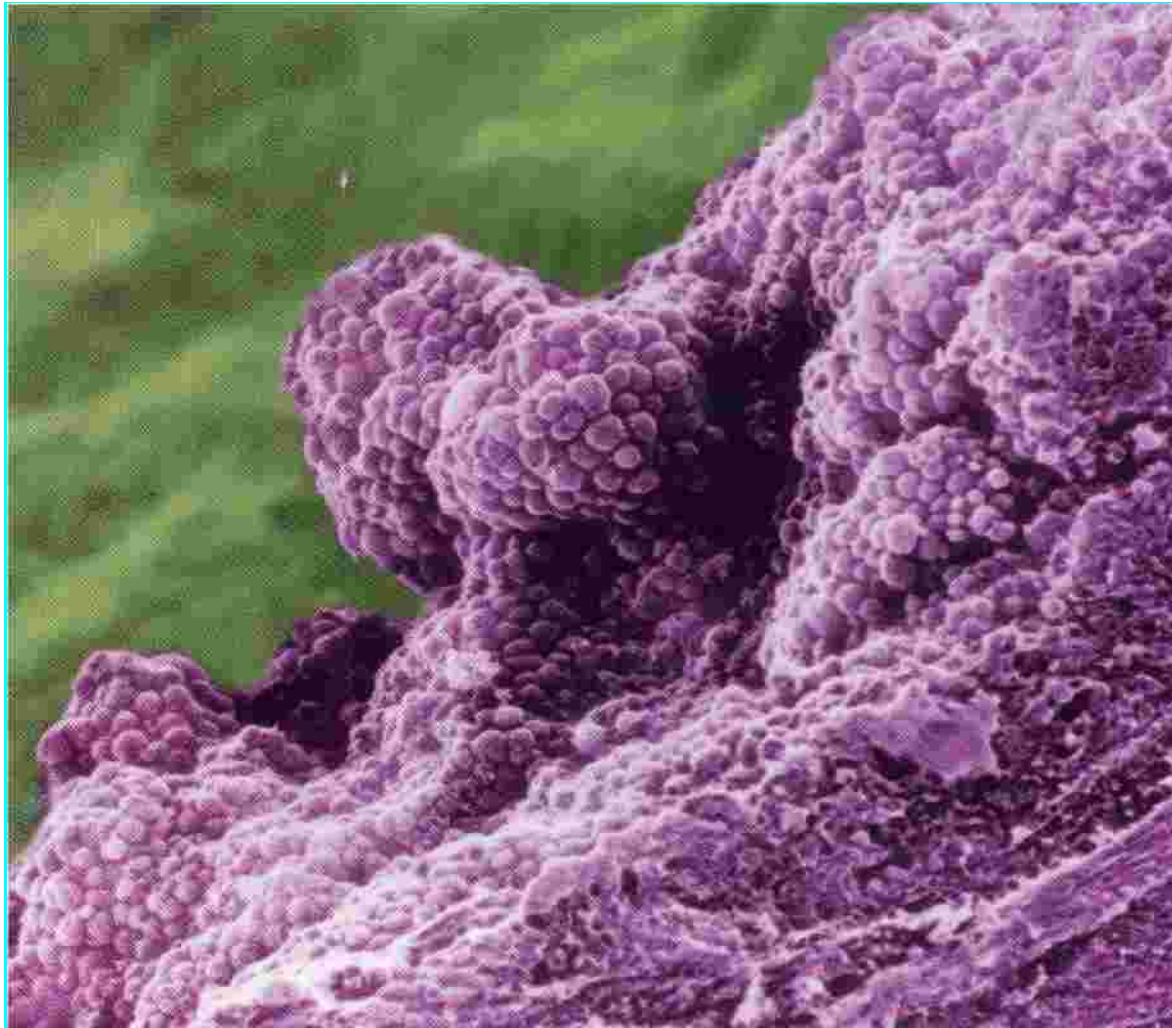
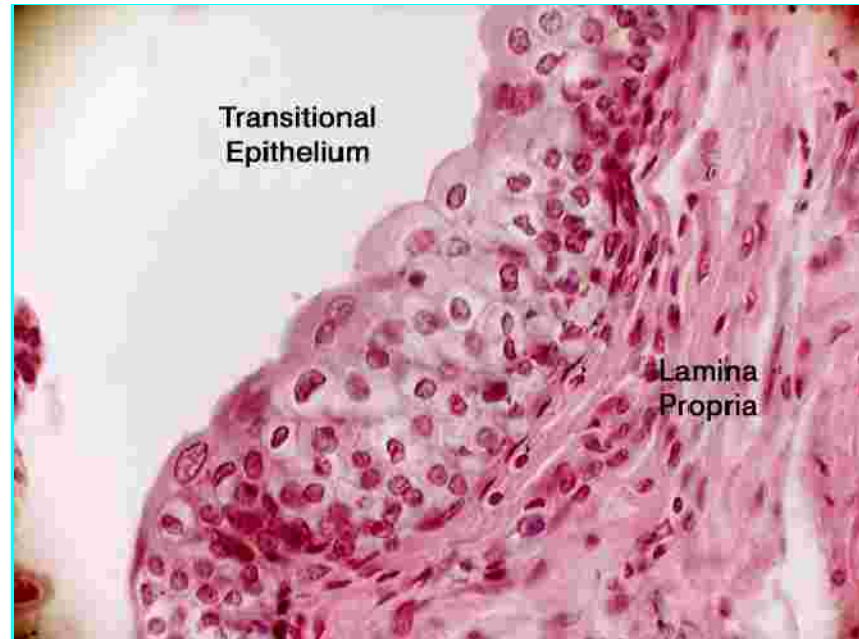
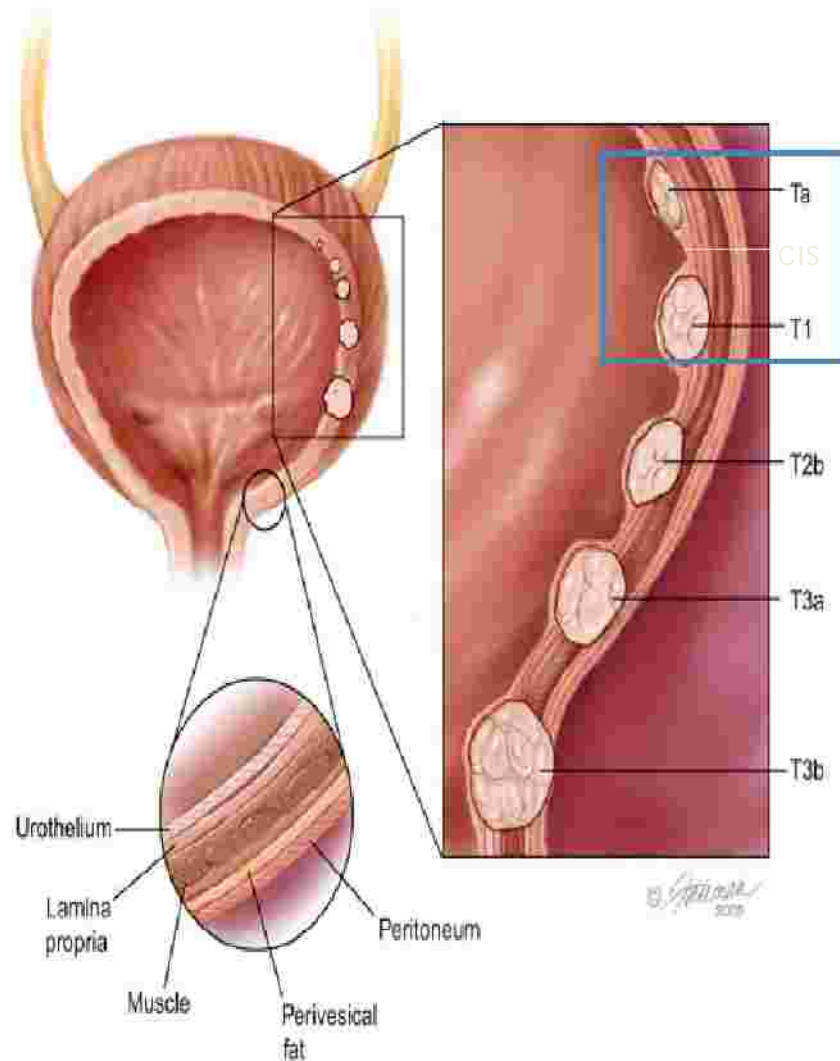


Treatment Options for Non-Invasive Bladder Cancer



Kamal S. Pohar, MD, The Ohio State University

Superficial Bladder Cancer



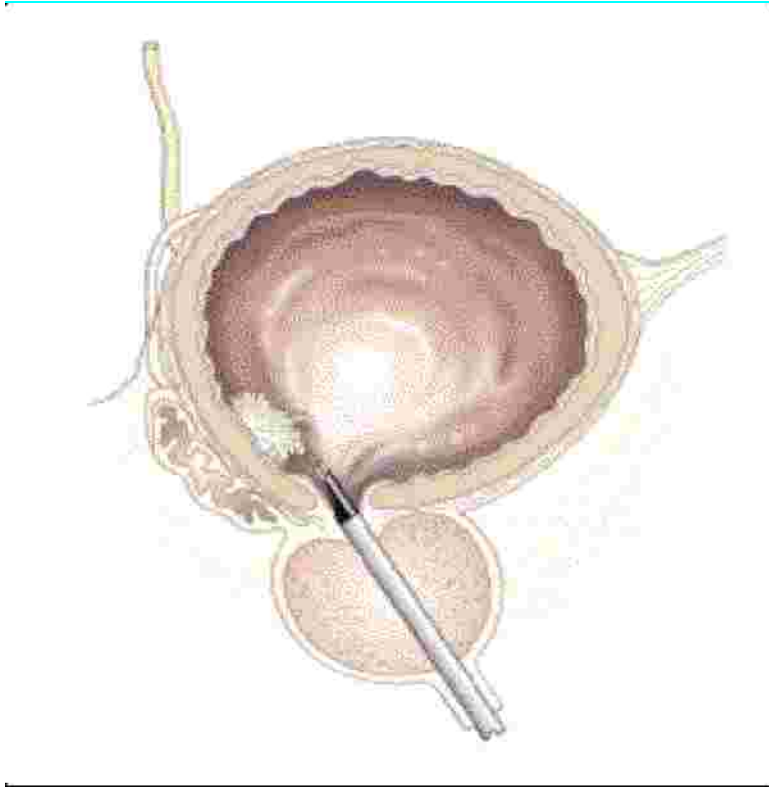
American Joint Committee on Cancer Staging for Bladder Cancer

- Ta Non-invasive papillary carcinoma
- Tis Carcinoma in-situ: "flat tumor"
- T1 Invades subepithelial connective tissue

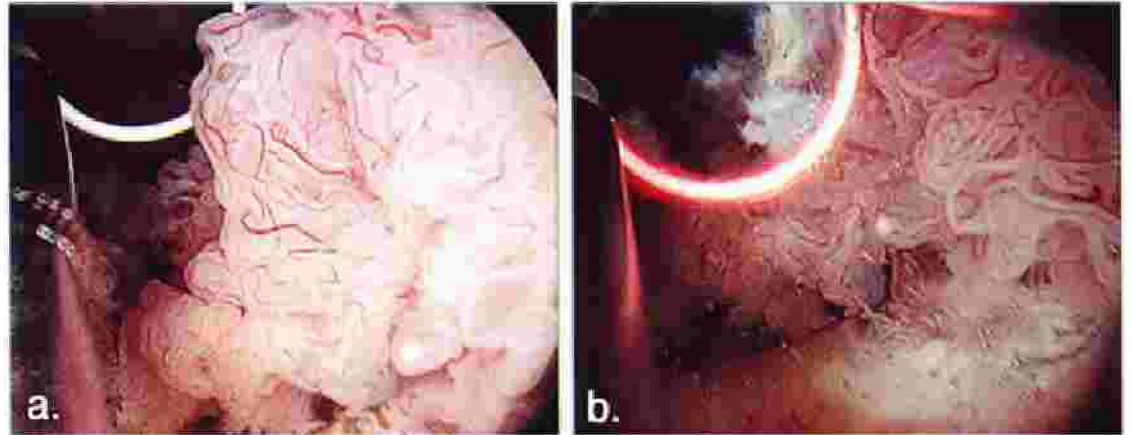
Papillary Bladder Tumors



Transurethral Resection of Bladder Tumor (TURBT)



Resectoscope in bladder



- Often Curative
- May require more than one procedure for larger tumors

Single Dose Instillation of Chemotherapy After Surgery In The Bladder



Single Dose Instillation of Chemotherapy After Surgery

A SINGLE IMMEDIATE POSTOPERATIVE INSTILLATION OF
CHEMOTHERAPY DECREASES THE RISK OF RECURRENCE IN
PATIENTS WITH STAGE T₂ T₁ BLADDER CANCER: A META-ANALYSIS
OF PUBLISHED RESULTS OF RANDOMIZED CLINICAL TRIALS

RICHARD J. SYLVESTER,* WILLEM GOSTERLINCK AND ADRIAN P. M. VAN DER MEIJDEN

*From the European Organization for the Research and Treatment of Cancer Data Center, Brussels, the Universitair Ziekenhuis Gent,
Gent, Belgium, and the Jeroen Bosch Hospital, 's Hertogenbosch, The Netherlands*

Single Dose Instillation of Chemotherapy After Surgery

- Patients with a single tumor in the bladder reduced their risk of the cancer recurring from 47.1% to 35.8%
- Patients with more than one tumor in the bladder reduced their risk of the cancer recurring from 81.5% to 65.2%

Natural History of Superficial Bladder Cancer

European Organization for the Research and Treatment of Cancer

Predicting Recurrence and Progression in Individual Patients with Stage Ta T1 Bladder Cancer Using EORTC Risk Tables: A Combined Analysis of 2596 Patients from Seven EORTC Trials

Richard J. Sylvester ^{a,*}, Adrian P.M. van der Meijden ^b, Willem Oosterlinck ^c,
J. Alfred Witjes ^d, Christian Bouffoux ^e, Louis Denis ^{f,1}, Donald W.W. Newling ^{g,2},
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^e Department of Urology, CHU Sart-tilman, Liège, Belgium

^f Department of Urology, Middelheim General Hospital, Antwerp, Belgium

^g Department of Urology, Free University Medical Center, Amsterdam, The Netherlands

^h Department of Urology, Academic Medical Center, Amsterdam, The Netherlands

What is the likelihood my cancer will come back?

Factor	Recurrence	Progression
Number of tumors		
Single	0	0
2 to 7	3	3
≥8	6	3
Tumor size		
<3 cm	0	0
≥3 cm	3	3
Prior recurrence rate		
Primary	0	0
≤1 rec/yr	2	2
>1 rec/yr	4	2
T category		
Ta	0	0
T1	1	4
CIS		
No	0	0
Yes	1	6
Grade		
G1	0	0
G2	1	0
G3	2	5
Total score	0-17	0-23

What is the likelihood my cancer will come back?

Recurrence score	Prob recurrence 1 year (95% CI)	Prob recurrence 5 years (95% CI)
0	15% (10%, 19%)	31% (24%, 37%)
1-4	24% (21%, 26%)	46% (42%, 49%)
5-9	38% (35%, 41%)	62% (58%, 65%)
10-17	61% (55%, 67%)	78% (73%, 84%)

Progression score	Prob progression 1 year (95% CI)	Prob progression 5 years (95% CI)
0	0.2% (0%, 0.7%)	0.8% (0%, 1.7%)
2-6	1.0% (.4%, 1.6%)	6% (5%, 8%)
7-13	5% (4%, 7%)	17% (14%, 20%)
14-23	17% (10%, 24%)	45% (35%, 55%)

Can we reduce the risk of cancer recurrence?

BCG



Can we reduce the risk of cancer recurrence?

Chemotherapy for Bladder Instillation

Mitomycin C

Doxorubicin

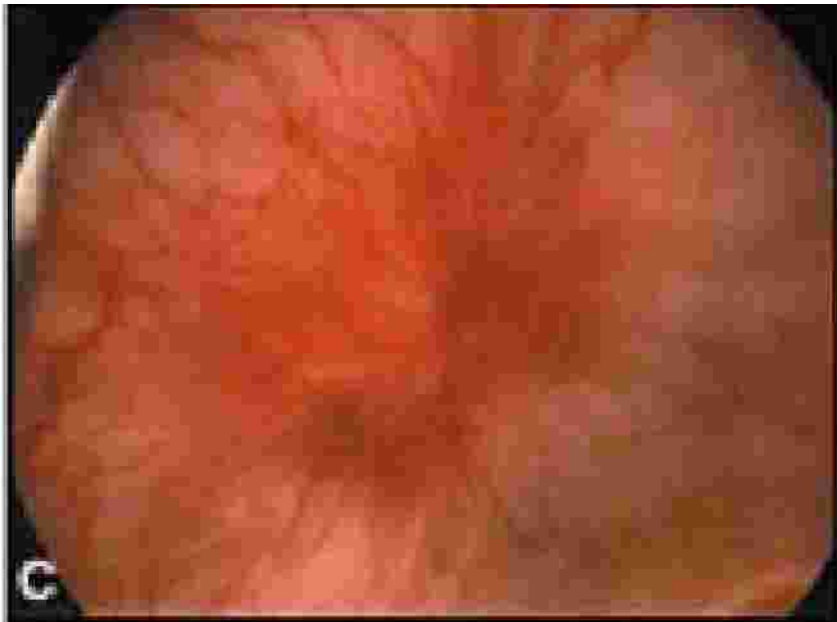
Thiotepa

Epirubicin

What's better – BCG or Chemotherapy

- Depends on the features of the cancer
- Depends on what treatments have been used in the past
- Have you experienced many side effects from the treatment?

Carcinoma in situ (CIS)



- n Most often is a flat red spot(s) in the bladder

Carcinoma in situ (CIS)

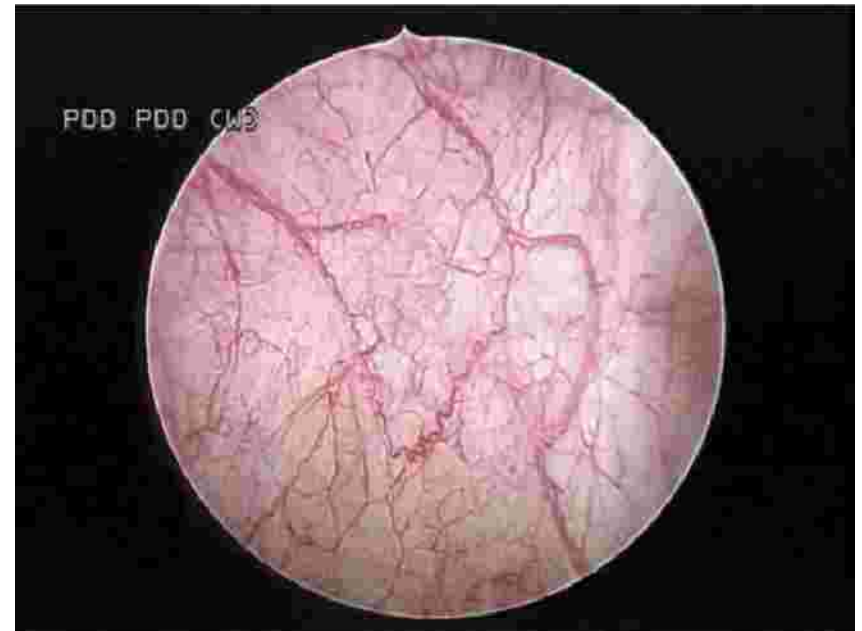
- Effectively treated with BCG
- Occasionally requires more than one course of BCG to cure
- If BCG does not work options are limited and may require surgical removal of the bladder
- Drugs being studied include BCG/interferon, gemcitabine, valrubicin and others

How will I know if my cancer comes back?

- Cystoscopy



Cystoscope



Normal

How will I know if my cancer comes back?

- Urinary Tumor Markers

Urine cytology

UroVysion FISH

NMP-22

BTA

Maintenance BCG

MAINTENANCE BACILLUS CALMETTE-GUERIN IMMUNOTHERAPY FOR RECURRENT TA, T1 AND CARCINOMA IN SITU TRANSITIONAL CELL CARCINOMA OF THE BLADDER: A RANDOMIZED SOUTHWEST ONCOLOGY GROUP STUDY

DONALD L. LAMM,*† BRENT A. BLUMENSTEIN, JOHN D. CRISSMAN, JAMES E. MONTIE, JAMES E. GOTTESMAN, BRUCE A. LOWE, MICHAEL F. SAROSDY,‡ ROBERT D. BOHL, H. BARTON GROSSMAN,§ THOMAS M. BECK, JOSEPH T. LEIMERT AND E. DAVID CRAWFORD|

From the West Virginia University Medical Center, Morgantown, West Virginia, Southwest Oncology Group Statistical Center and Swedish Hospital Tumor Institute, Seattle, Washington, Harper Hospital, Detroit and University of Michigan Medical Center, Ann Arbor, Michigan, Oregon Health Sciences University and Northwest Clinical Oncology Program, Portland, Oregon, University of Texas Health Science Center at San Antonio, San Antonio and University of Texas M. D. Anderson Cancer Center, Houston, Texas, Columbus Clinical Oncology Program, Columbus, Ohio, St. Luke's Regional Medical Center, Boise, Idaho, and University of Colorado, Denver, Colorado

- Reduces risk of cancer recurrence and progression
- Recommended 3 doses be given every 6 months

Surgical Removal of the Bladder (Radical Cystectomy)

- Not possible to remove the cancer by TURBT (cancer is too extensive)
- Risk of the cancer coming back more invasive or worse having spread is high
- BCG and chemotherapy have failed



Careers : Become a Urologist.