

## What is Your Diagnosis?

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### *Signalment*

A 1-year old, intact male, domestic short-haired cat.

### *History*

The patient was presented to the Small Animal Teaching Hospital, Chulalongkorn University due to the clinical signs of coughing and the swelling of the throat for two weeks. Besides, the cat showed less appetite. The cat has been raised as an indoor cat with another cat. Both cat had no historical evidence of the vaccination.

### *Clinical examination*

After the physical examination, severe generalized lymphadenopathy, dyspnea, abdominal

breathing and hyperpnoea were detected. Then, the fine needle aspiration for the cytologic examination was done to examine the popliteal and submandibular lymph nodes. The microscopic examination showed the yeast-like organism. Therefore, the systemic Cryptococcosis was suspected to be the primary cause of all clinical signs. Other laboratory results revealed thrombocytopenia, leukocytosis and the positive result of the Feline Immunodeficiency Virus (FIV).

### *Radiographic examination*

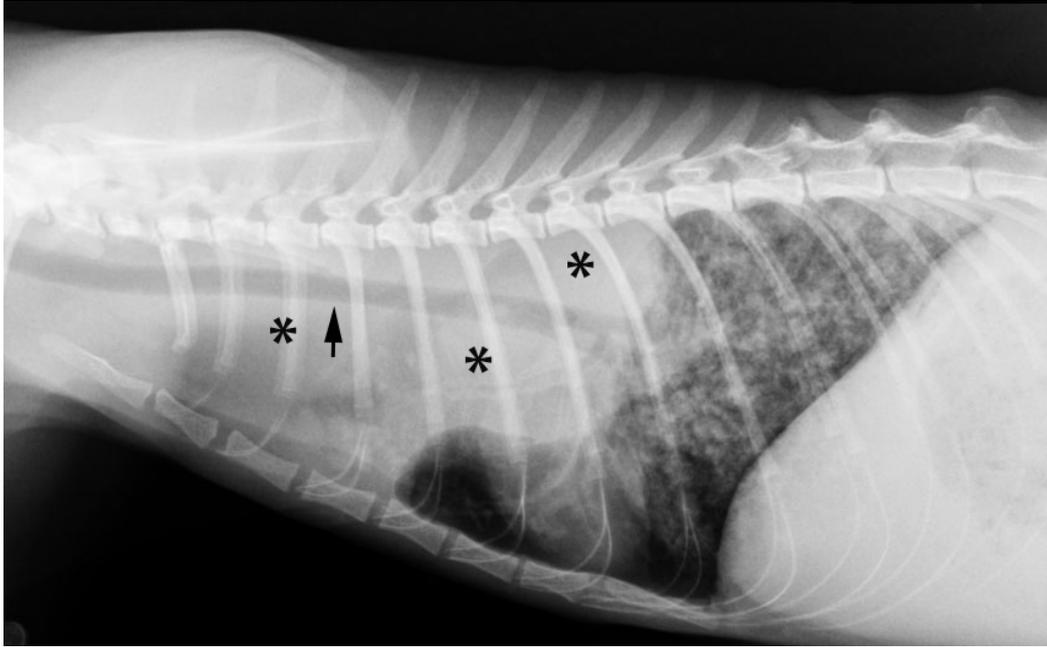
According to the main clinical signs of respiratory system such as dyspnea, hyperpnoea and abdominal breathing, thoracic radiographs both of ventrodorsal and lateral views were taken to investigate the cardiopulmonary condition of this patient.

What is your diagnosis?  
Please turn to next page for the answer.

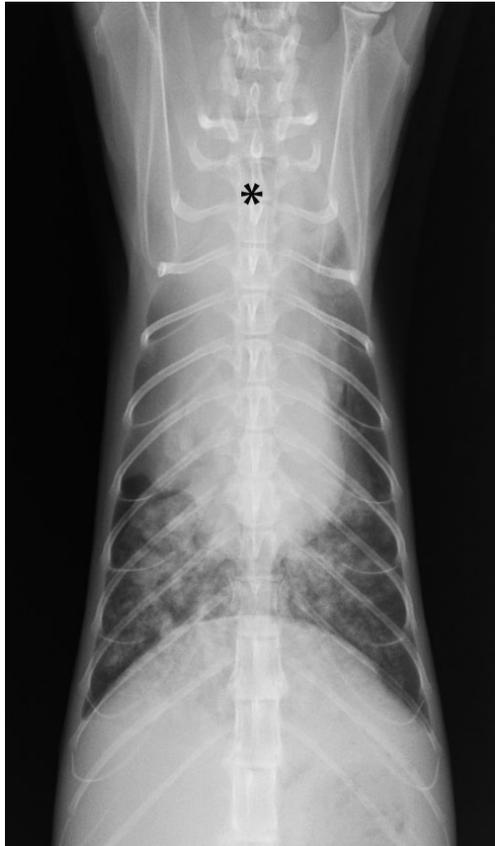
### Radiographic findings

On both of lateral (Fig. 1) and ventrodorsal (Fig. 2) radiographic views of the thorax, a large soft tissue density masses were detected at the cranial mediastinal and mid dorsal thoracic that showed up around the distal thoracic trachea (asterisks). Besides, the elevated of thoracic trachea was detected on the

lateral radiograph (arrow). In addition to the intra-thoracic soft tissue masses, the moderate to severe degree of bronchial lung infiltration that caused the increasing of soft tissue opacity at the caudal lung lobes was detected in both radiographic views.



**Figure 1** The lateral view of the thoracic radiograph showed a large soft tissue opacity masses at the cranial mediastinal and the mid dorsal thoracic area (asterisks). Besides, the elevation of the cranial thoracic trachea was also detected (arrow). In addition to the soft tissue opacity masses, the increase of soft tissue opacity due to the bronchial lung infiltration was detected at both caudal lung lobes.



**Figure 2** The ventrodorsal view of the thoracic radiograph, a large soft tissue opacity mass was detected at the cranial thoracic area which extended from the mediastinum to the right mid thoracic area. The mass diameter was larger than the 2 times of the width of cranial thoracic vertebra (asterisk). Moreover, the increased soft tissue opacity of pulmonary parenchyma due to the bronchial lung infiltration was detected at both caudal lung lobes. The cardiac silhouette was hardly to determine due to the superimposition of mass at the cranial area.

### **Radiographic diagnosis**

Bronchial pneumonia with intra-thoracic (mediastinal and bronchial) lymphadenopathy (Fungal pneumonia-Cryptococcosis).

### **Discussion**

Cryptococcosis is one of the most common, severe diseases in feline patients especially in the feline immunodeficiency such as the FIV infected cat like this patient (Gracia and Blanco, 2000; Ramos-Vara et al., 1994). Cryptococcosis is caused by the yeast-like organism that could involve the body through systemic infection. It has been reported that young and male cat was prone to be affected to this disease. (Gerds-Grogan and Dayrell-Hart, 1997). Normally, several organs could be affected such as the brain, lymph node and lung after pulmonary infection (Ramos-Vara et al., 1994). However, in some patients, clinical signs might be concealed. Therefore, the cat sometimes showed up with normal pulmonary

function and radiographic appearance. For that condition, Hamilton and colleagues have indicated that tracheal wash and bronchoalveolar lavage could be applied with more reliable to detect the primary cause as the *Cryptococcus* spp. than radiograph.

### **Reference**

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- Gerds-Grogan S and Dayrell-Hart B 1997. Feline cryptococcosis: a retrospective evaluation. J Am Anim Hosp Assoc. 33(2): 118-122.
- Hamilton TA, Hawkins EC and DeNicola DB 1991. Bronchoalveolar lavage and tracheal wash to determine lung involvement in a cat with cryptococcosis. J Am Vet Med Assoc. 198(4): 655-656.
- Ramos-Vara Ja, Ferrer L and Visa J 1994. Pathological findings in a cat with cryptococcosis and feline (2): 305-8.