peratures. Twenty dogs were cooled to the point of circulatory arrest or lower (5°–19° C.) and were then maintained on extracorporeal circulation for from two to three hours. Twelve dogs were cooled moderately (28°–30° C.) for from four to six hours. All animals were then rewarmed. A small group of controls were similarly infarcted but not cooled. The results of electrocardiographic, hemodynamic, blood gas, acid-base, and electrolyte studies on these animals lend some support to the protective concept. Upon rewarming, cooled animals showed more adequate hemodynamic recovery than normothermic animals. Furthermore, there was no more tendency for hypothermic animals to develop fatal arrhythmias than normothermic. The profoundly cooled group developed a metabolic acidosis and a less adequate return of cardiac output and aortic pressure than those maintained at 28°–30° C. (*Kuhn, L. A., and others: Hemodynamic and Metabolic Effects of Hypothermia and Extracorporeal Circulation in Experimental Myocardial Infarction and Shock, Circulat. Res. 10: 916 (June) 1962.*)

EXTRACORPOREAL CIRCULATION Hematologic changes were studied in dogs during and after a ten-hour period of cardiac bypass, employing several different pump oxygenators. Although no significant change in hematocrit occurred during perfusion, severe anemia of two to three weeks duration developed after bypass. Plasma hemoglobin increased linearly with time but had returned to preperfusion levels by the second day. Leukocyte counts fell initially but subsequently rose and exceeded control levels by termination of bypass. Thrombocytes decreased during perfusion, remained low in the immediate postperfusion period, and reached control values by the eighth postperfusion day. Leukocytosis and stabilization of thrombocyte count, correlated with bone marrow changes, suggested the presence of compensatory mechanisms which become operative during cardiac bypass. (*Brinsfield, D. E., and others: Hematologic Changes in Long Term Perfusion, J. Appl. Physiol. 17: 531 (May) 1962.*)

PLASMA EXPANDER Rheomacrodex, a low molecular weight dextran, was used to prime the pump in cardiopulmonary bypass. With cardiopulmonary bypass for ninety minutes using whole blood or macromolecular dextran solutions, a severe intravascular aggregation of cells can be detected. This intravascular aggregation can be prevented or reversed in early stages by administration of therapeutic doses of Rheomacrodex. The pathophysiologic revelance of intravascular aggregation has been disputed for years, however, diffuse renal, hepatic, and myocardial microinfarctions in dogs undergoing three hours of total cardiopulmonary bypass were demonstrated and attributed to intravascular aggregation. There is no reason why plasma expanders should not be used as partial blood substitutes in open-heart surgery. No additional bleeding tendency was noted by the administration of micromolecular weight dextran under these circumstances. (*Long, D. M. Jr.: Status of Plasma Expanders in Open Heart Surgery, Dis. Chest, 41: 578 (May) 1962.*)

PROGNOSIS Selection of patients with cardiopulmonary insufficiency for chest surgery is often difficult. Pulmonary artery pressure proved to be a more valuable prognostic tool than total and timed vital capacities. Electrocardiograms cannot be relied upon to indicate the presence of pulmonary hypertension, as changes tend to occur late. The mortality of patients with pulmonary arterial pressures of 36 or more is about ten times as great as that of patients with lower pressures. (*Pecora, D. V., and Brook, R.: Evaluation of Cardiopulmonary Reserve in Candidates for Chest Surgery, J. Thor. Cardiovas. Surg. 44: 60 (July) 1962.*)

POSTOPERATIVE ECG Electrocardiographic changes following surgery were studied in 220 patients, 190 with cardiac disease and 20 controls. There were three deaths, all in the cardiac group. About one half of the cardiac patients had coronary artery disease. The type of anesthetic was similar in both groups, being predominantly thiopental-nitrous oxide–curare. In the control group arrhythmias were seen in only two instances. In the cardiac series, 72 of the 190, or 38 per pent, had arrhythmias. Sixty per cent of these