7

NORMAL RANGE BY HOFFMANN'S METHOD: ITERATIVE
FITTING OF GAUSSIAN DISTRIBUTION USING A
COMPUTER AND AUTOMATIC REGISTRATION OF
PATIENTS' DATA. K.Imamura,T.Ishikawa,
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Hoffmann's method has been applied in our
laboratory for the standardization of radio-
immunoassay and thyroidal iodine uptake. It
was observed that there exists uncertainty
in the derivation of modal Gaussian distri-
bution using the probability diagram due to
the overlapping of distributions. To solve
this problem, iterative fitting procedure
was programed. The modal Gaussian distri-
bution from a probability diagram was
regarded as a first approximation, and
parameters of Gaussian distribution were
iteratively adjusted on the basis of distri-
bution of residual probabilities. It became
possible to fit multiple Gaussian distri-
butions to the whole range of patients' data.
Second, the computer system of RIA analysis
was developed so as to register and sort
patients' data following quality control.
It made free an analyst from a tedious work
of gathering and sorting a large number of
patients' data. These improvements provide
more accurate determination of normal range
from patients' data, and facilitate
Hoffmann's method in the standardization in
clinical measurements.

8

DEVELOPMENT OF THE DATA BASE SYSTEM FOR
SCINTIGRAPHY. Y.Ando,Y.Imai,A.Yagishita,
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gineering Co. Tokyo.

We developed total imformation system in
the department of Radiology. The language
we used is MUMPS that has the numerous me-
rits for the data base. We planed for 1.
the patient registeration, 2. the storage
of patient's history and status and 3. re-
porting of the scan.
On searching the patient data, the sto-
raged data will be looked for by the vari-
ous keys. The deys are not only patient
name, age, ID number but also by history
and status, the result of scintigraphy.
The merits of this system are though
that 1. Multi-terminal support, 2. tree-
data base, 3. interactive language and 4.
powerful string function. We feel the com-
lexity at system booting and system shut
down and it takes a few minutes to do so.
The running speed is slower than other com-
piler language for example Fortran and
Assembler. But we appreciate this system
for the data management and update.