

W22: Genitourinary Cancer Survivorship: A Practical Master-

class

Workshop Chair: Matthew Rutman, United States 29 August 2018 14:05 - 15:35

Start	End	Торіс	Speakers
14:05	14:25	How to Develop a GU Cancer Survivorship Hospital Based	Andrew Peterson
		Programme	
14:25	14:50	Managing Complex Urinary Fistulas in the Cancer Survivor	Steven Brandes
14:50	15:15	The Devastated Urinary Outlet in the Cancer Survivor	Shyam Sukumar
15:15	15:35	Managing Stress Incontinence in the Cancer Survivor	Matthew Rutman

Aims of Workshop

The aim of this workshop is to discuss the impact of a Genitourinary Cancer Survivorship Programme and to discuss conditions and problems unique to the cancer survivor and decision making and managing complex urologic and quality of life issues in this patient population.

Learning Objectives

1. Introduce the concept and discuss the establishment of a Gentiourinary Survivorship Programme

2. Discuss the evaluation and complex management of urinary fistula in the cancer survivor

3. Discuss the evaluation of the devastated urinary outlet related to cancer treatment, the role of reconstruction of the outlet and when to abandon the outlet and proceed with supravesical diversion

4. Describe the evaluation and management of stress incontinence in the cancer survivor

Target Audience

Physician, Nurse Practitioner, Physician Assistants, Nurses, Social Work, Patient Advocates

Advanced/Basic

Advanced

Suggested Learning before Workshop Attendance

None- interest in Genitourinary cancer survivorship, urology residency and advanced fellowship training

Suggested Reading

1. Madden-Fuentes RJ, Roontz BF, Harrison MR, George DJ, Davidson B, Gilmore BF, Moul JW, Mantyh C, Peterson AC. How can we effectively address the medical and psychological concerns of survivors of pelvic malignancies? Oncology (Willston Park) 2017;31 (4): 286-94.

- 2. Gupta S and Peterson AC. Stress Urinary Incontinence in the prostate cancer survivor. Curr Opin Urol 2014;24: 395-400
- 3. Hanna JM, Peterson AC, Mantyh C. Rectourethral Fistulas in the cancer survivor. Curr Opin Urol 2014;24:382-388

How to develop a GU Cancer Survivorship Hospital Based Program Dr. Andrew C Peterson, Duke University Department of Urology, USA

Cancer survivorship, when it comes to Urologic issues is an under-recognized and an under-treated problem. To the cancer center, cancer survivorship often means a patient who has no evidence of disease (NED) and the continuing treatment plan is typically to transition care back to his internist, and out of the cancer center. This is an antiquated, narrow and overly focused view of the cancer survivor. Sadly, the focus of the Cancer Center is overly focused on survival statistics and quantity of life, and oft-times blind to quality of life (QOL). Too commonly, QOL is not properly addressed in the pre-cancer treatment, or in the informed consent, or in the patient care plan.

Dr. Peterson will discuss his experience in establishing a viable GU cancer survivorship program. GU cancer survivorship requires a collaborative and multidisciplinary approach to management. This population includes survivors of non-GU malignancies as well, where the sequela of cancer treatments have impacted urinary and/or sexual function and thus overall QOL. It's important to identify like-minded physicians interested in caring for this complex group of patients to help establish a survivorship program. A network of multiple specialties and ancillary support is critical; this includes colorectal surgery, gynecologic oncology, female-pelvic reconstructive surgery, as well as psychological and nutrition support. The practical aspects of developing and maintaining such a program will be detailed by Dr. Peterson. The goal of this course is increase awareness and understanding the sequela of cancer treatments and to help improve the QOL of our patients.

Managing Complex Urinary Fistulas in the Cancer Survivor Dr. Steven B Brandes, Columbia University Department of Urology, USA

The development of urinary fistulae is a potentially devastating outcome related to the treatment of pelvic malignancies. Dr. Brandes will discuss the management of urinary fistulae following surgery, chemotherapy, and radiation or combination thereof, for pelvic malignancies. Certainly, it is paramount to first understand that status of the patients' disease process, is there evidence of persistent or recurrent cancer? This must be addressed prior to proceeding with further evaluation and definitive management of urinary fistulae. Secondly, it is important to understand the patients' goals and the impact on their quality of life. Urinary fistula may be of several varieties, including but not limited to vesico-vaginal, uretero-vaginal, rectourethral, prostato-symphyseal, and urethro-perineal fistulae. It is important to take into consideration the factors associated with the fistulae, including associated radiation treatments, prior attempts at repair, health of surrounding tissues, and overall functional and nutritional status of the patient. An anatomic and functional evaluation of the bladder and urethra as well as determining the presence and degree of urinary incontinence is critical prior to any reconstructive efforts. If the fistula is involving the gastrointestinal (GI) tract, anatomic and functional evaluation is also important. Dr. Brandes will discuss a variety of reconstructive techniques for management of these fistulae, which often includes tissue transfer techniques, as well as the pitfalls of such reconstructive efforts. Additionally, we will address advances in the field of genitourinary reconstruction and the increasing utilization of minimally invasive surgical approaches in an effort to reduce morbidity and hasten recovery.

The Devastated Urinary Outlet in the Cancer Survivor Shyam Sukumar

Germane to the all urologists is the management of bladder neck contractures/urethral strictures, which are most often related to prostate cancer management. However, this group of patients also includes those with refractory incontinence, incompetent outlets and fistulae. Not infrequently, these patients are teetering on the edge of retention and incontinence and after managing obstruction, it is necessary to then manage their incontinence, which will be discussed more in detail by Dr. Rutman. It is important to take into account the overall health of the patient and their goals in management and expectations prior to proceeding with any major reconstructive surgery. Furthermore, it is even more important to know when reconstructing the bladder outlet will not be successful and choosing alternatives for management: in the case of the devastated outlet.

Dr. Sukumar will detail the evaluation and management of the devastated outlet and when a urinary tract may be deemed devastated, either by multiple failed prior attempts at reconstruction or in patients with poor performance status who are unfit for major surgery. The management paradigm for patients with a devastated outlet include a spectrum of management approaches depending on the goals, expectations and performance status of the patient. This may include, suprapubic tube placement, bilateral nephrostomy tubes +/- ureteral embolization, bladder neck closure/urethral ligation and supravesical diversion, continent or incontinent urinary diversions.

Managing Stress Incontinence in the Cancer Survivor Dr. Matthew Rutman, Columbia University Department of Urology

Male and female urinary incontinence in this complex population due to prior pelvic surgery and history of prior chemotherapy and/or radiation therapy. Consistent among the cancer survivorship population is the need to address cancer status, performance status and keeping in mind QOL goals and expectations of the potential treatment options. The management of female voiding dysfunction after pelvic surgery and/or radiation is complicated by abnormal tissue planes and impaired bladder function and thus modification of surgical techniques is required. Similarly, the timing and selection of management of male stress incontinence in the GU cancer survivor will be discussed, as well as revision techniques for male urethral slings and artificial urinary sphincters.

Establishing a Hospital Based Cancer Survivorship Program

Andrew C. Peterson, MD, FACS





Who is a 'survivor?'

Anyone who has been diagnosed with cancer is a survivor— from the time of diagnosis to the end of life

Caregivers and family members are also cancer survivors (Source: NCCS, 1986)

Three distinct phases: 1. The time from diagnosis to the end of initial treatment 2. The transition from treatment to extended survival 3. Long-term survival









- Physical/Medical (second cancers, cardíac dysfunction, pain, lymphedema, sexual impairment, incontinence)
- Psychological (depression, anxiety, uncertainty, isolation, altered body image)

Prestical/Social (changes in interpersonal relationships, concerns regarding health or life insurance, job lock/loss, return to school, financial burden)

(sense of purpose or meaning, appreciation of life)



Enhance quality of life for cancer survivors Physical Psychological

- Practical
- Existential
- Interventions that promote health and well-being
 - Exercise
 - Pain management
 Coping

What Cancer Survivors Fear?

- -fear of recurrence 75%
- -school issues 73%
- -sadness and depression 65%
- -grief and identity 64%
- -energy 53%
- -concentration 53%
- -sexual function 48%
- -neuropathy 39%
- -pain 30%









What does the research say?

- 3 factors important to cancer survivors' health-related outcomes (both QOL and survival) are:
 - Having access to state of the art care
 - Being active in one's care
 - Having or perceiving adequate social support

Key to all of the above, is access to appropriate, accurate and timely information and education.



The Survivorship Program

- Comprehensive Care Available
 - At time of diagnosis
 - During Treatment
 - Post Treatment
 - Recurrence/Progression
 - End of life
- · Services Provided to
 - Patients
 - Survivors
 - Family/Caregivers

The Successful Survivorship Program

- Awareness and education
- Evidence to identify what is being done well & what needs to improve
- Innovation – Multi-D clinics
 - Algorithms
- Sensitivity to current economic climate
- Patient outcomes

The Survivorship Program

Requirement from the COC

All accredited cancer institutes

Most have been giving this care albeit disjointed



34 Standards for Cancer institutes



Psychosocial Support

- Patient and family support groups
- Chaplaincy
- Genetic counseling
 - Financial support counseling
- Psychological support including family therapy and stress management
- Integrative medicine: yoga, massage
- Exercise
- Nutrition
- Lymphedema management
- Recreation therapy
- Art therapy
- Pet therapy
- Self-image boutique
- Duke Fertility Center
- HomeCare and Hospice (and Bereavement Center)

GU Cancer Survivorship: The Practical Application

Cancer Survivorship

- · How does this apply to practice?
 - Most likely seeing patients everyday that are "cancer survivors"
 - Coordinating care among specialists
 - PCP/PA/NP are often first point of contact for many patients who have issues

Our Clinic Model

- Established GU Survivorship Clinic in cancer center (DCI) so patient care is centralized
- Referrals from anyone: oncologists (GU, Colorectal, Breast, Gyn), nurses
- Evaluation prior to, during or after cancer treatment
- Multidisciplinary approach

Center for Cancer Survivorship

"We believe that individuals become cancer survivors at the moment of diagnosis and are survivors for the balance of life."

 Tina Piccirilli, Director, Duke Center for Cancer Survivorship

GU Issues

- Urinary incontinence
- Sexual and reproductive health
- Rectourethral fistula
- Radiation cystitis
- · End stage lower tract

GU Issues

- Urinary incontinence
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Urinary Incontinence

- CC: "leaking urine and this gets worse with activity"
- HPI: 68 yo male treated for prostate cancer with prostatectomy and radiation
- Wears 4-5 pads/day

What is out there?











Urinary Incontinence

- Not just in men after treatment for prostate cancer
- Colorectal cancer treatments can also cause incontinence
- 60% of women report urinary incontinence issues after colorectal cancer treatment

Panjari et al. J Sex Med. 2012 Nov;9(11):2749-58. Sexual function, incontinence, and wellbeing in

GU Issues

- Urinary incontinence
- · Sexual and reproductive health
- Rectourethral fistula
- Radiation cystitis
- End stage lower tract

Infertility

- CC: "can I still have kids after cancer treatment"
- HPI: 24 yo male diagnosed with testicular mass.
- Orchiectomy specimen shows characteristics that are high risk for recurrence, may need chemotherapy or retroperitoneal lymph node dissection

Infertility

- What should be discussed with this patient?
- Options for sperm banking
- Risk of infertility with chemotherapy and surgery

Infertility

- JCO
 - Survey of young men between 14-40 who underwent cancer therapy that could affect fertility
 - Only 61% said fertility was even discussed
 - Only 51% said sperm banking was offered
 - Only 25% banked sperm

Schover et al. J Clini Oncol. 1;20(7):1880-9.Knowledge and experience regarding cancer, infertility, and sperm banking in younger male survivors.

Onco-fertility

- Two urologists who treat erectile dysfunction and testicular dysfunction
- PA sees erectile dysfunction clinic
- Added faculty for Onco-Fertility
- Offer sperm banking and counseling

GU Issues

- Urinary incontinence
- Sexual and reproductive health
- Rectourethral fistula
- Radiation cystitis
- End stage lower tract

Fistula

- CC: "I'm passing air through my penis and urine out my rectum"
- HPI: 57 yo male who underwent robotic prostatectomy 6 weeks ago. The catheter was removed but he was leaking urine out his rectum
- Cystogram confirmed rectourethral fistula







Multidisciplinary Approach

- Colo-Rectal Surgery
- Plastic Surgery
- Nutrition
- Wound Care/Stoma nurse
- Clinic appointments scheduled on the same day for patient convenience

GU Issues

- Urinary incontinence
- Sexual and reproductive health
- Rectourethral fistula
- Radiation cystitis
- End stage lower tract

Extirpative Surgery:

Sometimes necessary

Beware progressive disease with radiation

Select for continent and non-continent diversion options

Can use small bowel – <u>cautiously</u>

GU Cancer Survivorship:

Establishing a New Fellowship

Changing the Culture

DUKE UNIVERSITY MEDICAL CENTER Director, Graduate Medical Education Duke University Hospital

Associate Dean, Graduate Medical Educat Duke University School of Medicine March 14, 2013

Andrew C. Peterson, MD, FACS Program Training Director

 Approval of New ICGME Program Gentourinary Cancer Survivorship Fellowship Program (#133000

a Peerson, a Ad hoc Committee of the Institutional Committee for Graduate Mer

at Dake University Hospital. The application documentation indicates there will be one trained per year and the division of the program is one year. It is also the Committein understanding, based on information included in the ICOME program application, that the training and barefacts cost related or this traines will be provided through existing handle obtained from an unrestricted grant from includy (American Merclas Systems). Plasae axis with the Adfiliation Strike is a some sharing on assement is an advantationed.

The PATIENT is as important as the CANCER

Aims and Awareness

- Evaluation and Management of all morbidities
- Incontinence
- Bladder dysfunction
- Infertility issues
- Sexual dysfunction
- Fistula and Stricture disease
- Diversions and their revisions

Necessary Resources

- Mentors
- Multidisciplinary Team
- Case exposure
- Support

Cost of a Fellow

- Faculty privileges
 - Independent clinic
 - Independent OR time
 - Assistant on all complex cases
- 65,280 salary + 32,000

 taxes /building funds/overhead/malpractice
- 92,280 total expense
- 38,000 revenue
- 54,280 expenditure

Effect on Training

- Intra and interdepartmental Education
- Intra and interdepartmental Collaboration

GU Cancer Survivorship

- Goals
 - Multidisciplinary approach
 - Acknowledge patient as cancer survivor
 - Address issues before, during and after cancer treatment that affect quality of life and outcomes
 - Communication between members of healthcare team



Goals of Cancer Survivorship

Adding <u>years</u> to life & Adding <u>life</u> to years





Disclosures	PHILADELPHIA
Affiliations to disclose [†] :	
None	
 Maniformed from given proventation Funding for speaker to attend: 	
Self-funded	
X Institution (non-industry) funded Sponsored by:	





Examination under Anesthesia

- DRE/ Pelvic exam
 - Mobile or Fixed?
- PE (abdomen, inner thigh, perineum)
 - Assess quality of local tissues and skin
 - RT changes? Loss of hair?



Examination under Anesthesia

- RUG/ VCUG/ Cystogram
- Cystoscopy
- Flex Sig or Rigid Proctoscopy
 Enlist colorectal colleague
- RPG or Ureteroscopy
 - ? Fistula proximity to UO or trigonal ridge
 - R/O ureteral stricture/ fistula

Assess Fistula Size and Location



 Fistula Biopsy - strongly consider fistula tract biopsy if prior resection margins (+), advanced tumor stage, or not definitively NED







Pelvic RT – Assess Bladder for Collateral Damage

- Assess bladder capacity
 - Hard to do if BN or bladder fistula is large
 - Voiding diary, UroD
 - Obstruct fistula under anesthesia to assess Anesthetic capacity > Awake
- Assess bladder for RT changes
 - Telangiectasias?
 - Radiation cystitis?
 - Gross hematuria?



Assess Physiologic Reserve

- Functional assessment
- ADL (Barthel Index, Katz Index)
- Physical Performance Test (PPT)
- Sarcopenia (Psoas muscle on CT imaging)
- Surgical Risk Calculator (ACS/ NSQIP) "riskcalculator.facs.org"
- Frailty Index (predicts surgical outcomes as to complications, LOS, DC to a facility, death)
 - Hopkins Frailty Score
 - Canadian Study of Health and Aging

Physiologic Reserve Interventions

- Nutrition supplements
 - Protein shakes
 - G tube
 - TPN
- Appetite Stimulants - Remeron, Megace, Marinol
- Physical Therapy
- · Smoking cessation program and meds

Shared Decision Making

- What is the patient's #1 goal?
 - Void normally out of native urethra?
 - Good quality of life?
 - How important is body image?
 - Stoma acceptable? Cath Stoma Acceptable?
 - · Consultation with pt. advocate very helpful
- What bothers him/her the most ?
 - Incontinence? (Day time? Night time?)
 - Pelvic Pain?
- · Set realistic expectations
 - Long process till RUF "cured" 6mo- 1 yr.

Do All Patients Need Fecal Diversion?

- Fecal Diversion Indications
 - RUF from RT, HIFU, Cryo
 - Recurrent UTI, Symptomatic Fecaluria (Dysuria, severe OAB from feces, Foley obstruction, severe penile/ genital pain),
 - Severe painful rectal ulcer/ rectal pain
 - Overwhelming urinary/ fecal incontinence Loop Ileostomy
- Colostomy Vs
- Take down complex - Distal diversion
- Take down easy - Proximal diversion
- Ostomy easy to care for
- Ostomy leaks often and pt. often gets dehydrated

Can a small post RRP/ RALP RUF heal with only diversion?

- Small surgical injury
- Prolonged bladder rest with Foley catheter
- +/- Fecal diversion
- +/- Suppressive antibiotics
- No pelvic RT or HIFU or Cryo
- Up to 25 % of such injuries will heal without major reconstruction

Approaches to Fistula Repair



- Transabdominal (a)
- Kraske laterosacral (b)
- Posterior trans-sphincteric (c)
- Trans-anal (d)
- Perineal (e)

RUF Etiologies/ Inci	de	nce
Radical prostatectomy without RT	12	28.6%
Prostate brachytherapy	10	23.8%
Rectal cancer s/p APR and RT	6	14.3%
Prostate cryoablation	2	4.8%
Prostate cryoablation after radiation for rectal cancer	2	4.8%
High Intensity Focused Ultrasound	2	4.8%
Sigmoid colectomy for diverticulitis	2	4.8%
Intersphincteric anal abscess	2	4.8%
Radical prostatectomy and RT	2	4.8%
XRT and salvage prostatectomy	2	4.8%
N=	42	
Ferguson	Brar	ndes J Uro















































Ureteral Embolization

- 52 ureters embolized
- 100% success!
- Mean delay to dryness (< 1 pad pd) = 3 days
- 10% (3/29) Staged urinary diversion
 2 transverse colo-conduits, 1 ileal conduit
- 79% (23/29) Dead @ mean of 8.1 mo.
- 17% (5/29) Alive @ mean of 44 mo.





Ureteral Embolization

Best Candidates:

- Poor performance status
- Limited life expectancy
 - Definitive management
- Staged method to control urine leakage for poor performance status pts.
 - Planned delayed supra-vesical reconstruction

Take Home Messages

- Shared decision making
- · Set realistic expectations
- Reconstruction is complex and requires the whole surgical armamentarium
- Long process -- min 6 mo. to 1 yr.
- Consider supra-vesical diversion



THE DEVASTATED URINARY OUTLET IN THE CANCER SURVIVOR

SHYAM SUKUMAR, MD



SHYAM SUKUMAR

Affiliations to disclose[†]:

NO CONFLICTS OF INTEREST

Funding for speaker to attend:

- Self-funded
- Institution (non-industry) funded
- Sponsored by:

	Long-Term Functional Outcomes after Treatment for Localized Prostate Cancer					
	Matthew J. Resnick, M.D., Tats Peter C. Albertsen, M.D	uki Koyama, Ph.D., K ., Michael Goodman,	ang-Hsien Fa M.D., M.P.H.	n, M.S.,		
Table 2. Sur	vey Responses on Selected Items Regard	ling Urinary, Bowel, and S	exual Function.*			
Outcome		Prostatectomy	Radiotherapy	Adjusted Odds Ratio (95% CI)†		
		pen	tent			
Urinary inco	ntinence					
No control o	r frequent urinary leakage					
2 yr		9.6	3.2	6.22 (1.92-20.29)		
5 yr		13.4	4.4	5.10 (2.29-11.36)		
15 yr		18.3	9.4	2.34 (0.88-6.23)		
Bothered by	dripping or leaking urine‡					
2 yr		10.6	2.4	5.86 (1.93-17.64)		
5 yr		12.9	2.9	7.66 (2.97-19.89)		
15 vr		17.1	18.4	0.87 (0.41-1.80)		

THE DEVASTATED URINARY OUTLET IN THE CANCER SURVIVOR

- BULBO-MEMBRANOUS STRICTURE FROM XRT
- INTRAPROSTATIC OBSTRUCTION
- BLADDER NECK CONTRACTURE









INTRAPROSTATIC OBSTRUCTION





	Carr Bladder Dysfanct Rep (2014) 11:79-87 DOI 10.1007/s11884-016-0355-6		Canada and
	CANCER-ASSOCIATED VOIDING D The Devastated Bladde Therapy for Prostate C Skyam Sakamar ¹ · Sean P. Ellon ¹	visionerion (A perfession, soction edito r Outlet in Cancer Survivors Cancer	8) After Local
	n	Rate of BNC	Follow up
Erickson et al	4132	2.5%	44mo
Borborogiu et al	467	11.1%	4.5 years
Hu et al	2292	25.7%	NA
Jarosek et al	28,527	19%	10 year propensity weighted incidence



LOWER BNC INCIDENCE W RALP

- RALP: 0.2%-1.4%
- MAGNIFIED VISUALIZATION
- LOWER EBL
- IMPROVED INSTRUMENT MANEUVERABILITY

		HR (95% CI)
Primary treatment:		
RP vs WW	< 0.0001	10.440 (3.276-33.272)
RP+EBRT vs WW	0.1086	4.386 (0.721-26.691)
Cryotherapy vs WW	0.2044	2.641 (0.589-11.831)
BT vs WW	0.4297	1.684 (0.462-6.136)
BT+EBRT vs WW	0.0231	4.560 (1.232-16.875)
EBRT vs WW	0.3905	1.773 (0.480-6.552)
Hormones vs WW	0.5130	1.531 (0.427-5.490)
Age at primary treatment:		
60-69 vs Younger than 60	0.0358	1.382 (1.022-1.871)
70 or Older vs younger	< 0.0001	2.206 (1.514-3.215)
than 60 y		
3MI:		
Overwt vs not overwt	0.0489	1.401 (1.002-1.959)
Obese vs not overwt	< 0.0001	2.254 (1.566-3.244)

- PROLONGED URINARY LEAK

- INTRA-OP EBL
- SURGICAL CLIP MIGRATION (LAPRA-TY, WECK)
- Excessive luminal narrowing (BN recon)
- LOCAL TISSUE ISCHEMIA
- ANASTOMOTIC TENSION



Review Article Postprostatectomy Anastomosis ۲ NOT A URETHRAL STRICTURE Stenosis: A Systematic Review Joseph Song, Jairam Eswara, and Steven B. Brander 594 papers identified; 22 met criteria for review MAJOR LITERATURE WEAKNESSES: ALL RETROSPECTIVE AND OXFORD LOE 4 SERIES · ETIOLOGY STENOSIS LENGTH OR LUMEN SIZE - NO DETAILS RALP v RRP? Bladder neck oh • FLOW-RATE, IPSS, OR PVR- NO DETAILS POST OP BLEED? NO UNIFORM ACCEPTED GRADING SCALE URINARY LEAK? NO UNIFORM DEFINITION OF SUCCESS

ADJUVANT EBRT?





Study	Follow-up (mo)	Initial Success Rate (%)	Eventual Success Rate (%)	De Novo Incontinence (%)	CIC
Borboroglu, 200011	54	58	NR	0	No
Park, 2001 ²²	12	NR	92.3	NR	3 mc
Besarani, 2004 ¹⁸	30	81	100	5	Yes
Thiel, 200648	51	77	100	NR	No
Kumar, 2007 ¹⁹	33	89	89	0	No
Giannarini, 2008 ¹⁵	69	6.5	NR	0	No
Kravchick, 2013 ¹⁷	56.4	10.3	NR	NR	No
Kravchick, 2013 ¹⁷ (with steroid)	62.5	78.6	93	0	No
Totals	47.5 (Avg)	53	97	0.6	ר



		THIBN			
Study	No. of Prior AS Treatments	Follow-up (mo)	Initial Success Rate (%)	Eventual Success Rate (%)	De Novo Incontinence (%)
Yurkanin, 200149	0	31	87	100	3
Anger, 2005 ²⁴	0	7.4	17	N/A	NR
Giannarini, 2008 ¹⁵	0	69	74	100	0
Eltahawy, 2008 ²⁵	0-1	24	83	96	NR
Vanni, 2011 ¹³	Multiple	12	72	94	5.6
Kravchick, 201317	1	49.3	50	88	12.5
Total		37.2 (Avg)	74.1	97.1	4.6

	DE	EP TUIBN	
Study	Follow-up	Initial Success	Eventual Success
	(mo)	Rate (%)	Rate (%)
Gousse, 2005 ²³	15	77	100
Anger, 2005-A ²⁴	26.6	100	100
Anger, 2005-B ²⁴	22.4	71	100
Totals	23.2 (Avg)	90.5	100
	De novo ind	continence = 100%	100





Study	Follow-up (mo)	Initial Success Rate (%)	Eventual Success Rate (%)
Elliott, 2001 ³⁷	17.5	89	100
Anger, 2005 ²⁴	7.4	78	N/A
Elliott, 2006 ³⁸	24	80	N/A
Magera, 2009	34.8	52	76
Borawski, 2010	37	76	NK
Totals	30.2 (Avg)	65.2	86.1









Study	Follow-up (mo)	Initial Success Rate (%)	Eventual Success Rate (%)	De Novo Incontinence
Theodoros, 2000 ⁴⁵	24.4	83	NR	NR
Elliott, 2006 ³⁸	24	78	NR	NR
Simonato, 2007	38 63	100	95	36
Totals	41.3 (Avg)	74.0	96.1	58.8

OPEN REPAIR

- POTENTIALLY MORBID
- NEEDS A HIGHLY MOTIVATED AND WELL INFORMED PATIENT
- CHALLENGING SURGERY REQUIRES BEING FACILE WITH MULTIPLE RECONSTRUCTIVE TECHNIQUES
- LESS THEN IDEAL OVERALL SUCCESS
- SUPRAVESICAL DIVERSION MAY ULTIMATELY BE NEEDED

OPEN VESICO-URETHROPLASTY

Surgical Approaches

1. PERINEAL APPROACH

MAY REQUIRE INFERIOR PUBECTOMY

2. ABDOMINO-PERINEAL APPROACH

- SUPERIOR PUBECTOMY VS TOTAL PUBECTOMY AND OMENTAL FLAP
- 2 TEAM APPROACH PREFERRED

OPEN VESICO-URETHROPLASTY

Post Reconstruction Incontinence

PLANNED AUS AT 6-12 MO. – IF BN OPEN * CONSIDER TRANS-CORPORAL CUFF









URETHRAL-VESICAL EPA

- "URETHRAL ADVANCEMENT FLAP SURGERY"
 RELIES ON BIPEDAL CORPUS SPONGIOSAL C
- DETACHED FROM ITS PROXIMAL VASCULAR SUPPLY THE URETHRA IS DEPENDENT
- CIRCUMFLEX PENILE ARTERIES



SURGICAL GOAL

- TENSION-FREE ANASTOMOSIS
- Spatulated urethra
- MUCOSA TO MUCOSA APPOSITION
 URETHRA TO BLADDER
- LIBERAL EXCISION OF "SCAR"





DEVASTATED OUTLET

- BLADDER NECK STENOSIS BEYOND REPAIR
- FAILED MULTIPLE ENDOSCOPIC METHODS
- OBLITERATIVE STENOSIS



• SURGICAL DECISION MAKING:

- OPTIONS:
- ILEAL CECAL VALVE
 (INDIANA, FLORIDA ETC.)
- ILEAL INTUSSUSCEPTION (MAINZ, KOCK ETC.)









8







STOMA COMPLICATIONS

- Stomal stenosis
- 30 55%
- ↓ WITH V-FLAP AND VQZ-FLAP
- PAIN + DIFFICULT CATH
- CONTINENCE
 - 95- 99 % (PEDS)
 - 75-95% (ADULTS)
 - DURABLE RESULT.

Gowda et al: BJU 2008Van der Aa et al: Neuro UroD 2009



BNC TREATMENT CONCLUSIONS

1. A GRADED APPROACH

- → Each successive intervention is more invasive
- The more invasive the treatment
- → EXPECT MORE DE NOVO SUI
- → MAY NEED AN INTERVAL SLING OR AUS
- 3. DEEP TUIBN OR OPEN BN RECONSTRUCTION
 - →ASSUMES <u>SEVERE</u> POST OP ISD
 - →STAGED AUS FOR ISD (> 6 TO 12MO.)

TAKE HOME MESSAGE

- BULBOMEMBRANOUS STRICTURES, BLADDER NECK CONTRACTURES AND INTRAPROSTATIC OBSTRUCTION ARE MAJOR MANIFESTATIONS OF THE DEVASTATED OUTLET AFTER PROSTATE CANCER THERAPY
- OPEN BN RECONSTRUCTIONS CAN BE TECHNICALLY DIFFICULT AND HAVE MODERATE SUCCESS
- FOR OBLITERATIVE BNC & HIGH RISK URETHRAL STRICTURE DISEASE → CONSIDER SUPRA-VESICAL DIVERSION



Genitourinary Cancer Survivorship: A Practical Master-Class	O ICS 2018 PHILADELPHIA	Genitourinary Cancer Survivorship: A Practical Master-Class	PHILADELPHIA
Genitourinary Cancer Surviv A Practical Master-Cla	vorship: ss	WORKSHOP SCHEDULE: 14:05 HOW TO DEVELOP A GU C SURVIVORSHIP HOSPITAL BASED F • ANDREW PETERSON	ANCER PROGRAMME
WORKSHOP FACULTY: • ANDREW PETERSON • STEVEN BRANDES		14:25 MANAGING COMPLEX UR IN THE CANCER SURVIVOR • STEVEN BRANDES 14:50 THE DEVASTATED URINAR CANCER SURVIVOR	INARY FISTULAS Y OUTLET IN THE
• SHYAM SUKUMAR • MATTHEW P RUTMAN			NTINENCE IN THE







Matthew P. Rutman, MD	O PHILADELPHIA
Affiliations to disclose [†] :	
None	
• All financial tiss (over the last year) that you may have with any business organization with respect to the subjects ment	ioned during your presentation
Funding for speaker to attend:	
X Self-funded	
Institution (non-industry) funded	

Managing Stress Incontinence in the Cancer Survivor

- Objectives from syllabus:
- The cancer survivor is a unique population that is complicated by prior pelvis surgery, concomitant chemo and radiotherapy, performance status and patient expectation
- Method as to properly selecting the best quality of life operation with patient
 performance status, manual dexterity and expectation will be detailed
- Specifics as to how to modify surgical techniques, selection and timing as to urethral slings and artificial urinary sphincters for the cancer survivor (post radiation, post chemotherapy) will be detailed

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Patient Evaluation

History

- -Pre-op continence, defecation
- H/o XRT, bladder neck contractures, TURP
 Assess physical & mental capacity to work AUS if being considered
- Physical exam
 - -GU tract, neuro-urological
- -S2-S4 segments perineal sensation, digital rectal exam
- Urinalysis, Urine culture, post-void residual
- -Rules out UTI and overflow

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 Evaluation of PPI

 • No universally agreed upon method to quantify degree and severity of PPI

 • Simplest: ask about pad use over a period of time, but....

 • Some change due to odor, convenience, wetness, etc.

 - 24 hour pad test and 1 hour pad test have been used

Cystourethroscopy – Mandatory

- Must r/o anastomotic or urethral stricture pre-op
 –If contracture, treat and ensure recurrence free for 3 months prior to
 anti-incontinence surgery
- Hx of bladder pathology (bladder cancer, recurrent stones) -May need future transurethral access
- ?? Assess residual sphincter function -I don't find that to be helpful or reproducible

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Urodynamics in Eval of PPI Rule out detrusor overactivity Particularly in cases with MUI, significant UUI component Hx of XRT & concerns about compliance Y Assess Valsalva leak point pressure Does not correlate well with degree of UI on 24 hour pad test I don't find UDS to be helpful in straightforward cases

Is Bladder Contractility Important (BCI)? Paucity of evidence re: impaired contractility AUS outcomes same with normal vs. weak detrusor Potentially obstructive sling with detrusor underactivity may pose risk of retention Sling is designed to prevent leakage with straining



Interaction Decays not membrand	e-5 Al men	Both undefined	95 (905) cured or improved	Case writes		Read on all page
Dukoutine 60mg takin daily for an unerage of \$4 wk	8-30 Al man	>32 (69 = 15, radical systemum; + orthotopic moltabler =5)	Significant decrease in mean daily public (from AD to 4.2), 3708 (36.9%) completely dry (2 drug direct transitions)	Case artists	*	statester er al psp
Duknotine Initially 20 mg torke daily for 1 wk.	n-18 Al men	>3 (62 - 18)	Muss loss with pad test decreased from 124 g to 58 g; increase in MICL	Case antes		Zaharios et al (20)
Dukentine Polytic Borr muscle training s40 mg telen daily for 4 me	e- 112 Až men	35 d alter extinter record (07 - 11.2)	Significant decrease in pad use, after 36 wk 39/50 (2930) completely day we. 23/52 (51.95) planetic (39 drug discuss timuctional	Ran-domined control total	16	Plocamo et al (12)
Cont pelv the and	clusions: O ic floor mu treatment well-desig	ne high-level study w scle training shows p of male SUL These re med trials to allow treatment of male S	rith duloxetine in combina reliminary but promising sults have to be confirmed definite recommendation	ation with results in d in larger is for the	1	









Male Slings

- With > 85% patient satisfaction rates with AUS why offer a sling?
- · Patients who do not want a mechanical device
- · Patients who cannot use a mechanical device
- · Patients with lesser degrees of incontinence who feel an AUS is not warranted

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Male Slings

- 2006, AdVance sling (Boston Scientific) introduced
- 2006, AdVance sing (Boston Scientific) Introduced -Most frequently used sling worldwide -Self anchored bilateral polypropylene mesh arms placed transobturator -Sling is secured at proximal bulbar urethra -Hypothesized MOA (Rehder et al, Adv Urol, 2016): The AdVance Sling relocates the posterior urethra and EUS region to it's native position, has venous sealing effect and increases functional urethral length
- 2010, AdVance XP introduced in Europe
- -Anchors and increased length of sling arms and improved needle shape

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AdVance Sling

- First retroluminal transobturator sling FDA approved in October 2007
- Mechanism based on relocation of proximal urethra
- Sling exerts dorsal sphincter support and NOT primarily compression

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Sling placed using a tran

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Postoperative Plan for Perineal Slings

- Foley catheter for 0-3 days (some leave without)
- No sexual relations for 6-8 weeks
 Refrain from strenuous activity for 6 weeks (lifting > 1 gallon milk)
- No hot tubs, jacuzzi, or bathing for 6 weeks

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	٨d	/a	nc	e Outo	comes	
Study	Device	# of pts	% with PPI	Study Design	Mean/median follow-up, mo	Findings
Cornu, et aL ²⁰	AdVance	102	95	Prospective, single center	13	Cure rate 62.79 pads)
Bauer, et aL**	AdVance	70	100	Prospective, single center	12	71.1% cured or improved
Rehder, et al.44	AdVance	118	NR	Prospective, single center	12	73.7% cured (n
Rauer, et al.*2	AdVance	126	93	Prospective, single center	27	51.6% cured(no one dry pad)
Cornu, et al. ⁴³	AdVance	136	100	Prospective, single center	21	62% cure rate (
Rehder, et al. ⁴⁴	AdVance	156	93	Prospective, multicenter	36	51.3% cured or improved
Zuckerma et al. st	n AdVance	102	86.4	Retrospective, single center	36	62% cured or i
Kowalik, e al. ^{sc}	¢ AdVance	30	100	Prospective, single center	30	60% cured (no one dry pad)
Kretschm et al. ⁴⁷	er AdVanceXP	41	100	Prospective, single center	33.1	46.3% cured (n no differences i irradiated patie
Bauer, et al.**	AdVanceXP	94	100	Prospective, multicenter	24	73.1% cured (n no intraoperati complications
Raner, et al.**	AdVanceXP	115	100	Prospective, multicenter	36	66% cured (no intraoperative term complicat
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CAL CENTER						j.



Perineal Sling: Potential Advantages vs AUS Compresses only the ventral aspect of the bulbar urethra -dorsal and lateral blood flow intact -minimizes urethral atrophy -cushions urethra, minimizes risk of erosion, atrophy · No mechanical components to malfunction -No connections, no fluid COLUMBIA CANTER MEDICAL CENTER UROLOGY

Adjustable Retropubic Slings (ARS)

- Inserted suburethrally on top of BS muscle
- Place pressure on bulbar urethra to improve continence
- · Postoperatively, tension is adjusted to achieve continence
- Argus and Argus T (Promedon, Argentina), ATOMS (Austria) and Remeex (Neomedic, Barcelona, Spain)
- EAU guidelines state there is no evidence that adjustability of a sling
 offers a benefit for the patient

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	What shoul	d you offer?	
AUS	Preferred>	1. ISD / weak bladder	
		2. Severe incontinence • Unlikely to have predictable success w/ sling • Quadratic sling under investigation	
		3. XRT	
		4. Revision surgery	
Cons	ider a sling ————>	1. Mild leakage	
		2. Moderate incontinence • Lengthy discussion	
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Continence Balloon Implants

• Pro-ACT (adjustable continence therapy): Uromedia Inc, MN, USA

 Act (augustative common sector)
 Approved for use in US
 -2 silicone balloons placed in periurethral posi
 -Adjustable via titanium port placed in scrotum -Gregori et al. reported on 79 patients with PPI 66.1% dry, 25.8% improved, 8% failure at 25 month • 2.5% bladder perf, 1.2% urine retention, 3.8% migr

-Advantages over AUS: easy insert, low cost, a

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Recurrent PPI After Initial Therapy

- Rule out bladder dysfunction (consider UDS testing)
- Cystourethroscopy (rule out sling or AUS erosion)
- If failed prior sling, can consider repeat sling procedure
 -Martinez et al. found patient failing late (2 years post-op sling), improved with
 salvage AdVance sling

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- Consider AUS (most experts agree)
- Registry of 16,348 men with PPI: 13% of men who undergo sling eventually require AUS
- Leave mesh in situ if it was Advance, but not Virtue
 -Prior sling does not make AUS more difficult or decrease efficacy

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