A 69-YEAR-OLD MAN PRESENTED FOR EVALUATION OF AN UNUSUAL COLOR and decreased mobility on the right side of his tongue. He first noticed these symptoms 2 years previously. The patient had undergone radical dissection of the right side of the neck 7 years earlier for a malignant tumor of the right tonsil. Intraoral examination of the patient revealed hemiatrophy of the tongue, on the right side, and the inability to completely deviate the tongue toward the left side of the mouth on protrusion (Panel A). A computed tomographic scan showed atrophy of the right side of the tongue, with fatty infiltration (Panel B). The hypoglossal nerve (cranial nerve XII) supplies motor innervation to the muscles of the tongue. Damage to the hypoglossal nucleus or hypoglossal nerve can cause denervation atrophy of the tongue, as seen in this patient. During radical neck dissection, the cranial and cervical nerves are at risk for injury.

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