

招待講演

APPLICATIONS OF THE DIRECT-STORE VIDEO TAPE DATE PROCESSOR

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Static and dynamic function studies on the gamma-ray scintillation camera can be stored directly on video tape and played back in the digital mode in live time. Electronic windows can monitor simultaneously two areas of interest from which activity-histograms are obtained and/or integrated counts. Thus blood perfusion and flows can be determined in such organs as the brain, kidneys lungs and liver. Radiocardiographic studies to estimate circulation times, cardiac output and intracardiac shunts are easily and accurately performed.

Many of these procedures have been performed in the past using external scintillation probes, but have never gained wide popularity due to the inaccuracies inherent in the blind placement of these probes. This is overcome in the present system where the areas of interest are precisely localized with the electronic probes and errors induced by adjacent structures are minimized. Highlights from our studies to date will be presented, with emphasis on the clinical applications.