

# CASE STUDY: PET/CT Identifying an Occluded RCA with Coronary Angiogram Correlation

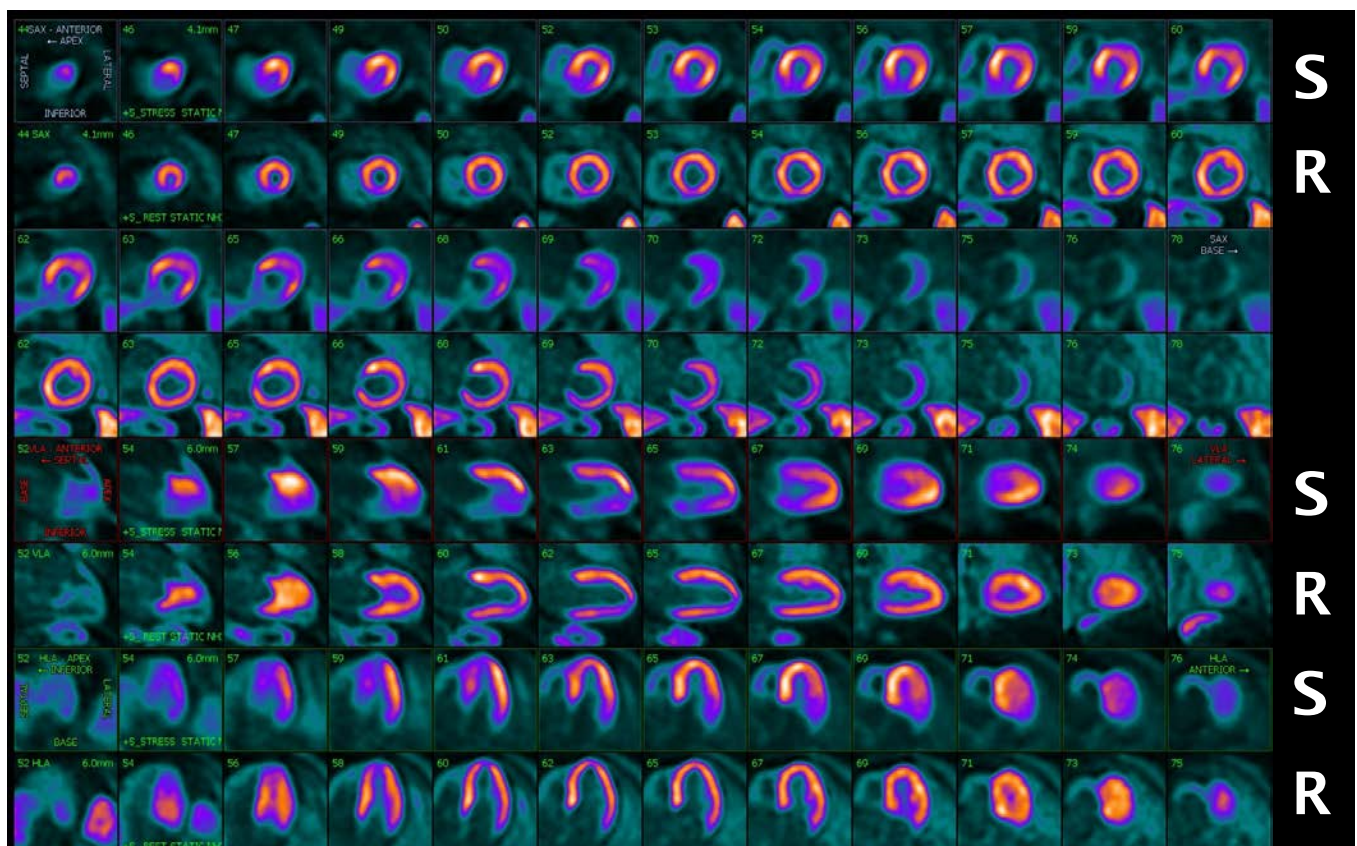
University of Kansas Medical Center

78 yo. M presents to the ED with recurrent chest pain. Six months earlier the patient had an obtuse marginal DES PCI. A previous Bruce protocol exercise stress SPECT MPI was said to show only “attenuation artifacts” in the inferior wall. History of Myasthenia gravis, type II diabetes, hypercholesterolemia, peripheral vascular disease and an allergy to Iodinated IV contrast.

In the ED serial troponins were negative. An EKG showed normal sinus rhythm with non-diagnostic ST abnormality.

A low dose rest/high dose regadenoson stress N-13 Ammonia PET/CT MPI was done to guide therapy.

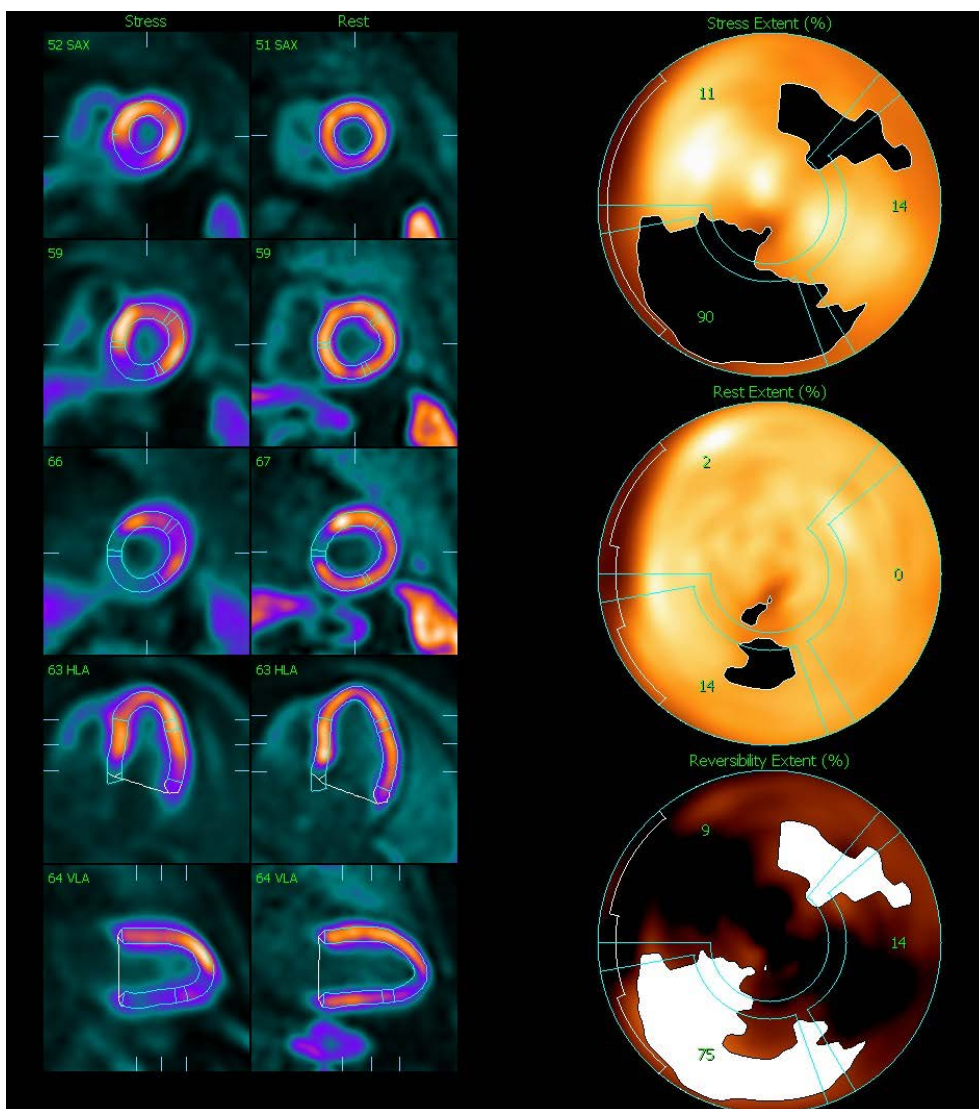
N-13 Ammonia PET/CT MPI revealed normal myocardial flow at rest and with stress for the LAD and LCX. There was a large reversible perfusion defect in the inferior wall with significantly diminished peak stress myocardial



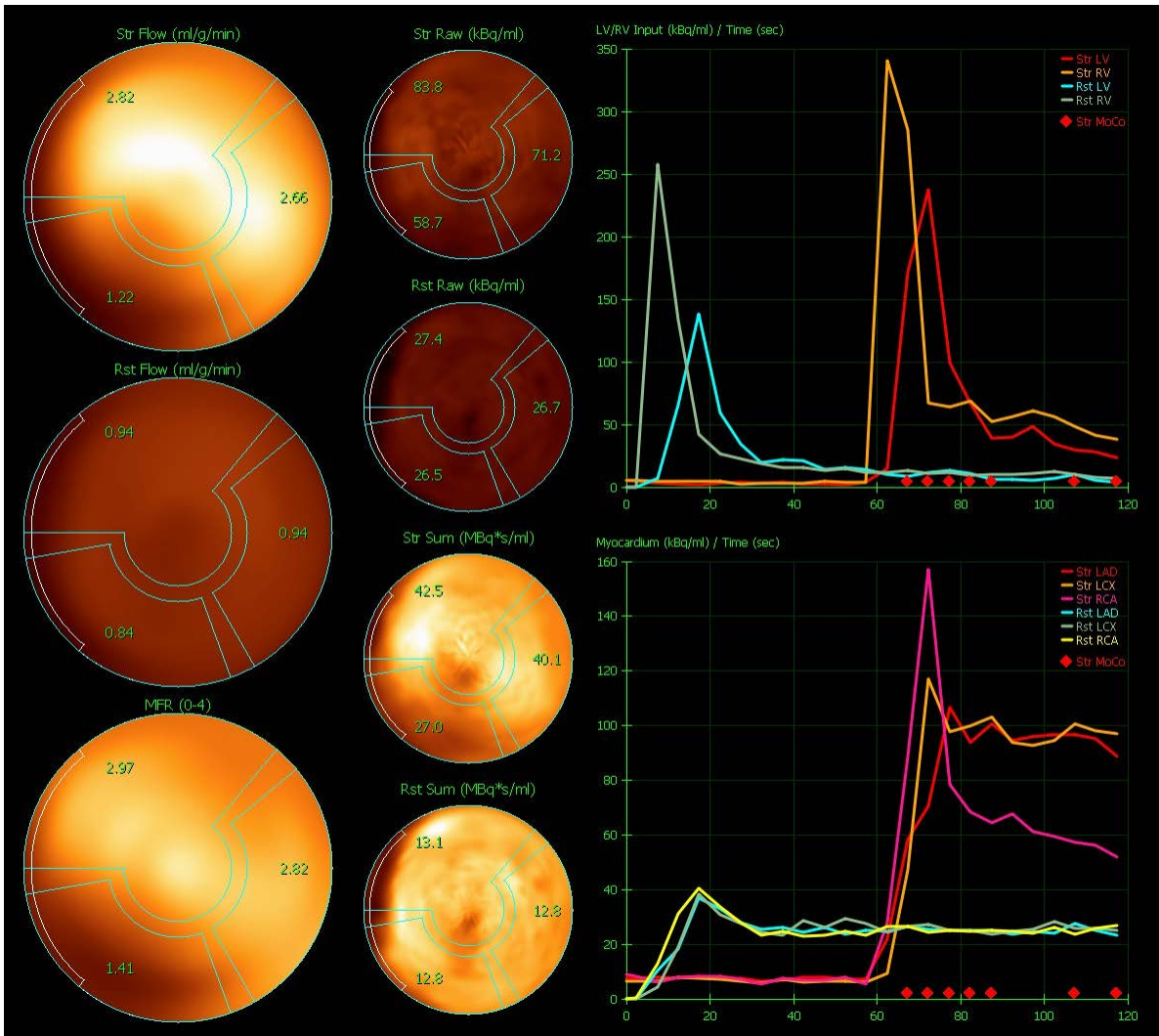
SA, HLA, VLA, Stress / Rest Slices

blood flow and myocardial flow reserve in the RCA territory. Resting myocardial blood flow in the RCA territory was normal.

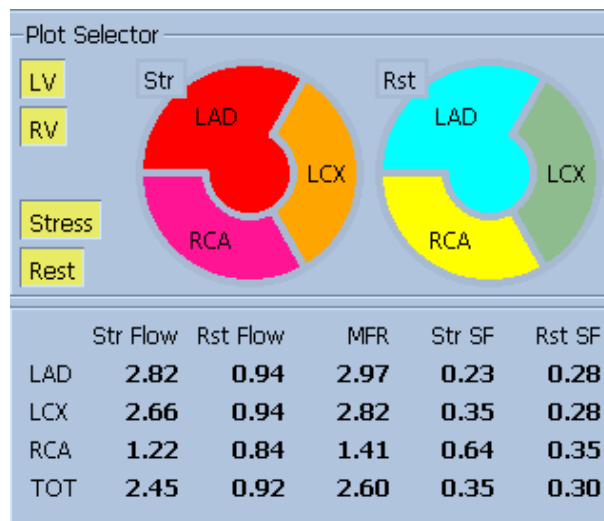
CATH showed mild disease of the left coronary system and a large occluded and collateralized dominant RCA. The patient underwent successful coronary intervention of the chronically occluded right coronary artery. Four drug eluting stents were placed to the RCA with an excellent angiographic result.



Stress / Rest and Reversibility Extent Ischemia Percentage

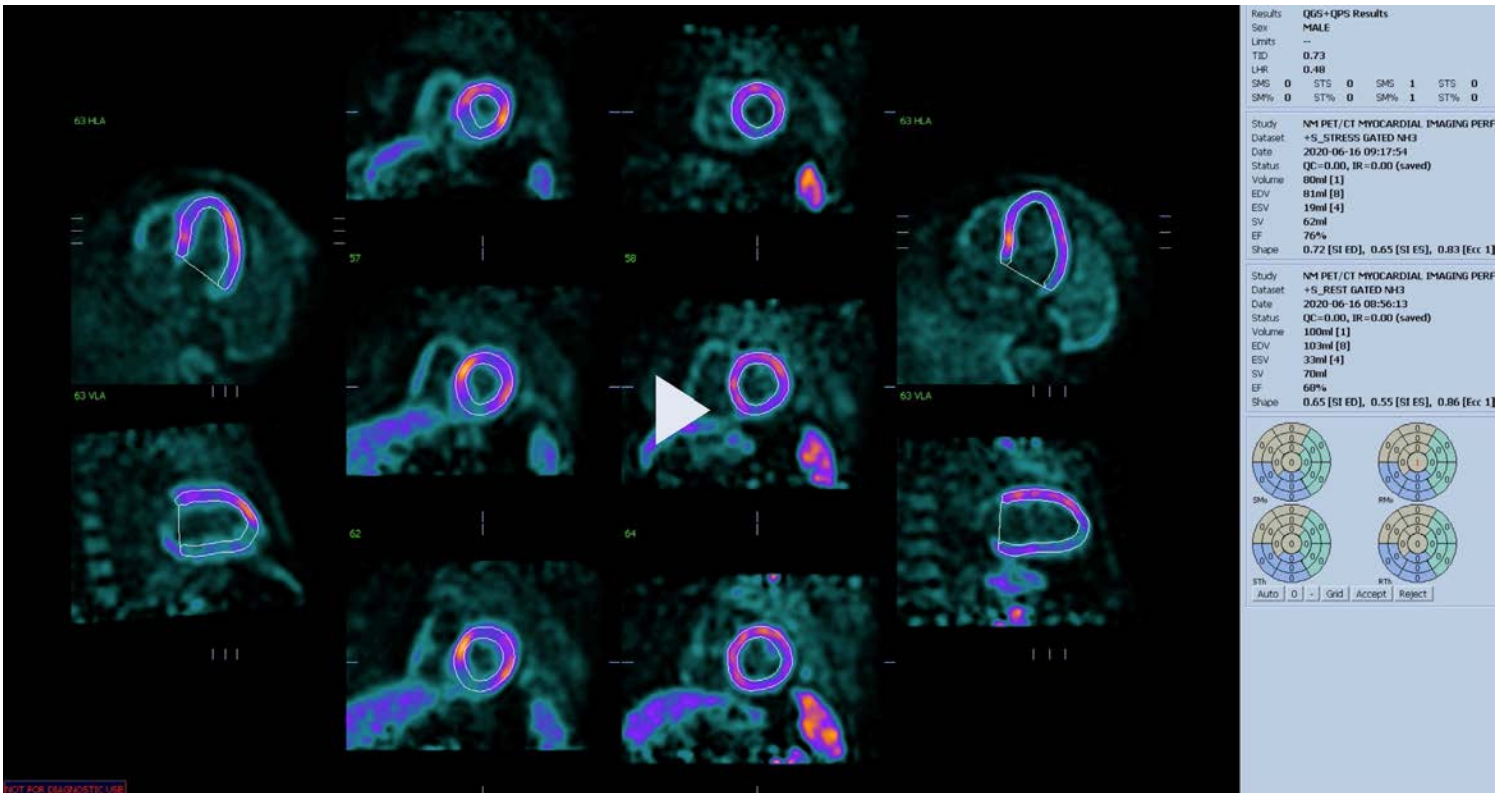


Global and Regional Myocardial Blood Flow and Quality Control Curves

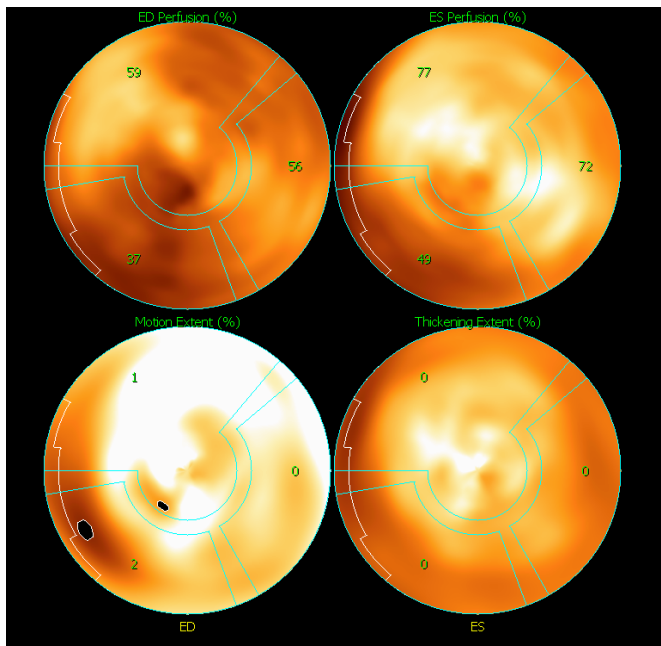


Global, Regional and Reserve Myocardial Blood Flow Values

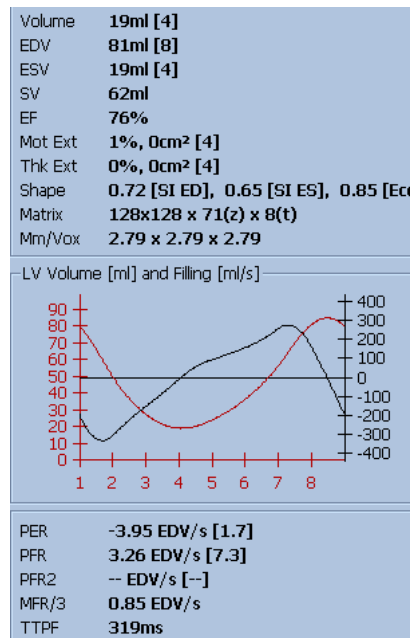




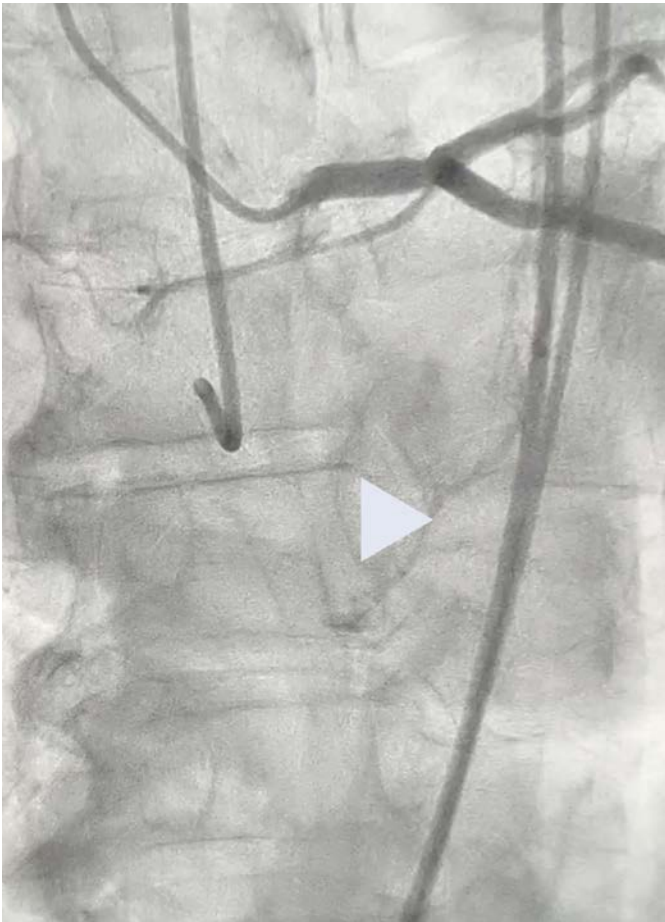
Eight Frame Stress / Rest Gated Cine. Click to link to video.



ED, ES, Motion, Thickening Percentages



Functional Data Including Ejection Fraction



Coronary angiogram documenting a large occluded and collateralized dominant RCA. [Click to link to video.](#)



Post placement of four drug eluting stents placed to the RCA with an excellent angiographic result. [Click to link to video.](#)

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