CARDIOVASCULAR PATHOLOGY

GROSS LABORATORY **Normal Hearts and Selected Diseases**

The objective of this laboratory is to examine the normal gross anatomy of the heart and to review potential sites for pathologic lesions. The specimens in your laboratory should be reviewed according to blood flow (i.e. inferior vena caval blood returning to the right atrium (right ventricle, etc.)

I. Heart: Key Concepts in the Gross Examination

1. The size of the heart correlates with associated chamber hypertrophy or dilatation. Examples of cardiac lesions which are associated with cardiomegaly include:

Left ventricular dilatation:	In chronic ischemic heart disease due to coronary artery atherosclerosis
Right ventricular dilatation:	Pulmonary disease /pulmonary hypertension/ pulmonary valve disease
4-chamber dilatation:	Cardiomyopathy
Left ventricular hypertrophy:	Hypertension
Right ventricular hypertrophy:	Chronically elevated pulmonary artery pressure

2. Examine all cardiac structures for pathologic legions.

Pericardium:	Normal is smooth and glistening (dull with grey-tan exudates in Pericarditis)
Coronary arteries:	Determine percent of lumen compromised by atherosclerosis
Ventricular walls:	Upper normal thickness of LV is 12mm, and of RV is 3mm. Examine for scars (prior infarct) or pale/hemorrhagic/yellow areas (acute-recent infarct)
Septum:	Examine for scars or recent infarct
Valves:	Examine valve RING, CUSPS, COMMISSURES, CHORDAE TENDINIAE. Are there any vegetations?

3. Chamber dilatation is manifested by an increased volume, a "scooped out" appearance, and flattened trabecular muscle in the chamber.

4. Myocardial infarction can be recognized grossly in various stages. An 18-24 hour old infarct will be pale; at several days the tissue is more yellow with a hyperemic or hemorrhagic border; a healed infarct is white-grey (scar).

5. The major conditions affecting the aorta are atherosclerosis, aneurysm formation and dissection. The major lesions seen in the pulmonary artery are thromboemboli and atherosclerosis (the latter with chronically elevated pulmonary artery pressures).

II. Cardiac Pathology: Selected examples of heart disease will be reviewed by the lab instructors.