



Maxillectomy and Mandibulectomy

Indications:

A mandibulectomy involved removal of a part of the lower jaw (mandible), while a maxillectomy refers to removal of a part of the upper jaw (maxilla). The part of the bone that is removed can be smaller or more extensive – and the most common indications are tumors (cancer) involving the bone, or extensive trauma to the bone (such as fractures).

Preoperative workup and other diagnostics:

The extent of the diagnostic work up will depend on the reason for the surgery (cancer vs trauma vs other), but will generally involve:

- General physical examination with a focus on the jaws
- Preoperative laboratory work (CBC, chemistry profile, urinalysis, thyroid function testing)
- Imaging:
 - CT Scan of the head
 - Chest x-rays/Abdominal ultrasound/CT of the chest +/- abdomen
- Cytology: sampling of the local lymphnodes might be part of cancer diagnostic workup
- Culture: if indicated, for example in cases of a wound, ulcerated tumor.
- Histopathology: in case of cancer, a biopsy will be part of the diagnostic workup to identify the type of cancer and the extent of surgery needed. The full tumor will be submitted after surgery to confirm the biopsy diagnosis, and look at the margins (ie if the tumor has been fully removed).

Procedure:

Maxillectomy

A part of the upper jaw is removed during a maxillectomy. This can be a part of either the left or right side of the bone, or a part towards the nose. If a part along the side is removed, the upper lip often hides the surgery side, and only a slight indentation is visible. For surgeries towards the nose, a slight drooping of the nose might occur. The hard palate divides the nose and the mouth, and a break down of the surgery site ('dehiscence') might lead to an opening ('fistula') between the nose and the mouth. Surgical revision/repair is typically needed to address these.

Mandibulectomy:

A part of the lower jaw is removed during a mandibulectomy. This can be a part of either the left or right side of the bone, or a part towards the front of the mouth. There is very little tissue covering the bone of the lower jaw, and surgeries of the lower jaw have a high risk of bone becoming visible/uncovered due to surgery site opening up. Sometimes this can be allowed to heal on its own (if it's small), but sometimes a surgical repair might be advised.

Complications:

As with any surgical procedure, there are always risks associated with general anesthesia. For otherwise healthy pets, these risks are usually low, but are considered increased in animals with systemic illness.

- Bleeding during and after surgery: this might be especially severe during upper jaw surgeries, and sometimes a blood transfusion might be needed.
- dehiscence (opening of the incision site): a second surgery might be needed to close the surgery site, especially if the gap is large, or if it connects the nose with the mouth.
- incomplete margins: if this is the case, additional local therapy might be recommended
- difficulty eating: if we suspect a high risk for this, we might place a feeding tube during surgery. However, if your pet struggles more with eating than expected, we might suggest a short anesthesia to place a feeding tube during your pet's hospitalization and recovery stay.
- trauma due to remaining teeth: sometimes after mandibulectomy (removal of a part of the lower jaw), the remaining part of the jaw might drift during eating ('mandibular drift') and one of the canines might hit a part of the hard palate during closing (instead of being in its normal position) and traumatize the tissues.
- change in your pet's appearance

Your surgeon will discuss these complications in more detail during your pet's visit, and can discuss (or show images of) the expected change in appearance as well.

Postoperative Care:

In hospital care:

Your pet will be recovered in hospital, and will receive strong pain medications and fluids intravenously. Food will be offered, and we will only discharge your pet if we are comfortable that your pet's pain is well controlled and is able to eat, or is tolerating tube feeding well.

- Eating: most dogs start eating the day after surgery. However, if the surgery was extensive we might place a feeding tube in case your pet is not comfortable eating, and to give additional food or medications via the tube (bypassing the mouth). This tube typically is an esophageal feeding tube, and can be removed once your pet eats. Cats typically take longer to start eating, and we would recommend placing a feeding tube in all cats undergoing extensive jaw surgery.

At home care:

After your pet leaves the hospital we will have you continue to administer oral pain medications, and in some cases antibiotics.

- Food: during the recovery after surgery, your pet will need canned/soft food, as kibble might damage the surgery site. After a recheck visit, and assessment of how the site is healing, kibble can be gradually re-introduced. To transition from soft food to kibble, the kibble can be fed soaked for 2 weeks as an intermediary to allow further healing of the site.
- Feeding tube: if a feeding tube was placed, we will give you detailed instructions in how to care for the tube, and how to provide food via the tube. Additional information can also be found in the feeding tube link on the landing page.
- It is important that your pet does not play with toys, or carry around rocks, sticks, leashes or other objects that could traumatize the surgery site.

Prognosis

Prognosis will depend on the reason for surgery, and the type of cancer. Dogs typically adjust well to jaw surgeries. Your pet's appearance might be altered after surgery – the extent depends on whether the upper or lower jaw is involved, and the extent of bone that is removed.