## Analysis of Images of Scintillation Camera with the Use of the Hardwired Imaging Processor

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A color display device (Elscint) which processes images by pushbutton operation has been connected to a scintillation camaera (Nuclear-Chicago) and to a whole body scanner (Elscint) in order to perform image processing quickly and easily in routine clinical diagnosis.

Its usefulness is considered to be significant particularly with connection to the scintillation camera since it is matched to versatile and quick nature of the camera because the data being taken by the camera is displayed simultaneously on C.R.T. of the Processor and data processing while detecting is possible.

As for uniformity correction of the scintillation camera, non-uniformity of the detecting system of the camera including a collimator, crystal and photomultiplier tubes was easily corrected by the hardwired circuit. Clear color display with 8 colors (9 colors including overrange color) was obtained on 12″ C.R.T. by dividing the field view of the camera into a matrix of 96 by 96 cells at maximum. The use of cassette tapes and a color dot printer was useful for recording and storing of images. In addition to the above, since such data processing as profile and histogram display of x and y axes, counts in certain region of interest to be set discretionally, change in color range for eight colors and baseline shift, background subtraction, 9-point smoothing, isocount display and subtraction is performed easily by push-button or dialing operation, the Processor is considered to be useful for routine clinical diagnosis.

## On the Peripheral Decrease of Density of the Life Size Images

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The images on CRT of about 85 mm in diameter can be magnified photographically on the medical film of about 24 cm in diameter by means of the lens system; life size adaptor. The lens attached with the apparatus now available is rather toy-like gadget and it is difficult to magnify the CRT images on the life size film without distortion or non-uniformity in its density by life size adaptor.

Our experiment was done to examine why the peripheral decrease of density on the life size film was caused and how much did it reach using microdensitometric method.

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