

333 Single Photon Emission Tomography
System : - MaxiCamera 400T

General Electric Company, Nuclear
Diagnostics

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The use of X-Ray CT is limited to imaging of organs exhibiting changes in density. Vascular type defects may not produce density changes but only show increased metabolic activity. These types of lesions are best detected using nuclear medicine techniques. To aid in visualization of deep seated metabolic changes, General Electric Company has designed a Single Photon Emission Tomography System - MaxiCamera 400T. The system consists of a large field of view MaxiCamera II with a special mechanism to rotate the detector around the body. The information gathered during the rotation is fed into a computer for multiple plane tomographic reconstruction.

Presentation of MaxiCamera 400T includes design features, specifications and clinical examples highlighting diagnostic performance. A brief discussion of a reconstruction algorithm time to obtain results and types of computers in use will be presented.

334 Special Procedure Scintillation
Camera : - MaxiCamera 535

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Increase in number of bone and whole body imaging procedures has created the need for an extra large field of view Scintillation Camera. To meet this demand General Electric Company has designed a 530mm diameter Scintillation Camera detector, the first of its kind. The detector proved to have excellent spatial and energy resolutions together with exceptional depth perception. The area of the detector is about twice as large as the present day large field of view cameras. This increases the sensitivity permitting large organ studies to be completed twice as fast or to obtain much higher information density in the same time as a conventional large field of view camera. Increased sensitivity permits the use of lower radionuclide doses to diminish patient exposure as is desirable when the studies are performed on pregnant women or children.

Extended field of view capability of the MaxiCamera 535 aids diagnosis of large organs by allowing physician to see complete anatomy in a single frame of reference. Presentation of MaxiCamera 535 will point out advanced design features together with the complete specifications and examples of clinical applications.