2013 Oral Poster Session
Sunday, October 13, 2013
1:30 – 2:30 p.m.

Time: 1:36:00 PM - 1:42:00 PM

Presenter: Shrey K Thawait, MD

Title of Abstract: **A Pattern Approach to Interpretation of Delayed Contrast Enhanced Cardiac MRI for Evaluation of Non-Ischemic Cardiomyopathies**

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Modality: MR

Organ System: CV

Scientific and/or Clinical Significance? This exhibit will improve the radiologist's understanding of the pathophysiology of delayed myocardial contrast enhancement and review the patterns of delayed enhancement associated with non ischemic cardiomyopathies.

Relationship to existing work This image rich exhibit will describe the typical and variant patterns of delayed myocardial enhancement in non ischemic cardiomyopathies.

Purpose 1. Recognize the non-vascular delayed myocardial contrast enhancement and differentiate it from ischemic cardiomyopathy. 2. Understand the basic pathophysiological mechanisms leading to delayed enhancement. 3. Learn the subendocardial, transmural or subepicardial patterns of delayed myocardial enhancement. 4. Identify the delayed contrast enhancement of the ventricular septum and learn the imaging features of hypertrophic and dilated cardiomyopathy. 5. Gain knowledge of patchy delayed contrast enhancement which may be seen with sarcoidosis, amyloidosis and myocarditis. **Content Organization** Improvements in pulse sequences, higher field strength magnets and better hardware have led to superior contrast and temporal resolution of delayed contrast enhanced cardiac MRI with gadolinium based intravenous agents. While the delayed contrast enhancement was initially described for diagnosis of ischemic cardiomyopathy, it is being increasingly utilized for evaluation of non-ischemic cardiomyopathy. High resolution images of non-ischemic cardiomyopathies will be presented, and findings will be contrasted with ischemic cardiomyopathy. Among the non-ischemic, typical and variant imaging features will be discussed. The importance of integrating correct clinical information will be underlined. **Major Teaching Points** The utilization of dynamic contrast enhanced cardiac MRI will continue to increase and expand. Several non-ischemic cardiomyopathies may be diagnosed with delayed contrast enhancement. Although each entity has a classical pattern of delayed enhancement, there may be significant overlap. Integration of available history and ancillary imaging findings could be very helpful in arriving at the correct histological diagnosis.