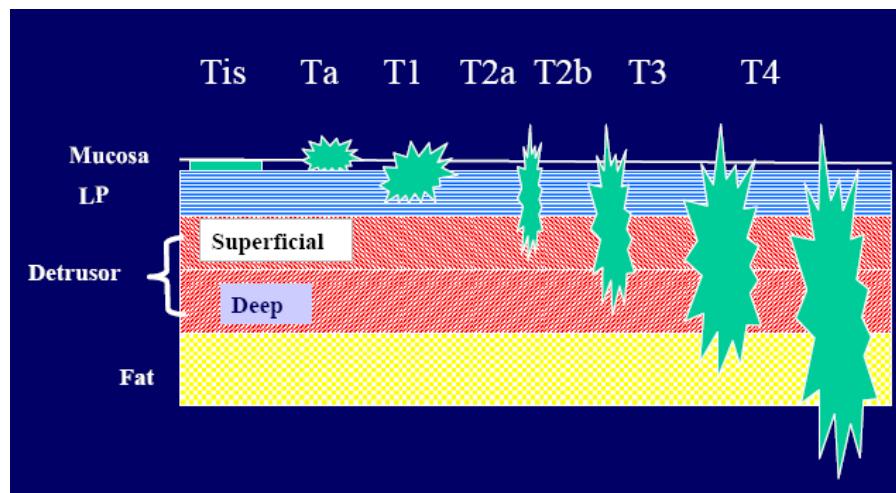


# Chemotherapy For Muscle Invasive Bladder Cancer

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## Muscle-Invasive Disease



## Stage at Diagnosis

- 75% of patients present with non-muscle invasive disease
  - Managed by urologists
- 25% present with muscle invasive disease at diagnosis
- Additional 10-25% will develop muscle invasive disease with relapse from non-muscle invasive bladder cancer

## Why Do We Use Chemotherapy?

- Improve outcomes in patients with localized muscle-invasive disease
- Improve quality and quantity of life in patients with metastatic disease

## Systemic Chemotherapy

- Perioperative
  - Neoadjuvant
    - Given before surgery done with curative intent
  - Adjuvant
    - Given after surgery done with curative intent
- Concurrent
  - Given with radiation therapy
    - Bladder preservation approaches
    - Recurrent disease (sometimes)
- Palliative
  - Given for treatment of metastatic disease with goal of improving quality and quantity of life

## Perioperative Chemotherapy

Cisplatin based combination  
chemotherapy

## Surgery Alone for Muscle-Invasive Disease

- 5 year survival with cystectomy

Disease extent	USC N = 1054	MSKCC N = 686	Switzerland N = 507
Organ confined	74%	68%	62%
Extravesicular	37%	30%	*49%
Node positive	31%	25%	26%

## Neoadjuvant Chemotherapy

- Advantages
  - Immediately treat micrometastatic disease
    - Cancer outside the bladder not large enough to be seen on imaging evaluation
  - Better tolerated before surgery
  - Drug delivery has been shown to be better before surgery
  - Information on how sensitive your tumor is to chemotherapy can be helpful to your doctor in making future treatment decisions
  - Stronger evidence from clinical trials supporting its use

## Neoadjuvant Chemotherapy

- Disadvantages
  - There are some patients in which neoadjuvant chemotherapy is not effective
  - Potential for side effects of chemotherapy to delay surgery or result in more complications during and after surgery
    - Large clinical trial testing neoadjuvant chemotherapy showed patients did better with chemotherapy prior to surgery with no increased complications seen

## Adjuvant Chemotherapy

- Advantages
  - No risk from delaying surgery
  - Use the pathology results from the bladder and lymph nodes removed during surgery to select patients for chemotherapy who are at highest risk for recurrence
- Disadvantages
  - Data from clinical trials not as strong to support this approach
  - More difficult for patients to receive chemotherapy after surgery with decreased drug delivery

## Palliative Chemotherapy

- In vast majority of cases metastatic bladder cancer is not curable
- Goal to improve quality and quantity of life
- Yes, quality of life can improve with chemotherapy
- Several different regimens used
  - GC (cisplatin or carboplatin/gemcitabine)
  - MVAC (rarely used now days)

## Options for Second Line and Beyond Chemotherapy

- No standard approved therapy
  - Vinflunine in Europe
- Taxanes most common second line
- Alimta used by many for third line
- Clinical Trials
  - Targeted therapy opening at Duke for 2<sup>nd</sup> line and beyond
  - Taxotere plus targeted therapy planned to open this year at Duke for second line treatment
  - Phase I trials

Questions / Open Discussion