Non-cardiogenic pulmonary edema (NCPE) is a rare but life-threatening complication after administration of intravenous (IV) non-ionic radiographic contrast media (RCM). The exact pathophysiology is not known but is thought to be related to increased capillary permeability. We report a case of a 23-y old female with development of contrast induced pulmonary edema twice after administration of radiographic contrast agent for computed tomography angiography (CTA) of chest.

A 23-y old previously healthy female presented to the hospital with a 2-month history of shortness of breath and exertional chest pain. 
- CTA chest was ordered among other workup. Soon after imaging, she started experiencing increasing tachypnea with desaturation to the 40s.
- She was put on noninvasive positive pressure ventilation. Repeat chest X-ray showed diffuse opacities throughout the lungs. CTA chest was negative for pulmonary emboli but was consistent with pulmonary edema or infectious/autoimmune process.
- She was eventually diagnosed with systemic lupus erythematosus based on her lab findings, started on prednisone and discharged to follow with rheumatology.
- A few days later, she again presented with exertional shortness of breath. A CTA chest was obtained in the emergency department to rule out an acute process.
- Soon after completion of CTA, she started feeling a sensation of throat tightness and shortness of breath.
- Her symptoms were thought to represent contrast allergy and she was given methylprednisolone and diphenhydramine to no effect. Auscultation revealed crackles but no rhonchi.
- Chest X-ray showed obvious pulmonary edema. (Figure 1) She was put on noninvasive positive pressure ventilation, eventually got intubated in the intensive care unit and was symptomatically managed with diuretics and steroid taper.
- Her shortness of breath improved, and she was later discharged to the care of her primary care provider.
- Due to her sudden onset shortness of breath, both times in relation to the CTA chest, her presentation was thought to have represented non-cardiogenic pulmonary edema due to contrast administration.

Non-cardiogenic pulmonary edema is a rare (0.001–0.008%) adverse event related to IV contrast media. Nonionic RCM generally have a lower risk of adverse events as compared to ionic contrast media. Most of the reactions (about 70%) are immediate, i.e., occurring within a few minutes after the injection. Primary treatment of NCPE is oxygen supplementation with positive airway pressure or invasive ventilation. Diuretics should be used with caution. Corticosteroids can be given to decrease the severity of the reaction.