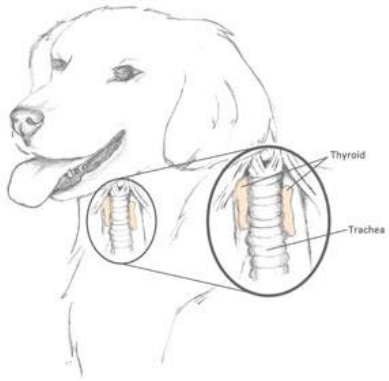
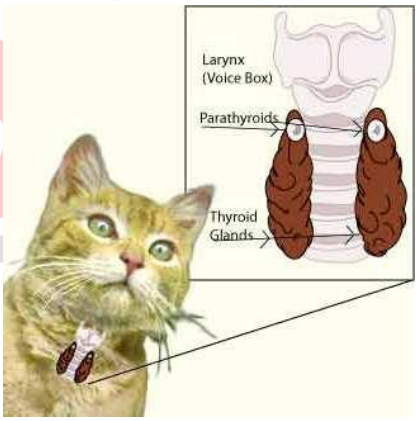
Thyroid Tumors, Thyroidectomy	Thyroid glands are paired glands located in the neck along the beginning of the trachea in dogs and cats. The thyroid gland secretes thyroxine hormone which has an important role in metabolism. Thyroid tumors can occur in dogs and cats which can be benign or malignant. Most thyroid tumors in cat are benign, functionally secreting tumors that cause hyperthyroidism (over-production of thyroid hormone with a subsequent increase in metabolic rate). Most thyroid tumors in dogs are malignant and usually do not secrete thyroid hormone. Malignant thyroid tumors can metastasize (spread to other parts of the body). More commonly affected breed are Beagles, Boxers, Golden Retrievers, and Siberian Huskies.   Image of the thyroid gland orientation in a dog. Image of the thyroid gland orientation in a cat. Signs and Symptoms: Dogs with a thyroid tumor may not have any abnormal signs. The first noticeable sign may be a visible or palpable mass in the neck region. Other signs of thyroid tumor may include coughing, difficulty

	breathing, noisy breathing, gagging, difficulty swallowing, vocal change, anorexia, and weight loss. If the thyroid tumor is function and produces an excessive thyroid hormone level, then the pet may have signs of hyperthyroidism. Clinical signs of hyperthyroidism include: weight loss, increased appetite, over-active, excessively vocal, vomiting, diarrhea, increased water consumption, increased urinations, behavior change, and hair coat abnormalities. Diagnosis: A physical examination is the initial step in diagnosing a thyroid tumor. A palpable mass in the neck region may be detected on physical examination. The veterinarian will perform a CBC, biochemistry profile, and thyroid panel to assess the pet's health and evaluate the thyroid function. If a mass in the neck region is identified, then a fine needle aspirate cytology may be performed to aid in the diagnosis. Cytology may be suggestive of thyroid neoplasia but may not be conclusive. Diagnostic imaging techniques to evaluate the size and regional invasiveness of the tumor in the neck region may include: • CT scan • Magnetic Resonance Imaging • Ultrasound Thoracic (chest) radiographs (X-rays) or CT scan of the thorax is performed to evaluate the pet for metastatic disease (spread of disease). Prior to surgery, a coagulation profile will be performed to assess the pet's clotting ability as many thyroid tumors are highly vascular. Definitive diagnosis of a thyroid tumor is made by biopsy. Treatment: Thyroidectomy (surgical removal of thyroid gland) is recommended in dogs with moveable tumors or tumors that are not excessively large or overly invasive into the regional tissue. Dogs with thyroid tumors that are not suitable for anesthesia or have tumors that are too large, invasive, firmly fixed in the deep tissue, or incompletely removed are recommended for radiation therapy, chemotherapy, or radioactive iodine (I-131) treatment. Based on the biopsy diagnosis of the thyroid tumor, additional treatment with an Oncologist may be recommended. Cats with thyroid tumors can be treated with surgical thyroidectomy, medical therapy with methimazole, or radioactive iodine (I-131) treatment. Postoperative care: After surgery the pet will be monitored closely for breathing and swallowing difficulty that may be associated with injury to the recurrent laryngeal nerve which functions in movement of the larynx or be associated with soft tissue inflammation in the neck region. Other possible complications associated with surgical removal of thyroid tumors include

	bleeding, possible low blood calcium, and low thyroid hormone level requiring supplementation. The pet will be discharge with an antibiotic, pain medication, restricted activity, and no leashes or collars until the surgical site is healed, which is usually approximately 14 days. Prognosis: The prognosis for treatment in cats with thyroid tumors is good. The best outcome in dogs is when the thyroid tumor is freely moveable, less than 4 cm in size, completely excised, and has not metastasized (spread). In dogs with thyroid tumors, long-term survival may be approximately 1 to 3 years with early surgical excision before invasiveness of the tumor or metastasis has occurred.