<table>
<thead>
<tr>
<th>Emergent condition</th>
<th>Reason for emergent operative need</th>
<th>Specific possible conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Malignancy</strong></td>
<td>- Need for diagnostic material</td>
<td>- Cancers of the nasal cavity and paranasal sinus and skull base (clivus, temporal bone) - 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) Orbital cancers (including lacrimal gland, lacrimal sac and true primary orbital cancers) Cancers of parotid, skin, adnexa involving the cranial base. - high-grade epithelial or salivary tumors</td>
</tr>
<tr>
<td>Rapidly-growing or advanced stage cancer</td>
<td>- Active related infection (brain or orbital abscess) - Active bleeding requiring operative management - Lack of acceptable alternative treatment (e.g. chemotherapy, radiation or chemoradiation)</td>
<td></td>
</tr>
<tr>
<td><strong>Cancer with potential of immediate morbidity</strong></td>
<td>- 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)</td>
<td>- Secondary catastrophic abscess/infection - Vascular complication - CSF leak - Vision loss, airway compromise, neurologic function loss</td>
</tr>
<tr>
<td><strong>Benign Lesions</strong></td>
<td>- Secondary complication from tumor (loss of neurovascular, visual or cognitive function) - Active related infection (brain or orbital abscess)</td>
<td>- Pituitary adenoma - Osseous lesions (fibrous dysplasia, chondroma) - Cystic mass (mucocoele, mucopyocele, rathke, pituitary abscess etc) - Airway compromise - Tumors of meninges (meningioma)</td>
</tr>
<tr>
<td>Mass with acute compressive vision (or other neurologic) loss, airway compromise</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Functional and/or Infectious Lesions</strong></td>
<td>- Potential for meningitis - Neurovascular compromise</td>
<td>- 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</td>
</tr>
<tr>
<td>Traumatic CSF leak, complicated sinusitis, invasive fungal sinusitis</td>
<td>-need for diagnosis -need for debridement -need to relieve symptoms</td>
<td>- Invasive fungal sinusitis for diagnosis and therapy - Allergic fungal sinusitis with compression of optic nerve or massive intracranial extension</td>
</tr>
<tr>
<td>Fungal disease</td>
<td></td>
<td>- Orbital abscess - Brain abscess - Compression of critical structures</td>
</tr>
<tr>
<td>Acute-on-chronic rhinosinusitis with intracranial or intraorbital infection</td>
<td>Abscess, spreading infection</td>
<td></td>
</tr>
</tbody>
</table>
| Active arterial epistaxis | - Inability to control massive bleeding with packing  
- Patient comorbidities making operative intervention superior to packing  
- Requirements for transfusion | - Sphenopalatine artery bleed  
- HHT or other bleeds requiring multiple transfusions |

Table II: Urgent

<table>
<thead>
<tr>
<th>Urgent condition</th>
<th>Reason for urgent operative need</th>
<th>Specific possible conditions</th>
</tr>
</thead>
</table>
| **Malignancy**   | - 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 | Cancers of the nasal cavity and paranasal sinus and skull base (clivus, temporal bone)  
- Carcinomas  
- Olfactory neuroblastoma of moderate or low grade  
- Chordoma  
- Neuroectodermal/melanocytic tumors  
- Other malignant soft tissue tumors (sarcomas, nerve sheath tumors)  
- Recurrent nasopharynx cancer  
Orbital cancers (including lacrimal gland, lacrimal sac and true primary orbital cancers)  
Cancers of parotid, skin, adnexa involving the cranial base.  
- Epithelial or salivary tumors of moderate or higher grade  
Metastatic tumor to skull base or parapharyngeal space. |
| **Benign Lesions** | - 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. | - 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, leiomymoma, etc)  
- Parapharyngeal/infratemporal fossa tumors with neurovascular or airway compromise |
| **Functional and/or Infectious lesions** | - 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 | - Findings of skull base process with severe/significant symptoms and need for diagnosis  
- Inability to diagnosis by less-invasive tests or needle/core biopsies | - 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

<table>
<thead>
<tr>
<th>Time-sensitive condition</th>
<th>Reason for time-sensitive operative need</th>
<th>Specific possible conditions</th>
</tr>
</thead>
</table>
| **Malignancy**          | Ongoing slow progression of disease with possibility of increasing stage and/or increasing morbidity of further delay of treatment | - 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**       | Progressive growth that is not at risk for more urgent neurovascular compromise or tumors with potential for malignant transformation | - 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** | Chronic CSF leak  
Asymptomatic Encephalocele, meningocoele | - 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 |
| **Infiltrative processes requiring diagnosis for long term management** | Need to limit prolonged use of IV antibiotics or need to prevent further morbidity of disease or further hospitalization | |
| **Infectious processes managed currently with antibiotics or aspiration that would be better managed with operative intervention** | Causing neurologic symptoms after stabilization and/or unresponsive to medical therapy | - Basilar impression  
-Rheumatoid pannus |
| **Spine conditions unresponsive to nonsurgical therapy** | | |

### Table IV: Standard Conditions

<table>
<thead>
<tr>
<th>Nonurgent, standard condition</th>
<th>Potential need for higher priority operative need</th>
<th>Specific possible conditions</th>
</tr>
</thead>
</table>
| **Malignancy**               | Very slow-growing cancer in anatomically-favorable location with low-risk of major morbidity, low risk of metastases | - In situ carcinoma  
- Kadish A low-grade olfactory neuroblastoma |
<table>
<thead>
<tr>
<th>Benign Lesion</th>
<th>Tumor with slow growth and no impending neurovascular compromise</th>
<th>Pleomorphic adenoma Schwannoma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional and/or Infectious Lesions</td>
<td>Nasal obstruction and rhinosinusitis</td>
<td>- Functional deficit that may be improved with surgical intervention (e.g. nasal obstruction, reversible Eustachian tube dysfunction, proptosis) - Mass lesion causing mild airway symptoms</td>
</tr>
<tr>
<td>Post-treatment disorders</td>
<td>Post treatment effects causing functional and/or quality of life issues</td>
<td>- Deviated septum - Chronic rhinosinusitis with polyposis refractory to medical management - Turbinate hypertrophy - Nasal synechiae that cannot be managed in the office - Nasopharyngeal stenosis - Eustachian tube dysfunction not able to be managed in the office - Velopharyngeal insufficiency - Oroantral fistula</td>
</tr>
</tbody>
</table>