# Malignant Meningioma of the Jugular Foramen

Ian M. Sambur, MD\(^1\); Fred Y. Lin, MD\(^1\); Joshua B. Bederson, MD\(^2\); Eric E. Smouha, MD\(^1\)

\(^1\)Department of Otolaryngology--Head and Neck Surgery, Mount Sinai School of Medicine, New York, NY
\(^2\)Department of Neurosurgery, Mount Sinai School of Medicine, New York, NY

## ABSTRACT

Objectives:
- To highlight the importance of considering malignant meningiomas in the differential diagnosis of jugular foramen lesions.
- To review the incidence, biological behavior, and treatment of this disease.

Study Design:
- Case report and literature review of malignant meningiomas.

Methods:
- A patient is presented with a malignant meningioma of the right jugular foramen.
- He was treated with gross total resection of the tumor, plus postoperative radiation therapy.

Results:
- The patient has remained disease free for 2 years with excellent quality of life.

Conclusions:
- Malignant meningiomas are relatively rare and behave aggressively.
- Gross total surgical excision and adjuvant radiotherapy offer the best hope for disease-free survival.

## CASE REPORT

- A 20 year old male complained of 4 months of right hearing loss with an enlarging soft tissue mass in the right ear canal.
- MRI revealed a large intracranial tumor of the temporal bone, replacing the petrous apex, surrounding the carotid artery, extending into the middle ear and upper neck through an enlarged jugular foramen (Figure 1).
- The tumor was pre-operatively embolized.
- A suboccipital approach was first performed to resect the intracranial tumor.
- A combined posterior skull base resection via transmastoid approach with labyrinthectomy, petrous apicectomy, jugular vein ligation, upper neck dissection and abdominal fat graft was performed one week later.
- The intrapetrous carotid artery was mobilized to dissect tumor from its adventitia (Figures 2 and 3).
- Histopathology revealed a focal papillary meningioma (WHO grade III).
- Post-operatively, the patient had a right Horner’s syndrome, shoulder weakness, vocal cord paralysis and 3/6 facial nerve paralysis.
- A right vocal cord injection with Cymetra was performed.
- The patient received adjuvant radiotherapy.
- The patient has returned to full function with no signs of recurrence 2 years postoperatively (Figure 4).

## REFERENCES