

The flow value at rest state and vasucular reactivity of individual Xtals were displayed as functional images as well as numerical print outs. The

functional images facilitate immediate evaluation of regional abnormality of cerebral hemodynamics.

### **Application of Minicomputer for System 70 Gamma Camera**

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System 70 gamma camera is suitable for the radioisotope cardio dynamic study.

This system is original equipment manufacture (OEM) with 20 programs.

Dead time and uniformity correction are convenient in clinical use.

In the quantitative measurement it needs another computer, magnetic disc and teletype.

### **Current Status and Future of RI Data Processing in Cardiovascular System**

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Data processing is applied for both static and dynamic RI studies for the diagnosis of cardiac diseases.

In static studies, attempts were made to improve myocardial images by a digital computer and to quantitize the scan-data of the myocardium. Images of  $^{131}\text{Cs}$  myocardial scintigrams were improved by a blur restoration technique with a digital filter. Production of functional images of the myocardium was attempted by subtracting blood pool from serial  $^{131}\text{Cs}$  scintigrams. The auto-correlation analysis was available for the quantitization of homogeneity of the myocardial

scintigram. By this analysis, the degree of sparseness of a myocardial scintigram in congestive cardiomyopathy was evaluated quantitatively. With these processings, the accuracy of myocardial scintigram in diagnosis was improved.

Furthermore, the application of newly developed radioactive tracers for myocardial scanning is desired.

In dynamic studies with scintillation camera, two types of data processing systems were adopted; one was "programming scintiphotocardiography (ECG gated scintiphotocardiography)" and the other was videotape data play back system. The