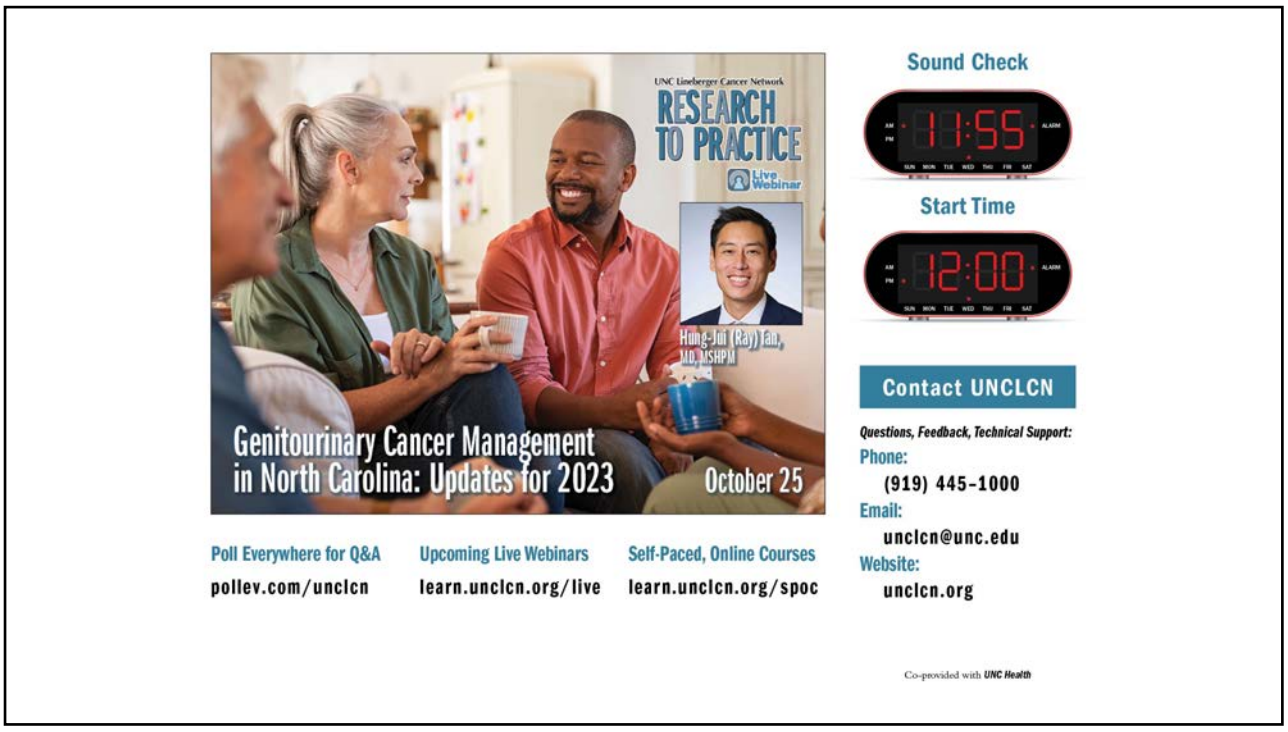
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Live Webinar
Hung-Jui (Ray) Tan, MD, MSHPM
Genitourinary Cancer Management in North Carolina: Updates for 2023
October 25
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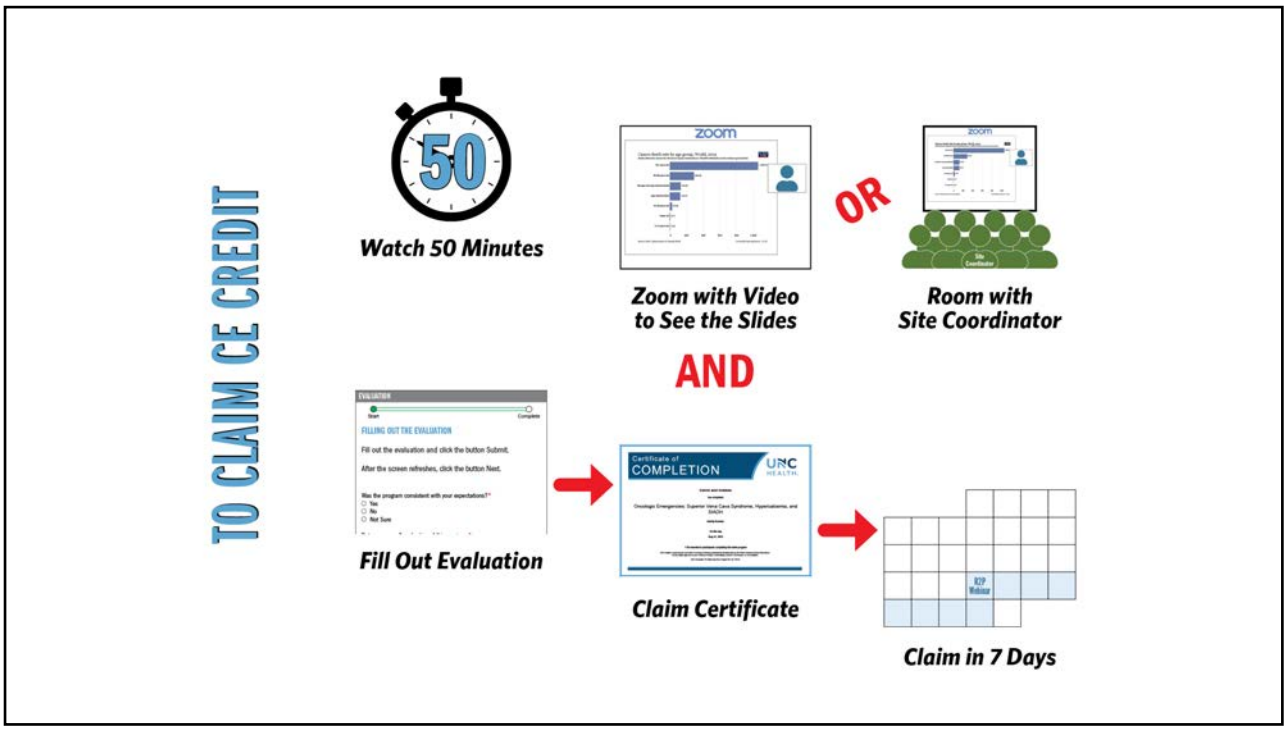
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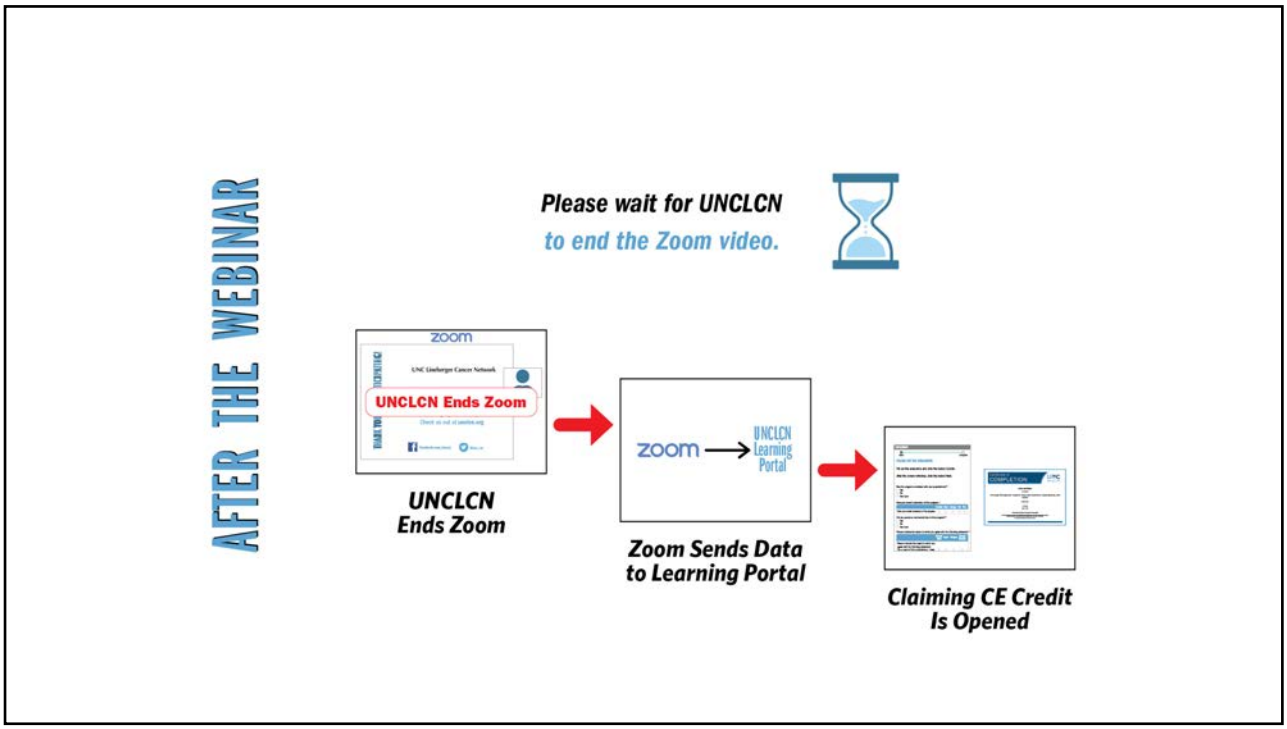
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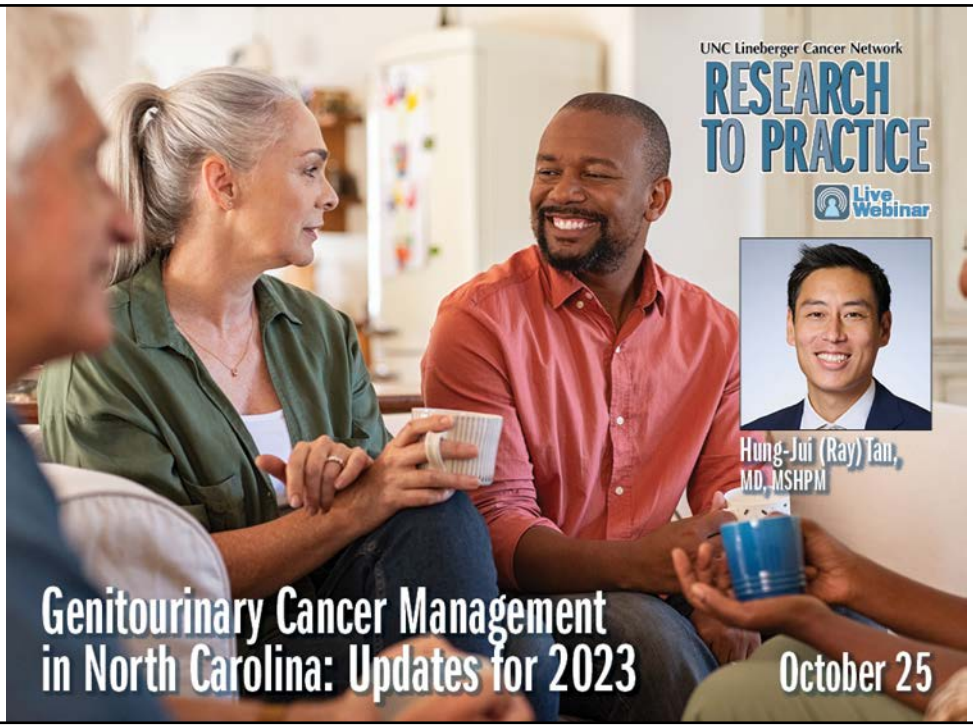
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October 25

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OUR PRESENTER

Hung-Jui (Ray) Tan,
MD, MSHPM

Dr. Tan is an Associate Professor of Urology, Director of Urologic Oncology for the Department of Urology, and Co-Director of the Lineberger Comprehensive Cancer Center Multidisciplinary Urologic Oncology Program at UNC. He also directs the urologic oncology fellowship.

Raised in North Carolina, received his medical degree from the University of Michigan where he also completed his residency in urology. Afterwards, he obtained advanced fellowship training in urologic oncology and health services research through the Institute of Urologic Oncology and the Robert Wood Johnson Foundation Clinical Scholars Program at UCLA.

Dr. Tan specializes in the management of prostate, kidney, bladder, and testicular cancer. He performs complex open and robotic surgeries for cancer as well as specialized procedures (e.g., MRI-US fusion & transperineal prostate biopsy, retzius-sparing prostatectomy, robotic RPLND). To further meet the health needs of his patients, Dr. Tan leads a robust research program focuses on decision-making, risk communication, and survivorship with funding support from the American Cancer Society, the Department of Defense, and the National Institutes of Health.

7

OUR PRESENTER

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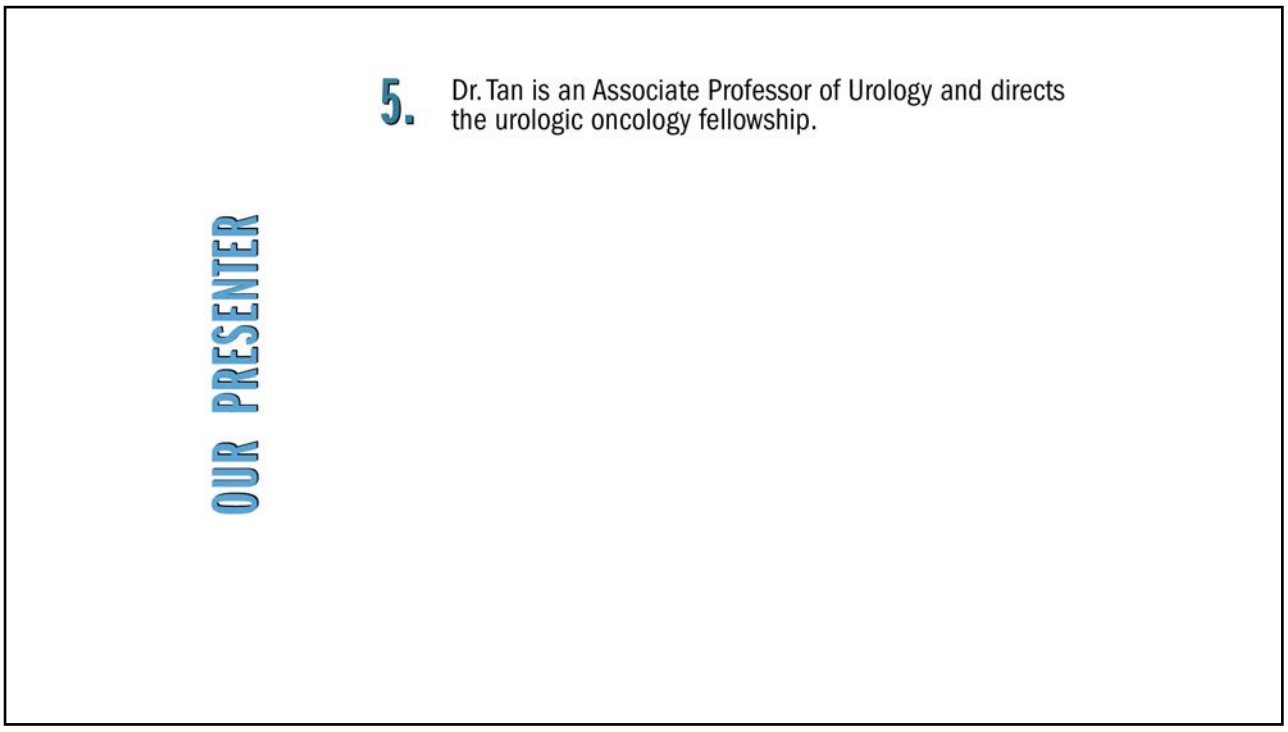
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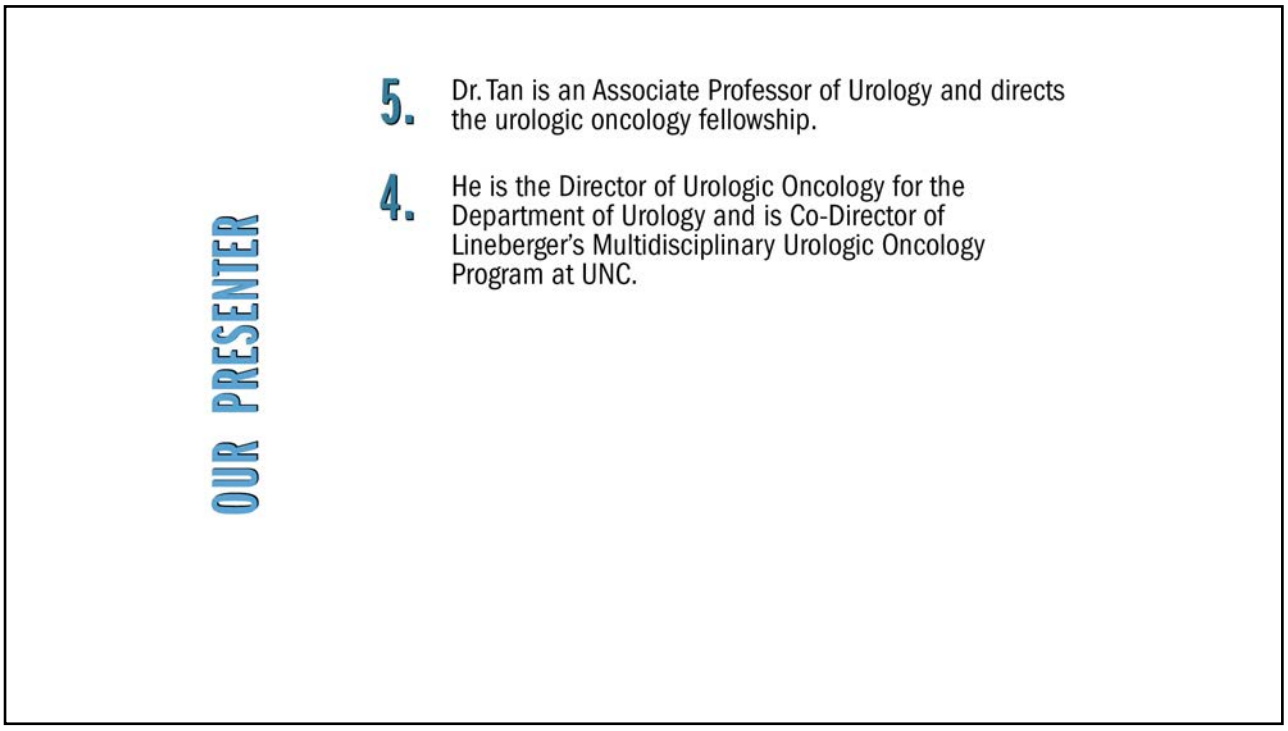
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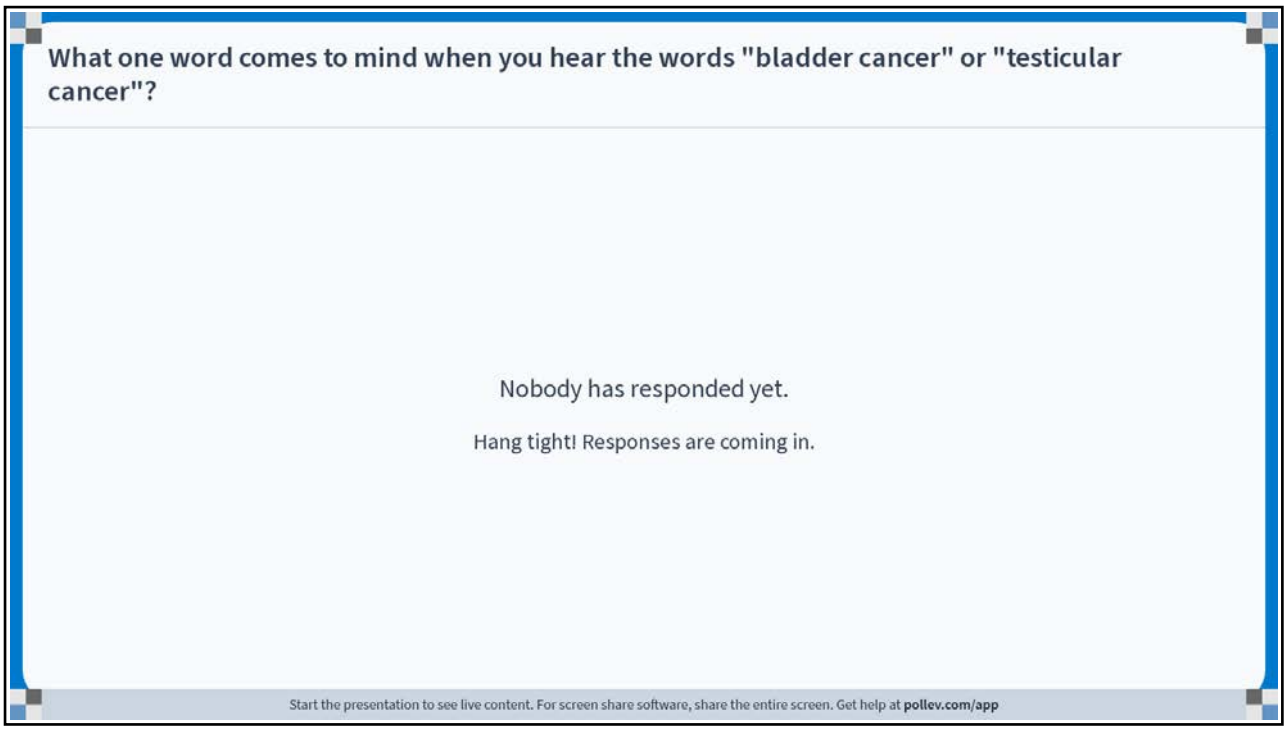

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UNC LINEBERGER COMPREHENSIVE CANCER CENTER

UNC CANCER CARE

Genitourinary Cancer Management in North Carolina: Updates for 2023

Hung-Jui Tan, MD, MSHPM
Associate Professor of Urology
Director of Urologic Oncology
Department of Urology
October 25, 2023

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Disclosures

- Funding support from Lineberger Comprehensive Cancer Center, the American Cancer Society, and the Department of Defense

Outline

From the urologist's perspective

- Prostate Cancer (screening in brief)
- Bladder Cancer
- Kidney Cancer
- Testis Cancer

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Prostate Cancer

22

Upcoming Research to Practice Webinar

RESEARCH TO PRACTICE
Live Webinar

Prostate Cancer Management in North Carolina: Updates for 2023

November 15, 2023

Overview | Program | Faculty | Accreditation | Register/Take course

Marc Bjurlin, DO, MSc, FACOS
Associate Professor
Urology
UNC Lineberger Comprehensive Cancer Center
UNC School of Medicine
University of North Carolina at Chapel Hill

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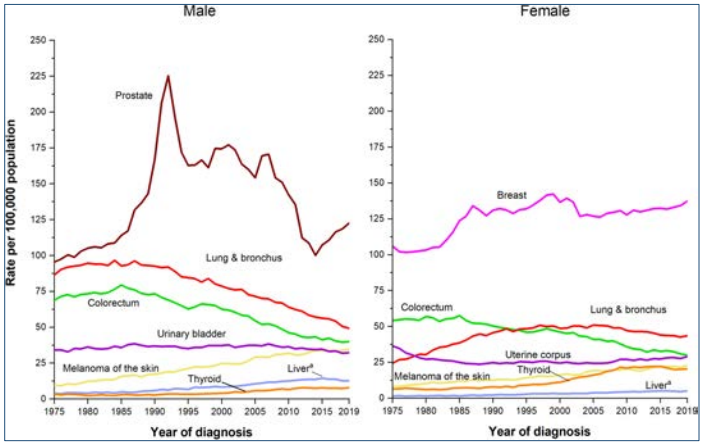
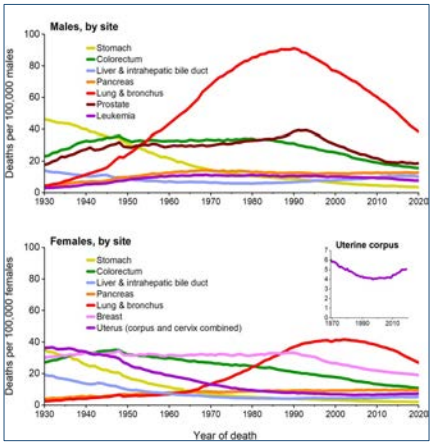
Alarming Trends in Prostate Cancer





CA A Cancer J Clinicians, Volume: 73, Issue: 1, Pages: 17-48, First published: 12 January 2023, DOI: (10.3322/caac.21763)

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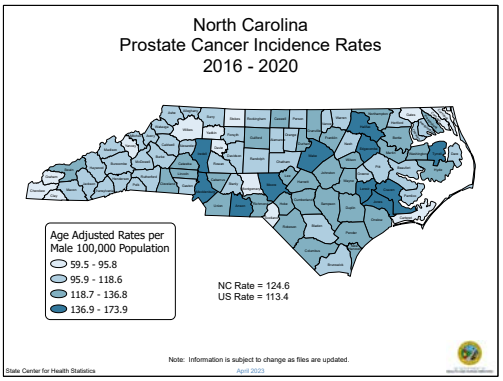
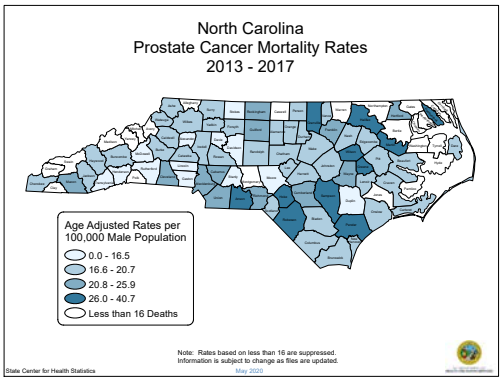
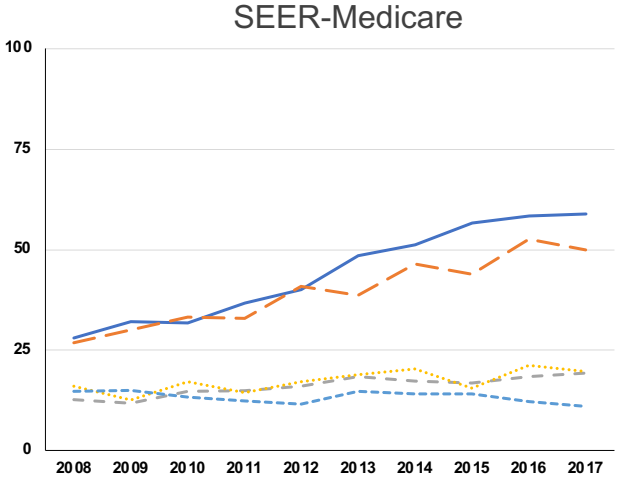
Significant Disparities in NC

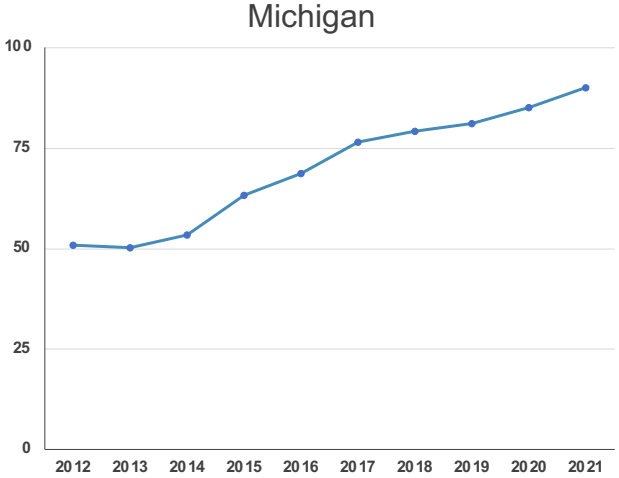
Black men have 1.7x incidence and 2.4x mortality than White men





Wide Adoption of Active Surveillance





Prostate Cancer Screening Recommendations

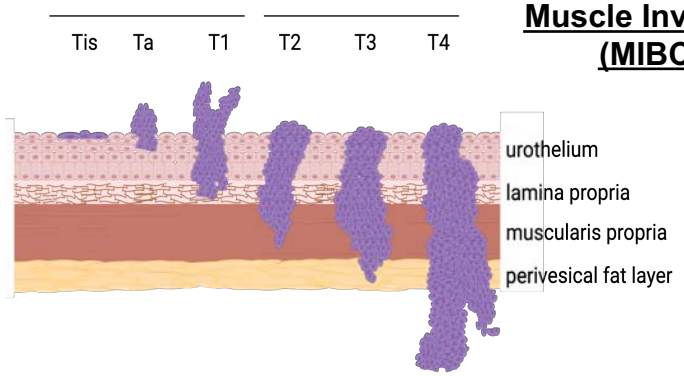
ACS (2023)	AUA (2023)	USPTF (2018)
Men should have a chance to make an informed decision about initial screening with their provider at: **50 if average risk** with at least 10-year life expectancy. **45 if high risk**. Black men and those with a 1° relative diagnosed with prostate cancer before age 65. **40 if even higher risk**. Men with 2 or more 1° relatives with prostate cancer diagnosed at early age. If PSA <2.5, then every other year testing. Annual testing if >2.5	Clinicians should engage in shared decision-making and may begin screening and offer a baseline PSA between ages **45-50** years. Clinicians should offer screening at age **40-45** years for people at increased risk: Black ancestry, germline mutations, strong family history of prostate cancer. Clinicians should offer regular prostate cancer screening every 2-4 years for those aged **50 to 69** years.	Grade C: An individual decision for men **aged 55-69**. Small potential benefits whereas "many men will experience potential harms." Patients and clinicians should consider family history, race/ethnicity, comorbid medical conditions, patient values, and other health needs.

Bladder Cancer (Non-Invasive)

Spectrum of Disease

Non-Muscle Invasive (NMIBC)

- 70% of newly diagnosed bladder cancer
- 30% progress



Muscle Invasive (MIBC)

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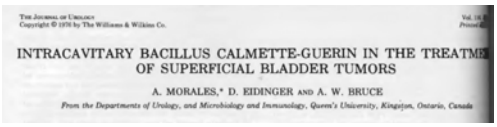
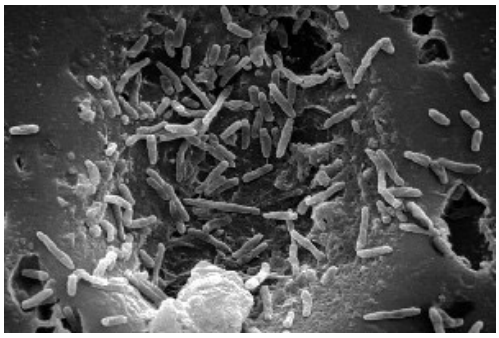
Bacillus Calmette-Guerin (BCG) - historical gold standard

- Intravesical immunotherapy
- Used for >40 years (First report in 1976)
- Exact mechanism unclear
- 70-80% initial response but up to 40% failure long-term
- Risks (Macloed *et al.*, PMID: 25210559):
  - Lower urinary tract symptoms (27%-95%)
  - Fever greater than 39.5ºC (2.9%)
  - Rare: granulomatous prostatitis (0.9%), pneumonitis or hepatitis (0.7%), arthralgia (0.5%), epididymitis (0.4%), **severe disseminated BCG sepsis (0.4%)**
- Frequent shortages associated with supply chain issues, resulting in reduced dosing and inadequate treatment


INTRACAVITARY BACILLUS CALMETTE-GUERIN IN THE TREATME
OF SUPERFICIAL BLADDER TUMORS

A. MORALES,* D. EIDINGER AND A. W. BRUCE

Morales et al., *J Urol*, 1976



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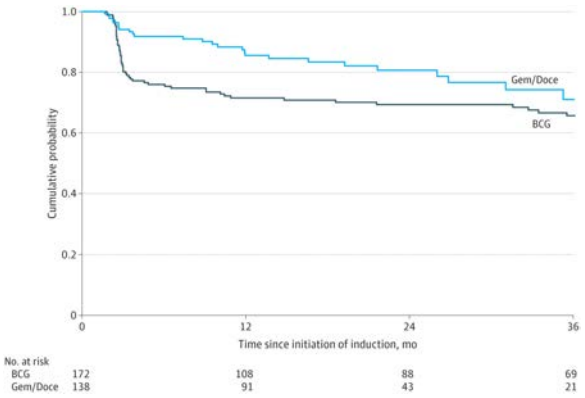
Sequential Gemcitabine/Docetaxel – substitute

Comparison of Sequential Intravesical Gemcitabine and Docetaxel vs Bacillus Calmette-Guérin for the Treatment of Patients With High-Risk Non–Muscle-Invasive Bladder Cancer

- Retrospective comparison of BCG (full or reduced dosing, maintenance at 3, 9, 15 months) vs. Gem/Doce (6 week induction then monthly maintenance for up to 2-years) from 2011-2021
- **67% vs. 81% RFS at 1-year**
- >90% PFS, CFS, CSS at 2-years
- 9.2% vs. 2.9% discontinuation

BRIDGE Trial (SWOG) – RCT for BCG vs. Gem/Doce for HR NMIBC now open



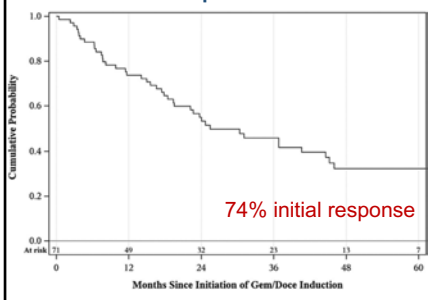
McElree et al., JAMA Netw Open. 2023;6(2):e230849. doi:10.1001/jamanetworkopen.2023.0849

UNC LINEBERGER COMPREHENSIVE CANCER CENTER

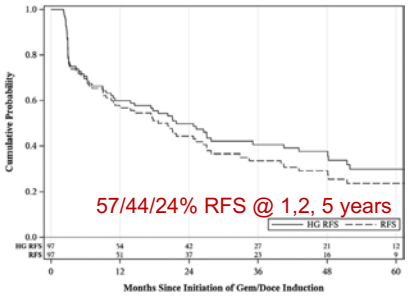
Sequential Gemcitabine/Docetaxel – salvage

- **1 g of gemcitabine in 50 ml of sterile water or normal saline for 90 minutes, followed by 37.5 mg of docetaxel dissolved in 50 ml of normal saline for 90 to 120 minutes.**
- Weekly induction for 6 weeks then monthly maintenance for 2-years.
- 60% Grade 1, 40% Grade 2 toxicity, mostly irritative urinary symptoms

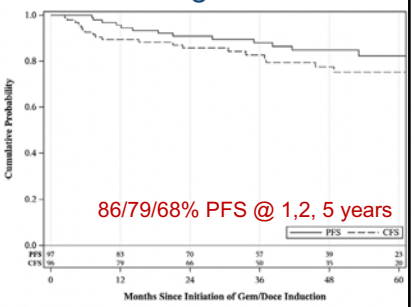
Response



Recurrence



Progression



Chevuru et al. Urologic Oncology: Seminars and Original Investigations 41(3):148.e1-148.e7, 2023

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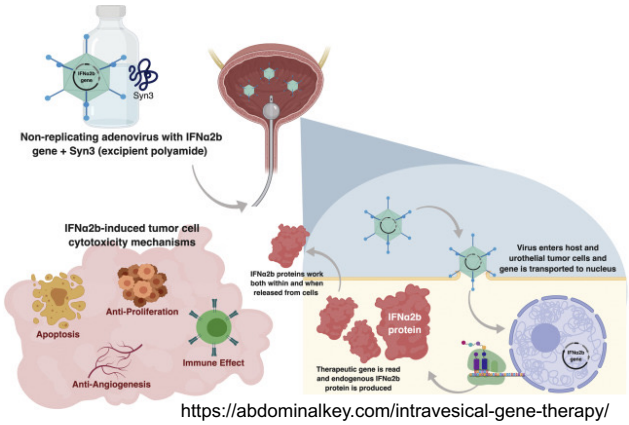
Pembrolizumab

- Anti-programmed cell death (PD)-1 antibody
- Expressed by T-cells and acts as an immune checkpoint inhibitor
- Approved for BCG-unresponsive, high-risk NMIBC based on KEYNOTE-057 (Balar *et al.*, *Lancet Oncology* 2021)
  - Single arm study of 101 patients → analysis included 96 patients with high-risk CIS ineligible or unwilling to undergo cystectomy
  - Treated with 200 mg of systemic pembrolizumab every 3 weeks for up to 24 months
  - **Complete response: 41% at 3 months**
  - Adverse events in 2/3 of patients:
    - Most common: diarrhea, fatigue, pruritis (11 serious treatment-related)
    - Immune related adverse events in 22% (most common: hypothyroid)
- Extended follow-up (Balar *et al., JCO*, 2021):
  - **14% (13 of 39) with CR @ 2 years**
  - 41.7% underwent cystectomy for toxicity, recurrence, progression, or persistence

Alliance Trial Intravesical Gemcitabine + Pembrolizumab ongoing at UNC

Nidofaragene firadenovec (Adstiladrin)

- Intravesical adenoviral-based gene therapy
- CS-003: multicenter, single arm trial:
  - 157 patients with BCG-unresponsive CIS
  - Intravesical instillation q3months for up to 1 year
  - **Initial CR rate 57%, 46% remained CR at 1-year**
  - Adverse events >10%: Hyperglycemia, instillation site discharge, increased TGs, fatigue, bladder spasm, urgency, elevated creatinine, hematuria, decreased phosphate, chills, dysuria, pyrexia.
- **Approved by FDA on December 16, 2022**

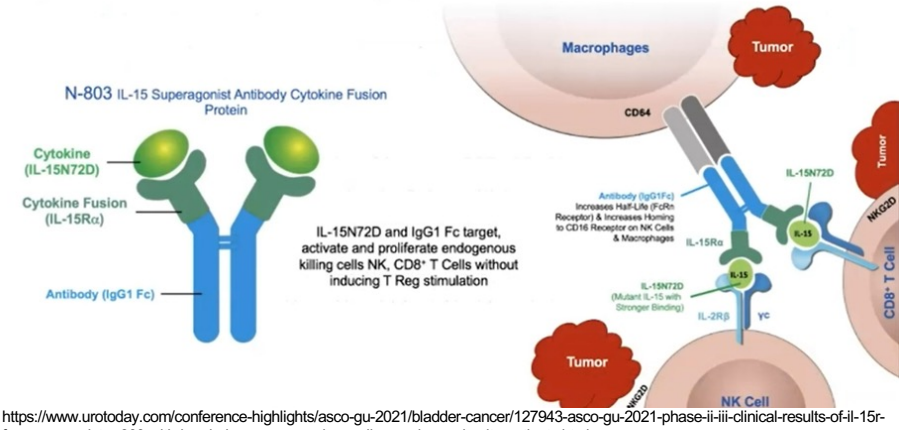


https://abdominalkey.com/intravesical-gene-therapy/

Boorjian *et al., Lancet Oncology*, 2021.

ALT-803: IL-15 Superagonist

N-803 Mechanism of Action



https://www.urotoday.com/conference-highlights/asco-gu-2021/bladder-cancer/127943-asco-gu-2021-phase-ii-iii-clinical-results-of-il-15r-fc-superagonist-n-803-with-bcg-in-bcg-unresponsive-nmibc-carcinoma-in-situ-patients.html

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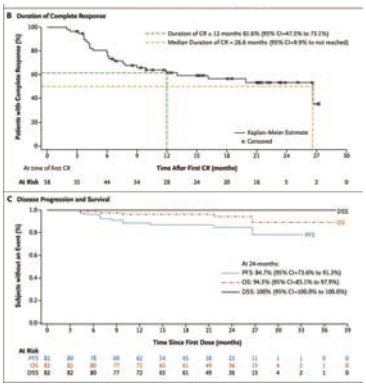
ALT-803: IL-15 Superagonist (NAI)

Phase II/III Results of N-803 with BCG in BCG-Unresponsive NIMBC carcinoma in situ (CIS) patients w/wo papillary lesions

Chamie *et al., NEJM Evidence,* 2022

Cohort	Population	Treatment	Outcomes
A	BCG-unresponsive CIS +/- Ta/T1 disease	NAI + BCG	**CR: 58/82 (71%). >50% CR at 2 years.** In patients with CR, probability of cystectomy-free 89.2% and DSS 100%
C	BCG-unresponsive CIS +/- Ta/T1 disease	NAI alone	CR at 3 months = 2/10 patients CR at 6 months = 1/10 patients *(discontinued for futility)*
B	BCG-unresponsive HG Ta/T1 disease	NAI + BCG	DFS rate at 12-months of 55.4% Median DFS 19.3 months



FDA declined approval in Spring 2023 due to manufacturing issues.

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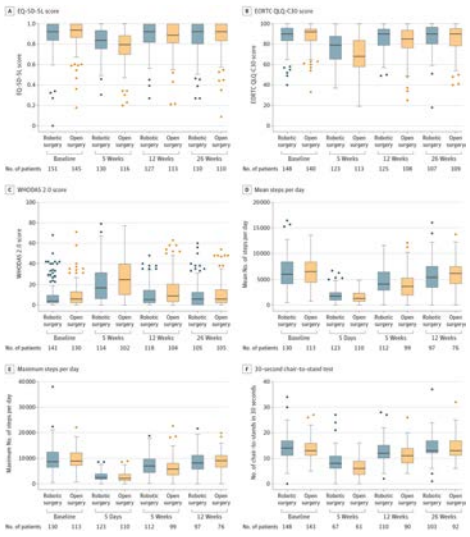
Bladder Cancer (Invasive)

Robotic vs. Open Cystectomy - modest differences in morbidity

Table 2. Complications Recorded Within 12 Weeks of Surgery Stratified by Group and Reported According to Clavien-Dindo Severity Grade and Type

Complications	No. (%) Robotic cystectomy (n = 161)	Open cystectomy (n = 156)	Difference, % (95% CI)
Clavien-Dindo grade[a]	n = 151	n = 150	
No complications	59 (39.1)	50 (33.3)	5.7 (-5.1 to 16.6)
I	26 (17.2)	21 (14.0)	3.2 (-5.0 to 11.4)
II	41 (27.2)	46 (30.7)	-3.5 (-13.8 to 6.7)
III	0	1 (0.7)	
IIIa	8 (5.3)	14 (9.3)	-4.0 (-9.9 to 1.8)
IIIb	9 (6.0)	11 (7.3)	-1.4 (-7.0 to 4.3)
IV	0	0	
IVa	5 (3.3)	4 (2.7)	0.6 (-3.2 to 4.5)
IVb	0	0	
V	3 (2.0)	3 (2.0)	-0.0 (-3.2 to 3.1)
Type			
Gastrointestinal	46 (28.6)	44 (28.2)	0.37 (-9.54 to 10.25)
Infection	38 (23.6)	52 (33.3)	-9.73 (-19.47 to 0.24)
Genitourinary[b]	19 (11.8)	17 (10.9)	0.9 (-6.19 to 7.94)
Wound	9 (5.6)	27 (17.3)	-11.72 (-18.59 to -4.58)
Neurological	7 (4.3)	10 (6.4)	-2.06 (-7.23 to 3.12)
Cardiac	7 (4.3)	6 (3.8)	0.5 (-4.14 to 5.09)
Pulmonary	7 (4.3)	4 (2.6)	1.78 (-2.55 to 6.04)
Surgical	6 (3.7)	3 (1.9)	1.8 (-2.2 to 5.72)
Miscellaneous[c]	4 (2.5)	9 (5.8)	-3.28 (-7.89 to 1.37)
Thromboembolic[d]	3 (1.9)	13 (8.3)	-6.47 (-11.43 to -1.38)
Bleeding	1 (0.6)	1 (0.6)	-0.02 (-2.47 to 2.39)
Other[e]	22 (13.7)	23 (14.7)	-1.08 (-8.82 to 6.66)

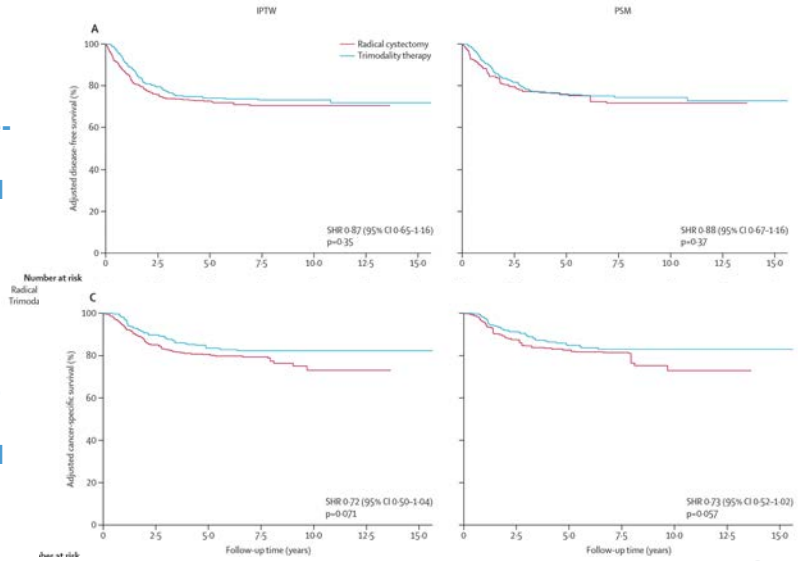


Catto JWF, Khetrapal P, Ricciardi F, et al. Effect of robot-assisted radical cystectomy with intracorporeal urinary diversion vs open radical cystectomy on 90-day morbidity and mortality among patients with bladder cancer: a randomized clinical trial. JAMA. 2022;327(21):2092-2103.

Trimodal Therapy - an accepted option for MIBC

Disease-Free Survival

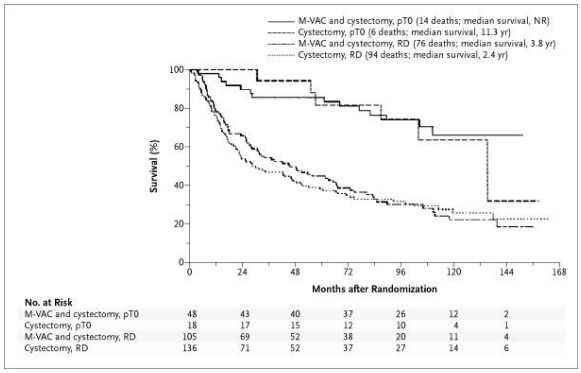
Cancer-specific Survival



- Solitary mass, no CIS, no hydronephrosis, good bladder function
- Care Coordination
- Will need ongoing cystoscopy surveillance
- NMIBC recurrence may be treated intravesically
- 15-25% will require salvage cystectomy

39 Zlotta AR, Ballas LK, Niemierko A, et al. Radical cystectomy versus trimodality therapy for muscle-invasive bladder cancer: a multi-institutional propensity score matched and weighted analysis. Lancet Oncol. 2023;24(6):669-681.

Significance of CR/downstaging with neoadjuvant therapy



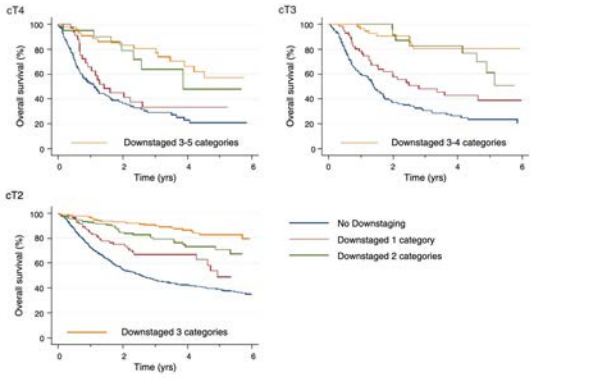


Figure 4. Survival of patients according to the clinical tumor stage and the degree of downstaging in the National Cancer Database.

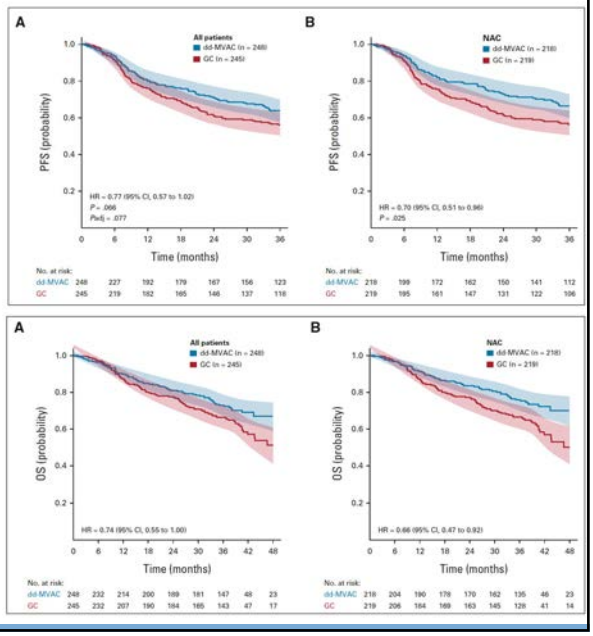
Landmark Studies
Grossman et al, NEJM 2003
EORTC 30894, JCO 2011
Martini et al., Cancer, 2019

Modified from Dr. Tracy Rose

Dose-dense MVAC vs Gem/Cisplatin for neoadjuvant chemotherapy

VESPER study

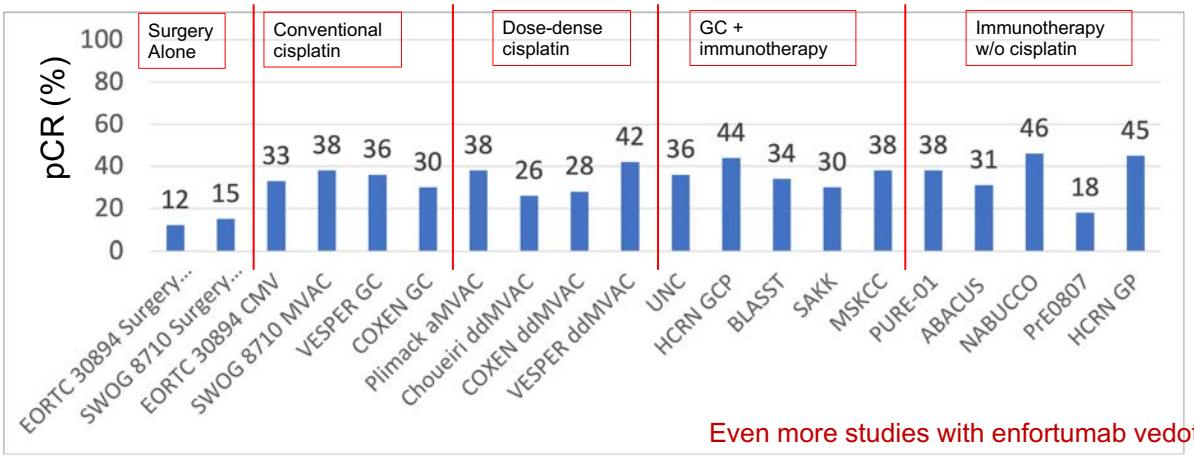
- 500 patients randomized between 6 cycles ddMVAC vs. 4 cycles GC of which 89% received as NAC
- 60% in ddMVAC received 6 cycles vs. 84% in GC received 4 cycles
- pCR 42% vs. 36%
- <ypT3 77% vs. 63%
- 3-year PFS 66% vs. 56% for NAC, HR 0.70, p=0.025
- 5-year survival data in NAC: 66% vs. 57% OS, 75% vs. 60% CSS.



Pfister et al. VESPER JCO, 2022.
Pfister at al. VESPER Eur Urol, 2021.

Neoadjuvant therapy remains an active space

Modified from Dr. Tracy Ros



Even more studies with enfortumab vedotin

Grossman et al. NEJM 2003
Flaig et al, CCR 2021
Gupta et al, JCO 38,6_supp (Feb 2020).
Necchi et al, JCO 2018
Grivas et al, ASCO Annual Mtg 2021; abstr 4518

EORTC 30894, JCO 2011
Rose et al, GU ASCO 2021, abstr 396.
Cathomas et al, GU ASCO 2021, abstr 430.
Powles et al, Nat Med 2019

Pfister et al, Euro Urol 2021
Hoimes et al, ESMO 2018, abstr 5681.
Funt et al, ASCO Annual Meeting, abstr 4517.
Van Dijk et al, ASCO Annual Mtg 2020;abstr 5020
Kaimakliotis et al, ASCO Annual Mtg 2020;abstr 5019

Moving towards personalized, bladder-sparing approaches

Primary endpoint: 2-yr Metastasis free survival

RETAIN2

Major Inclusion Criteria:
- cT2-T3 N0
- Predominant Urothelial Carcinoma of Bladder
- ECOG 0-1

TURBT #1 → Nivolumab X 3 + AMVAC X3 → TURBT #2

NGS (Caris): Mutation positive defined as alterations in: *ATM, RB1, ERCC2*

- Mutation positive AND No residual disease/ cT0 → ACTIVE SURVEILLANCE
- cTa OR cTis OR cT1 OR positive cytology OR cT0 but mutation negative → Patient & Physician Choose → Intravesical Tx OR Chemo-RT OR Cystectomy
- cT2 → Patient & Physician Choose → Chemo-RT OR Cystectomy
- ≥cT3 → Cystectomy

Courtesy of Dr. Tracy Rose

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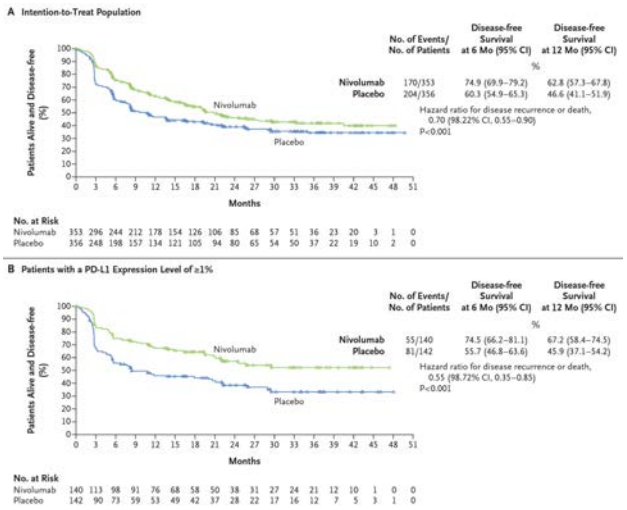
Nivolumab associated with prolonged DFS in patients with MIBC

- CheckMate 274
- 709 patients with ypT2+ or ypN+ post NAC or ypT3+ or ypN+ if no NAC
- Nivolumab 240 mg IV q2 weeks for up to 1 year
- 1:1 randomization with stratification based on PDL1, NAC, nodal status
- 43% of cohort received NAC, ~60% pT3, ~50% N+
- 12% discontinued nivolumab due to toxicity
- **Approved by FDA on August 2021**



Bajorin DF, Witjes JA, Gschwend JE, et al. Adjuvant nivolumab versus placebo in muscle-invasive urothelial carcinoma. N Engl J Med. 2021;384(22):2102-2114.

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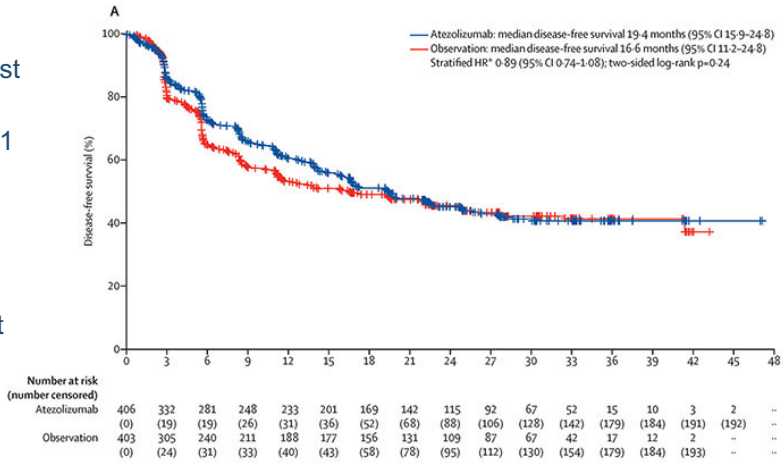
Atezolizumab not associated with DFS benefit in adjuvant setting

- IMvigor010
- 809 patients with ypT2+ or ypN+ post NAC or ypT3+ or ypN+ if no NAC
- Atezolizumab 1200 mg q3 for up to 1 year
- 1:1 randomization
- 48% of cohort received NAC, ~75% pT3+, ~50% N+
- 15% discontinued due to toxicity but 33% had dose interruption



Bellmunt et al. Lancet Oncol. 2021 22(4): 525-537

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Perioperative Chemotherapy for UTTCC

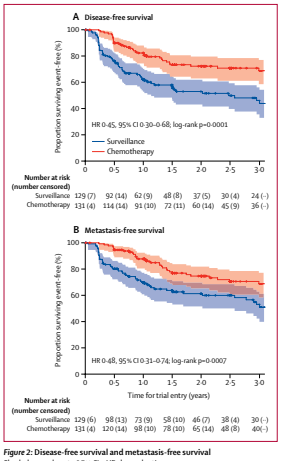

Figure 2: Disease-free survival and metastasis-free survival
Shaded areas denote 95% CIs. HR=hazard ratio.

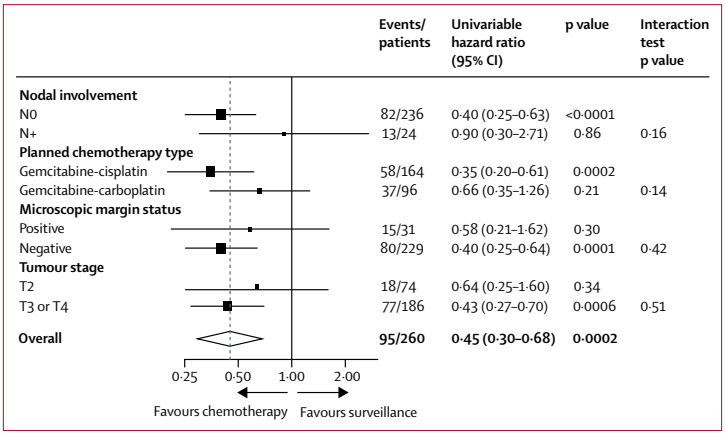

Figure 3: Subgroup analysis of disease-free survival

Birtle et al. Lancet 2020; 395: 1268-77

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Kidney Cancer

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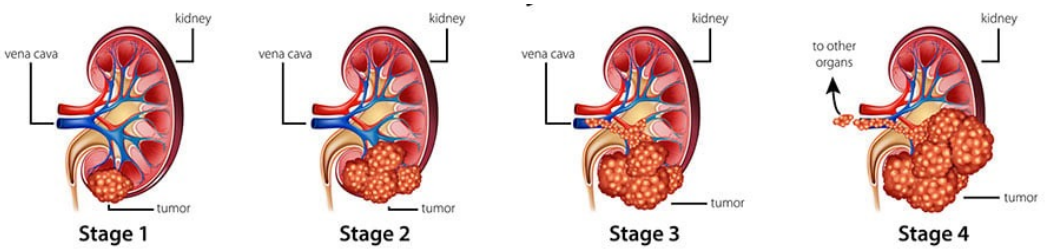
Kidney Cancer Staging



https://www.moffitt.org/cancers/kidney-renal-cell-cancer/diagnosis/stages/

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GRADE-SRM

Newly diagnosed small renal

Appointment at UNC Urology

Standard of care counseling

Enrollment into GRADE-SRM with T0 Decisional Assessment

Biopsy decision: yes / no

T1 Decisional Assessment

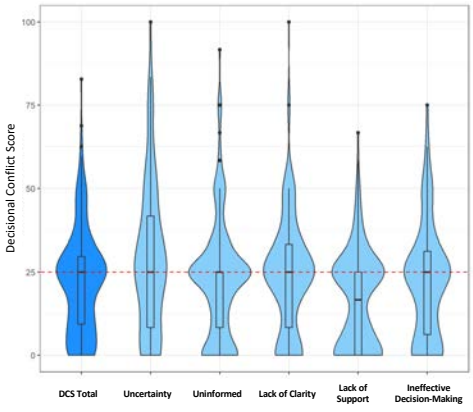
Treatment decision

Active surveillance | Ablation | Surgery

Continued follow-up and decisional assessments

Hybrid clinical trial with two primary objectives:

1. Evaluate the impact of renal mass biopsy on **decisional conflict**
2. Validate **genomic concordance** between renal mass biopsy and nephrectomy specimens



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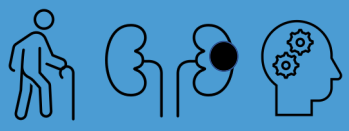
GRADE-SRM

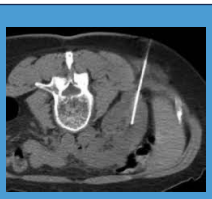


Decisional conflict is associated with:

Patient age

Tumor complexity
Mass type

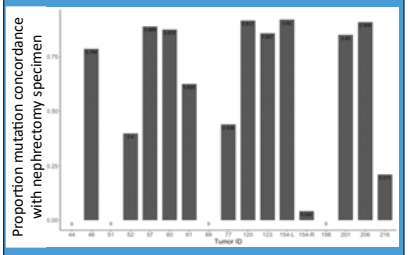
Self efficacy
Information seeking behavior
Patient-physician communication



Renal mass biopsy (RMB) and Decisional conflict scores (DCS):

No difference overall

RMB may decreased DCS in patient subgroups:
- More medical comorbidities
- Male patients
- No outside urologist
- Lower communication



RMB tumor samples show wide variability in DNA mutational concordance with nephrectomy specimens, possibly due to intratumoral heterogeneity vs collection differences.

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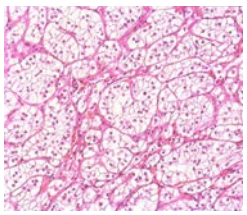
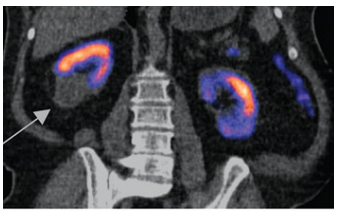
Diagnostic Tools for SRMs

Renal Mass Biopsy



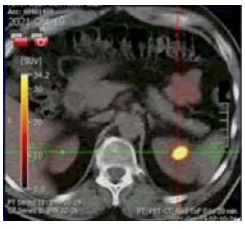
Sensitivity 97%,
Specificity 95%
90% accuracy

Technetium-99m-Sestamibi SPECT/CT Imaging



Sensitivity 69-100%,
Specificity 89-100%
78% accuracy

^{89}Zr-DFO-girentuximab PET/CT



Sensitivity 86%,
Specificity 87%
86% accuracy

Schober et al. J Urol, 2023

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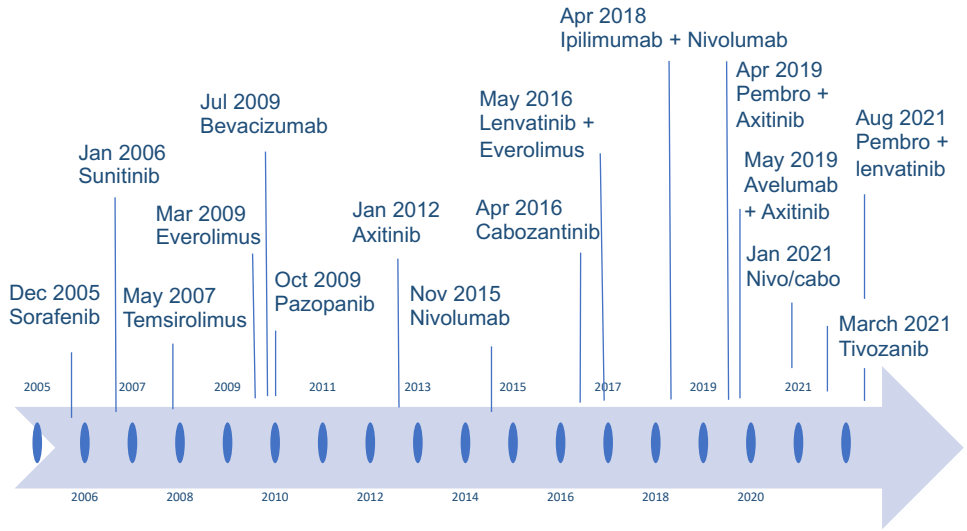
FDA Approvals for Metastatic Kidney Cancer



Courtesy of Dr. Tracy Rose

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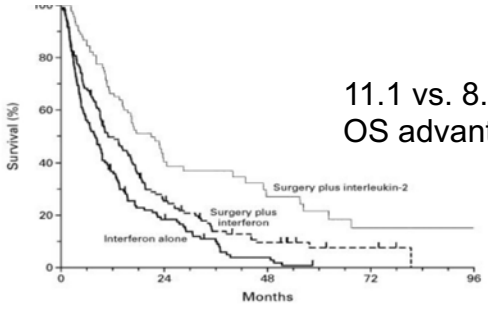
Cytoreductive Nephrectomy for Metastatic Kidney Cancer

ORIGINAL ARTICLE

Nephrectomy Followed by Interferon Alfa-2b Compared with Interferon Alfa-2b Alone for Metastatic Renal-Cell Cancer

Robert C. Flanigan, M.D., Sydney E. Salmon, M.D., Brent A. Blumenstein, Ph.D., Scott I. Bearman, M.D., Vivek Roy, M.D., Patrick C. McGrath, M.D., John R. Caton, Jr., M.D., Nikhil Munshi, M.D., and E. David Crawford, M.D.



11.1 vs. 8.1 month
OS advantage (p=0.05)

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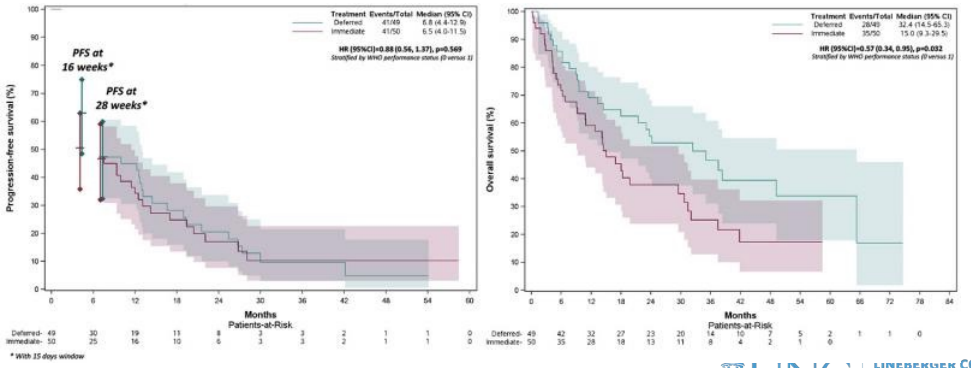
SURTIME Trial

- 99 patients from 19 institutions
- CN then sunitinib vs. 3 cycles sunitinib then CN



Bex, ESMO, 2017

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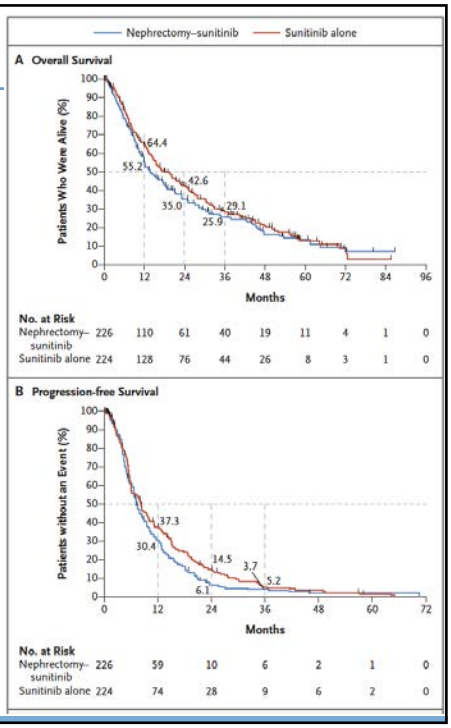
CARMENA Trial

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Sunitinib Alone or after Nephrectomy in Metastatic Renal-Cell Carcinoma

- Phase III RCT, non-inferiority trial
- Intermediate & Poor Risk
- 450 patients from 2009-2017
- Median OS 18.4 vs. 13.9 months



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Practice Changing but Evolving

Critiques:

- Poor accrual and early closure
- "Patients unwilling to be randomized between surgical and non-surgical option."
- "Many patients I saw either 'obviously' need a nephrectomy or 'obviously' needed oncology."

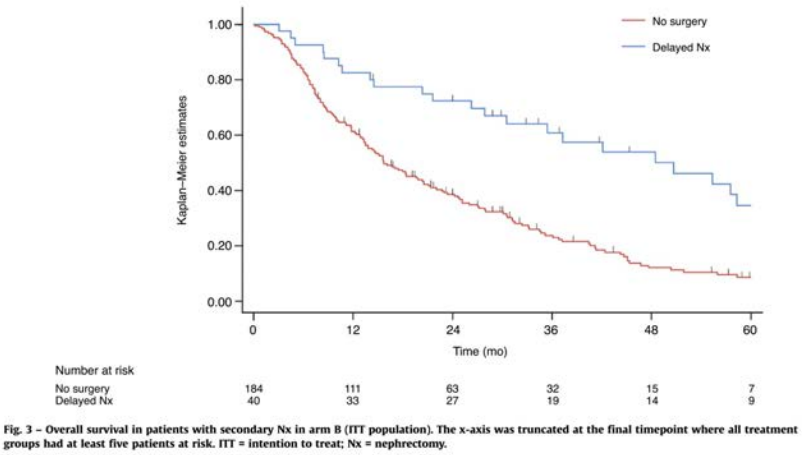

Fig. 3 – Overall survival in patients with secondary Nx in arm B (ITT population). The x-axis was truncated at the final timepoint where all treatment groups had at least five patients at risk. ITT = intention to treat; Nx = nephrectomy.

Stewart et al., Eur Urol, 2016; Mejean et al., Eur Urol, 2021.

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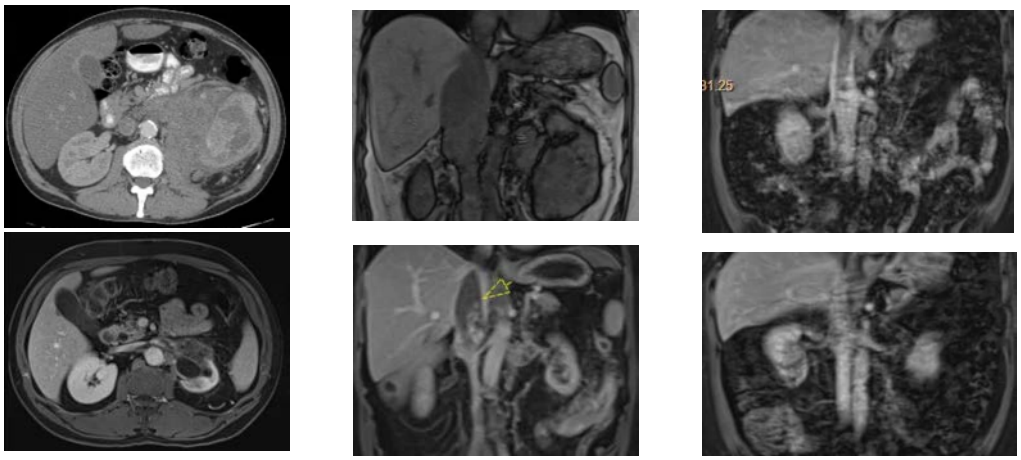
Perioperative Therapy - partial responses but +/- survival benefit



- 40-60% CR/PR from recent systemic therapy trials for metastatic RCC
- Phase II neoadjuvant axitinib/avelumab – 30% PR, 20% tumor shrinkage
- PROSPER (perioperative nivolumab) trial closed early due to futility in RFS (819 patients enrolled)

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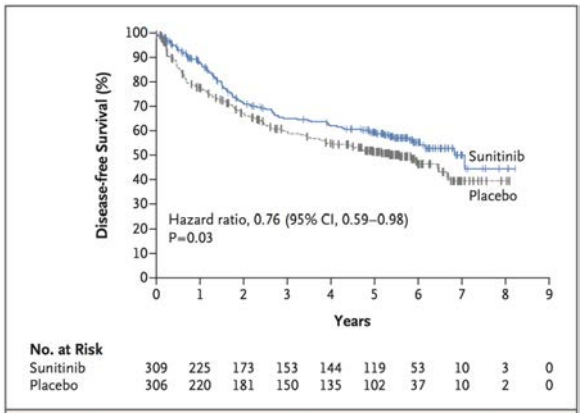
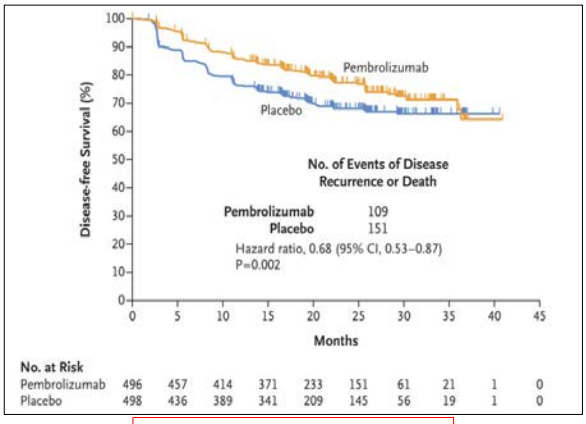
Adjuvant Therapy – 2 FDA approved options





Median DFS:
Sunitinib 6.8 years
Placebo 5.6 years

At 24 months: DFS 77.3% with pembrolizumab, 68.1% with placebo

Ravaud et al, NEJM 2016: 375;23:2246
Choueiri et al, NEJM 2021

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Testicular Cancer

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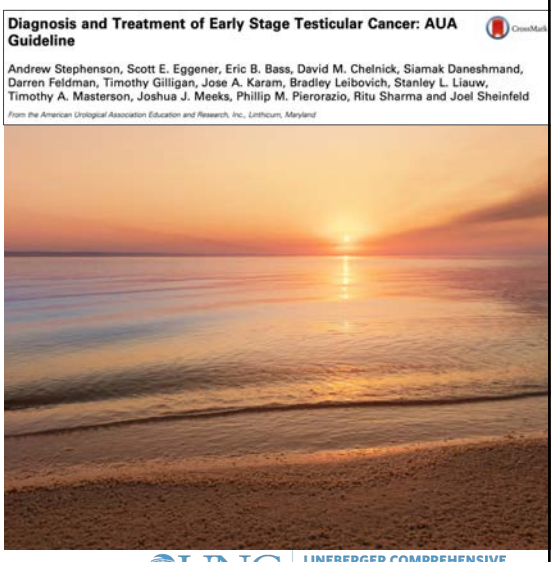
Testis Cancer Guidelines

Highlights from AUA Guidelines

1. Counsel patients on infertility + ⬇️ T
2. Consider existing subfertility (50%)
3. Offer sperm banking + prosthesis
4. Microlithiasis does not require f/u
5. Consider repeat US for ? Lesions

Not in guidelines:

"Don't let the sunset on a testis mass"



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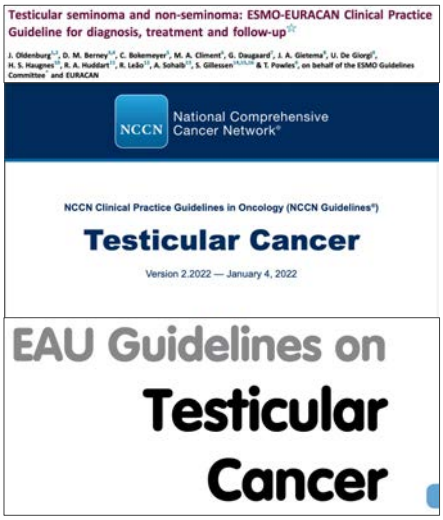
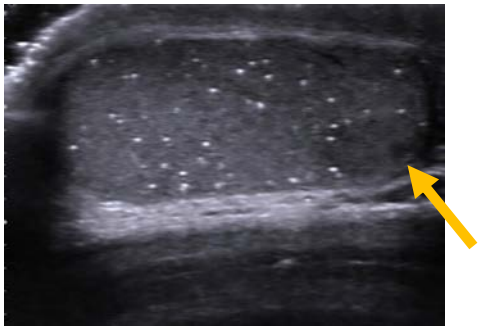
Testis Cancer Guidelines

Highlights from NCCN/ESMO/EAU

1. Stage I Risk factors
   - Seminoma: retes testes, >3 cm – 15-30% recurrence
   - NSGCT: LVI/embryonal – 30-50% recurrence
2. Minor elevation in STM ≠ chemo
3. PC-late relapses (>2 years) likely yolk sac or teratoma
4. PET only for seminoma, PC >3cm



Indeterminate Small Testis Mass



1. 5% risk each of contralateral GCT/GCNIS
2. 50-80% of lesions <2 cm + negative STM are benign
3. TSS can be discussed
   - Accuracy of frozen section (70%)
   - Biopsy of adjacent tissue (90% w/ cancer have GCIS)
   - Risk of local recurrence (7%)
4. For GCNIS or cancer: AS, XRT, or orchiectomy should be discussed given risk/benefits

RPLND for Seminoma

Primary RPLND for Seminoma

	SEMS (2021 GU ASCO)	PRIMETEST (2022 GU ASCO)
Population	- 55 patients with Stage II A/B Seminoma - Max LN 3 cm - 14 progression on AS - 15 sites in North America	- 33 patients with Stage II A/B Seminoma - 9 de novo, 19 progression on AS, 5 progression after carboplatin - Single site in Germany
Intervention	Primary RPLND (open, modified)	Primary RPLND (robot and open)
Comparison	Single Arm	Single Arm
Outcomes	- 10 recurrences (18%) at 2-years - 2 (4%) with major complications - No retrograde ejaculation	- 10 (31%) recurrences at median 2-years - 3 in-field recurrences - 3 (10%) with major complications - No difference between robotic and open

https://ascopubs.org/doi/abs/10.1200/JCO.2022.40.6_suppl.420
https://ascopubs.org/doi/abs/10.1200/JCO.2021.39.6_suppl.375

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Robotic RPLND

Primary Robot-assisted Retroperitoneal Lymph Node Dissection for Men with Nonseminomatous Germ Cell Tumor: Experience from a Multi-institutional Cohort

Jacob Taylor[a,], Ezequiel Becher[a], James S. Wysock[a], Andrew T. Lenis[b], Mark S. Litwin[b], Jacob Jipp[c], Peter Langenstroer[c], Scott Johnson[c], Marc A. Bjurlin[d], Hung-Jui Tan[d], Brian R. Lane[e], William C. Huang[a]*

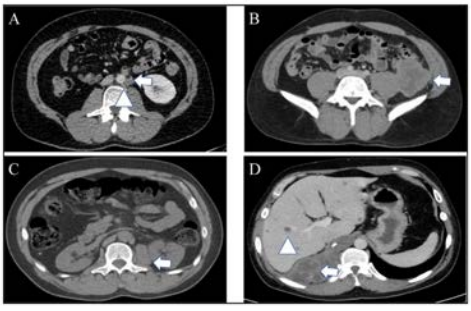
[a] NYU Langone Health, New York, NY, USA; [b] University of California Los Angeles, Los Angeles, CA, USA; [c] Medical College of Wisconsin, Milwaukee, WI, USA; [d] University of North Carolina at Chapel Hill, Chapel Hill, NC, USA; [e] Spectrum Health, Grand Rapids, MI, USA

Operative Time (median)	288 minutes
EBL (median)	100 cc
LOS (median)	1 day
Readmissions	6%
Major Complications	4%
Recurrences (median 15 months)	8%
Lymph Node Count (median)	32

Adverse Surgical Outcomes Associated with Robotic Retroperitoneal Lymph Node Dissection Among Patients with Testicular Cancer

Adam C. Calaway[a,], Lawrence H. Einhorn[b], Timothy A. Masterson[a], Richard S. Foster[a], Clint Cary[a]*

[a] Department of Urology, Indiana University School of Medicine, Indianapolis, IN, USA; [b] Department of Oncology, Indiana University School of Medicine, Indianapolis, IN, USA



>50 R-RPLNDs at UNC, 2 in-field recurrences

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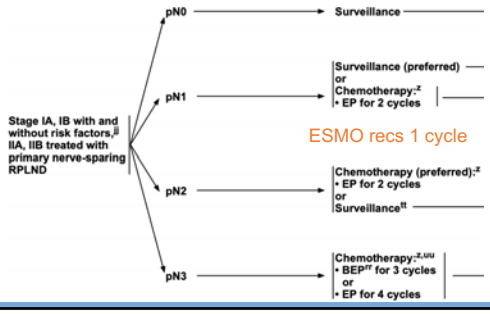
RPLND – Advances + Indications

Right Sizing Chemotherapy

1. High-risk stage I (LVI, embryonal)
2. Teratoma (high%, somatic transformation)
3. Stage II Seminoma
4. Reduce chemotherapy



original reports

Primary Retroperitoneal Lymph Node Dissection for Patients With Pathologic Stage II Nonseminomatous Germ Cell Tumor—N1, N2, and N3 Disease: Is Adjuvant Chemotherapy Necessary?

Isamu Tachibana, MD[1]; Sean Q. Kern, MD[1]; Antoin Douglawi, MD[1]; Yan Tong, MS[2]; Mohammad Mahmoud, MD[1]; Timothy A. Masterson, MD[1]; Nabil Adra, MD[3]; Richard S. Foster, MD[1]; Lawrence H. Einhorn, MD[3]; and Clint Cary, MD, MPH[1]

- 97 pts tx with pRPLND on AS
  - 41 N1, 46 N2, 10 N3
- 20% recurrence at median of 5-years
  - 50% historical rate for pN2, <10% with chemo
- No sig difference based on pN stage
- Lower recurrence if no LVI (6%) or <50% embryonal (11%)

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Monitoring Advances

TRISST: Modality + Intensity

original reports

Imaging Modality and Frequency in Surveillance of Stage I Seminoma Testicular Cancer: Results From a Randomized, Phase III, Noninferiority Trial (TRISST)

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- 669 stage I seminoma pts in 35 UK centers
- Non-inferior RCT: 7 vs 3 scans; CT vs. MRI
- >80% compliance

CT vs. MRI: 2.6% vs. 0.6%

7 vs 3 scans: 0.3% vs. 2.8%

✅ DFS similar across all 4 groups (85-89%)

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Special Thanks

Tracy Rose, MD, MPH

Urologic Oncology Fellows
- **Zach Feuer, MD**
- **Colton Walker, MD**
- **Kate Gessner, MD, PhD**

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Darcy Doege, BSN, RN **Mellisa Wheeler,** BSW, MHA

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