ABSTRACT
Objective: To discuss the clinical utility of endoscopic coblation for the extirpation of sinonasal tumors. Methods: A retrospective case series of six patients who underwent endoscopic coblation of their sinonasal tumors is reviewed. Six patients, age 12-79, were included in the study. Results: Endoscopic coblation of sinonasal tumors is a useful surgical modality that allows meticulous resections, controlled bleeding and excellent visualization. Conclusions: Sinonasal tumors can be safely and effectively excised utilizing endoscopic coblation techniques.

INTRODUCTION
Coblation or “cold ablation” utilizes a plasma field created by radiofrequency current that is generated between two bipolar electrodes. The current is used to ablate or “excise” tissue. This ablation modality has traditionally been utilized in adenotonsillectomy and turbinate reduction in the field of otolaryngology. Due to the hemostatic effects, reduced postoperative pain, lack of airway fire risk and elimination of tissue charring, the application of coblation techniques to other aspects of head and neck surgery has many theoretical advantages.

Traditionally, surgical excision of sinonasal tumors had been carried out via open approaches, involving large and often disfiguring incisions on the face and scalp. With the increased popularity of surgical endoscopy over the past several decades, endoscopic and combined external/endoscopic approaches to sinonasal tumors have also been performed with increased regularity. Endoscopic approaches to sinonasal tumors offer several advantages including: excellent lighting and magnification of tumor, ability to visualize lesion around corners utilizing different degrees of telescopic lens, lack of external facial incisions, decreased destruction of healthy tissue, decreased facial swelling, decreased postoperative pain, decreased epiphora and decreased intraoperative bleeding. Other studies have also found an associated decreased duration of hospital stay, decreased blood loss and less morbidity when comparing endoscopic to open surgical approaches.

In one retrospective review of 78 patients with paranasal or anterior skull base tumors, the authors found that the removal of the tumor via an endoscopic approach provided surgical outcomes that were comparable to open incisions with an en bloc resection.

METHODS & MATERIALS
A retrospective case series of six patients who underwent endoscopic coblation of sinonasal tumors is reviewed. Charts were pulled and reviewed after obtaining approval from the Institutional Review Boards of the two participating hospitals.

The following data points were collected for each patient: age, gender, diagnosis, operative procedure and operative details (including open vs. endoscopic approach, operative time and estimated blood loss). Coblation was performed with ArthroCare® ENT’s Coblator Surgery System and plasma wands.

RESULTS
Six patients, age range 12-79, were diagnosed with the following: radiation induced sarcoma, juvenile nasopharyngeal angiofibroma, sinonasal melanoma, sinonasal angiofibroma, schwannoma and recurrent chordoma. Endoscopic coblation technique was utilized in tumor resection in addition to more traditional modalities. Five of the six patients had tumors excised via a strictly endoscopic approach with coblator utilization.

Subjectively, the use of coblation improved visualization during surgical resection by reducing the amount of blood in the field. Estimated blood loss for the cases ranged between 50-1100 mL with a mean EBL of approximately 300 mL.

CONCLUSIONS
Sinos nasal tumors can be safely and effectively excised utilizing endoscopic coblation techniques. Endoscopic coblation of sinonasal tumors has not been previously discussed in current literature; the findings from this case series suggest that this is a useful and successful and excellent visualization.

REFERENCES