To evaluate the usefulness of regional washout in discrimination between normal and ischemic areas, exercise and redistribution myocardial LAO images were reviewed in 8 normals (Gp1), 16 pts with angina (Gp2), 21 pts with angina plus old myocardial infarction (Gp3) and 6 pts after coronary artery bypass grafting (Gp4). Percent decrease of T1-201 counts (%W) was calculated in initial and delayed (2.5 hours after exercise) images. Images were divided into 3 areas. Apex was placed at 180°, then 3 ROIs of 60°-150°, 150°-210° and 210°-300° were assigned to LAD, RCA and LCX areas, respectively. %W in areas supplied by coronary arteries with less than 75% stenosis were higher than those with stenosis of more than 75% (p<0.001). In Gp4, areas perfused by patent grafting vessels showed higher %W compared with those perfused by non-patent vessels. These results suggest that regional %W reflects coronary artery stenosis. However, regional %W in non ischemic areas which should be identical in Gp1, Gp2 and Gp3 were different as 37.7±8.6, 23.4±10.5% in Gp1, and 12.8±1.6% in Gp2. And, double products in these 3 groups were in the same descending order. Thus it is suggested that %W should be carefully interpreted in coronary artery disease to avoid overdiagnosis.

In 40 patients with previous myocardial infarction, exercise T1-201 myocardial imaging (TI-IM) was performed to detect additional ischemic area. Patients were exercised in the upright position on a bicycle ergometer until the onset of limiting symptoms. Myocardial imaging was performed using Shimazu-LFOV scintillation camera and a high-sensitivity parallel-hole collimator. There was sensitivity for detecting infarcted area by TI-IM in 37 of 40 patients (92%). However, it was difficult to detect ischemic lesion other than infarcted area in only 10 patients of 24 patients (41%) with multi-vessel disease. Conversely, 15 of 16 patients (94%) with single-vessel disease had no evidence of additional myocardial ischemia. These results suggest that in previous myocardial infarction, TI-IM shows low sensitivity to predict multi-vessel disease, but high specificity.