

173 – Poster Session**Chemosensitizing effect of aqueous extract of sweet fennel in cisplatin treated HeLa cells**K. Sait. *King Abdulaziz University, Calgary, AB, Canada*

Objectives: Cisplatin is an important chemotherapeutic agent that is widely used in treatment against several malignancies, but the adverse effects in normal tissues and organs limit its use. The aim of this study was to evaluate the effect of aqueous extract of sweet fennel alone and in combination with cisplatin on a human cervical cancer adenocarcinoma cell line (HeLa cells) in a search for an effective, cost-effective therapy with minimal adverse effects.

Methods: The HeLa cell line was used to study the cytotoxic effect of different concentrations of the aqueous extract of sweet fennel alone and in combination with 50 mcg/mL cisplatin. Drug interaction was quantified by the combination index. Gas chromatography–mass spectrometry (GC–MS) and high-performance liquid chromatography (HPLC) were used to analyze the components of the sweet fennel decoction. MTT assay was used to examine cell viability percentage. Electron microscopy was applied to study the ultrastructure of the cells.

Results: The phenyl propanoids (23%) and phenols (12%) constituted the highest percentage of the aqueous extract. Increasing the concentration of sweet fennel from 50 mcg/mL to 80 mcg/mL decreased the percentage of cell viability of HeLa cells from 86.74% to 78.28%, respectively. Further decrease to 11.31% was demonstrated when 50 mcg/mL of fennel was combined with 50 mcg/mL cisplatin (additive effect). In addition to the signs of apoptosis observed in HeLa cells at 50 mcg/mL of fennel, disruption of both nuclear and cytoplasmic membranes and presence of autophagolysosomes were noticed at a dose of 80 mcg/mL. Combining 50 mcg/mL of cisplatin with 60, 70, and 80 mcg/mL of sweet fennel revealed no significant difference in comparison to cisplatin alone. The combination with 50 mcg/mL of sweet fennel revealed marked vacuolization of the cytoplasm, fragmentation of the nucleus, and complete disruption of the nuclear membrane.

Conclusions: The combination of cisplatin and 50 mcg/mL fennel could enhance inhibition of cervical cancer growth. This combination could be effective in lowering the dose of single or repeated cumulative courses of cisplatin and, hence, decrease its hazardous adverse effects. In vivo studies and the evaluation of different combination doses of cisplatin and sweet fennel are recommended.

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174 – Poster Session**Treatment compliance among medically underserved women receiving chemoradiation for locoregionally advanced cervical cancer**G.L. Hsieh, S. Linesch, A. Sajjad, M.L. Anderson, M. Ludwig. *Baylor College of Medicine, Houston, TX, USA*

Objectives: To assess treatment compliance among women undergoing definitive chemoradiation with weekly cisplatin for locoregionally advanced cervical cancer in a regional safety-net health system.

Methods: After obtaining institutional review board approval, clinical demographics were abstracted for all women treated with definitive chemoradiation for cervical cancer (FIGO IB2–IVA) between March 2007 and May 2014. Reasons for treatment delays were categorized as being cisplatin-related, related to comorbid medical conditions, patient-initiated (e.g., declined treatment), or system issues (e.g., scheduling error).

Results: A total of 121 women (mean age 48.6 ± 12.5 years) received chemoradiation for cervical cancer. Tumor histologies included squamous ($n = 100$, 83%), adenosquamous ($n = 14$, 12%), poorly differentiated ($n = 6$, 5%), and adenocarcinoma ($n = 1$, 1%). A

total of 116 (95.9%) women completed definitive radiotherapy as planned (mean duration 56.2 ± 20 days). Of these, 66 (58.4%) completed radiotherapy in ≤ 56 days. Only 44 women (36.4%) received all six planned cycles of weekly cisplatin. Of the remaining women, 46 (38.0%) received five cycles, 17 (14.0%) received four cycles, and 14 (11.6%) received three cycles or less. Among 122 delayed cycles, reasons cited for chemotherapy delays included cisplatin toxicities ($n = 54$, 44.3%), medical comorbidities ($n = 28$, 22.9%), patient-initiated ($n = 13$, 10.6%), and system issues ($n = 8$, 6.6%). Two or more issues complicated treatment for seven doses (5.7%). Reasons for delay were not documented for 12 cisplatin doses (9.8%). Twelve of 121 first planned cycles were delayed, of which 5 (41.7%) were due to comorbid conditions and functional status. As treatment progressed, chemotherapy-associated toxicities became increasingly common. Of 77 planned sixth cycles, 39 (50.6%) were held, with 20 (51.2%) held due to cisplatin toxicities.

Conclusions: Medically underserved patients undergoing definitive radiotherapy for cervical cancer experience more delays with weekly cisplatin than demonstrated in clinical trials establishing the need for concurrent chemotherapy. Future efforts to improve outcomes for these women should focus on addressing preventable reasons for delays, such as system issues and patient noncompliance. Chemotherapy regimens associated with less toxicity may also benefit this vulnerable population.

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175 – Poster Session**Upfront laparoscopic surgery in Ib2 cervical cancer: Surgical and survival outcomes**F. Ferrari^a, G. Fachechi^a, K. Gubbala^a, H. Soleymani majd^b, R. Garruto Campanile^b, R. Tozzi^{a,b}. ^aOxford University Hospital, Oxford, UK, ^bOxford University Hospitals NHS Trust, Oxford, UK

Objectives: To assess surgical and survival outcomes of upfront laparoscopic radical surgery patients affected by FIGO stage IB2 cervical cancer.

Methods: In the observed period, all patients with FIGO stage Ib2 cervical cancer received upfront laparoscopic staging, including radical surgery if the lymph nodes were found to be tumor-free. Data collection of surgicopathologic outcomes, morbidity, and survival were collected and analyzed.

Results: Seventy patients underwent laparoscopic staging of a clinical stage IB2 cervical cancer. Forty-three ended with a type III nerve-sparing radical hysterectomy. All patients had free resection margins and two patients (4.6%) had positive lymph nodes missed at frozen section. Both received further treatment. Six patients (13%) had mild temporary urinary impairment, four (9%) had ureteric fistula (all conservatively managed, except one of neoplastic origin), two (4.5%) had leg lymphedema, one (2.2%) had a pelvic fluid collection (managed conservatively), and one (2.2%) had a compartmental syndrome (managed with surgery). Excluding poor urinary voiding, the overall morbidity was 18%. Five patients had recurrence. Median disease-free survival was 12 months and median overall survival was 46 months.

Conclusions: Surgical upfront treatment is feasible in patients affected by stage IB2 cervical cancer.

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176 – Poster Session**The impact of lymph node density (LND) on outcome in pelvic lymph node-positive cervical cancer patients**A. Yoon^a, Y.Y. Lee^a, C.H. Choi^a, W.Y. Kim^b, T.J. Kim^c, J.W. Lee^c, B.G. Kim^c, D.S. Bae^c. ^aSamsung Medical Center, Seoul, South Korea, ^bKangbuk