

## Endonasal Endoscopic Resection of Olfactory Neuroblastoma: An Eleven Year Experience

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### Introduction

Olfactory neuroblastoma (ONB) is a rare malignant neoplasm of the sinonasal cavity. Surgery has been and remains a mainstay of treatment for patients with this tumor. Open craniofacial resections have been the treatment of choice for many decades. Recently, experience has been growing with endoscopic approaches in the management ONB. The object of this study is to report our experience over the past 11 years with ONB patients treated using purely endonasal endoscopic techniques.

### Methods

We performed a retrospective chart review of 20 consecutive patients with ONB who underwent a completely endonasal endoscopic approach for an oncologic tumor resection at our institution between January 2006 and January 2017. Patient demographics, tumor stage, pathological grade, frozen section analysis, permanent margin assessment, perioperative complications, postoperative therapy, length of follow-up, and outcomes at last follow-up were collected and analyzed.

### Results

Eighteen patients presented with newly diagnosed disease with modified Kadish stage of A in 2, B in 3, C in 11, and D in 2. Two patients presented with recurrent tumors. An average of 25.3 specimens per patient were examined by frozen section analysis. Although analyses of intraoperative frozen section margins were negative in all but 1 case, microscopic foci of tumor were found in 7 cases (35%) on permanent histopathological analysis. Perioperative complications occurred in 7 patients (35%) including 1 patient who developed a cerebrospinal fluid leak; there were no episodes of meningitis. All but 1 patient received postoperative radiotherapy, and 5 patients received postoperative chemotherapy. With mean follow-up of over 5 years, 19 patients were alive and 1 patient died from an unrelated cause. There were 2 cases of tumor recurrence. The 5-year overall, disease-specific, and recurrence-free survival rates were 92.9%, 100%, and 92.9%, respectively.

### Conclusions

The results provide additional evidence for continued use of endoscopic procedures in management of patients with ONB.

### Learning Objectives

To describe the outcomes of patients undergoing purely endonasal endoscopic resection of olfactory neuroblastomas (ONB)

### References

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