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### Title

PD11-02 URINARY DIVERSION FOR COMPLICATIONS OF PROSTATE CANCER RADIATION TREATMENT

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## Urinary Diversion: Bladder Reconstruction, Augmentation, Substitution, Diversion II

### Podium 11

Saturday, May 16, 2015

10:30 AM-12:30 PM

#### PD11-01

#### PELVIC RADIATION IS ASSOCIATED WITH URINARY FISTULAE REPAIR FAILURE AND NEED FOR PERMANENT URINARY DIVERSION

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**INTRODUCTION AND OBJECTIVES:** Enterourinary fistulae (EUF) and urinary-cutaneous fistulae (UCF) can be treated either primary closure or urinary diversion allowing the wound to heal by secondary intention. Primary repair often includes use of interposing omental, sliding, or muscle flap. Even after successful fistula repair, permanent urinary diversion can be required to manage persistent urinary incontinence. Here, we review our experience with non-muscle flap repairs of EUF and UCF.

**METHODS:** We retrospectively reviewed 86 patients who underwent treatment of EUF or UCF at a single institution between the years 1998–2013. Of these, 39 patients underwent fistula repair while 47 underwent either temporary to permanent urinary diversion. Outcomes measured included post-operative fistula closure, need for permanent urinary diversion, and urinary incontinence.

**RESULTS:** The mean age in our series was 59 years (21–87) at time of surgery with median follow-up of 20 months (1–137). Among patients who underwent surgical repair, radiation was associated higher rates of repair failure ( $p=0.0002$ ), post-surgical incontinence ( $p<0.0001$ ), and need for permanent urinary diversion ( $p=0.0076$ ). Overall, 32 of the 44 radiated patients required permanent diversion (72%), compared to 3 of the 42 non-radiated patients (7%) ( $p<0.0001$ ).

**CONCLUSIONS:** Patients who undergo pelvic radiation prior to EUF and UCF repairs are at higher risk for developing repair failure and post-surgical incontinence. A majority of patients eventually require permanent urinary diversion. Therefore, EUF and UCF repairs in radiated patients should be undertaken with caution, and patients should be counseled about the possibility of urinary diversion as primary therapy.

**Source of Funding:** None

#### PD11-02

#### URINARY DIVERSION FOR COMPLICATIONS OF PROSTATE CANCER RADIATION TREATMENT

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**INTRODUCTION AND OBJECTIVES:** Urinary diversion surgery (conduit or continent catheterizable pouch) may be used to treat complications of radiation therapy (XRT) for prostate cancer (CaP). In this group of men, there is limited data on patient characteristics and outcomes following urinary diversion. We hypothesized that urinary diversion offers acceptable complications rates despite age and comorbidities.

**METHODS:** We identified 25 patients undergoing urinary diversion surgery (conduit or continent catheterizable pouch) to treat complications following definitive or post-operative XRT for CaP at the

University of Utah and University of California, San Francisco between 2009–2014. Data collected included: demographics, Charleston Comorbidity Index (CCI), types of CaP treatments, previous surgeries, Clavian-Dindo grading of complications, re-admission and re-operation rates, and long-term surgical complications. The data was summarized using descriptive statistics.

**RESULTS:** The mean age of our cohort was 73.1 years (range: 65–81 yrs). The mean duration from XRT treatment and mean number of operations for XRT complications, prior to urinary diversion, was 7.8 years and 4.7 operations. Seventeen (68%) patients had combined modality CaP treatment including radical prostatectomy and adjuvant XRT in 10 patients and 2 types of primary XRT in the other 7 patients. The remaining 8 patients received a variety of XRT monotherapy. The median follow-up after urinary diversion was 5 months; 3 patients were lost to follow-up. Fifteen (60%) patients underwent a conduit and 8 (32%) patients underwent a continent catheterizable diversion. Simple cystectomy was done in 13 (52%) patients. Median CCI was 7, with cardiac disease (40%) as the most common comorbidity. Median hospital stay was 10 days. Grade 3 or greater Clavian-Dindo complications following urinary diversion occurred in 7 (28%), including grade 3b in 2, 4a in 2, and 5 (death) in 3. Readmission and reoperation within 6 weeks occurred in 6 (24%) patients and 2 (8%) patients, respectively. Long-term operative complications (parastomal hernia, stomal stenosis, ureteral obstruction, infected abdominal mesh) occurred in 4/22 (18%) patients.

**CONCLUSIONS:** Urinary diversion in CaP patients who had prior radiation with or without radical prostatectomy has a considerable complication rate. Patients undergoing urinary diversion after XRT therapy for CaP are older with a high comorbid state leading to lengthy hospitalization, readmission, post-operative complications, and a high rate of death.

**Source of Funding:** None

#### PD11-03

#### FOLLOW-UP SURGICAL INTERVENTIONS IN PATIENTS WITH URINARY DIVERSION: A COMPARISON BETWEEN ORTHOTOPIC NEOBLADDERS AND ILEAL CONDUITS

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**INTRODUCTION AND OBJECTIVES:** Patients undergoing radical cystectomy with urinary diversion often require additional surgical interventions related to their urinary diversion. The objective of this study was to compare the type of urinary diversion performed with the type of surgical interventions that patients underwent related to their cystectomy and urinary diversion to assess if the type of urinary diversion increased the likelihood of requiring follow-up surgical procedures.

**METHODS:** This was a retrospective review of patients undergoing a radical cystectomy with either a neobladder or ileal conduit reconstruction at the University of Kansas from 2004 until 2013. Specific data regarding the need for additional surgical procedures performed at the University of Kansas were recorded. Procedures included were any urological stone procedure, reconstructive procedures including artificial urinary sphincter (AUS) and inflatable penile prosthesis (IPP), open procedures of the abdomen including ureteral anastomosis revisions as well as incisional/ventral hernia repairs, and endoscopic procedures of the urethra, neobladder, ileal conduit or ureters.

**RESULTS:** In reviewing 240 patients, 120 in each arm, we found that neobladder patients were more than three times more likely to require an endoscopic intervention (OR 3.9) and were more than twice as likely to require additional open surgical interventions (OR 2.8) when compared to patients that underwent the creation of a ileal conduit. The number of ventral hernias was higher in the neobladder group, but did not reach statistical