

## 《招待講演 II》

## An Integrated Imaging Approach to the Diagnosis of Diseases Involving the Thyroid, Liver, Pancreas and Kidneys

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This presentation will discuss an integrated approach to the diagnosis of diseases involving the thyroid, liver, pancreas and kidneys. It will commence with a brief description of the physical principles underlying imaging by radionuclides, ultrasound, computerised X-ray tomography and nuclear magnetic resonance. The ability of these techniques to produce complementary information will be emphasised and illustrated by examples of various diseases in the different organs.

The paper will then discuss the limited number of definite features produced by each technique in different types of disease. The difficulty in making a firm differential diagnosis by a single modality will be emphasised and the value of using different modalities to achieve better differential diagnosis will be clarified.

The paper will conclude with a brief discussion on how diagnosis might be better made on the basis of priorities taking into account disease prevalence and the probability of finding a specific feature in a particular disease. The way in which this approach can be particularly well carried out using computerised reporting will become clear.

## 《招待講演 III》

## The Analysis of Myocardial Function Using Blood Pool Scans

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The paper deals with radionuclide ventriculography (RNV), its prerequisites, performance (data acquisition and processing), clinical indications and results.

Imaging of heart motion by gated blood pool scans (GBP) was developed in the USA (STRAUSS and ZARET, 1971). In contrast GBP in Europe started with a probe system and resulted in a time-activity curve of one heart cycle. (HOFFMANN and KLEINE, 1965). Application of a camera system and the region of interest technique (ADAM and BITTER, 1971) finally resulted in a matrix of pixel curves and parametric scans (Systolic, diastolic difference scans, con-