

The Dyspnoeic Cat

A practical approach

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Causes of Dyspnoea

- **Non-respiratory**

CHF/anaemia/methaemoglobinaemia

- **URT**

Flu/Polyps/Rhinitis/trauma/neoplasia

- **Larynx**

Allergy/polyps/neoplasia/trauma/
paralysis

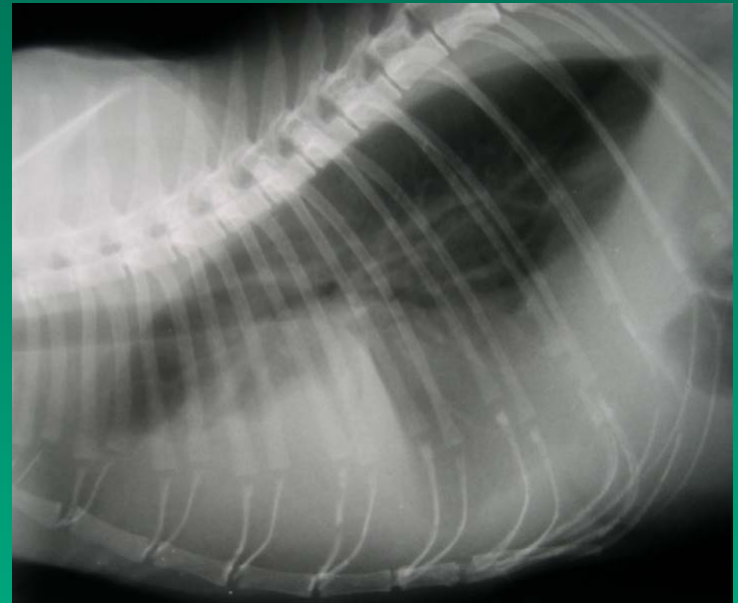
- **Trachea**

Flu/Bordetella/Aleurostrongylus/trauma



Causes of Dyspnoea

- **Bronchi**
(chronic bronchitis/
asthma/Aleurostrongylus)
- **Lungs** (oedema, trauma,
neoplasia, bronchopneumonia)
- **Thoracic cavity**
(effusions/pneumothorax/ruptured diaphragm/
mediastinal disease/neoplasia/
pneumomediastinum)



Initial assessment

- Signalment and history
- Observation of demeanour and breathing pattern
- Clinical examination
- Auscultate chest (murmur/gallop/airway sounds)
- Beware normal heart rate



Significance of breathing pattern

Loud airways	URT
Inspiratory Stridor	Pharynx/larynx
Expiratory stridor	Intrathoracic trachea / bronchi
Rapid shallow breaths	Lung parenchyma
Short choppy breaths (chest and abdomen moving in opposite directions)	Pleural space
Short inspiration, prolonged expiration	Small airway

It`s not always easy to tell!



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In Severe Respiratory Distress?

- Avoid further stressing the cat
- **Oxygen**
- Delay investigation until stabilised if possible
- Fine needle aspiration to confirm pleural effusion or pneumothorax



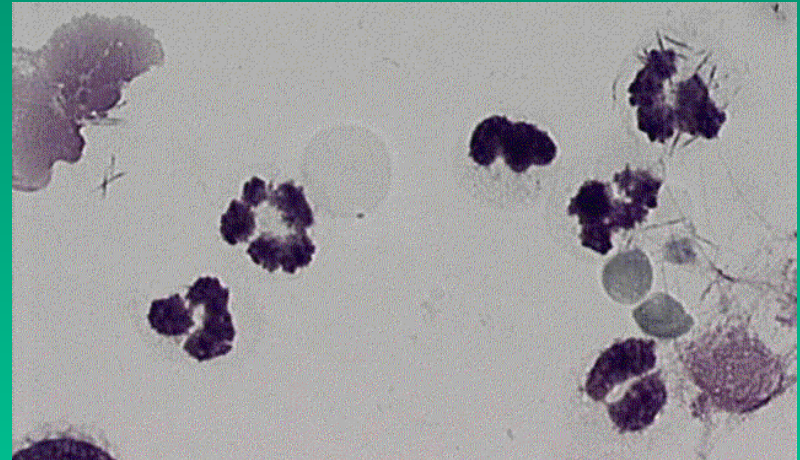
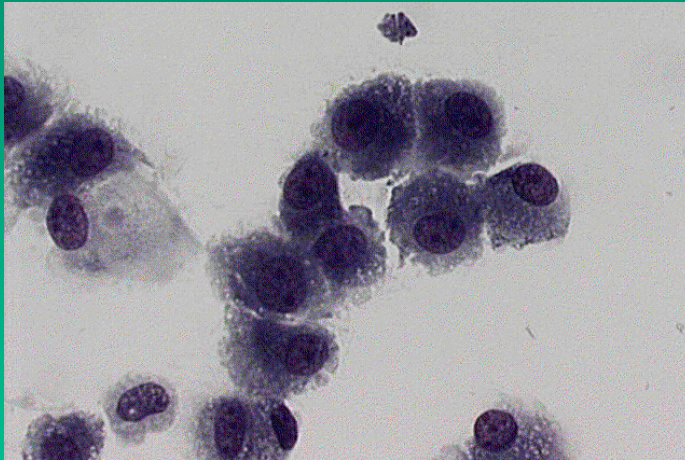
Fine needle aspirate



- Air
- Transudate
- Modified transudate
- Exudate
- Chyle/pseudochyle
- Cells from abdominal organs
- Blood
- Pulmonary oedema fluid (well oxygenated)

Practice laboratory

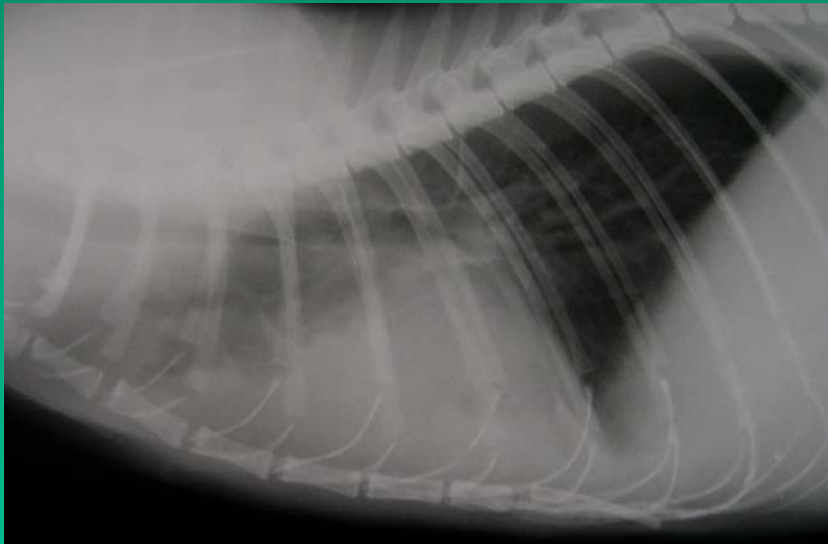
- **Diagnosis in <5 mins**
- **More accurate prognosis/therapy**
- **Specialist confirmation?**



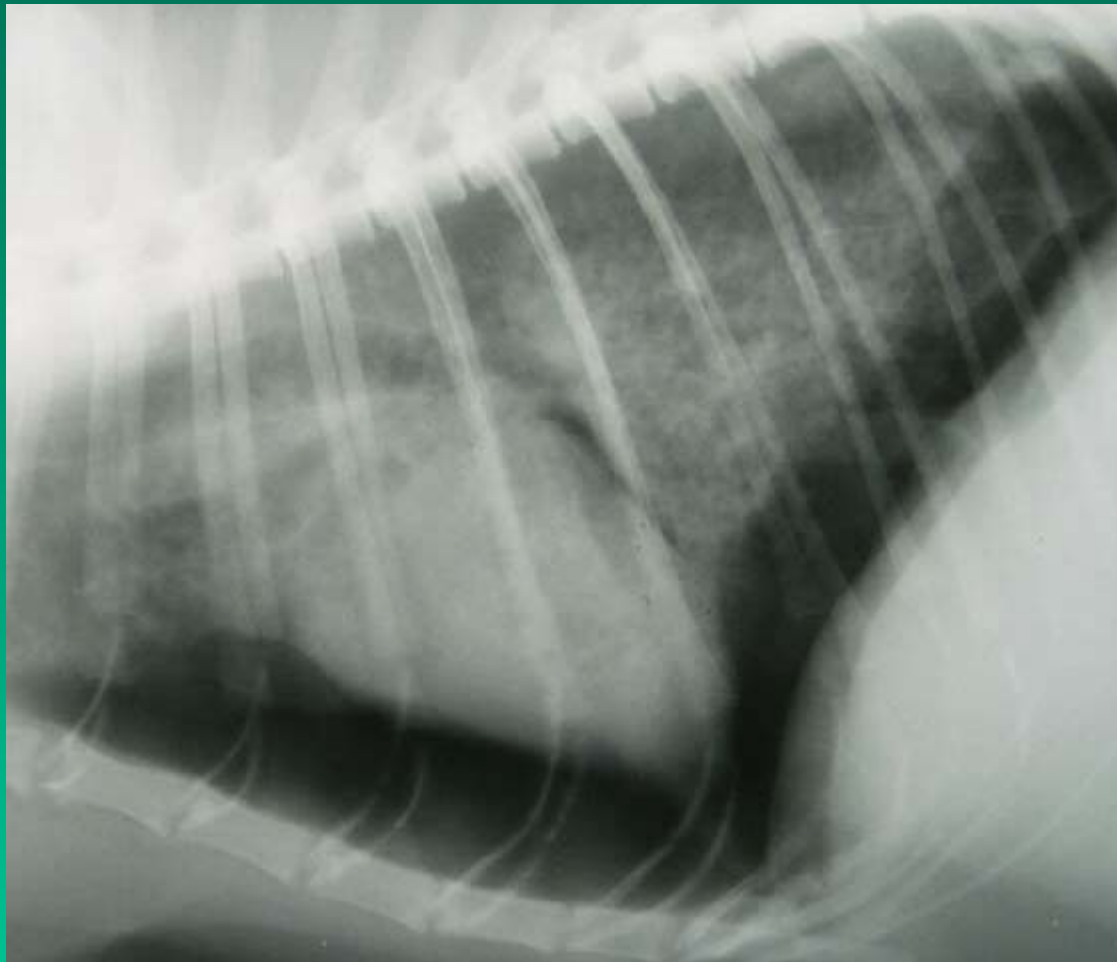
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Radiography and ultrasonography

- Sedation using I/V ketamine/midazolam
- vital to have anaesthetic machine ready in case of respiratory failure

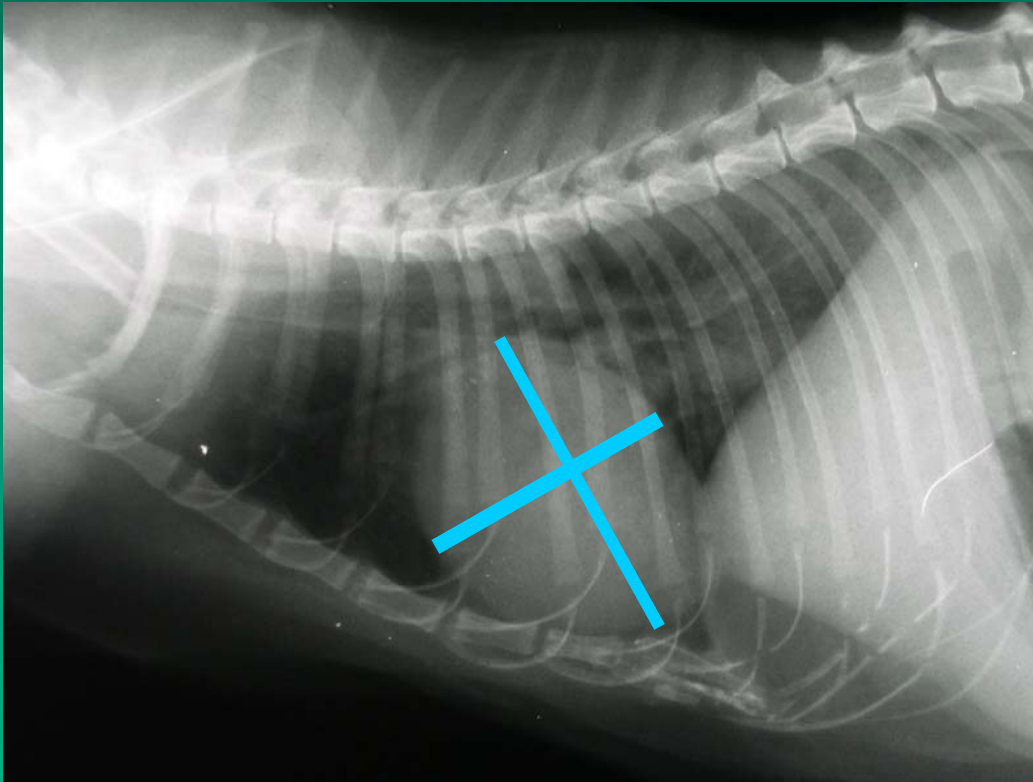


Pneumothorax and atelectasis



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Heart Size



- **Lateral:** 2/3rds height, 2 rib spaces wide (or **VHS 7-8**)
- **Dorsoventral:** 2/3rds width

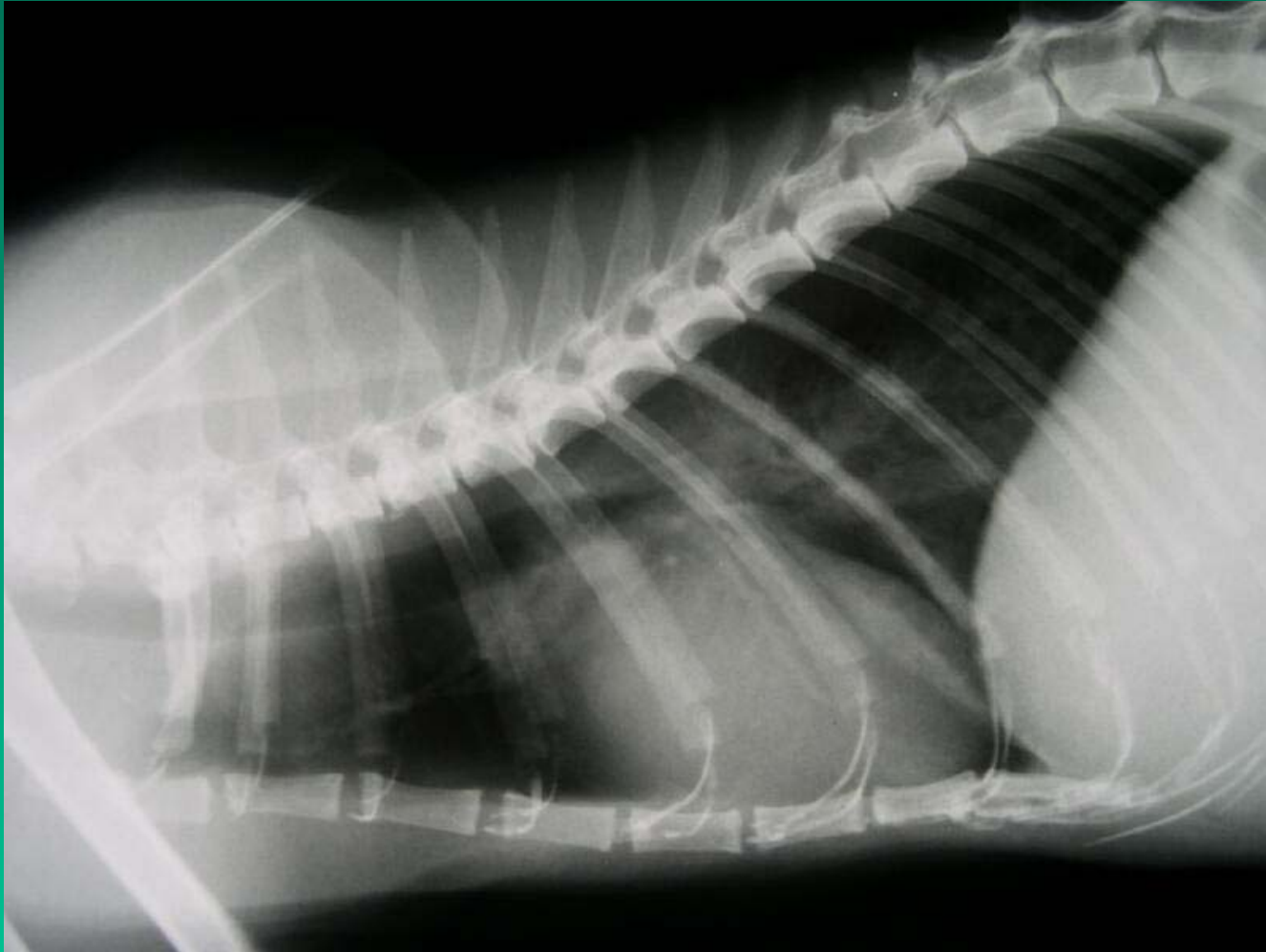
Echocardiography

Feline Myocardial Diseases (Phil Fox)

	<i>LA</i>	<i>LVFW_d</i>	<i>FS</i>	<i>LVID_d</i>
HCM	+/- >16mm	>6mm	OK	
Restrictive CM	>16mm (often >20mm)	OK	OK	OK
Dilated CM	>16mm	OK	<25%	>21mm
Endomyocardial fibrosis	>22mm	OK	OK	Speckled myocardium and mid-ventricular "band-like" plaque

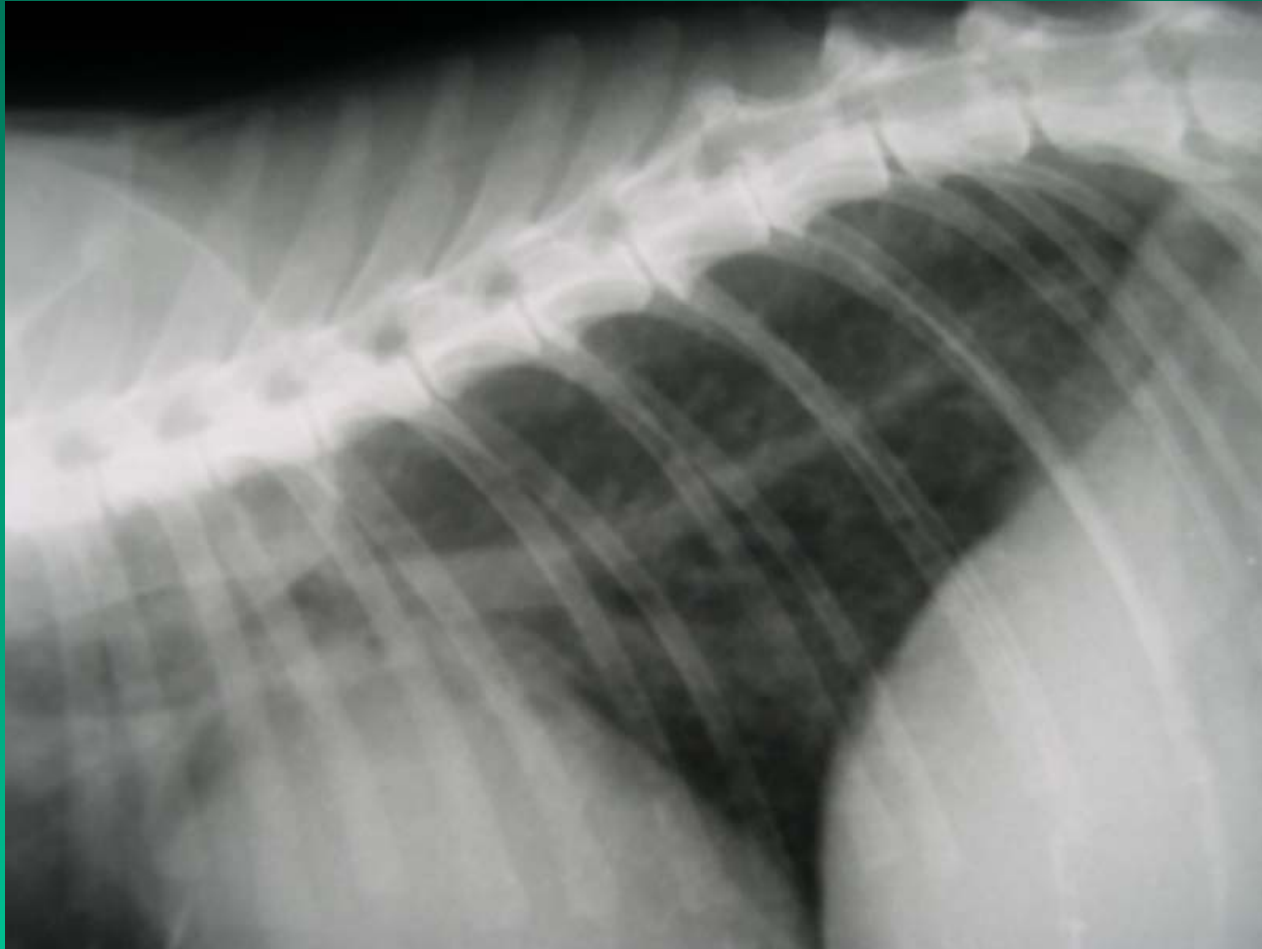
+ assess LA for echocardiatic "smoke"
suggesting swirling/studying of blood
- needs aspirate!

Cardiomegaly and pulmonary congestion



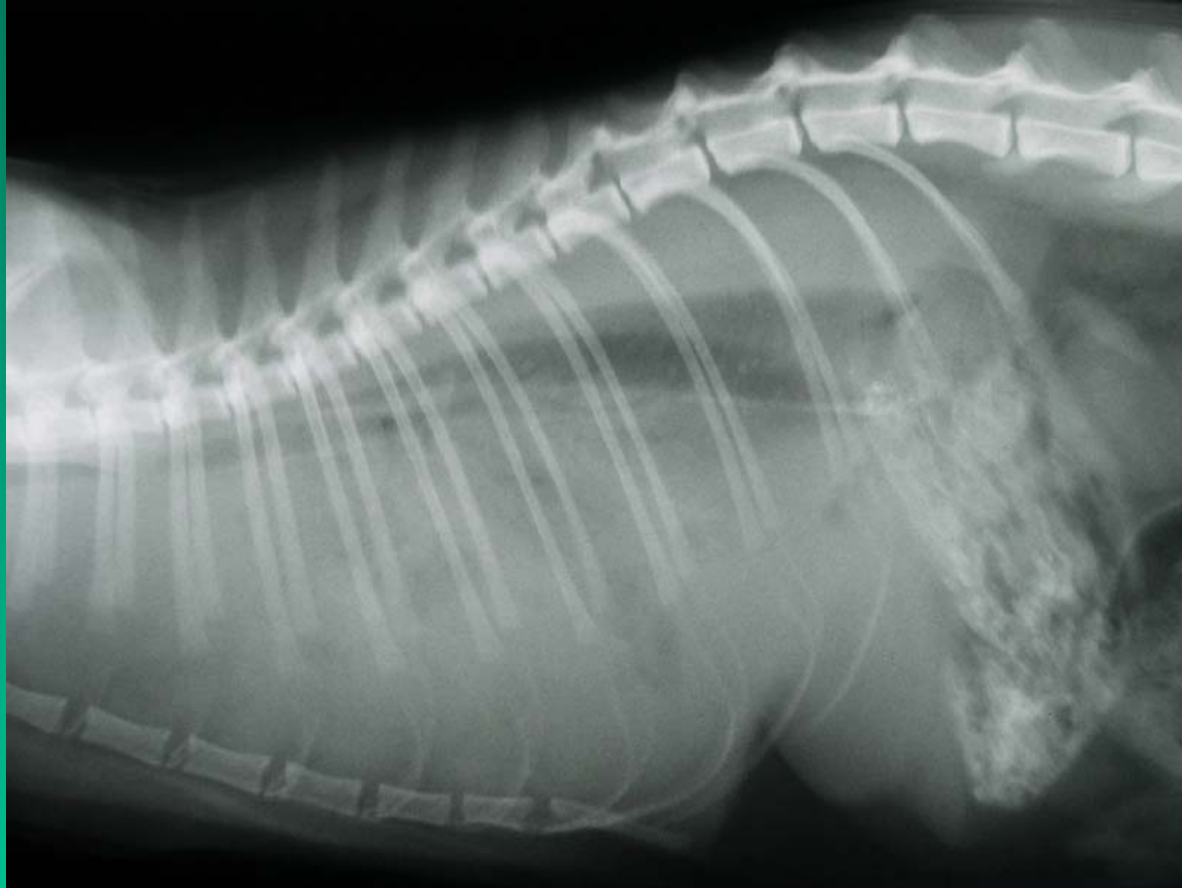
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Pulmonary oedema due to CHF can be anywhere in the lung (cf canine hilar oedema)



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Tracheal elevation is not always due to cardiomegaly



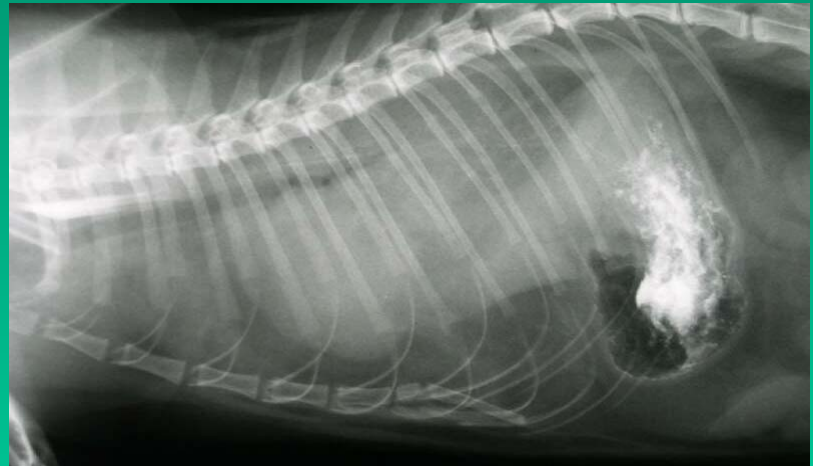
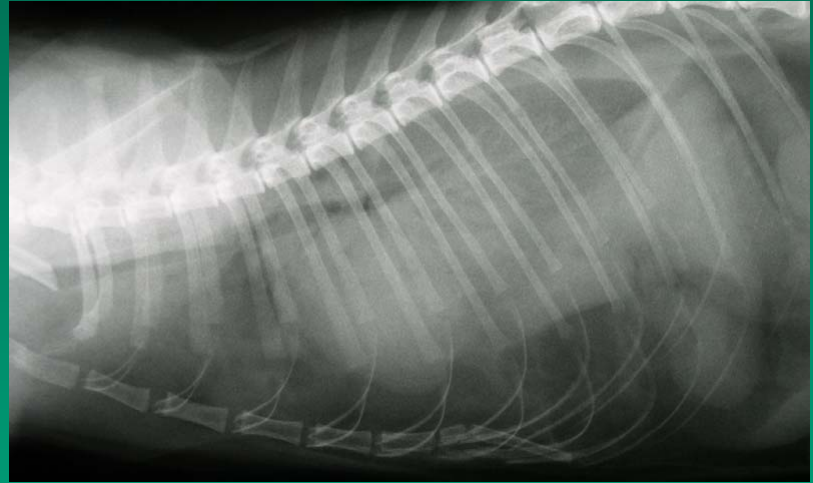
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Unusual exudate associated with thoracic lymphoma



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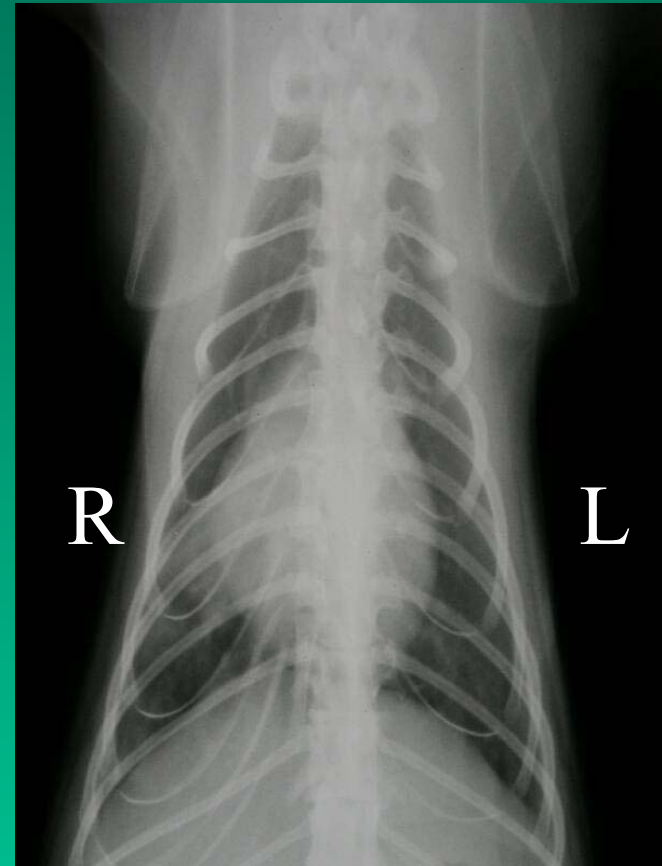
Diaphragmatic hernia (hepatocytes on FNA left thorax)



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Feline Asthma/chronic airway disease

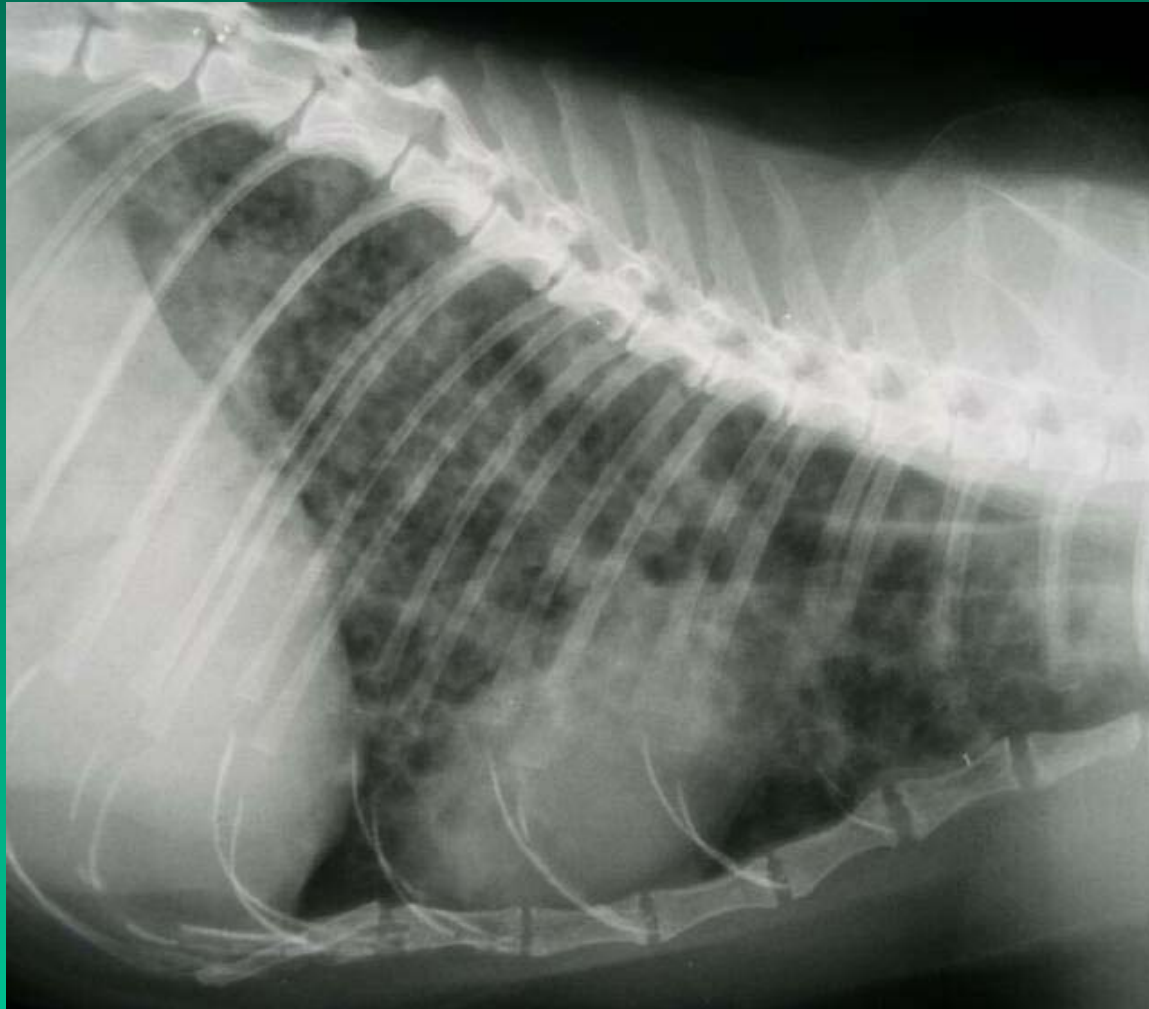
- **Air entrapment**
- **Tram-lines and doughnuts**
- **Consolidation of right middle lung lobe (cf alectectasis)**
- **Some asthmatics have normal radiographs!**
- **BAL to confirm**



Bronchoalveolar lavage in the cat

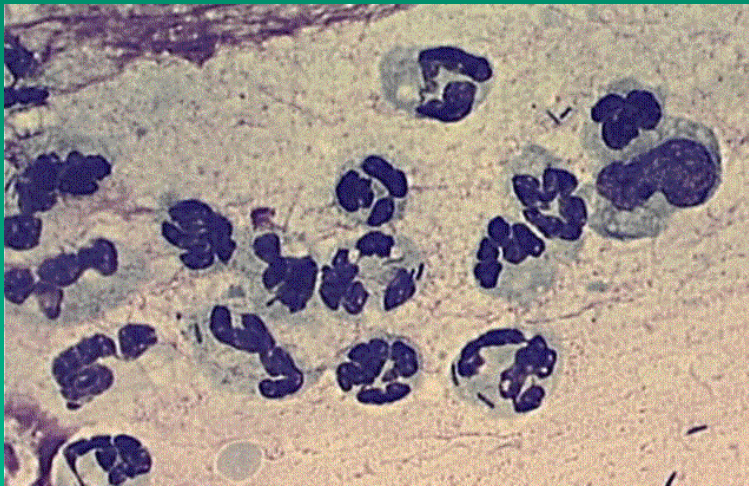
- Sterile urinary catheter (pre-measured) introduced into lung via endotracheal tube
- three doses of 5-10 ml sterile saline
- chest coupage before each re-aspiration
- first wash usually not recovered
- second wash for culture
- final wash for cytology
(froth reflects presence of surfactant)

Pulmonary neoplasia confirmed on BAL



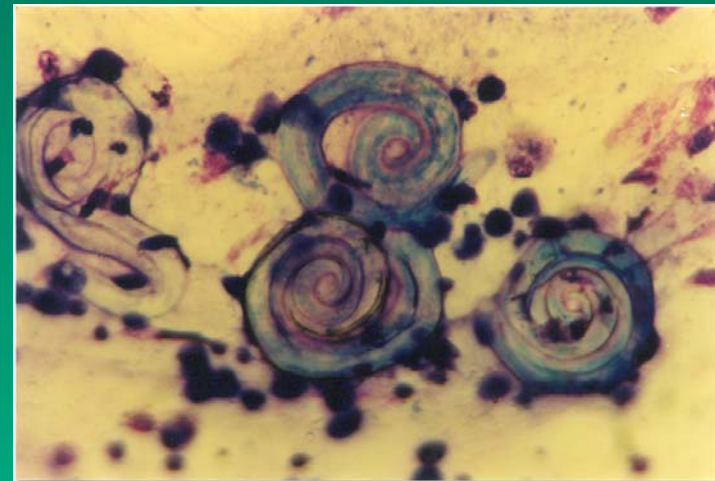
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Airway cytology



Bacteria in PMN`s

Lungworm larvae



Therapy for Feline Asthma

- **Lifestyle changes**
- **Fenbendazole 50mg/kg sid 5dd**
- **Dexamethasone 0.2-2.2 mg/kg then Prednisolone 1 mg/kg bid 5dd and taper slowly**
- **Theophylline (Corvental-D) 100mg/cat sid**
- **(Terbutaline 0.01 mg/kg s/cut or 1/8 to 1/4 2.5mg tablet bid PO)**



Inhalers - you can't be serious!



- Albuterol (one dose as needed - up to every 30 mins)
- Fluticasone 250mg - two puffs bid daily (+/- oral pred)
- ?? Beclamethasone

(Intractable cases: Consider addition of ciproheptadine (1mg/kg PO bid/tid))