My approach to respiratory distress in the ER
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Difficulty breathing in dogs and cats is a common reason for owners to bring pets to the hospital. Rapid identification and recognition of disease are key to a favorable outcome in these patients. At the end of this lecture, you should be able to:

1. Localize the respiratory lesion based on history, signalment of patient, pattern of breathing, and physical exam findings.
2. Promptly recognize the location of respiratory disease involves tableside diagnostic testing that allows for careful and safe handling of the fragile respiratory patient.
3. Understand common diseases that you may see causing respiratory emergencies
4. Know rapid interventions to stabilize patients including oxygen supplementation and sedation options for respiratory cases

Anatomic lesion localization	**Disease Examples**	**Physical Exam Findings**	**Diagnostic Testing Recommended**
Upper Airway -Nose/nasopharynx -oropharynx -larynx -cervical trachea	Brachycephalic airway syndrome Laryngeal Paralysis Nasal Polyp Tumor	Inspiratory stertor or stridor Loud noise on inspiration Normal lung sounds on thoracic auscultation	Sedated oropharyngeal exam Sedated oral exam +/- cervical imaging and thoracic imaging
Lower Airway -bronchioles	Feline Asthma Canine bronchitis	Expiratory push Wheezes on thoracic auscultation Increased respiratory rate	Thoracic radiographs Bronchoscopy or endotracheal wash with culture and cytology
Pulmonary parenchymal disease	Pneumonia Congestive heart failure/pulmonary edema Interstitial lung disease Hemorrhage Pulmonary contusions	Increased respiratory rate and effort Crackles on thoracic auscultation Rapid, shallow breathing Increased inspiratory and expiratory effort	Point of care ultrasound -TFAST -La/Ao ratio Thoracic radiographs Coagulation testing NT-pro BNP (cats only) Echocardiogram Blastomycosis testing Endotracheal wash
Pleural space disease	Pneumothorax (spontaneous vs traumatic) Pleural effusion -pus	Increased respiratory rate and effort Short, choppy breaths Paradoxical breathing Decreased or “muffled” lung sounds	Point of care ultrasound Thoracic radiographs CT scan NT-pro BNP (cats only)

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FOR YOUR INFO ONLY Brainstem disease Cervical disk disease Lower motor neuron disease Medication (Opioid)	Brain herniation IVDD (C1-T2) Tick paralysis Polyradiculoneuritis Botulism Opioid usage/overdose	“Belly” or abdominal breathing with no thoracic wall movement Normal thoracic auscultation	Arterial blood gas (evaluated $PaCO_2$ + PaO_2) MRI and/or CT scan