Abstract:
**Purpose:** We developed an algorithm for the management of ureteral obstruction due to malignant extrinsic compression.

**Materials and Methods:** We retrospectively reviewed all ureteral stents placed for noncalculous reasons at our institution from January 1, 1990 to January 1, 2004. Further clinical information was gathered from 157 patients with malignant extrinsic ureteral compression. Failure was defined as recurrent ureteral obstruction or an inability to place stents cystoscopically.

**Results:** A total of 157 patients underwent retrograde ureteral stent attempt for malignant extrinsic ureteral obstruction. Mean patient age was 54.7 years (range 23 to 83) and average follow-up was 13.6 months. Of our patients 61% were women, and the most common cancer diagnoses were ovarian cancer (in 26), lymphoma (17) and cervical cancer (16). A total of 24 patients required immediate percutaneous nephrostomy (PCN) referral. There were 32 patients who experienced a late failure and required PCN (average 180 days after initial stent), and 83 patients in our series (52.9%) who experienced 110 major complications. Type of cancer did not predict need for PCN. However, when invasion into the bladder was noted on cystoscopy, 55.9% (19 of 34, p = 0.008) progressed to PCN referral. A total of 77 patients underwent stent replacement on average 2.8 times and with an interval of 95 days.

**Conclusions:** In our series patients with malignant extrinsic ureteral compression presenting for ureteral stent(s) experienced a failure rate of 35.7% (56 of 157). Invasion of cystoscopy had a significant predictive value for progression to PCN. We present an algorithm on the management of extrinsic malignant ureteral obstruction.

**Strengths/uniqueness:**
A useful flow chart for the management of cancer related ureteral obstruction is created. This flow chart is helpful to organize thoughts on the next steps or options in patient’s management plan.
This study includes a variety of cancer patients.

**Weaknesses:**
Each cancer cohort is fairly small.
There is no information about survival between stent insertions and PCN, goals of care and quality of life.
**Relevance to Palliative Care:**
This is a common situation in palliative care scenarios. The algorithm would be helpful to discuss options and goals of care with patients and families.