

Filing and Statistical Analysis of Liver Scan Data with Computer

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Computer diagnosis of liver scans is one of the most interesting part of nuclear medicine. Recent advance and availability of general purpose computer in nuclear medicine department made it possible to try to diagnose liver scans with computer in clinic. The authors reported 80-column coding of liver scan data two years ago. Up to 1975, 945 liver scans were confirmed its diagnosis by biopsy, operation and so on. These liver scan data containing patient data (6 items), radiopharmaceuticals, dose and data (5 items), and liver scan findings and diagnosis (34 items) were punched serially on paper tape (8 bits). Data on this paper tape were fed into HP 2100 computer (24K words) and transformed into 5 digits/item and filed on magnetic disc. These data could be retrieved with combination of up to 50 data item values using

QUERY/2100 system.

In this report the authors evaluated size of liver on liver scan and its distribution in various liver diseases and normal liver. Size of normal liver (mean and S.D.) were as follows: in frontal view, view, right vertical diameter= 13.1 ± 2.0 cm, left vertical diameter= 7.5 ± 1.6 cm, transvers diameter= 18.4 ± 2.2 cm, and in right lateral view, horizontal diameter= 14.7 ± 1.7 cm.

From these results, abnormal range of each measurements were decided and sensitivity and specificity of these measurements were calculated in various liver diseases. The results showed that size of liver alone was difficult to be discriminating factor in liver scan diagnosis, and combination of physiologic findings in liver scan other than size was thought to be necessary.

Automated System for Recording Report in Nuclear Medicine

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In order to overcome the rapid expansion of nuclear medicine as diagnostic tool, we developed the system called RABUPORT (Radiological Bunin Report System) to record the clinical report in nuclear medicine automatically using Tosbac 40

time sharing system electronic computer.

In this system a radiologist makes necessary inputs from the usual terminal of the computer and the keymat editor (DTZ 0008A). After the input of the name of the patient, date of the examination,