



Treatment for Early-Stage or Non-Muscle Invasive Bladder Cancer



Image credit: Stephen Kelly, 2018

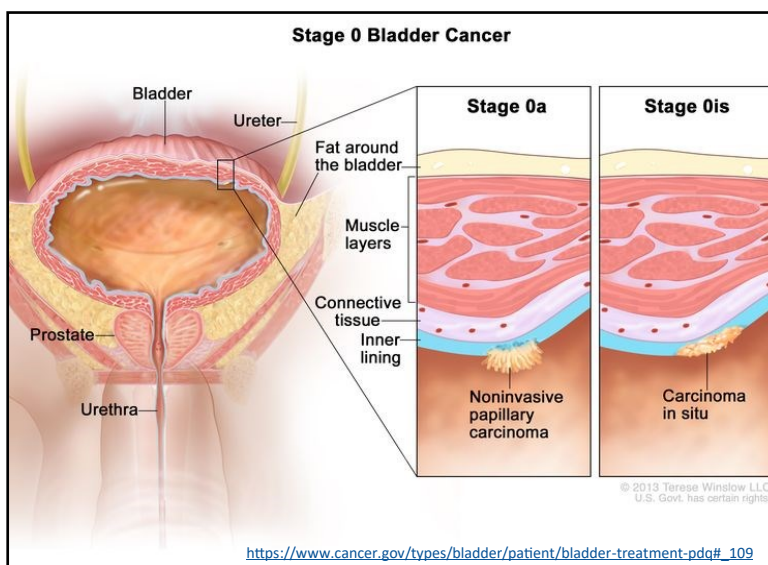
In US, 90% of bladder tumors are urothelial carcinoma; less than 5% are pure squamous cell carcinoma or pure adenocarcinoma. Urothelial carcinoma originates in urothelial/transitional cells which line the urethra, bladder, ureters, and renal pelvis and has two major subdivisions: papillary and non-papillary.

- **Papillary carcinoma:** (commonly in bladder, ureter, or renal pelvis): A warty growth which projects from the wall on a stalk.
 - Non-invasive papillary urothelial carcinoma (occasionally called in situ)
- **Non-papillary urothelial:** originates within the mucosa and does not project from the wall.
 - Non-invasive carcinoma in situ (CIS)

https://seer.cancer.gov/tools/solidtumor/Urinary_STM.pdf

The NCCN guidelines for bladder cancer generally manage non-muscle-invasive disease with intravesical therapy or, for those with particularly high risk, cystectomy.

https://www.nccn.org/professionals/physician_gls/pdf/bladder.pdf



Rule M7 Abstract a **single primary** when the patient has multiple occurrences of /2 urothelial carcinoma in the **bladder**. Tumors may be any combination of:

- In situ urothelial carcinoma **8120/2 AND/OR**
- Papillary urothelial carcinoma noninvasive **8130/2** (does **not** include micropapillary subtype)

Note 1: Timing is irrelevant. Tumors may be synchronous or non-synchronous.

Note 2: Abstract only one /2 urothelial bladder primary per the patient's lifetime.

Note 3: There are no /2 subtypes for urothelial carcinoma with the exception of papillary urothelial carcinoma.

Example: On 1/3/2018, the patient had a TURB with a diagnosis of in situ urothelial carcinoma 8120/2. On 5/8/2019, pathology from TURB is papillary urothelial carcinoma non-invasive 8130/2.

This is a single primary; the papillary urothelial carcinoma is recorded as a recurrence for those registrars who collect recurrence data.

https://seer.cancer.gov/tools/solidtumor/Urinary_STM.pdf

Abstracting Tip:

It's typical for patients to start out with serial TURBTs for noninvasive and even T1 non-muscle invasive tumors.

The **date of the most definitive surgery** of the primary site is the date of the **first TURBT**. When a tumor is completely removed with the initial TURBT, and the follow-up shows recurrence do not enter date of a TURBT done when patient is being followed under cancer surveillance as FCT. The date of most definitive resection was the date of the initial TURBT, not the date of the follow-up TURBT.



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NCCN Guidelines version 5.2020

Bladder Cancer

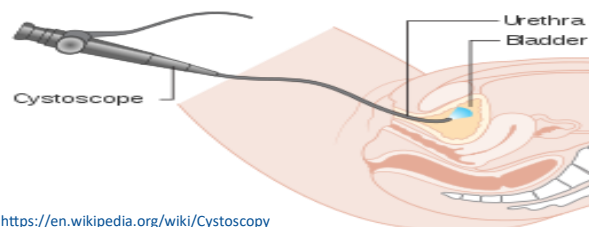
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Transurethral Resection of the Bladder Tumor (TURBT) for Staging

- Adequate resection with muscle in specimen
 - ◆ Muscle may be omitted in cases of documented low-grade Ta disease
 - ◆ In cases of suspected or known carcinoma in situ:
 - ◇ Biopsy adjacent to papillary tumor
 - ◆ Papillary appearing tumor (likely non-muscle invasive)
 - ◇ Early repeat TURBT (within 6 weeks) if:
 - Incomplete initial resection
 - No muscle in original specimen for high-grade disease
 - Large (≥ 3 cm) or multi-focal lesions
 - Any T1 lesion
 - ◆ Transurethral resection for sessile or invasive appearing tumor (likely muscle invasive)
 - ◇ Repeat TURBT if:
 - Prior resection did not include muscle in the setting of high-grade disease
 - Any T1 lesion
 - First resection does not allow adequate staging
 - Incomplete resection and considering bladder preservation therapy
- Enhanced cystoscopy may be helpful in identifying lesions.
- Immediate postoperative intravesicle chemotherapy within 24 hours is recommended if there is no muscle invasive cancer and if no concern for bladder perforation and visibly complete resection.
 - ◆ Gemcitabine (preferred) and mitomycin are the most common used options for intravesicle chemotherapy.

Transurethral resection of bladder tumor

(TURBT) is a procedure to remove bladder cancers confined to the inner layers of the bladder, those which aren't yet muscle invasive cancers. During the procedure, a surgeon passes a small wire loop through a cystoscope and into the bladder. The wire loop burns away cancer cells using an electric current. Alternatively a high-energy laser may be used to destroy the cancer cells.



<https://en.wikipedia.org/wiki/Cystoscopy>

Abstracting Tip:

Multiple TURBTs can be done for cancer surveillance, then the decision is made for radical surgery after some type of progression.

Several months (sometimes more than a year) after initial diagnosis, a plan is made for neoadjuvant chemo and radical cystectomy.

If this is the case do **NOT** code radical cystectomy as part of first course treatment. At some point, the decision for radical surgery is made after some type of progression. The criteria for cutoff of first course treatment must be observed.

A radical cystectomy may be done because of a decrease in the length of the disease-free intervals between recurrences of non invasive tumors.

Abstracting Tip:

The treatment plan for low stage bladder TCC includes **both** - local (TURBT, intravesical) and radical (surgical) approaches. Some cancers respond to local therapy, some don't. Those who respond, no cystectomy is needed.

Those, who don't respond to local treatment, are offered a more aggressive treatment - radical cystectomy.

When a patient does not respond to local treatment, was not in progression of disease, and underwent a radical cystectomy, which is in compliance with NCCN guidelines. **Code it as first course of treatment.**

<http://cancerbulletin.facs.org/forums/forum/fords-national-cancer-data-base/fords/first-course-of-treatment/surgery/36518-radical-cystectomy-following-turbt-first-course-or-subsequent-treatment>



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Bladder Cancer

TURBT/Maximal TURBT for Treatment

- Bladder preservation with maximally complete and safe TURBT and concurrent chemoradiotherapy is most suitable for patients with solitary tumors, negative nodes, no extensive or multifocal carcinoma in situ, no tumor-related hydronephrosis, and good pre-treatment bladder function.
- TURBT alone can be considered for non-cystectomy candidates.
- A visually complete TURBT is associated with improved patient outcomes in non-metastatic settings.

Treatment of cTa, Low-Grade Tumors

TURBT is the standard treatment for cTa, low-grade tumors. Although a complete TURBT alone can eradicate these tumors, there is a relatively high risk for recurrence. Therefore, after TURBT, the panel recommends administering a single dose of immediate intravesical chemotherapy (gemcitabine or mitomycin) although gemcitabine is preferred within 24 hours. While intravesical chemotherapy is preferred, BCG may be considered when no in a shortage.

The need for adjuvant therapy depends on the patient prognosis. If the patient has a low risk for recurrence, a single immediate intravesical treatment may be sufficient.

Treatment of cTa, High-Grade Tumors

Tumors staged as cTa, high grade are papillary tumors with a relatively high risk for recurrence and progression towards more invasiveness. Repeat resection is recommended if there incomplete resection, or strongly considered if there is no muscle in the specimen.

After TURBT, patients with cTa, high-grade tumors may be treated with intravesical BCG (preferred), intravesical chemotherapy, or observation.

https://www.nccn.org/professionals/physician_gls/pdf/bladder.pdf

Low-grade bladder tumor

Image credit: Stephen Kelly, 2018

This type of tumor has cells that are closer in appearance and organization to normal cells (well-differentiated). A low-grade tumor usually grows more slowly and is less likely to invade the muscular wall of the bladder than is a high-grade tumor.

High-grade bladder tumor

This type of tumor has cells that are abnormal-looking and that lack any resemblance to normal-appearing tissues (poorly differentiated). A high-grade tumor tends to grow more aggressively than a low-grade tumor and may be more likely to spread to the muscular wall of the bladder and other tissues and organs.

<https://www.mayoclinic.org/diseases-conditions/bladder-cancer/diagnosis-treatment/drc-20356109>

Abstracting Tip:

Intravesicular Therapy

Surgery Code 15 - Intervesical therapy. The physician administers chemo such as gemcitabine or mitomycin directly into the bladder rather than giving it by mouth or injecting it into a vein. Intravesicular chemotherapy may be used at the completion of the TURBT to destroy residual tumor cells. It is instilled while the patient is still in the operating room and left for a few hours before it is drained from the bladder.

It may be used as neoadjuvant chemotherapy given in the weeks before radical cystectomy.

Surgery Code 16 - BCG or immunotherapy. BCG is often given once a week for 6 weeks. If BCG is administered intra-operatively with destruction of tumor and **there is no other treatment given**, code surgical code 16 and immunotherapy code 01.

If immunotherapy is followed by a surgery with the codes 20-80, code **that** surgery and code the immunotherapy only as immunotherapy.



Treatment for Early-Stage or (Non-Muscle Invasive) Bladder Cancer



NCCN Guidelines version 5.2020 Bladder Cancer

Treatment of cT1 Tumors

Based on the histologic differentiation, most cT1 lesions are high grade and considered to be potentially dangerous with a higher risk for recurrence and progression. These tumors may occur as solitary lesions or a multifocal tumors with or without an associated Tis component.

These tumors are treated with a complete endoscopic resection, and repeat TURBT is strongly advised.

If residual cT1 disease is found at repeat TURBT, treatment should consist of BCG or radical cystectomy. Within T1 disease, a particularly high-risk stratum can be identified: multifocal lesions, tumors associated with CIS or lymphovascular invasion, variant histology (eg, micropapillary, plasmacytoid, nested variants), or lesions that recur after BCG treatment. There is data suggesting that early cystectomy may be preferred in these patients because of the high risk for progression to a more advanced stage.

If no residual disease is found after the second resection, intravesical therapy with BCG or intravesical chemotherapy is recommended. Observation may be reasonable in highly select cases.

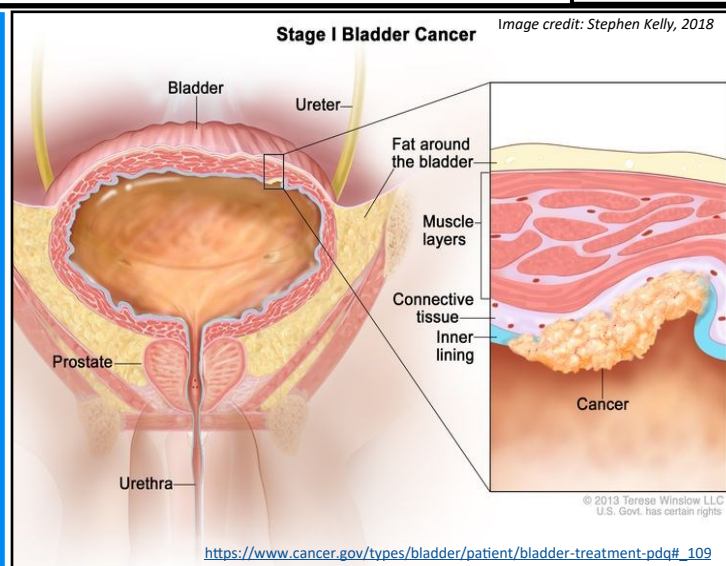
Treatment of Tis

Primary Tis is high-grade lesion of the urothelium. Standard therapy for this lesion is resection followed by intravesical therapy with BCG. BCG is preferred over intravesical chemotherapy.

Surveillance

For cTa high grade, cT1, and Tis, follow-up is recommended with a urinary cytology and cystoscopy at 3 to 6 month intervals for 2 years, and longer intervals as appropriate thereafter.

For patients with low-risk non-muscle invasive bladder cancer, if the initial follow-up surveillance cystoscopy



is negative within 4 months of TURBT, the next cystoscopy is recommended 6 to 9 months later and then yearly for up to 5 years.

Posttreatment of Recurrent or Persistent Disease

Treatment of Patients with Positive Cystoscopy

Patients under observation after initial TURBT, who show a documented recurrence by positive cystoscopy, should undergo another TURBT and then adjuvant intravesical therapy or cystectomy based on the stage and grade of the recurrent lesion.

Recurrence Following Intravesical Treatment

After the initial intravesical treatment and 12-week evaluation, patients with persistent cTa, cT1, or Tis disease tumors can be given a second induction course of induction therapy. If no residual disease is found on TURBT, maintenance BCG is recommended for patients who received prior BCG.

If residual disease is seen following TURBT, patients with persistent cT1 tumors are recommended to proceed to cystectomy.

https://www.nccn.org/professionals/physician_gls/pdf/bladder.pdf