

**Poster #39****A multi-institutional review of tumor lysis syndrome in gynecologic cancers: The importance of immediate diagnosis and treatment**

T. Castellano<sup>a</sup>, A. Staley<sup>b</sup>, B.A. Bulard<sup>c</sup>, K.N. Moore<sup>d</sup>. <sup>a</sup>The University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA, <sup>b</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, USA, <sup>c</sup>University of Oklahoma HSC, Oklahoma City, OK, USA, <sup>d</sup>The University of Oklahoma, Stephenson Cancer Center, Oklahoma City, OK, USA

**Objectives:** To describe the incidences, trends, common clinical and laboratory findings, treatment strategies and outcomes associated with tumor lysis syndrome (TLS) in women with gynecologic cancer (GOC).

**Methods:** A retrospective multi-institutional cohort study of women with gynecologic malignancy that received inpatient treatment of acute TLS was assembled. Patient data was collected from two large academic sites in different states. Cases were included if women with new or established GOC presented with elevated serum uric acid and was managed with intravenous rasburicase, a uric oxidase inhibitor. Descriptive analysis of patient characteristics, clinical factors, laboratory findings, treatment and outcome data was performed.

**Results:** From institution A, pharmacy records identified 1,134 inpatients from 2008-2018 receiving an inpatient dose of Rasburicase were screened. Of those, 344 (30.34%) were women and of those 307 women had a known malignancy, 15 were found to have GOC reflecting an approximate 5% proportion of women with of TLS. From institution B, an informatics agency queried the medical record system from the dates of 2014-2018 using the patient inclusion criteria and three additional patients were identified, totaling N=18 patients meeting inclusion criteria.

High-grade gynecologic malignancies were found in nearly all cases, n=17, 94.4%. The most common sites were ovarian (n=8, 53.3%) and uterine (n=6, 35.3%). The majority were Caucasian (n=11, 61.1%) with median age at admission of 60 (range: 35-71), and mean BMI of 39.9. A majority (n=12, 70.6%) of TLS diagnosis was made at the same time of GOC diagnosis, the remainder were made at the time of recurrence. TLS was diagnosed following chemotherapy in n=7 (38.89%) of cases; six treated with taxol and, interestingly, two of the seven cases, 28.6%, were treated with a CD47 inhibitor. One case was associated with major surgery and radiation. Chief complaints included electrolyte and renal issues (n=11, 73.3%). Mean peak serum creatinine, potassium, uric acid, and phosphorus levels were 5.11mg/dL, 5.66mEq/L, 14.16mg/dL, and 6.78mg/dL and the mean serum calcium nadir was 8.33mg/dL. On average, 2 doses of rasburicase were given by hospital day(d) 2 of a median 9 d(range: 4-16d) admission. Full laboratory recovery occurred in 6 (40%) cases and the remaining 9 were placed on hospice during their admission with 3 (20%) deaths occurring as inpatients. Median OS is 29 (range: 2-398) d following diagnosis of TLS and median time to death, in those that died was 21 (range: 3-87) d.

**Conclusions:** TLS, though rare in solid tumors, can be associated with GOC. Early recognition of unique presenting symptoms, laboratory findings and subsequent urgent treatment may help with electrolyte recovery; however, TLS associated with GOC may herald a rapidly deteriorating state with significant associated mortality.

doi:10.1016/j.ygyno.2019.03.144

**Poster #40****Provider perspective on medical marijuana in oncology**

A. Greenwood<sup>a</sup>, T. Castellano<sup>b</sup>, D.L. Richardson<sup>c</sup>. <sup>a</sup>University of Oklahoma HSC, Oklahoma City, OK, USA, <sup>b</sup>The University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA, <sup>c</sup>The University of Oklahoma, Stephenson Cancer Center, Oklahoma City, OK, USA

**Objectives:** New medical marijuana (MM) laws in Oklahoma and across the nation are trending towards support of medical marijuana for certain medical issues. The relative lack of high-quality evidence on MM and the lack of standardized training in professional school may leave practitioners ill prepared for their patients request. The specific aims of this study were to survey current oncology professionals at the Stephenson Cancer Center in Oklahoma City to assess how comfortable oncology professionals were with prescribing and using medical marijuana in oncology treatments.

**Methods:** This is a cross-sectional survey study done at the Stephenson Cancer Center in Oklahoma City, OK. A voluntary survey study was sent to all oncologist, PA/NP and pharmacist working in the Cancer Center using an electronic list serve. All survey data was collected using a survey tool in REDCap. Relationships between categorical variables were assessed using Fisher's exact test. We identified 119 possible participants and had a response rate of 34% n=41.

**Results:** We found that most provider do have an interest in prescribing MM (70.7%) compared to having no interest or being unsure (30.3%). Most providers showed interest in recommending MM however an also large proportion felt they had insufficient knowledge to recommend MM (76.9%). Oklahoma recently passed new laws allowing prescription of MM however only 7.5% of provider felt they had a comprehensive knowledge of the new laws and 35% of provider had no or limited knowledge of the laws. Many providers are looking to the Stephenson Cancer Center, University of Oklahoma or OK Medical Board to provide guidance in recommending MM. 82% of providers felt that there has been a modest to significant increase in patient interest in being prescribed MM. Some of the medical conditions' providers felt the strongest about using MM were poor appetite, nausea, chronic pain, and poor sleep.45% felt that MM could reduce polypharmacy and 69% felt MM could be beneficial in decreasing opioid dependency in oncology treatments. 27% of our respondents were Gynecology Oncologist.

**Conclusions:** This study supported the fact that many providers were interested in prescribing or recommending MM to their patients. In the limited time since the new law changes providers are seeing a higher demand from patient requesting to be treated with MM. However, providers feel ill prepared to counsel their patients appropriately. Most providers are getting their information from high quality peer reviewed journals however there is relatively small amount of high-quality evidence on the use of MM in the treatment of common medical issues associated with cancer and oncology treatments. Providers are looking to their programs and governing bodies to fill in the knowledge gaps. This study may help in promoting the need for further high-quality studies to guide their practice.

doi:10.1016/j.ygyno.2019.03.145

**Poster #41****Comparison of short and long interval flush maintenance for implanted catheters in gynecologic malignancies**

L.C. Cook<sup>a</sup>, H.M. Cottrill<sup>b</sup>. <sup>a</sup>University of Kentucky Medical Center, Lexington, KY, USA, <sup>b</sup>Baptist Health Lexington, Lexington, KY, USA

**Objectives:** To determine if the time interval between heparin flushes performed for maintenance of implanted venous access catheters influences complication rates that necessitate removal of the device

**Methods:** Records for all patients with gynecologic malignancies who had implanted venous access catheters placed between 2010 and 2017 at a single institution were reviewed. Those who completed

chemotherapy and had catheter maintenance for >3 months were included for analysis. Groups were divided based on their maintenance interval: short interval (SI) at 4–6 weeks which is according to manufacturer's specifications, or long interval (LI) at 10–12 weeks which was historically performed with patient's 3-month surveillance visits. Complications were defined as events during the flush maintenance period that required removal of the port. Patient demographics and risk factors for inflammation, clotting, and infection were also collected for analysis. As a secondary outcome cost analysis was performed. SPSS was used to analyze data via Fisher's exact test and Chi-Square analysis. Significance was defined as  $p < 0.05$ .

**Results:** Data was collected on 259 patient charts from 2010 to 2017 of which 185 met inclusion criteria. Three complications requiring removal were seen during the study period: infection (1) and port malfunction (2). Complication rates were not statistically different between the SI group ( $n=90$ ) 1.11% and the LI group ( $n=95$ ) 2.10%,  $p=0.525$ . The groups were also noted to be evenly matched with no significant patient characteristics or demographic differences.

Currently, \$168 is billed for each implanted catheter flush encounter at the study facility. Patients traveled an average of 78.64 miles round trip to reach the facility. Considering only travel costs (gas, vehicle wear and tear) and billing, the LI scheduling could reduce a patient's expense by 50 to 66% and save as much as \$59–\$119 each month in addition to the individual's copay.

**Conclusions:** Our findings support the hypothesis that complication rates are not increased when using a long interval flush maintenance schedule. Additionally, the potential savings for the patient is not insignificant and warrants consideration

doi:10.1016/j.ygyno.2019.03.146

#### Poster #42

##### Workplace harassment and discrimination in gynecology: Results of an International Society Survey

L. Drury<sup>a</sup>, J. Brown<sup>a</sup>, K.M. Raub<sup>a</sup>, B. Levy<sup>b</sup>, P. Brantner<sup>c</sup>, T.C. Krivak<sup>d</sup>, L.D. Bradley<sup>e</sup>, R.W. Naumann<sup>f</sup>. <sup>a</sup>Levine Cancer Institute, Carolinas Medical Center, Charlotte, NC, USA, <sup>b</sup>The American College of Obstetricians and Gynecologists, Washington, DC, USA, <sup>c</sup>PB Work Solutions, Washington, DC, USA, <sup>d</sup>Western Pennsylvania Hospital, Pittsburgh, PA, USA, <sup>e</sup>The Cleveland Clinic Foundation, Cleveland, OH, USA, <sup>f</sup>Levine Cancer Institute, Charlotte, NC, USA

**Objectives:** Sexual and non-sexual workplace harassment and discrimination have not been studied in gynecology despite reported concerns. Our objective was to characterize harassment and discrimination among physicians in gynecology.

**Methods:** An IRB-approved survey was constructed and beta-tested to inform policy changes within a professional gynecologic society. It was distributed by email to all members ( $n=7026$ ) using the REDCap survey tool with questions regarding demographics, attitudes regarding harassment and discrimination, and experiences of workplace harassment and discrimination and perceived sequelae. All responses were anonymous and non-traceable and subjects provided consent at the time of survey submission. Frequency distributions were determined and non-parametric tests were performed.

**Results:** A total of 907 physicians responded; 603 were US and 304 were non-US. Sixty percent were female (F) and 40% were male (M). F were younger than M ( $p < 0.05$ ); 20% were trainees. F were more likely than M to think that the #MeToo movement was justified and overdue ( $p < 0.001$ ), independent of age or trainee status. More F than M experienced workplace discrimination (67% vs. 39%,  $p < 0.001$ ), and gender was the most common factor for both. The most common

sequela was loss of self-confidence (46%); F reported this and lower salary, while M reported lower patient volume and fewer employment opportunities. Women felt harassment was more prevalent in the medical field than did men, independent of age or trainee status. Overall, 39% of physicians experienced workplace harassment, including 23% non-sexual, 37% sexual, and 40% both. Harassment was indicated by more F than M (81% vs. 18%,  $p < 0.001$ ) and by more US than non-US respondents (43% vs. 30%,  $p < 0.001$ ), and gender was the most common basis for harassment. The harasser was senior in 84% of cases, in a position of power in 72% of cases, and was more often a physician in cases involving F (91%). Sequelae occurred in 53% of victims but only 31% reported an incident, often due to fear of reprisal. Overall, 28% of respondents experienced sexual harassment; 84% were F ( $p < 0.001$ ), 87% were US, and 44% were <40 years old. The nature of the events varied; 16 women and 2 men experienced workplace-related sexual assault. The sexual harasser was senior in 80% of cases and in a position of power in 59% of cases. Sequelae (work and personal issues) occurred in 36% of victims and 22% sought counseling. Only 8% of victims reported an incident; 62% did not think it was taken seriously and 10% felt subject to reprisal.

**Conclusions:** Workplace harassment, including sexual harassment, is commonly experienced by female and male gynecologists, usually related to a power differential. Gender based discrimination is commonly identified. Substantial improvements should be made in the workplace environment to achieve equity and a workplace free of harassment and discrimination.

doi:10.1016/j.ygyno.2019.03.147

#### Poster #43

##### Prevalence of anemia and compliance to the National Comprehensive Cancer Network guidelines for workup and treatment of anemia among patients diagnosed with gynecologic cancer

S. Mehta<sup>a</sup>, D. Hufnagel<sup>a</sup>, C. Ezekwe<sup>b</sup>, L.S. Prescott<sup>a</sup>. <sup>a</sup>Vanderbilt University Medical Center, Nashville, TN, USA, <sup>b</sup>Meharry Medical College, Nashville, TN, USA

**Objectives:** The National Comprehensive Cancer Network (NCCN) recommends prompt evaluation of anemic patients with hemoglobin (Hb)  $\leq 11$ g/dL. There are a paucity of studies evaluating compliance with the NCCN guidelines. Our objective was to investigate the prevalence of anemia among patients diagnosed with ovarian and uterine cancer and assess compliance with NCCN guidelines.

**Methods:** We performed a retrospective cohort study of patients diagnosed and treated with ovarian and endometrial cancer at our institution from 2008–2018. Tumor-registry-confirmed cancer cases were identified using ICD-0 codes from the Synthetic Derivative (SD) database which is a de-identified copy our institution's electronic medical record. Patients were included if they were between the ages of 18 and 89, had their initial care at our institution, and had a hemoglobin (Hg) within the first 6 months of diagnosis. Anemia was defined as Hg  $\leq 11$ g/dL. Anemia was graded using the CTCAE v.4.0. Absolute and possible iron deficiency were defined by NCCN Guidelines.

**Results:** We identified 1190 patients who met our inclusion criteria. The median age was 61 years (interquartile range [IQR] 54–69). The most common malignancy was uterine cancer 875 (74%) followed by ovarian 273 (23%). Twenty-one were noted to have dual primaries (2%). Of the 1027 patients with a Hb identified prior to initiation of oncologic treatment 248 (24%) patients were noted to be anemic at time of diagnosis. Of the 1190 patients in our study, 851 (72%) were noted to be anemic within six months of diagnosis. Of these patients 279 (23%) were noted to have grade 1, 349 (29%) grade 2, and 223