Bladder Cancer Support Group

2nd Semi-Annual Meeting

Guest Speaker: Dr. Jason Greenfield

Men's Sexual Health Specialist

Suzanne B. Merrill, M.D., F.A.C.S.

Urologic Oncologist

Why a Support Group?

- Brings people with **similar experience together**
- Creates a **sense of belonging**
  - Reduces feelings of isolation
- Can **empower** individuals—*regain back control*
  - Improves coping and adjustment
- **Enhances understanding** of what to expect
  - Gain practical advice + medical information

Creates a Community:

Together we are Stronger

Outline

1. Erectile dysfunction: risk factors & treatments
   - *What we can do to preserve function*
2. Colorado Urology's Bladder cancer team
3. Update on novel therapeutics & clinical trials
   - *Non-muscle invasive + Muscle invasive disease*
3. Bladder Cancer Advocacy Network (BCAN)—*Walk to End Bladder Cancer*
   - *Denver—April 27, 2024*

What is ED?

ED is the consistent inability to sustain an erection sufficient for sexual intercourse

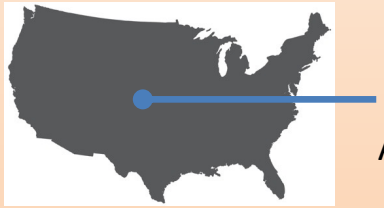
ED can be:

- A total inability to achieve an erection

– An inconsistent ability to achieve an erection rigid enough for penetration

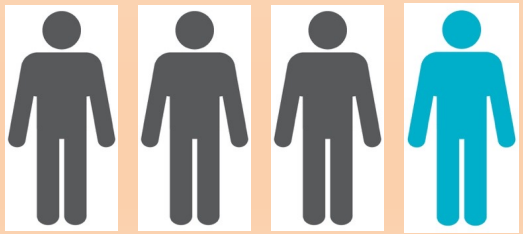
– A tendency to sustain only brief erections

Facts about Erectile Dysfunction (ED)



Approximately **30 million** American men suffer from ED

1 in 4 men experience some form of ED



- Most men with ED still have the ability to have an orgasm and father a child, but often have difficulty doing these things because they can't get or sustain an erection
- ED is not normal, and is by no means an inevitable consequence of aging
- In most cases, ED can be overcome

Causes of ED

Research has shown that greater than 80% of men suffering from ED can trace it to a physical problem or disorder

- For most men, ED is caused by a physical problem or disorder
- Once identified, proper treatment can be recommended to help return them to a satisfying sex life

ED can be caused by physical disorders such as:

- Injury (i.e. brain or spinal cord)
- Disease (i.e. diabetes or heart disease)
- An operation (i.e. prostate gland removal)
- Substance use (i.e. tobacco, drugs, alcohol or medications)

ED can be a marker for cardiovascular disease (CVD)

- The penis is a vascular organ
- Loss of erectile rigidity is the earliest sign of endothelial dysfunction
- Endothelial dysfunction is an early marker for cardiovascular disease
- Because the arteries to the penis are smaller – the earliest markers for CVD are apparent in the penis

Risk factors for ED

AGING

CHRONIC DISEASES Hypertension | Diabetes | Depression | Cardiovascular disease

MEDICATIONS Antihypertensives : Thiazide diuretics | Beta-blockers

LIFESTYLE Stress | Alcohol abuse | Smoking

RISK FACTORS FOR ED

Aging

The process of aging increases your risk for ED because of:

- Progressive decline in sexual physiologic function
- Increased prevalence of chronic diseases
- Psychological issues
- Relationship and partner issues

Most Frequent Reasons for Office Visits to Primary Care Physicians: Patients Age 45 to 64

- Essential hypertension
- Diabetes
- General medical examination
- Disorders of lipid metabolism

RISK FACTORS FOR ED

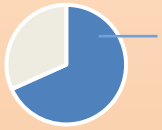
Diabetes and Hypertension

Factors impacting ED in patients with diabetes

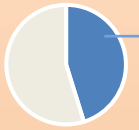
- Increased age
- Increased duration of diabetes
- Poor glycemic control (HbA1C)
- Complications of diabetes (e.g., neuropathy or vascular disease)

Hypertension

104 hypertensive patients (aged 34-75 years)



68.3% reported ED



45.2% reported severe ED

In this study, ED prevalence correlated to underlying vascular disease

RISK FACTORS FOR ED

Chronic Disease

Chronic Disease	Increased ED Risks
Diabetes	×4.1
Prostate disease	×2.9
Peripheral vascular disease	×2.6
Cardiac problems	×1.8
Hyperlipidemia	×1.6
Hypertension	×1.6

Prostate/Bladder Cancer

Prostate and Bladder Cancer itself will not cause ED but treatment options may affect your erections by impacting nerves or blood flow

Prostate Cancer treatment options correlated to ED:

Radical (cysto)prostatectomy

- During the process the nerve bundles may be damaged

Radiation therapy

- Over time, the radiation therapy may damage blood vessels to the penis, preventing blood flow

RISK FACTORS FOR ED

Smoking and Medications

Smoking

- Smoking increases risk of moderate-to-complete ED 2-fold
- Association between smoking and ED is likely due to impairment of endothelium-dependent smooth muscle relaxation
- Lower prevalence of ED in former smokers compared with current smokers

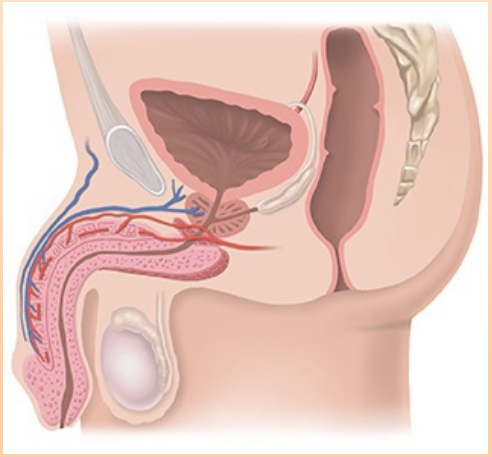
Medications

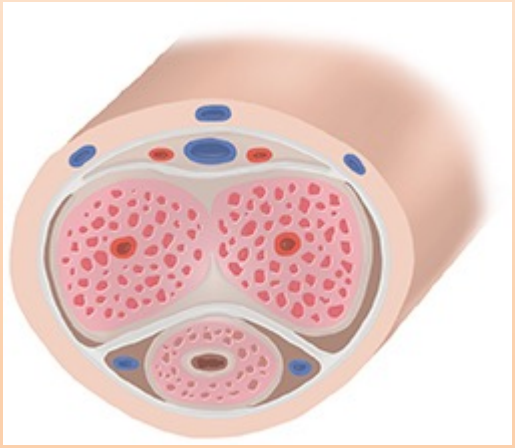
- Thiazide diuretics
- Beta-blockers

How does an erection occur?

An erection is an involuntary reaction in response to sexual stimulation and excitement

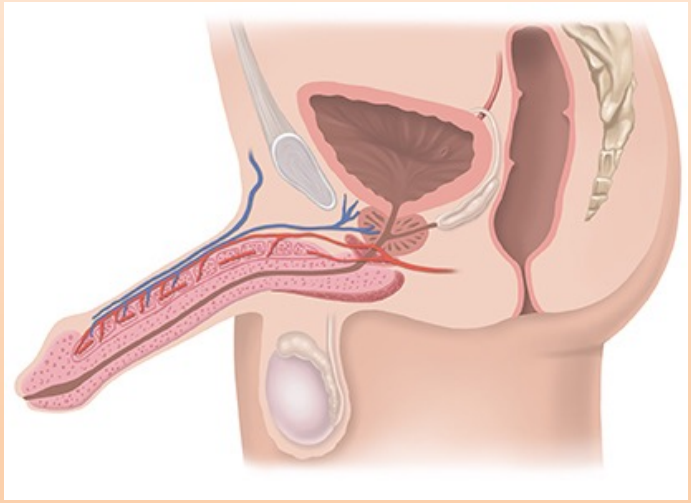
Sexual stimulation and excitement cause the brain, nerves, the heart, blood vessels and hormones to work together to produce a rapid increase in the amount of blood flowing to the penis

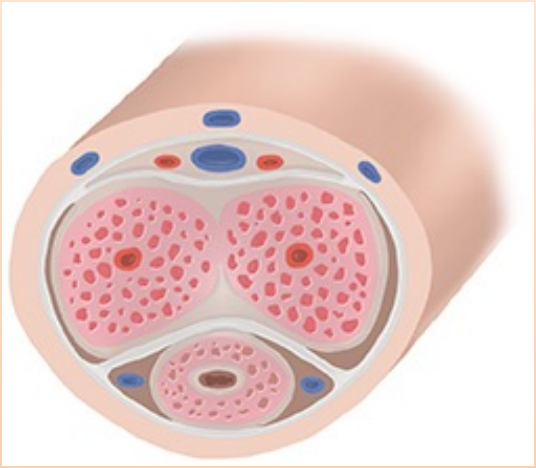




How does an erection occur?

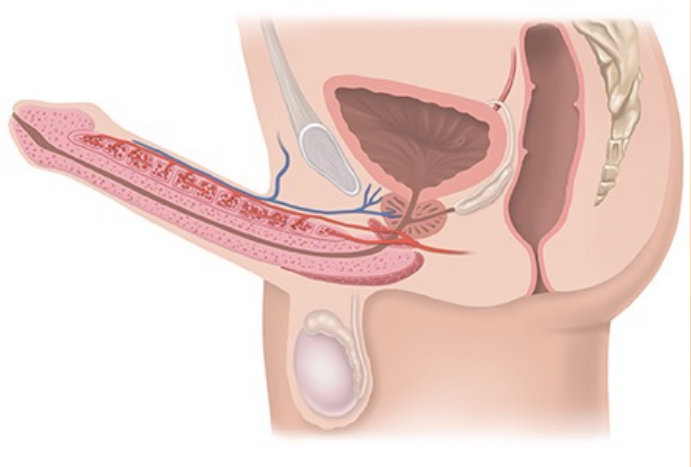
The blood becomes trapped and held in the two spongy chambers in the shaft of the penis

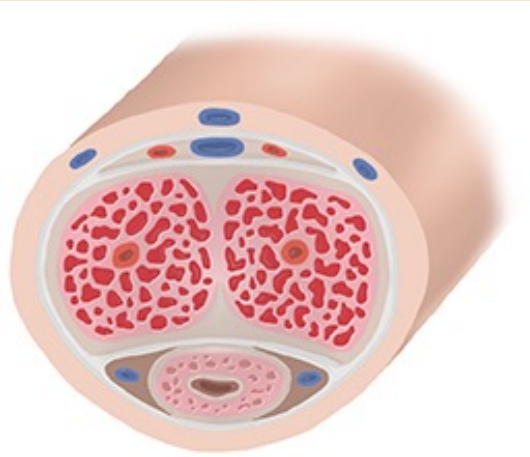




How does an erection occur?

As the chambers rapidly fill with blood, they expand, and the penis becomes firm and elongated. The result is an erection







Treatment Options for ED

Oral Drug Therapy

Drug therapy includes prescription medication (PDE5 inhibitor):

- Viagra® (sildenafil citrate)
- Cialis® (tadalafil)
- Levitra® (vardenafil hydrochloride)

These pills may help achieve erections in response to sexual stimulation:

- Do not provide automatic erections like injection drugs
- Not effective in approximately 30% of cases
- Must take at least ½ hour to one hour before anticipated sexual activity

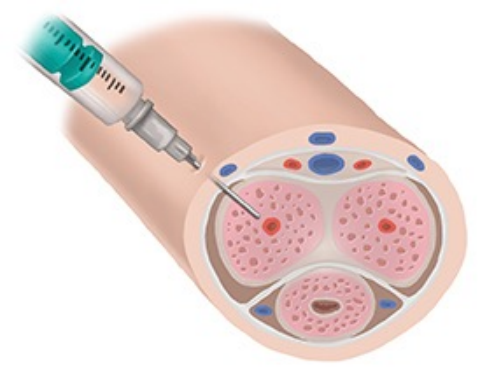
Potential side effects:

- Headaches
- Facial blushing
- Upset stomach
- Mild and temporary visual effects
- Back pain/muscle aches

Penile Injection Therapy

ADVANTAGES

- Onset of erection within 5-20 minutes



DISADVANTAGES

- Risk of erection lasting 4 hours or more (priapism)
- Possible bleeding at injection site
- Possible pain at injection site
- Requires training
- Bruising, prolonged erection
- Can cause Peyronie's disease (curvature of penis)
- Poor long-term tolerability
- Fear of sticking needle in penis

Vacuum Erection Devices

ADVANTAGES

- On-demand use
- Non-invasive
- Safe and effective
- Drug free
- Cost effective
- Therapeutic benefits
- Training available

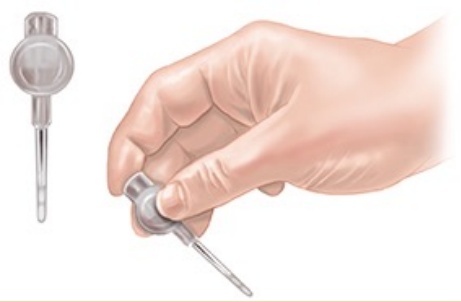
DISADVANTAGES

- Erection is not warm to the touch
- Learning curve
- Inconsistent ejaculation

Insertable drugs

Urethral Suppository

- An applicator containing a small pellet (suppository) is inserted in the urethra and the pellet is released.
- Pellet dissolves and increases blood flow creating an erection.



Why choose a Transurethral System

- Lack of response to oral therapy
- Contraindications to specific oral drugs
- Adverse reactions/intolerance to oral drugs

DISADVANTAGES

- Side effects like pain, burning, groin pain

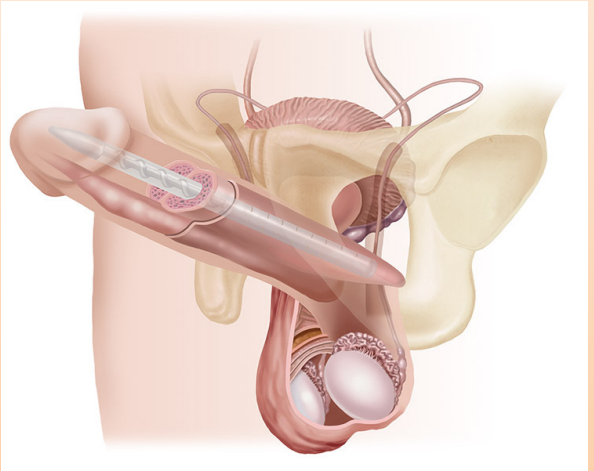
Malleable Penile Prosthesis Implant

ADVANTAGES

- Easy for you or your partner to activate
- Good option for men with limited dexterity
- Totally concealed in body
- Least expensive prosthesis

DISADVANTAGES

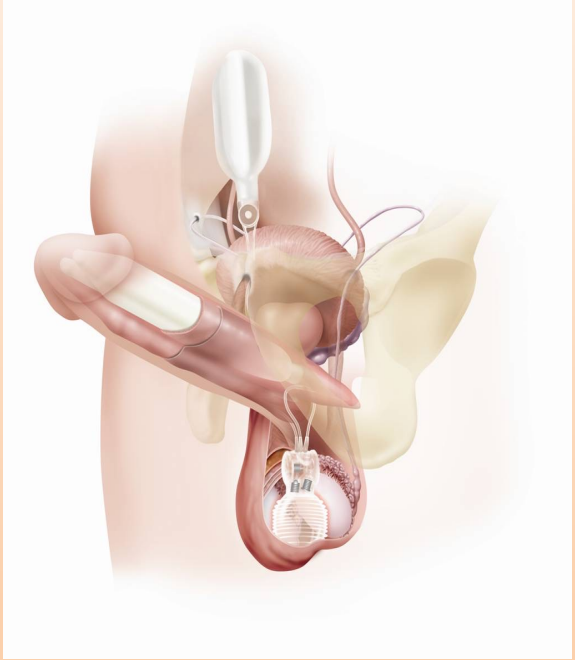
- Stays firm when not in erect position



Inflatable Penile Prosthesis

ADVANTAGES

- Easy to use
- One-step deflation
- Totally concealed in body
- Natural flaccidity compared to non-inflatable implants
- Acts and feels more like a natural erection
- Expands girth of the penis
- Feels softer and more flaccid when deflated



Risks of Penile Prosthesis

Implantation of both a malleable and inflatable penile prosthesis requires surgery. Every surgical treatment has potential risks, including penile implants:

- Infection
- May make latent natural erections, as well as other treatment options impossible
- Erosion (wearing away of the tissue next to the implant)
- Migration (unwanted movement of the device within the body)
- Chronic pain
- Device malfunction

Restorative/Regenerative Therapies

- Examples:
  - Stem cell injection
  - PRP injection
  - LiSWT
  - Other shockwave
- None are FDA approved
  - Data is limited, mostly shows safety rather than efficacy
  - Data especially limited in patients with neurogenic causes (such as nerve injury from surgery)

Interested in an Appointment?
Dr. Greenfield

We will contact you!

Colorado Urology's Bladder Cancer Team

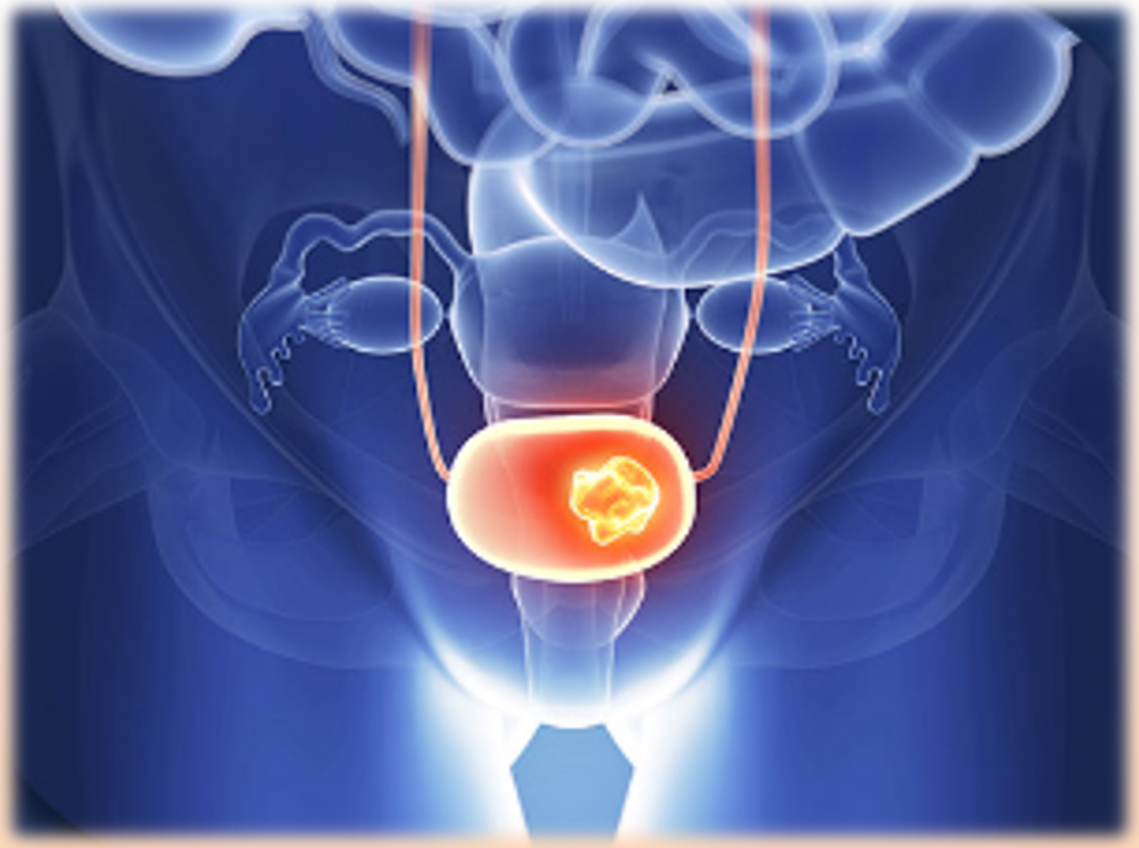
Lauren Sheffield, PA

Juliana White, MA

Suzanne Perez, RN
Nurse Navigator

Madison Mousaw
Appointment Scheduling

Dawn Hempel
Surgery Scheduling

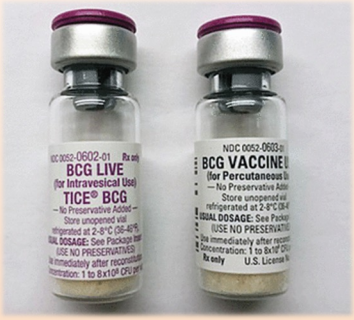


New FDA Approved Therapeutics & Diagnostics

Non-Muscle Invasive & Muscle Invasive Bladder Cancer

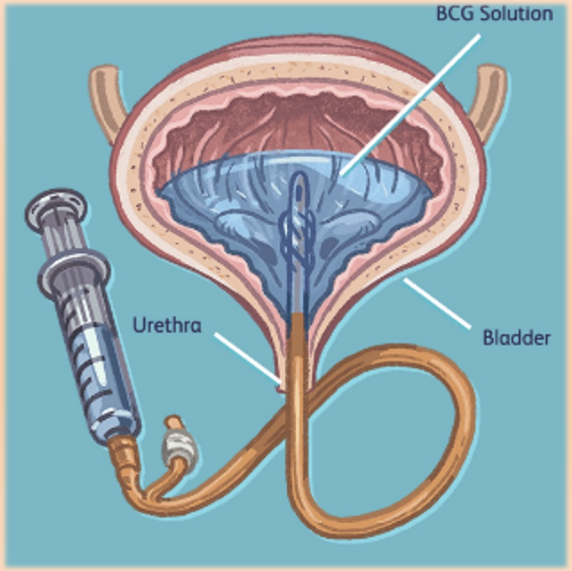
Traditional Agents

Treatment of Superficial Bladder Cancer



Intravesical Agents—*mainstay of therapy*

- Bacillus Calmette-Guerin (BCG)
  - *Supply shortage continuing **but lessening***
  - *CR up to 80%, but not durable*
- Gemcitabine
- **Gemcitabine/Docetaxel**
  - 46% RFS at 2 years
- Mitomycin



BCG Unresponsive disease

- Occurs in **50% of high risk patients**

New FDA Approved
Treatment of BCG Unresponsive NMBIC

- **Nadofaragene firadenovec (Adstiladrin)**—adenovirus vector gene based therapy (IF2b)-*not widely available*
  - 53% CR at 3 months—durability ~10 months
  - Intravesical--given every 3 months x 4 years
- **N-803 (Anktiva) +BCG** –IL 15 superagonist-*not on market*
  - 55% CR at 3 months—durability ~27 months
  - Intravesical--given like BCG (1x week/6 weeks)
- **Pembrolizumab**—PD-1 inhibitor
  - 41% CR at 3 months—durability ~24 months
  - IV therapy--every 3-6 weeks x 2 years

New FDA Approved

Treatment of Persistent Invasive Disease After Surgery

For patients after cystectomy with:

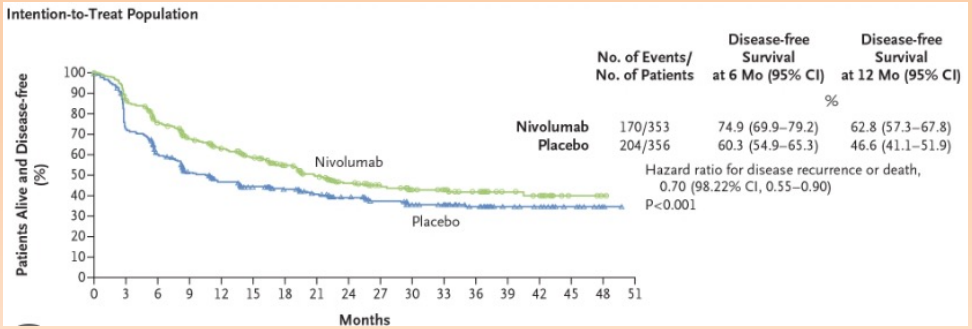
- ***pT2 or worse disease (with neoadjuvant chemo)***

  OR

- ***pT3 or worse disease (without neoadjuvant chemo)***

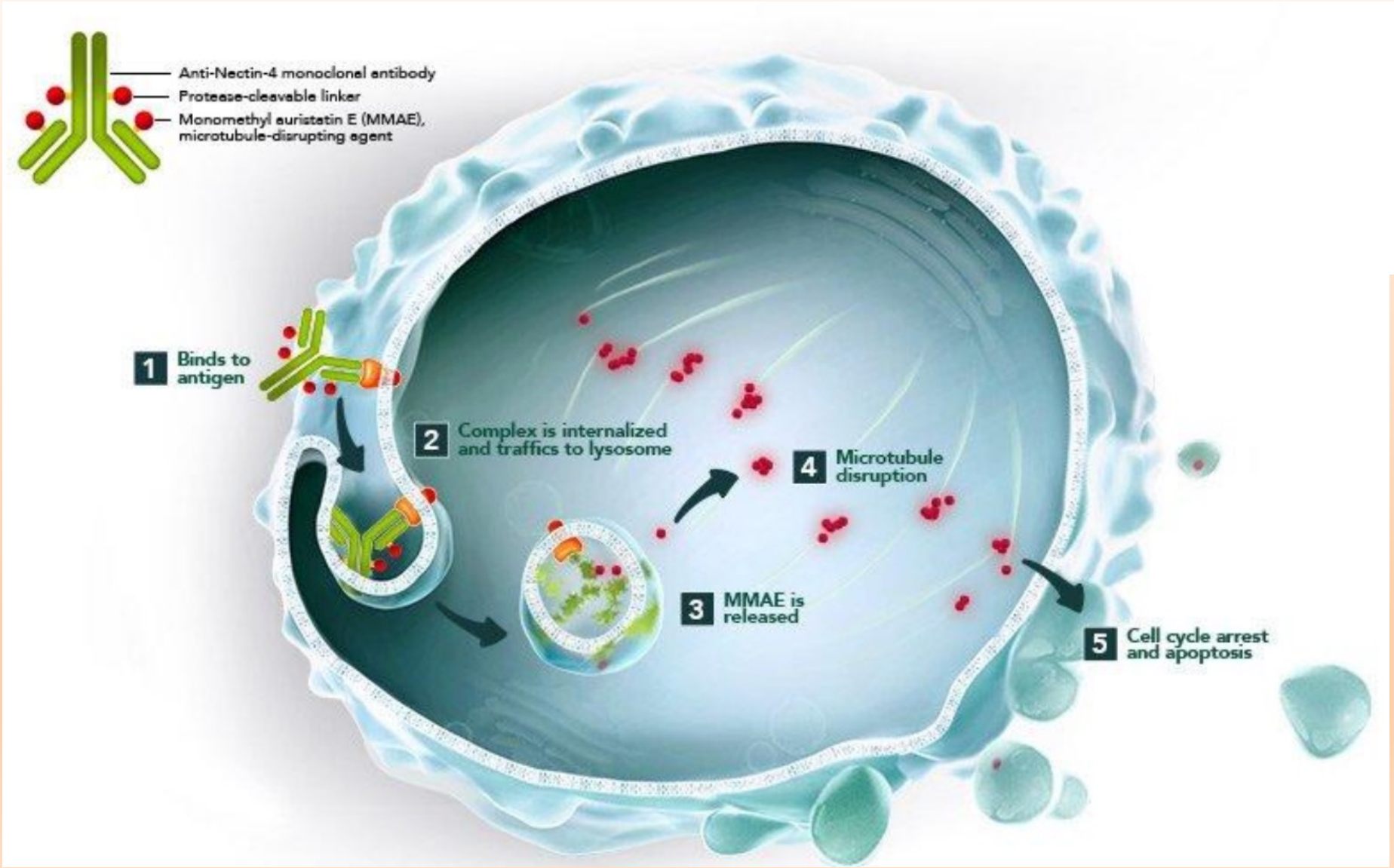
Nivolumab (Opdivo)—PD-1 inhibitor

- 30% risk reduction of BC recurrence/death (*HZ 0.7, 95% CI 0.57-0.86*)
- IV therapy--every 2-4 weeks x 1 year



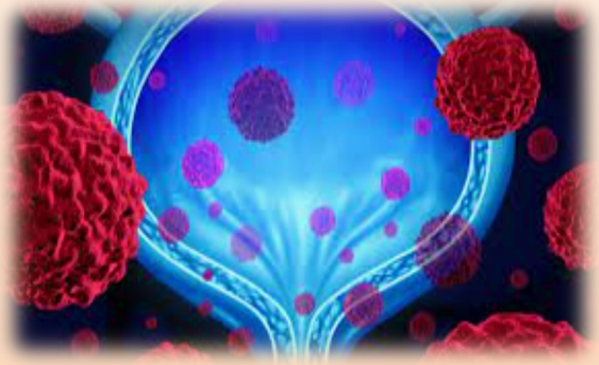
New Standard of Care

Locally advanced & Metastatic Urothelial Cancer



New Frontier: Clinical Trials

Critical component when standard of care treatments are not viable

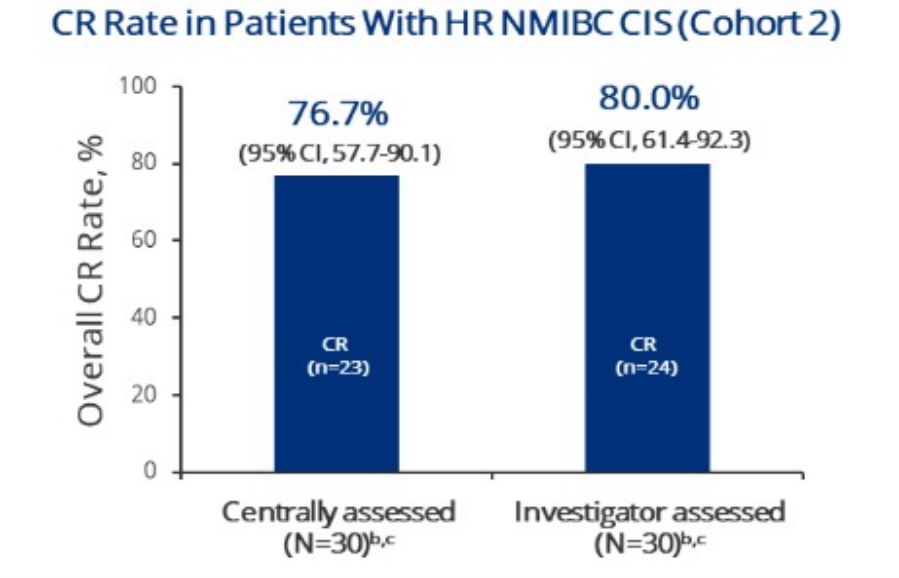


Non-Muscle Invasive Bladder Cancer

- **SunRISe 1 –*BCG unresponsive high risk CIS +/- pTa disease***
  - TAR-200 (intravesical slow release Gemcitabine) + Cetrelimab
- **SunRISe 3 –*BCG naïve high risk disease***
  - TAR-200/Cetrelimab vs. TAR-200 alone vs. BCG alone
- **Keynote 676 –*BCG naïve or persistent disease***
  - BCG +/- Pembrolizumab

Interim Trial Results – TAR 200

SunRISe 1 –*BCG unresponsive high risk CIS +/- pTa disease*

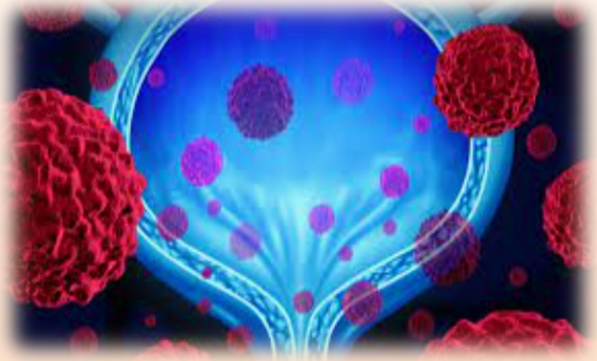


Complete response rate = 77%

SunRISe 1 – new cohort: BCG unresponsive high risk ***pTa disease only --TAR 200 only (no cetrelimab)***

New Frontier: Clinical Trials

Non-Muscle Invasive Bladder Cancer



- **SunRISe 1 –*BCG unresponsive high risk pTa disease***
  - TAR-200 (intravesical slow release Gemcitabine) only
- **SunRISe 3 –*BCG naïve high risk disease***
  - TAR-200/Cetrelimab vs. TAR-200 alone vs. BCG alone
- **Keynote 676 –*BCG persistent disease***
  - BCG +/- Pembrolizumab
- **PATAPSCO** --***BCG naïve high risk disease***
  - BCG + Durvalumab

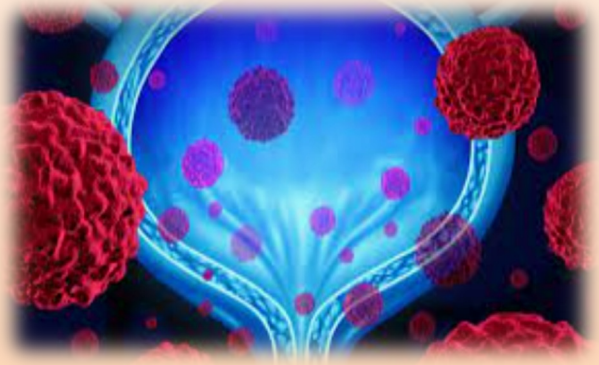
On the Horizon: Clinical Trials

Non-Muscle Invasive Bladder Cancer

- **MoonRISe—TAR 210**
  - FGFR alterations in 50-80% of NMIBC
  - Ertafitinib = oral selective pan-FGFR tyrosine kinase inhibitor approved for metastatic bladder cancer
  - Ertafitnib has activity in HR and IR NMIBC

New Frontier: Clinical Trials

Critical component when standard of care treatments are not viable



Muscle Invasive Bladder Cancer

- **SunRISe 2 –*unfit or unwilling for cystectomy***
  - TAR-200 + Cetrelimab vs. Chemotherapy/Radiation
- **SunRISe 4 –*ineligible for Cisplatin based chemotherapy***
  - Cetrelimab +/- TAR-200 prior to cystectomy

Janssen
PHARMACEUTICAL COMPANIES OF
Johnson & Johnson

First Bladder Cancer Walk in Denver

No one walks alone

Register as an individual. Or create a team!

www.bcanwalk.org

Bladder Cancer Support Group

Colorado Urology

- Semi-annual meetings (May/November)
  - Next meeting **May 2024**

- *Meeting topics*
  - What do you want to learn about?
    - Upcoming clinical trials and therapeutics
    - Ostomy tips/tricks
    - Pelvic floor physical therapy
    - Ways to mitigate side effects of intravesical therapy
    - Novel treatments for metastatic bladder cancer

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BLADDER CANCER AWARENESS