

## CLINICAL STUDIES OF RENOSCINTIPHOTOS ON 2000 CASES

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Statistics of 2411 renoscintiphotos performed in  
 Kitasato University Hospital from May 1972 to June  
 1978 was made. Total number of the examinations in  
 each year ranged 400-450. It took about 10% of all  
 scannings. Actually the number of patients perfor-  
 med renoscintiphotos was 1689. Because it carried  
 out two or more times on 371 cases. Among of them,  
 renoscintiphotos were most frequently taken on  
 transplanted kidneys and hydronephroses.

Allografts and hydronephroses were mainly examin-  
 ed with dynamic study using  $^{131}\text{I}$ -hippuran and/or  
 $^{99\text{m}}\text{Tc}$ -DTPA, on the other hand renal tumors and  
 cysts which had space occupying lesions were app-  
 lied with static imagings using  $^{99\text{m}}\text{Tc}$ -PAC or  $^{99\text{m}}\text{Tc}$ -  
 DMS.

Nuclear Chicago gamma HP scinticamera connected  
 with minicomputer was used for this studies. Add  
 to this, LFOV type camera is also available, the  
 number of renoscintiphotos gradually increases this  
 year.

## THE USE OF RADIONUCLIDE STUDIES IN RENAL FAILURE

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Renal radionuclide scans and renoscintiphoto of  
 158 cases with varying levels of renal insufficiency  
 were reviewed. Three scan grades were defined in  
 terms of ability to determine kidney location, size  
 and overall definition. The scan grades were cor-  
 related with the level of serum creatinine and  
 blood urea nitrogen.

## result

1.  $^{99\text{m}}\text{Tc}$ -DTPA (renoscintiphoto)

A good image can be obtained with creatinine levels  
 of 2.5mg/dl. or blood urea nitrogen levels of  
 35mg/dl. If only informations relating to location  
 and size are desired a scan may be attempted with  
 serum creatine levels as high as 9.6mg/dl., and  
 blood urea nitrogen levels as high as 96mg/dl. The  
 $^{99\text{m}}\text{Tc}$ -DTPA renoscintiphoto appears to have value  
 for differential diagnosis between obstructive  
 disease and parenchymal disease of kidney.

2.  $^{131}\text{I}$ -Hippuran (renoscintiphoto)

Serum creatinine and blood urea nitrogen levels  
 for good scans are approximately same as renoscinti-  
 photo of  $^{99\text{m}}\text{Tc}$ -DTPA, but rarely successful when the  
 serum creatinine level exceeds 6 mg/dl., and blood  
 urea nitrogen level exceeds 65mg/dl.

3.  $^{99\text{m}}\text{Tc}$ -DMS (renoscintiscan)

A good image can be obtained with creatinine level  
 of over 10mg/dl. or blood urea nitrogen level of  
 over 100mg/dl.

## 4. case of acute renal failure

The nuclide image successfully predicted whether  
 there would ultimately be good renal function. The  
 $^{99\text{m}}\text{Tc}$ -DTPA renal image appears to have value as a  
 predictor of ultimate renal function in patients  
 with acute renal failure, and it can be used in  
 patient management.