Management of Ca Urinary Bladder

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Learning Objectives

Workup

Classification of Bladder Cancer : Non-Invasive & Invasive

Risk Stratification: High Low & Intermediate

Management of Invasive & Noninvasive Bladder Cancers

Local & Systemic Therapies, their integeration

Management of Metastatic Disease

Treatment related complications

Recurrences & Management

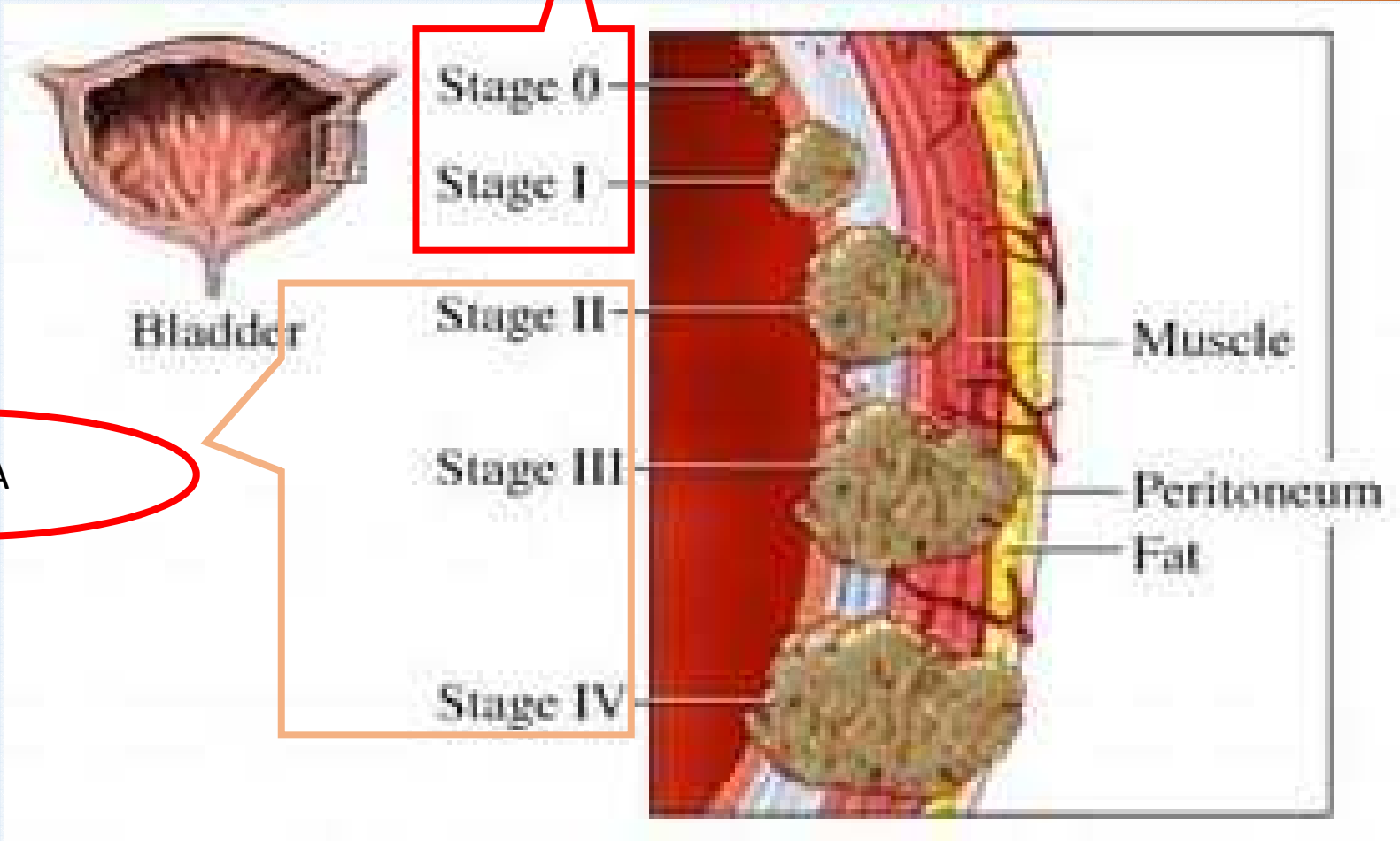
Workup

- Full blood count and biochemical profile
- Urine cytology
- Cystoscopy
- Imaging of the urothelium (e.g., ultrasound, intravenous urogram, or computed tomography [CT] urogram)
- Muscle-invasive bladder cancer (MIBC) : detailed cross-sectional staging with CT or magnetic resonance imaging (MRI) of the chest, abdomen, and pelvis.
- If any features suggestive of bone metastasis (e.g., raised alkaline phosphatase, bone pain): an isotope bone scan is indicated.
- Examination under anesthetic coupled with TURBT

Workup

- Presence or absence of a mass after TURBT : Important prognostic factor as it potentially indicates either unsuccessful clearance of tumor, extra-vesical extension, or both.
- TURBT serves as both definitive staging of the bladder lesion as well as a substantial proportion of the initial treatment.
- Pathological review of the resected specimen : to ascertain whether muscle invasion is present or not, particularly if the tumor appears sessile or high grade and whether there is CIS;
- These are the key determinants of further investigation and treatment

NON-INVASIVE CA



INVASIVE CA

Non-muscle-Invasive & Invasive Bladder Cancer

- Stage Ta, T1, and carcinoma in situ [Tis]
- High recurrence rate - 50% - 70% after treatment by TURBT
- 10% to 20% of NMIBC : progresses to muscle invasion (≥T2 lesions)
- Tumor grade & stage, tumor number, size, presence of carcinoma in situ (CIS), recurrence rate, and age at diagnosis are risk factors of progression
- Invasive Disease: poor prognosis due to a very high rate of occult metastatic disease at the time of diagnosis(<10% present with metastatic disease)
- carries a poor prognosis

Non-muscle-Invasive Bladder Cancer

- Base of the resected area should be separately biopsied.
- Any suspicious areas in the remainder of the bladder should be biopsied,
- Many advocate additional selected biopsies of the bladder mucosa and a prostatic urethral biopsy as well. (Urethral biopsies are clearly indicated in patients with risk factors for urethral involvement)
- T1, G3 tumors , without muscularis propria in the specimen require second biopsy in order to obtain muscularis propria to reduce the risk of understaging.
- Following resection of the tumor, : a single dose of intravesical mitomycin-C for 1 hour within 24 hours of surgery reduces relative risk of recurrence by 24.2% but no impact on disease progression or survival

Non-muscle-Invasive Bladder Cancer: Low V/S High Risk

- Low-risk tumors : single tumors <3 cm in diameter , graded as G1 , staged as Ta , with no evidence of CIS.
- Intermediate- and high-risk tumors are defined using a scoring system based on a number of clinical and pathological factors:
  - Number of tumors
  - Tumor size
  - Prior recurrence rate
  - T category
  - Presence of concurrent CIS
  - Tumor grade
- Intermediate-risk tumors :up to a 38% probability of recurrence and a 5% risk of progression at 1 year.
- High-risk tumors : 61% probability of recurrence and a 17% risk of progression at 1 year

EORTC
European Organisation for Research and Treatment of Cancer

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EORTC Risk Tables for Predicting Recurrence and Progression in Individual Patients with Stage Ta T1 Bladder Cancer

The provided software implements the EORTC Scoring System and Risk Tables for Stage Ta T1 Bladder Cancer as published in the paper:

Sylvester RJ, van der Meijden APM, Oosterlinck W, Witjes JA, Bouffioux C, Denis L, Newling DWW, and Kurth KH. 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. European Urology 49: 466 - 477, 2006.

They allow the user to estimate the probability of recurrence and progression in patients with stage Ta T1 bladder cancer based on six different factors:

- Number of tumors
- Tumor size
- Prior recurrence rate
- T category
- Concomitant carcinoma in situ
- Grade

Download the calculator

(Versions are available for Windows, iPhone/iPad and Android phones/tablets)

Window software programmed by Richard Sylvester, EORTC Headquarters.

iPhone/iPad and Android versions have been developed in cooperation with Cambridge Laboratories, a division of Alliance Pharmaceuticals Ltd.

Management: Non-muscle-Invasive Bladder Cancer

Management strategy are based on accurate initial staging and grading of the disease.

There can be variation in the interpretation of pathological specimens, so review of pathology is recommended

If there is uncertainty over the pathology, a further early re-resection is indicated.

Low-risk tumors :15% probability of recurrence and a 0.2% risk of progression at 1 year.

Cystoscopy 3 months after the initial resection, and if this is negative, a flexible cystoscopy should be undertaken 9 months later and then annually thereafter.

Management: Non-muscle-Invasive Bladder Cancer

- Patients who are at significant risk for developing progressive or recurrent disease following TURBT : candidates for adjuvant intravesical drug therapy.

- This includes those with multifocal CIS, CIS associated with Ta or T1 tumors, any G3 tumor, multifocal tumors, and those whose tumors rapidly recur following TURBT of the initial bladder tumor.

- Number of drugs have been used intravesically : Bacillus Calmette-Guérin (BCG), interferon (IFN) and BCG, thioTEPA, mitomycin C, doxorubicin, and gemcitabine.

Management: Non-muscle-Invasive Bladder Cancer

A number of studies have compared one intravesical chemotherapeutic agent with another. For the most part, BCG in these comparisons has a slight advantage in reducing recurrences

However, at FU more than 5 years, it appears that there is minimal overall effect at reducing the recurrence rate when compared with no treatment.

BCG and Epirubicin are the most commonly used agents

Both are effective for the treatment of superficial bladder cancer. However, superiority of one over the other is unknown.

A meta-analysis of over 1,100 patients treated with either drug reported that intravesical BCG was more efficacious, although also more toxic

Management: NMIBC , Intravesical Treatment

Variety of treatment schedules in the literature

Commonly used schedule: intravesical treatment once a week for 6 weeks followed by a subsequent 3 weeks as an induction treatment.

If there is no cystoscopic evidence of recurrence, the patient to be offered ongoing maintenance BCG with 3-6 week courses of BCG every 3 to 6 months with regular cystoscopic surveillance.

In a recent meta-analysis of trials with BCG maintenance, a 32% reduction in the risk of recurrence was seen for BCG compared with mitomycin-C ($P < .0001$), whereas there was a 28% increase in the risk of recurrence ($P = .006$) for patients treated with BCG in the trials without BCG maintenance

Management: NMIBC , Intravesical Treatment

Choice of treatment depends on risk of recurrence and progression based on EORTC subgroups.

Low risk recurrence subgroup : BCG does not alter the natural course of tumors therefore its use considered to be overtreatment.

Patients with high risk of progression: BCG treatment including at least 1-year maintenance, is indicated.

In this subgroup BCG with 1-year maintenance is more effective than chemotherapy for prevention of recurrence; however, also more side effects than chemotherapy.

The final choice should reflect the individual patient's risk of recurrence and progression and the efficacy and side effects of each treatment modality (EAU guidelines).

In treatment refractory disease, the patient should be offered radical treatment for the bladder.

Muscle-Invasive, Non-metastatic Disease

20% to 40% will either present with or ultimately develop muscle-invasive disease.

Invasive bladder cancer : lethal malignancy, if untreated over 85% of patients will die of the disease within 2 years of diagnosis.

Aggressive treatment approach employing radical cystectomy for high-grade, invasive bladder cancer

- Good long-term survival rates, lowest local recurrences
- morbidity and mortality substantially improved over the past several decades.
- It provides accurate pathologic staging of the primary bladder tumor (p stage) and regional lymph nodes, thus, selectively determining the need for adjuvant therapy based on precise pathologic evaluation.

Muscle-Invasive, Non-metastatic Disease: Surgical Management

Males: Cystoprostatectomy, with or without a urethrectomy and bilateral pelvic lymph node dissection

Female : an anterior exenteration, which includes the bladder and urethra (the urethra may be spared if uninvolved and an orthotopic bladder reconstruction is performed), the ventral vaginal wall, and the uterus.

A radical cystectomy may be indicated in non–muscularis propria–invasive bladder cancers when G3 disease is multifocal or associated with CIS or when bladder tumors rapidly recur, particularly in multifocal areas following intravesical drug therapy.

Muscle-Invasive, Non-metastatic Disease: Surgical Management

- An appropriate lymphadenectomy is an important component of radical cystectomy
- Related to the clinical outcomes of patients with high-grade, invasive bladder cancer.
- Evidence suggests that a more extended lymphadenectomy is beneficial in both lymph node–positive and lymph node–negative patients with bladder cancer
- Removal of more than 15 lymph nodes has been postulated to be both sufficient for the evaluation of the lymph node status as well as beneficial for overall survival in retrospective studies
- Both laparoscopic and robot-assisted cystectomy have been shown to be feasible and safe, but with a relatively shorter follow-up

Muscle-Invasive, Non-metastatic Disease: Surgical Management

Partial cystectomies may rarely be performed in selected patients, thus preserving bladder function in properly selected patient , same cure rate as a radical cystectomy

Candidates for such procedures must have focal disease located far enough away from the ureteral orifices and bladder neck, to achieve at least a 2-cm margin around the tumor and a margin sufficient around the ureteral orifices and bladder neck to reconstruct the bladder.

Practically, this limits partial cystectomies to those patients who have small tumors located in the dome of the bladder and in whom random bladder biopsies show no evidence of CIS or other bladder tumors.

Types of Urinary Diversion

- Divided into continent and incontinent.
- Incontinent urinary diversions or conduits involve the use of a segment of ileum or colon and, less commonly, a segment of jejunum.
- The distal end is brought to the skin, and the ureters are implanted into the proximal end.
- The patient wears a urinary collection appliance.
- The advantages of a conduit (ileal or colonic) are its simplicity and the reduced number of immediate and long-term postoperative complications.

Types of Urinary Diversion

- Continent diversions may be divided into two types: abdominal and orthotopic.
- Abdominal diversions require a continence valve, whereas an orthotopic neobladder depends on the urethral sphincter for continence.
- The reservoir is made of bowel that is fashioned into a globular configuration.
- Abdominal type of continent diversion : stoma is brought through the abdominal wall to the skin. The patient catheterizes the pouch every 4 hours.
- Orthotopic urinary diversions that use of bowel brought to the urethra, thus allowing the patient to void by Valsalva .
- Aadvantage of continent diversions :
  - avoidance of a collection device,
  - rehabilitates the patient to normal voiding through the urethra, often without the need for intermittent catheterization or the need to wear a collection device.

Survival at 10 Years After Radical Cystectomy

Pathologic Stage	Disease-Specific Survival (%)	Overall Survival (%)
pTa, Tis, T1 with high risk of progression	82	—
Organ confined, negative nodes (pT2, pN0)	73	49
Non–organ confined (pT3–4a or pN1–2)	33	23
Lymph node positive (any T, pN1–2)	28, 34	21

Selective Bladder-Preserving Approaches

For selected patients, bladder sparing therapy with salvage cystectomy reserved for tumor recurrence : safe and effective alternative to immediate radical cystectomy.

TURBT of as much of the tumor as is safely possible, followed by the combination of radiation with concurrent radiosensitizing chemotherapy.

Selection of patients for bladder preservation on the basis of the initial response of each individual patient's tumor to therapy : Important for success

Bladder conservation is reserved for patients who have a clinical CR to concurrent chemotherapy and radiation.

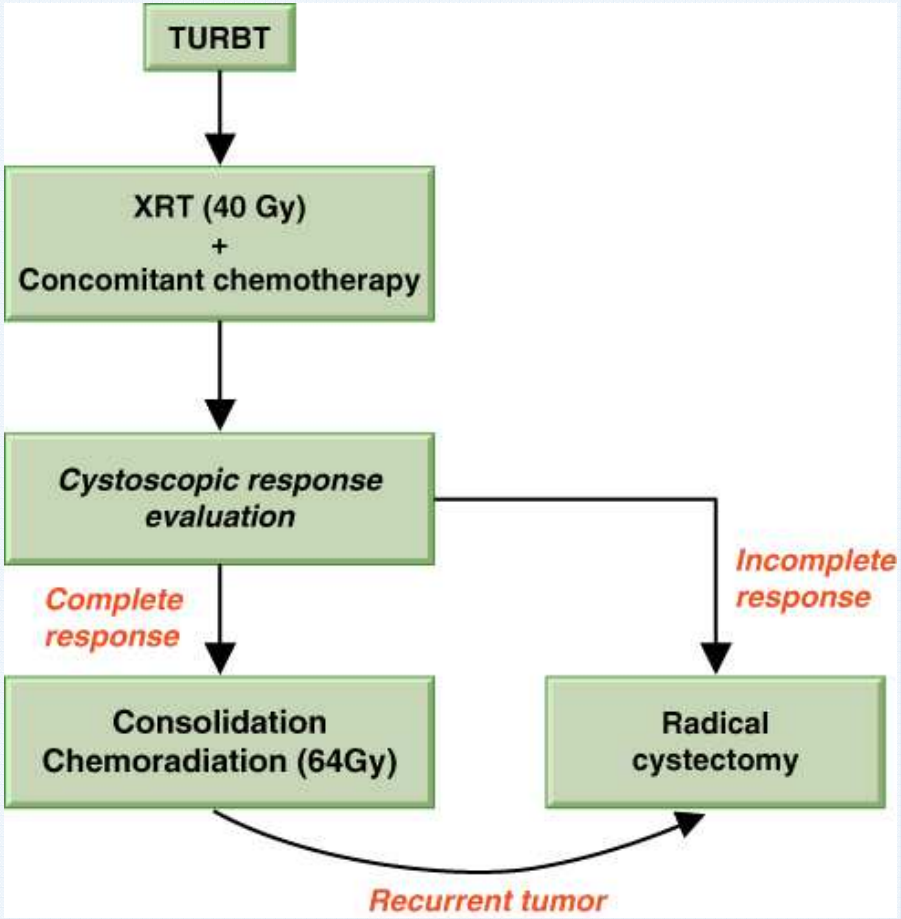
Prompt cystectomy is recommended if tumors respond incompletely or who subsequently develop an invasive tumor

Up to 30% of the patients entering a potential bladder-preserving protocol with trimodality therapy

Management: Bladder Preservation

- Tumor presentations associated with successful bladder-sparing therapy include:
  - solitary T2 or early T3 tumors (typically <6 cm in size),
  - no tumor-associated hydronephrosis, tumors allowing a visibly complete TURBT,
  - invasive tumors not associated with extensive CIS,
  - urothelial carcinoma histology
- Age is not a contraindication to successful bladder sparing therapy, and indeed, results are favorable in patients aged 75 years or
- Bladder-sparing chemoradiation remains a good option for those patients who are not cystectomy candidates and
- Such patients can be treated with daily radiation and appropriate concurrent chemotherapy without a break.

Bladder-Preserving Approach



Bladder-Preserving Approach: Results

Series , year	Multimodality Therapy Used	Number of Patients	5-Year Overall Survival (%)	5-Year Survival with Intact Bladder (%)
RTOG 8512, 1993	External-beam radiation with cisplatin	42	52	42
RTOG 8802, 1996	TURBT, MCV, external-beam radiation with cisplatin	91	51	44 (4 y)
RTOG 8903, 1998	TURBT with or without MCV, external-beam radiation with cisplatin	123	49	38
University of Paris, 1998	TURBT, 5-FU, external-beam radiation with cisplatin	120	63	N/A
Erlangen, 2002	TURBT, external-beam radiation, cisplatin, carboplatin, or cisplatin and 5-FU	415 (cisplatin, 82; carboplatin, 61; 5-FU/cisplatin, 87)	51	42
RTOG 9906, 2009	TURBT, TAX plus CP plus XRT; adjuvant CP plus GEM	80	56	47
MGH, 2012	TURBT, external-beam radiation and cisplatin *with or without* 5-FU or TAX; neoadjuvant or adjuvant chemotherapy	348	52	42

Results: Surgery v/s Bladder Preservation

Series , Yr.	Stages	Number of Patients	Overall Survival (%)	
			5 Year	10 Year
Cystectomy				
University of Southern California, 2001	pT2–pT4a	633	48	32
Memorial Sloan-Kettering, 2001	pT2–pT4a	181	36	27
SWOG/ECOG/CALGB, 2003	cT2–cT4a	303	49	34
Selective Bladder Preservation (Chemoradiation)				
University of Erlangen, 2002	cT2–cT4a	326	45	29
MGH, 2012	cT2–cT4a	348	52	35
RTOG,1998	cT2–cT4a	123	49	—
BC2001,2012	cT2–4a	182	48	

Radiation Treatment

Treatment of the pelvis to include the

- Bladder, prostate (in men),
- Low external and internal iliac lymph nodes
- total dose of 40 to 45 Gy / 1.8-2.0-Gy #/ 4 - 5 weeks.
- Subsequently, the target volume is reduced to deliver a final boost dose of 20 -25 Gy / 15 # to the primary bladder tumor.

Higher doses per fraction may lead to a higher rate of significant late complications.

Bladder be emptied when simulated and prior to each treatment to maximize reproducibility and avoid a geographic miss.

Forms of image-guided delivery (including daily cone-beam CT and fiducials) have also been employed for accurate localization

Brachytherapy is another technique to deliver a higher dose of radiation to a limited area of the bladder within a short period.

Radiation Treatment

TABLE 64.7 INDICATIONS FOR RADIOTHERAPY IN BLADDER CANCER

Stage	*Recommendation*
CIS, Ta, T1	No role for radiotherapy
T2-T4aN0M0	Potential role for radiotherapy, combined with synchronous chemotherapy if patient sufficiently fit
TanyN1–3M0 or TanyNanyM1	No role for radical radiotherapy as sole treatment for stage IV disease. It may be worth considering, however, as part of a package of "radical" palliation in concert with systemic chemotherapy. No randomized data on the use of radiotherapy in this setting beyond studies of fractionation.

Preoperative Irradiation

- nvestigated in the past, but interest in the technique has waned
- Chemosensitivity of bladder cancer lead to a lot of NACT trials in 1980s & 1990s, ended the interest
- Most studies in the literature are old, retrospective, nonrandomized comparisons and little can be concluded from them, few randomized trials in the literature
- Parsons and Million reviewed the results of retrospective studies and six prospective randomized trials on the use of preoperative irradiation, concluded that the use of the technique may improve outcomes by up to 15% to 20% at 5 years.
- Also observed that many preoperative RT series report pathological CR rates of around one-third, similar to that seen with NACT .
- No modern trials of preoperative radiotherapy

Postoperative Radiotherapy

- Little in the way of randomized data on the use of adjuvant radiotherapy following surgery.
- When used, it is mostly based on the grounds of positive surgical margins or tumor spillage at surgery,
- Chemo-naive patients at high risk of recurrence can be offered adjuvant chemotherapy in Post-op setting, although the evidence base for this approach is also somewhat thin.
- What few data there are on radiotherapy suggests that limited doses are well tolerated

Systemic Chemo for Radical Therapy: NACT

NACT advantages

- potential to downsize and downstage tumors
- attack occult metastatic disease early, as postoperative complications and prolonged recovery can delay adjuvant chemotherapy.

NACT Disadvantages

- inherent difficulties in assessing response, the fact that clinical rather than pathologic criteria must be relied on,
- the debilitating effects of chemotherapy in some patients, increasing the risks of surgery and possibly complicating or delaying full recovery from surgery,
- possibility of the deleterious effects of the delay in cystectomy or radiation associated with NACT , may lead to disease progression in a proportion of nonresponding patients

2 Phase III trials suggest a survival advantage for NACT

4 meta-analyses have been published that showed a 4% to 6% absolute increase in 5-year survival with NACT

GC, standard or accelerated or MVAC are widely used with definitive radical treatment

In the future, gene profiling may identify those most likely to respond to chemotherapy.

Systemic Chemo for Radical Therapy: Adjuvant CT

Advantage : pathologic staging allows for a more accurate selection of patients.

- facilitates the separation of patients in stage pT2 from patients at a high risks for metastatic progression (stages pT3 / pT4 or node +ive disease) .

Adjuvant CT studied in two major clinical settings:

- Following bladder-sparing chemoradiation : no guidance from pathologic staging, but studies shows that up to 50% of those with invasive cancers can have systemic disease.
- following a radical cystectomy.

Adjuvant chemotherapy after cystectomy : studied more thoroughly, but again, the results are not clear.

Adjuvant chemotherapy may improve survivals in positive nodes (even with negative nodes) and high pathologic stage of the primary tumor,.

Advanced Bladder Cancer Meta-Analysis Collaboration : 491 patients from six trials, insufficient evidence, recommended further research

More recent studies have used different adjuvant chemotherapy regimens or molecular stratification

Treatment of Local–Regionally Advanced Disease

Carefully selected patients with locally advanced unresectable bladder cancer, including some with pelvic nodal masses, may experience long-term survival with the combination of chemotherapy and radiation

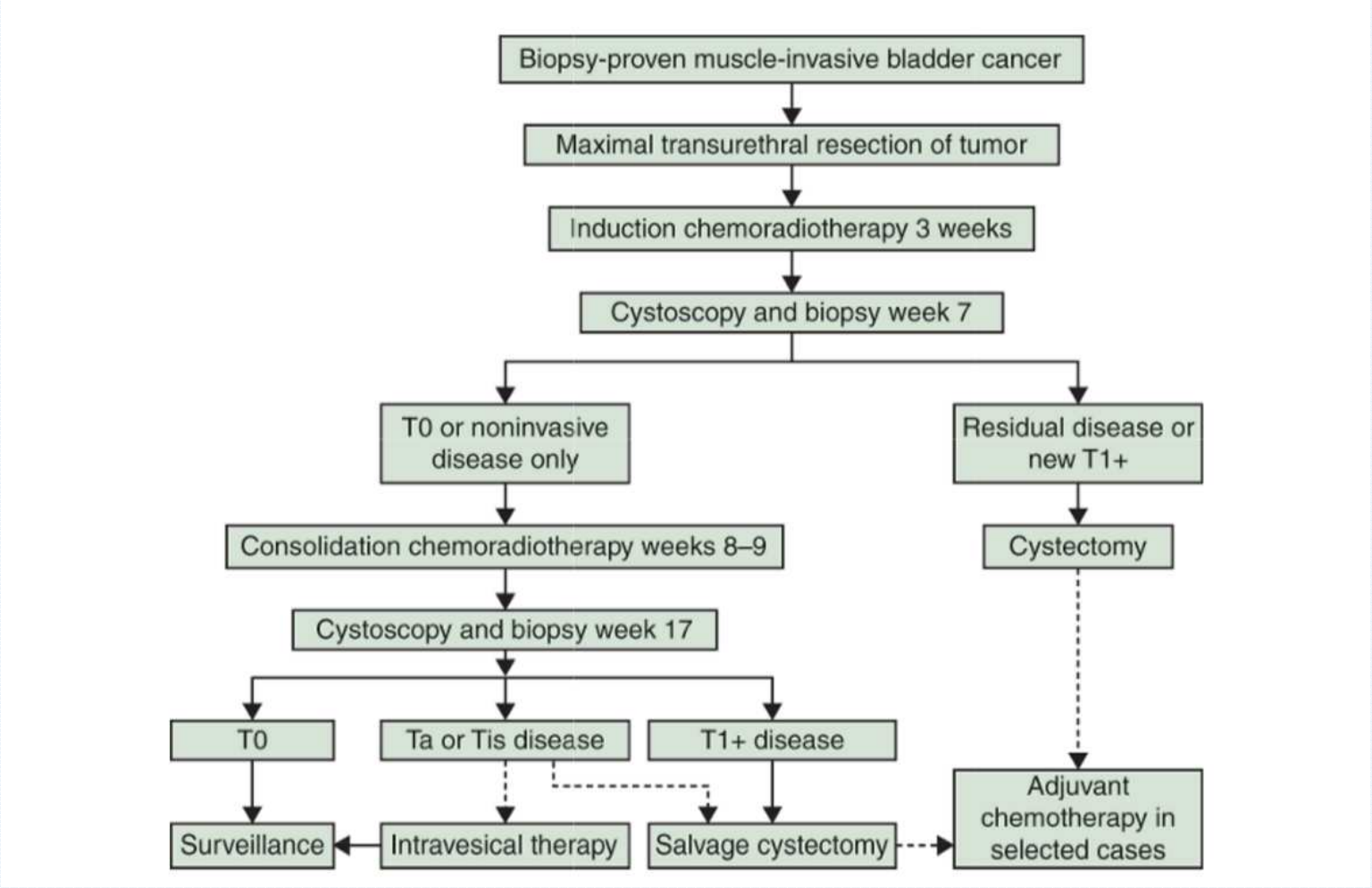
Initial treatment of four to six cycles of combination CT.

If a significant regression achieved, radiation is administered in combination with radiosensitizing chemotherapy in carefully selected patients

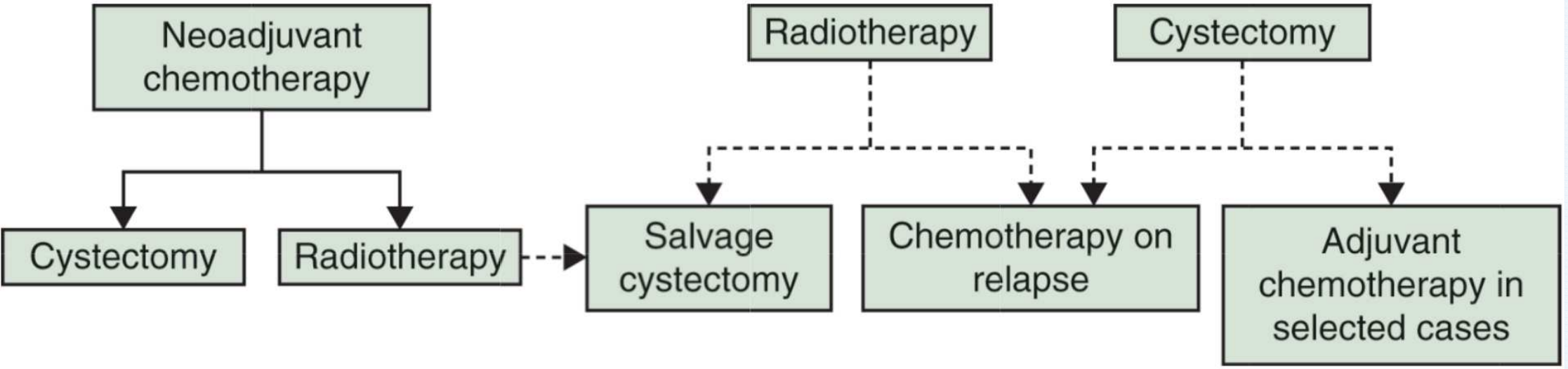
To be selected for this combined modality treatment, patients must have

- an excellent performance status,
- locally advanced measurable disease,
- normal kidney function tests, and
- no evidence of distant metastases beyond the common iliac lymph nodes.

Multimodality Management



Multimodality Management



Metastatic Bladder Cancer

- Bladder cancer metastasizes most commonly the lungs, bone, liver, and brain.
- Prognosis is poor, with a median survival on the order of only 12 months.
- Cisplatin-Based Combination Chemo , standard chemotherapy regimen for advanced bladder cancer for more than a decade was MVAC
- Another commonly used regimen is CMV, (omits the doxorubicin ,somewhat less toxicity)
- Gem-Cis was compared with MVAC in a multicenter phase III study, Median survival was 14 months with GC & 15.2 months with MVAC, which were statistically comparable.
- Patients treated with GC, however, had significantly less toxicity and improved tolerability.
- As a result of this study, GC is generally considered the current standard of care for metastatic bladder cancer.

Metastatic Bladder Cancer: Chemo Results

Regimen			Response			
Agents (Ref.)		**Schedule**	**Composite Number of Assessable Patients**	**Complete Response (%)**	**Response Rate (%)**	**Median Survival (Mo)**
MVAC	Methotrexate	30 mg/m^2 d 1, 15, 22	374	12–35	39–65	12.5–14.8
	Vinblastine	3 mg/m^2 d 2, 15, 22				
	Doxorubicin	30 mg/m^2 d 2				
	Cisplatin	70 mg/m^2 d 2				
CMV	Cisplatin	70 mg/m^2 d 2	104	10	36	7
	Methotrexate	30 mg/m^2 d 1, 8				
	Vinblastine	4 mg/m^2 d 1, 8				
GC	Gemcitabine	1000 mg/m^2 d 1, 8, 15	203	12	49	13.8
	Cisplatin	70 mg/m^2 d 2				

Taxane and Platinum-Containing Regimens

The doublets of cisplatin and paclitaxel and cisplatin and docetaxel appear to have response rates comparable to that of GC

Trials with carboplatin suggest that this agent has good activity, although likely not the same level of activity as cisplatin

Triplet Chemotherapy

In phase II trials, three such combinations, including cisplatin/gemcitabine/paclitaxel, carboplatin/gemcitabine/paclitaxel,& cisplatin/gemcitabine/docetaxel, demonstrated high CR rates of 28% to 32%, and overall RRs of 66% to 78%,

Metastatic Bladder Cancer: Chemo Results

Regimen	Composite Number of Patients	Response Rate (%)	Median Survival (Mo)
Carboplatin/paclitaxel	104	21–65	8.5–9.5
Cisplatin/paclitaxel	52	50	10.6
Cisplatin/docetaxel	129	52–60	8.0–13.6
Cisplatin/gemcitabine/ paclitaxel	61	78	15.8
Carboplatin/gemcitabine/paclitaxel	49	68	14.7
Cisplatin/gemcitabine/ docetaxel	35	66	15.5
Gemcitabine/paclitaxel	94	54–60	14.4

Metastatic Bladder Cancer

A triplet of paclitaxel, cisplatin, and infusional high-dose 5-FU with leucovorin has also been studied.

Response rates: 75%, 28% CRs, median OS of 17 months.

Significant toxicity : myelosuppression, GI disturbances, infections, and two treatment-related deaths

A randomized phase III trial compared the standard GC regimen with GC plus paclitaxel (PCG).

Preliminary results and updated data showed despite a response rate that was superior in the three drug arm (55.5% versus 43.6%, $p = 0.0031$) and a median OS that was slightly longer in patients receiving the third drug (15.8 months versus 12.7 months), the HR for survival did not achieve statistical significance (HR, 0.85; $p = 0.075$).

Thus, the standard of care remains the doublet of gemcitabine plus cisplatin.

Immunotherapy in metastatic bladder cancer

Secure | https://www.cancer.gov/news-events/cancer-currents-blog/2016/fda-atezolizumab-bladder

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FDA Approves New Immunotherapy Drug for Bladder Cancer

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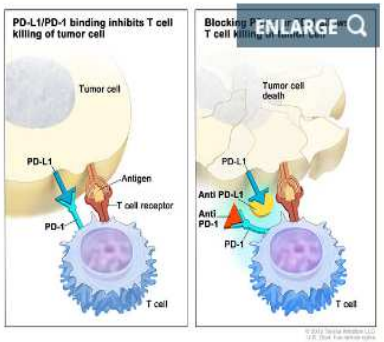
June 7, 2016, by NCI Staff

The Food and Drug Administration (FDA) on May 18 approved atezolizumab (Tecentriq®) for the treatment of some patients with urothelial carcinoma, the most common type of bladder cancer. The drug, which strengthens the body's immune response against cancer, is the first new treatment approved for bladder cancer in two decades.

"This is very exciting news for patients with bladder cancer," said Piyush Agarwal, M.D., head of the Bladder Cancer Section in the NCI Center for Cancer Research's (CCR) Urologic Oncology Branch, who noted that the approval would likely



Atezolizumab targets a protein on

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Categories

Research Findings

Drug Approvals

Complications of Cystectomy and Urinary Diversion

Diversion-related complication: Metabolic, neuromechanical, and surgical

Electrolyte abnormalities and altered drug metabolism, metabolic acidosis

Neuromechanical: an atonic segment with urinary retention, and hyperperistaltic contractions.

Most common early diversion-unrelated complication is dehydration

Specific Surgical compilations of radical cystectomy can be short term or late.

Short-term complications

- acute acidosis (16%),
- urine leak (3% to 16%),
- bowel obstruction or fecal leak (10%), and
- pyelonephritis (5% to 15%).

Long term complications

- ureteral or intestinal obstruction (15%),
- renal deterioration (15%),
- renal failure (5%), stoma problems (15%), and
- intestinal stricture (10% to 15%)

Complications of Local Treatment

Complications generally include frequency, dysuria, and irritative voiding symptoms.

Over the long term, bladder contracture may occur with these agents. Other complications, which are specific for each drug, are as follows

BCG administration may result in fever, joint pain, granulomatous prostatitis, sinus formation, disseminated tuberculosis, and death

ThioTEPA may cause myelosuppression

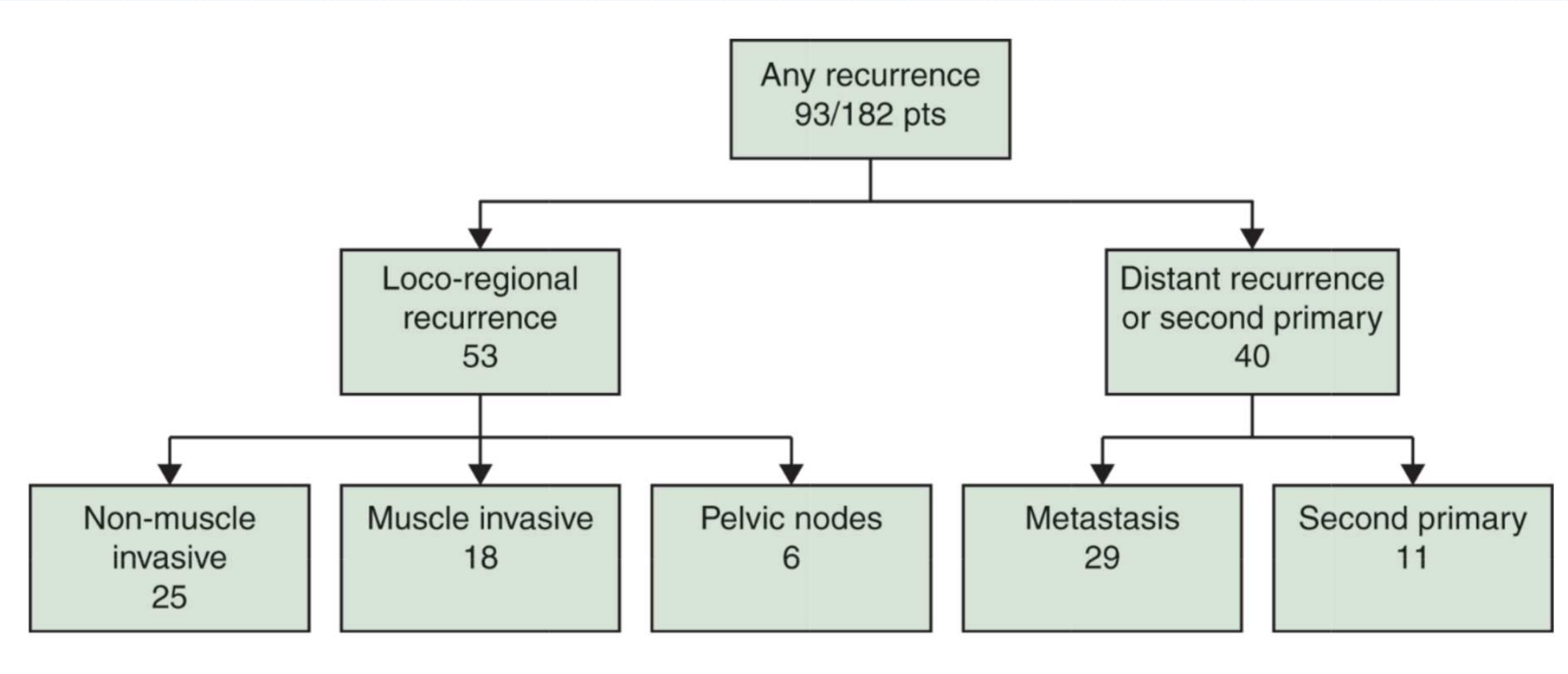
Mitomycin C may cause skin desquamation and rash

Doxorubicin may cause gastrointestinal upset and allergic reactions.

Recurrences: Following Radical Cystectomy

- Classified as local (pelvic), distant, and urethral
- Local recurrences were defined as those occurring within the soft tissue field of exenteration. Incidence- 6% to 9%
- Distant recurrences were defined as those occurring outside the pelvis, 20% to 35% are reported in large series
- while urethral tumors were classified as a new primary tumor occurring in the retained urethra. Incidence6% to 10%

Recurrences: Chemo-radiotherapy



Recurrences: Chemo-radiotherapy

- Majority of locoregional failures are in the bladder, and there are more noninvasive than invasive recurrences.
- This underlines the need for regular surveillance post radiotherapy and the requirement for good integration of radiotherapy and surgical services if patients are to be managed by bladder conservation.
- Majority of noninvasive recurrences can be successfully managed conservatively without the need for cystectomy.
- For those with invasive recurrence, cystectomy remains an option if the patients are sufficiently fit

Treatment of Patients with Uncommon Bladder Tumors

- Squamous cell carcinoma: local failure may be more prevalent than distant relapse
- Surgical resection with a partial cystectomy and en bloc resection of the urachal ligament with umbilicus is the treatment of choice in the setting of localized disease.
- There is currently no definitive role for neoadjuvant or adjuvant chemotherapy in this tumor
- No standard chemotherapy regimen for these patients
- Small cell carcinoma: generally get treated along the same lines as small cell lung carcinoma

Thanks