

Nuclear Cardiology

1. Evaluation of myocardial perfusion
2. Evaluation of ventricular function
3. Detection of myocardial necrosis

Nuclear Cardiology

Anatomy and Physiology

Heart made up of two separate pumps

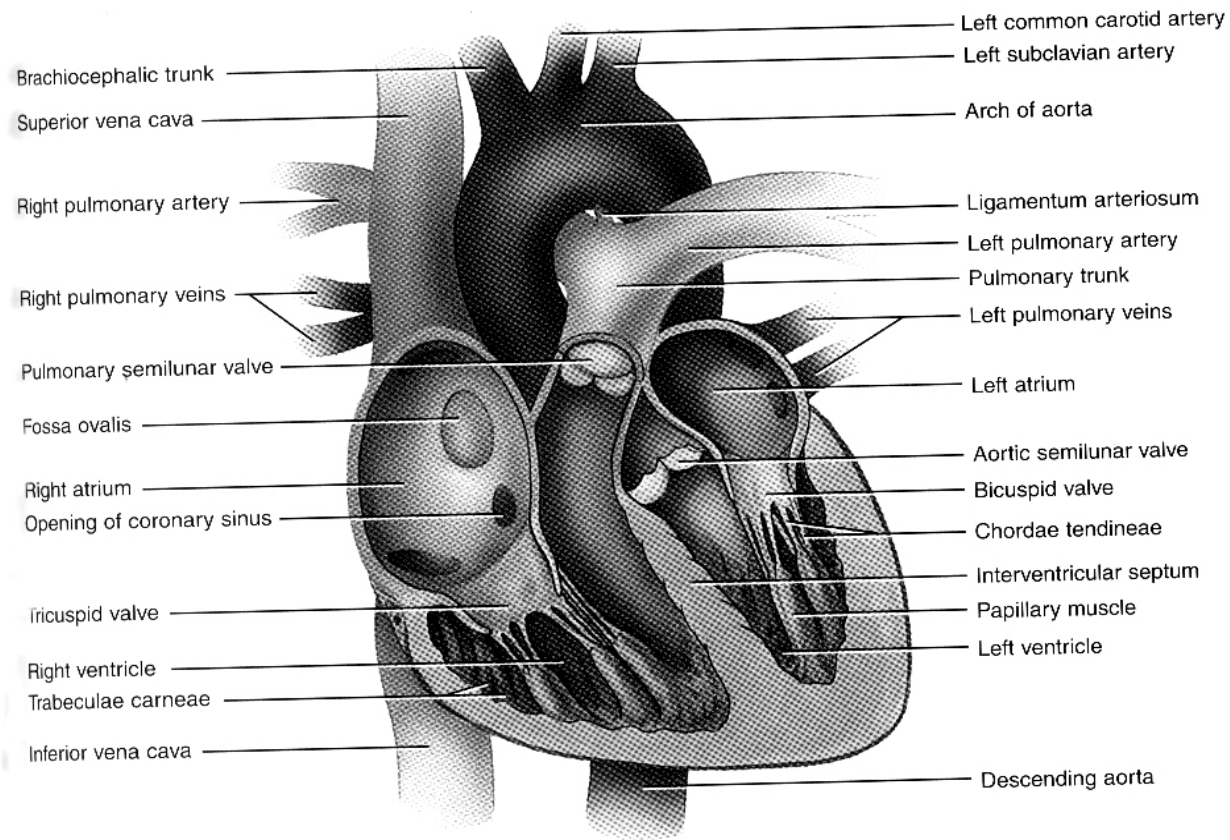
Atrias

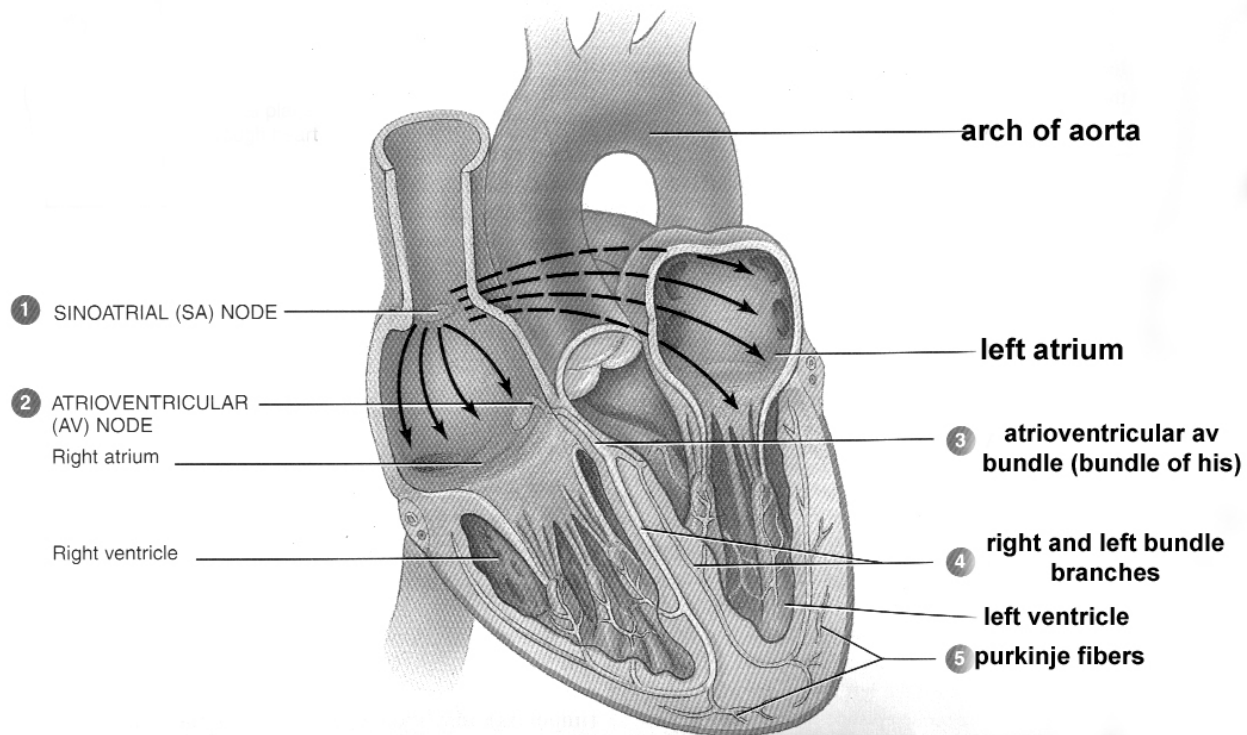
Ventricles

Valves

Blood Supply to the Heart

Valves





Nuclear Cardiology

Mechanics of the Heart

Systole

Diastole

Cardiac Output

Stroke Volume

Nuclear Cardiology

Myocardial Necrosis Imaging

MI:

Nuclear Cardiology

Tc99m PYP imaging

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In111 Antimyosin

Nuclear Cardiology

Evaluation of Ventricular Function

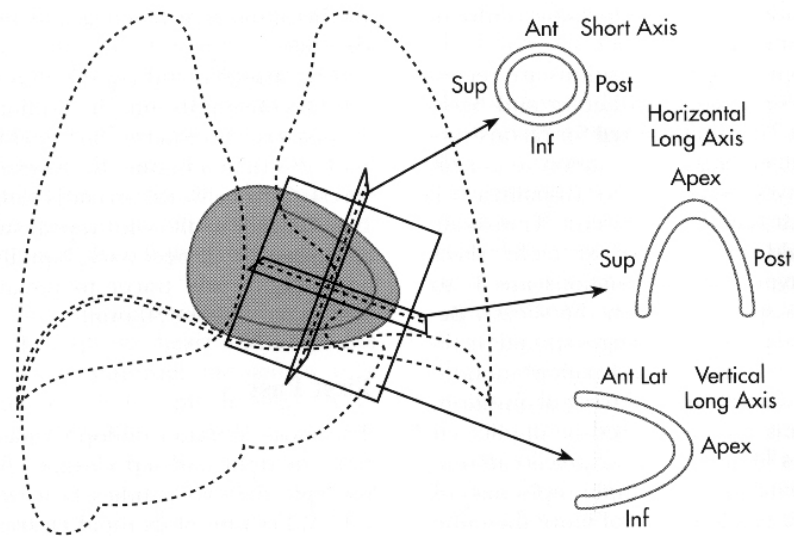
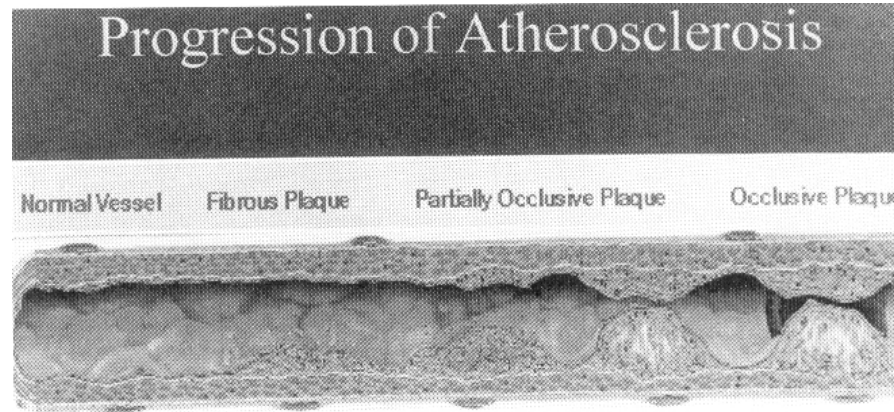
First pass imaging:

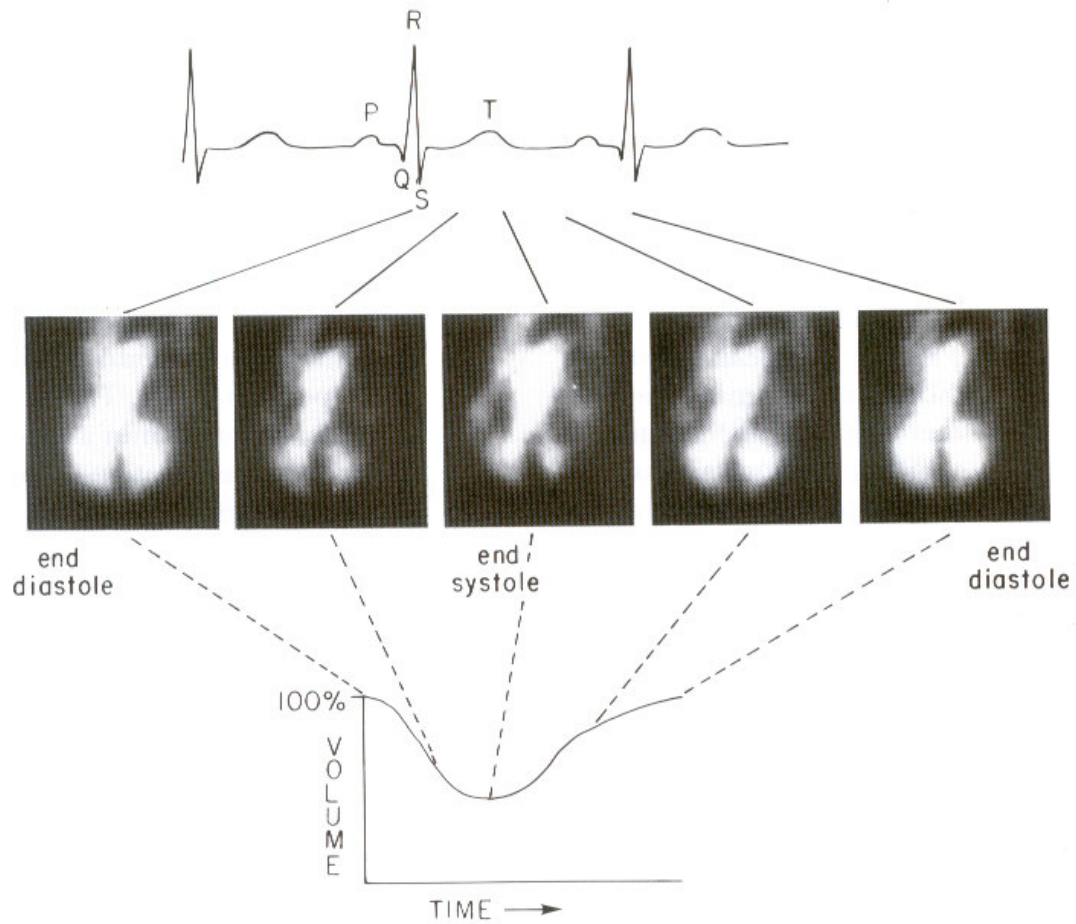
Nuclear Cardiology

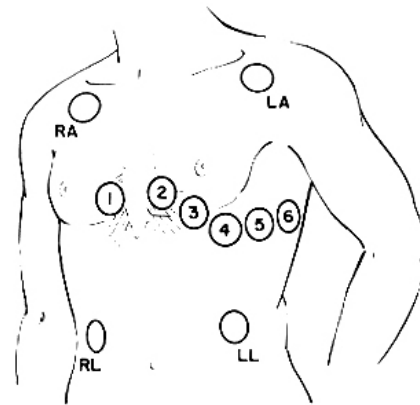
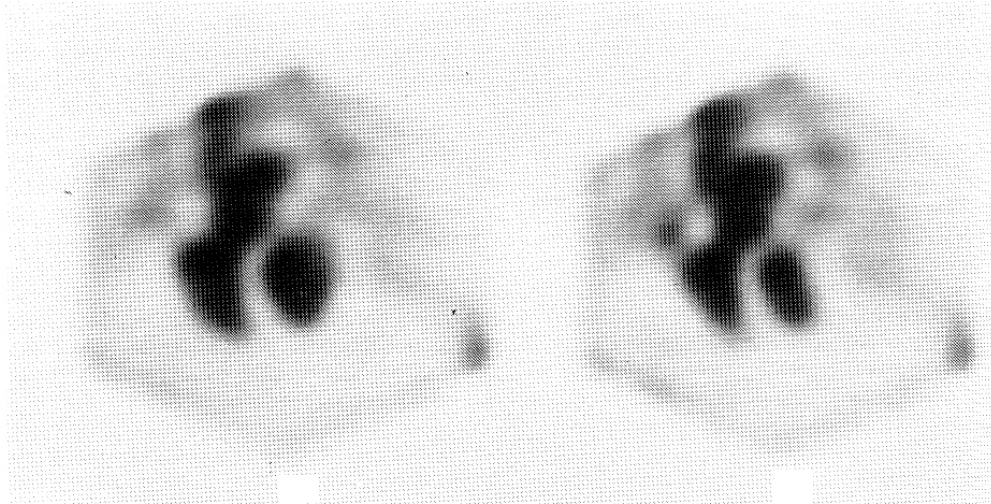
Electro-conduction system of Myocardium

Nuclear Cardiology

Muga Scans







Sites of electrode placement for cardiac stress testing.

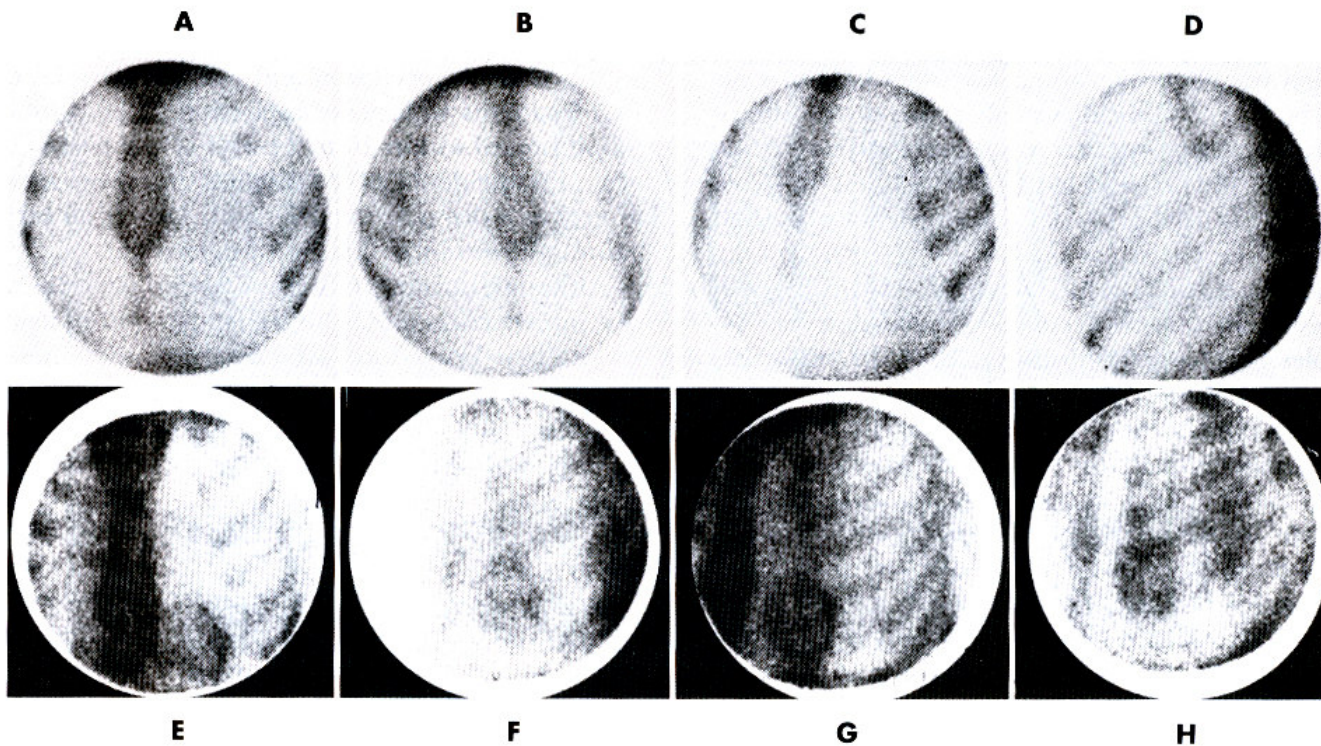


Figure 12-20 Normal ^{99m}Tc pyrophosphate myocardial images. A, Anterior; B, RAO; C, LAO; D, left lateral. Abnormal concentration of radiopharmaceutical in anterior (E); left lateral (F); 40-degree LAO (G); and 70-degree LAO (H).

Nuclear Cardiology

Tl201 Chloride

Nuclear Cardiology

Sestamibi/Myoview:

Nuclear Cardiology

Tebroxime

Nuclear Cardiology

General Tl201 Imaging Protocol

--HEART LUNG RATIO

Nuclear Cardiology

General Sestamibi/Myoview Imaging Protocol:

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Imaging protocols

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Treadmill stress test

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Dipyridamole (persantine)

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Adenosine

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Dobutamine

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Viability Imaging

Stunned vs. hibernating myocardium

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Imagine Findings

Patterns of imagine findings

Stress	Rest	Diagnosis
Normal	normal	normal
Defect	normal	ischemia
Defect	defect	infarct
Normal	defect	reverse redistribution, usually insignificant