

Table I : Emergent

	Emergent condition	Reason for emergent operative need	Specific possible conditions
Malignancy	Rapidly-growing or advanced stage cancer	<ul style="list-style-type: none"> - Need for diagnostic material - Acute vision loss due to optic nerve compression or orbital invasion (with potential for recovery) -Active CSF leak -Active related infection (brain or orbital abscess) -Active bleeding requiring operative management - Lack of acceptable alternative treatment (e.g. chemotherapy, radiation or chemoradiation) 	<p>Cancers of the nasal cavity and paranasal sinus and skull base (clivus, temporal bone)</p> <ul style="list-style-type: none"> - carcinomas - teratocarcinosarcoma - olfactory neuroblastoma (generally higher or moderate grade) - poorly-differentiated or dedifferentiated chordoma -neuroectodermal/melanocytic tumors - other malignant soft tissue tumors (sarcomas, nerve sheath tumors) <p>Orbital cancers (including lacrimal gland, lacrimal sac and true primary orbital cancers)</p> <p>Cancers of parotid, skin, adnexa involving the cranial base.</p> <ul style="list-style-type: none"> - high-grade epithelial or salivary tumors
	Cancer with potential of immediate morbidity	<ul style="list-style-type: none"> - Secondary complication from malignant tumor (loss of neurovascular, visual or cognitive function) - Risk of upstaging or metastases with delay (if no available alternatives such as chemo or radiation or available) 	<ul style="list-style-type: none"> - Secondary catastrophic abscess/infection - Vascular complication - CSF leak - Vision loss, airway compromise, neurologic function loss
Benign Lesions	Mass with acute compressive vision (or other neurologic) loss, airway compromise	<ul style="list-style-type: none"> - Secondary complication from tumor (loss of neurovascular, visual or cognitive function) -Active CSF leak -Active related infection (brain or orbital abscess) 	<ul style="list-style-type: none"> -Pituitary adenoma - Osseous lesions (fibrous dysplasia, chondroma) - Cystic mass (mucocele,mucopyocele, rathke, pituitary abscess etc) - Airway compromise - Tumors of meninges (meningioma)
Functional and/or Infectious Lesions	Traumatic CSF leak, complicated sinusitis, invasive fungal sinusitis	<ul style="list-style-type: none"> - Potential for meningitis - Neurovascular compromise 	<ul style="list-style-type: none"> - Penetrating or blunt head trauma with CSF leak and large dural defect (conservative management with or without lumbar drain should be considered first) - CSF leak refractory to conservative management
	Fungal disease	<ul style="list-style-type: none"> -need for diagnosis -need for debridement -need to relieve symptoms 	<ul style="list-style-type: none"> - Inasive fungal sinusitis for diagnosis and therapy - Allergic fungal sinusitis with compression of optic nerve or massive intracranial extension
	Acute-on-chronic rhinosinusitis with intracranial or intraorbital infection	Abscess, spreading infection	<ul style="list-style-type: none"> - Orbital abscess - Brain abscess - Compression of critical structures

	Active arterial epistaxis	<ul style="list-style-type: none"> - Inability to control massive bleeding with packing - Patient comorbidities making operative intervention superior to packing - Requirements for transfusion 	<ul style="list-style-type: none"> - Sphenopalatine artery bleed - HHT or other bleeds requiring multiple transfusions
--	---------------------------	---	--

Table II: Urgent

	Urgent condition	Reason for urgent operative need	Specific possible conditions
Malignancy	Cancer with potential for morbidity, increasing stage or increase in risk of metastases in >30 days	<ul style="list-style-type: none"> - Rapid growth that is threatening to cause increase in stage - Airway compromise - High risk of developing metastases that would require different treatment - Risk of tumor invading cranial nerve, great vessels, orbit (that would then require exenteration) - Risk of (but not immediately impending or acute) vision loss 	<p>Cancers of the nasal cavity and paranasal sinus and skull base (clivus, temporal bone)</p> <ul style="list-style-type: none"> - carcinomas - olfactory neuroblastoma of moderate or low grade - chordoma - neuroectodermal/melanocytic tumors - other malignant soft tissue tumors (sarcomas, nerve sheath tumors) - Recurrent nasopharynx cancer <p>Orbital cancers (including lacrimal gland, lacrimal sac and true primary orbital cancers)</p> <p>Cancers of parotid, skin, adnexa involving the cranial base.</p> <ul style="list-style-type: none"> - epithelial or salivary tumors of moderate or higher grade <p>Metastatic tumor to skull base or parapharyngeal space.</p>
Benign Lesions	<ul style="list-style-type: none"> - Benign tumor with impending complication or significant morbidity - Benign tumor with rapid growth - Active bleeding - CSF leak associated with tumor - Need for diagnosis (unclear diagnosis based on imaging and/or needle/other biopsy unable to be performed) 	<ul style="list-style-type: none"> - Rapid growth causing airway compromise, potential for vision loss or severe deformity. - Growth with breach of skull base causing secondary CSF leak. - Vascular or necrotic tumor causing bleeding requiring transfusion. - Mass effect with possible impending airway compromise, severe sleep apnea, cranial nerve deficit or other. 	<ul style="list-style-type: none"> - Sellar mass (pituitary adenoma, other) - Suprasellar mass (Rathke's cleft cyst, craniopharyngioma, dermoid, etc.) - Osseous/chondral lesions - Soft Tissue tumors (e.g. inverted papilloma, JNA, expanding hemangioma, Rosai Dorfman disease, schwannoma, neurofibroma, leiomyoma, etc) - Parapharyngeal/infratemporal fossa tumors with neurovascular or airway compromise
Functional and/or Infectious lesions	CSF leak with no signs of complication or infection	<ul style="list-style-type: none"> - Potential for meningitis - Brisk leak causing postnasal drainage and even aspiration - Inability to use CPAP due to leak 	CSF leak Encephalocele, meningocele
	Infiltrative or mass lesion with need for diagnosis	<ul style="list-style-type: none"> - Findings of skull base process with severe/significant symptoms and need for diagnosis - Inability to diagnosis by less-invasive tests or needle/core biopsies 	<ul style="list-style-type: none"> - Osteoradionecrosis, osteomyelitis - Pseudotumor/IgG4 disease - Lymphoma/hematologic malignancy or process - Other tumors - Chronic invasive fungal infection - Autoimmune disease

	Progressive infection unresponsive to aspiration and/or IV antibiotics		- Prevertebral abscess, - Spine osteomyelitis
--	--	--	--

Table III: Time Sensitive Conditions

	Time-sensitive condition	Reason for time-sensitive operative need	Specific possible conditions
Malignancy	Lower-grade malignancies	Ongoing slow progression of disease with possibility of increasing stage and/or increasing morbidity of further delay of treatment	<ul style="list-style-type: none"> - Low grade paranasal sinus cancers - Low grade orbital cancers - Cancers that had ability to have induction treatment but that now require operative intervention - Low-grade cancer of parotid, temporal bone, skin, adnexa, clivus -Metastatic tumor so skull base or parapharyngeal space
Benign Lesion	Slow-growing tumors	Progressive growth that is not at risk for more urgent neurovascular compromise or tumors with potential for malignant transformation	<ul style="list-style-type: none"> - Odontogenic tumors - Benign sinonasal and paranasal tumors (e.g. inverted papilloma, JNA, schwannoma) - Salivary tumors - Parapharyngeal space tumors (low grade)
Functional and/or Infectious Lesion	Intracranial defects		Chronic CSF leak Asymptomatic Encephalocele, meningocele
	Infiltrative processes requiring diagnosis for long term management		<ul style="list-style-type: none"> Osteoradionecrosis Bacterial osteomyelitis, chronic invasive fungal infection, Pseudotumor/ TFIL Desmoid tumor Lymphoma/hematologic -plasmacytoma, NK/T lymphoma Spine/Odontoid conditions -prevertebral abscess, -spine osteomyelitis Autoimmune disease Cholesterol granuloma petrous apex
	Infectious processes managed currently with antibiotics or aspiration that would be better managed with operative intervention	Need to limit prolonged use of IV antibiotics or need to prevent further morbidity of disease or further hospitalization	
	Spine conditions unresponsive to nonsurgical therapy	Causing neurologic symptoms after stabilization and/or unresponsive to medical therapy	<ul style="list-style-type: none"> -Basilar impression -Rheumatoid pannus

Table IV: Standard Conditions

	Nonurgent, standard condition	Potential need for higher priority operative need	Specific possible conditions
Malignancy	Very slow-growing cancer in anatomically-favorable location with low-risk of major morbidity, low risk of metastases		<ul style="list-style-type: none"> - In situ carcinoma - Kadish A low-grade olfactory neuroblastoma

Benign Lesion	Tumor with slow growth and no impending neurovascular compromise		Pleomorphic adenoma Schwannoma
Functional and/or Infectious Lesions	Nasal obstruction and rhinosinusitis	<ul style="list-style-type: none"> - Functional deficit that may be improved with surgical intervention (e.g. nasal obstruction, reversible Eustachian tube dysfunction, proptosis) - Mass lesion causing mild airway symptoms 	<ul style="list-style-type: none"> - Deviated septum - Chronic rhinosinusitis with polyposis refractory to medical management - Turbinate hypertrophy - Nasal synechiae that cannot be managed in the office - Nasopharyngeal stenosis
	Post-treatment disorders	Post treatment effects causing functional and/or quality of life issues	<ul style="list-style-type: none"> - Eustachian tube dysfunction not able to be managed in the office - Velopharyngeal insufficiency - Oroantral fistula