished by initial capital letters.

The authors alone are responsible for the views expressed in this publication.

Enquiries should be addressed to the  
Communications Unit, International Agency for Research on Cancer, 69008 Lyon, France,  
which will provide the latest information on any changes made to the text and plans for new editions.

### **Format for bibliographic citations:**

Eble J.N., Sauter G., Epstein J.I., Sesterhenn I.A. (Eds.): World Health Organization  
Classification of Tumours. Pathology and Genetics of Tumours of the Urinary System  
and Male Genital Organs. IARC Press: Lyon 2004

### **IARC Library Cataloguing in Publication Data**

Pathology and genetics of tumours of the urinary system and male genital organs /  
editors J.N. Eble... [et al.]

(World Health Organization classification of tumours ; 6)

1. Bladder neoplasms - genetics 2. Bladder neoplasms - pathology  
3. Genital neoplasms, male - genetics 4. Genital neoplasms, male - pathology  
5. Kidney neoplasms - genetics 6. Kidney neoplasms - pathology  
7. Prostatic neoplasms - genetics 8. Prostatic neoplasms - pathology  
I. Eble, John N. II. Series

ISBN 92 832 2412 4 (NLM Classification: WJ 160)