A cute respiratory distress syndrome (ARDS) is a severe inflammatory disorder of the lungs that can result in life-threatening respiratory failure in dogs and cats. It can be caused by a wide range of precipitating conditions, all of which lead to lung inflammation, alveolar capillary leakage, and protein-rich pulmonary edema. Acute lung injury (ALI) is a milder form of inflammatory injury to the lungs that also can progress to ARDS.

Risk Factors

ARDS has many potential causes. It may result either from direct pulmonary insult or from a generalized inflammatory response such as systemic inflammatory response syndrome (SIRS) or sepsis. Box 9-1 lists many of the risk factors proposed in dogs, but this list is not exhaustive. Sepsis of either pulmonary or nonpulmonary origin is the most common predisposing cause of ARDS identified in dogs. Risk factors have not been characterized in cats, but the few available reports suggest similar underlying etiologies. A single patient may have multiple precipitating causes.

Pathophysiology

The pathogenesis of ARDS is similar regardless of the underlying etiology and is characterized by an overwhelming inflammatory process that leads to epithelial