AUA Monographs

Vol. 1

Bladder Cancer

American Urological Association

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Monographs
VOLUME 1

Bladder Cancer

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AMERICAN UROLOGICAL ASSOCIATION
SEMINAR ON BLADDER CANCER
CHICAGO, ILLINOIS, APRIL 1980

WILLIAMS & WILKINS
Baltimore/London

Made in the United States of America

Library of Congress Cataloging in Publication Data

Main entry under title:

Bladder cancer.

(A.U.A. monographs in urology; v. 1)
Includes index.
1. Bladder—Cancer. I. Bonney, William W. II. Prout, George R. III. American Urological Association. IV. Series. [DNLM: 1. Bladder neoplasms. W1 AU14 v. 1 / WJ 504 B631]
RC280.B5B59 616.99'436 81-7501
ISBN 0-683-00919-2 AACR2

Composed and printed at the
Waverly Press, Inc.
Mt. Royal and Guilford Aves.
Baltimore, MD 21202, U.S.A.

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Bladder Cancer

Preface

To urologists everywhere this volume offers the subject matter of a recent AUA Seminar on bladder cancer.

The on-site seminar participants, with a unique faculty, explored the subject in great depth through presentation and free discussion. We have tried to capture all of this. Additional authors round out the topics for a glimpse of future clinical urology.

We hope you find this material highly relevant to your own practice.

William W. Bonney

George R. Prout, Jr.

The opinions and practices recommended in this monograph are those of the authors, not necessarily those of the AUA or the publisher.

Acknowledgments

The editors wish to thank the monograph secretary, Mrs. Denise Kuder, and the Medical Media staff of the Iowa City Veterans' Administration Medical Center for their willing and much appreciated help.

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Issues and Questions:

A Reader's Guide

Like any coverage of a subject in depth, this symposium provided answers and new concepts but also raised a number of controversies and questions. This section is a guide to some of the controversial issues raised, to help follow the thread of each issue through the various chapters.

Origins of Transitional Carcinoma

Is bladder cancer caused by exogenous carcinogens?

Is bladder cancer multifocal in origin ("field change") or monoclonal with ready dissemination to other parts of the bladder?

Does elevated residual urine volume predispose to bladder cancer?

Intravesical Dissemination of Bladder Cancer

Is the cancer spread by tumor cell shedding and remote implantation?

Is it spread by transurethral prostatic biopsy?

Are other endoscopic procedures implicated?

Screening Program with Urinary Cytology

Is routine screening justifiable in high risk, clinically normal populations?

Tumor Markers: Blood Group Antigens

What is the basis for this test?

Is this a clinically useful test?

Tumor Markers: Karyotype

What is the basis for TCC karyotype studies?

Normal urothelial cells have a very constant chromosome number with normal chromosome morphology, whereas bladder cancer cells have much variation with frequent abnormal chromosomes. **Chapter 8** **pp. 87-88**

Could karyotype studies help to stage our patients?

Potentially yes, because the above abnormalities correlate with invasive disease and suggest the need for aggressive treatment. **Chapter 8** **pp. 88-91**

Could it play a role in clinical management?

Potentially yes, to establish the neoplastic potential of biopsy-proven CIS and to make urine cytology studies more sensitive. **Chapter 8** **p. 93**

Not at the present time, because these studies are expensive, time consuming and require absolutely fresh tumor tissue. **Chapter 10** **p. 113**

Tumor Markers: Electron Microscopy (EM)

What is the basis for this study?

Under scanning EM there are pleomorphic microvilli on early animal tumors, on human TCC cells, and possibly in biopsies of adjacent normal mucosa. This may represent an early, irreversible commitment to neoplasia. **Chapter 9** **pp. 97-98**

These changes are not seen in normal, radiated, of inflammed biopsies and seem to correlate with a high risk for tumor recurrence in TCC patients. **Chapter 9** **pp. 101-103**

Could it be used in screening?

These changes are present in cytological specimens, even in well differentiated tumors not detectable by standard cytology. **Chapter 9** **pp. 97-100, 105**

Host Immune Response

What is the basis for an assay of host immunity?

Histocompatibility antigens are genetically determined and occur on normal and neoplastic cells. Closely related tumor specific antigens are probably determined by the abnormal neoplastic genes and can stimulate a host immune response.

Chapter 11 **p. 126**

Is this useful for cancer diagnosis and treatment?

Animal experiments prove that a host can reject a tumor and survive while control animals succumb.

Chapter 11 **pp. 122–123**

However, at the present time human tumor specific antigens have not been sufficiently well isolated. Tissue culture assays of immune response are difficult to interpret. There is no proof that a break-down of "immune surveillance" plays any role in the origin of TCC.

Chapter 11 **pp. 123–124**

Pretreatment Evaluation of the Cancer Patient

How accurate is classification and staging as practiced today?

Not very accurate for patients with clinically localized invasive bladder cancer, in that many of these patients are not cured by radical cystectomy.

Chapter 12 **p. 140**
Chapter 18 **pp. 237–240**

The new AJC classification helps to define the sources and quality of information and to clarify the patient's changing stage with disease progression.

Chapter 12 **pp. 133–146**

At the time of clinical staging would it help to include additional, new factors?

Yes. Promising new predictors of stage include microscopic invasion of lymphatic vessels in the primary tumor.

Chapter 12 **pp. 141–142**

One can also determine the extent of superficial disease by prostatic urethral biopsies and by cytology of the upper urinary tract in appropriate situations.

Chapter 16 **pp. 179–180, 183, 185, 189–193, 195, 203–206**

Recurrence and Progression of Superficial Disease

After apparently complete destruction, superficial cancer often recurs in the bladder. What factors can predict this recurrence?

What factors can predict progression of superficial bladder tumor to an invasive, metastatic type of disease?

Diagnosis of Superficial Disease

Why has CIS just now become so important?

Is cytology important to diagnose superficial disease?

Management of Superficial Disease

Do the conservative open surgical procedures (segmental resection or cystotomy with loop resection) have a legitimate place?

How about radiation therapy for superficial disease?

When is total cystectomy indicated?

In the asymptomatic patient with positive cytology or biopsies after intravesical chemotherapy, how long would you treat and follow the patient before considering total cystectomy?

Topical (Intravesical) Chemotherapy

Has intravesical chemotherapy found its place in superficial bladder cancer treatment?

How about prophylatic (immediate post TUR) thiotepa—is it safe? Is it effective?