We reexamined the 114 cases of normal ROI curve getting from To-99m-DTPA renogram. Cases were divided in two groups: transplanted kidney (group A) and non-transplanted kidney (group B). This time, we compared the same kinds of parameters of ROI curve with 24 C-Cr.

In group B, slight correlation (r=0.5-0.7) were showed in renogram index, concentration-time curve, excretory rate and time from injection to peak with 24 C-Cr. However, parameter relating to excretion, for example, excretory angle and time from peak to 75% of peak did not correlate with 24 C-Cr. These results indicated that it is difficult to detect the quantitative value about renal function from simple parameter of ROI curve. According to group A, perfusion index might be a good indicator to detect the renal function.

The renal clearance and Filtration Fraction were able to analyze by renoscintigraphy using To-99m-DTPA. 10mCi of To-99m-DTPA was injected intravenously as a rapid bolus and sequential images of the kidney were recorded one second for 72 frames and 6 seconds for 244 frames. The time activity curves were obtained from the ROI in both kidneys, left ventricle (LV), and each back ground. The time activity curves of LV was fitted a exponential function by the method of least squares. Volume of circulation plasma flow of the patient was obtained from standard plasma flow. DTPA-clearance was obtained from T(1/2) and volume of circulation plasma flow. DTPA-PF was determined by correlation peak value of initial blood flow phase and integral value of concentration phase. It was adequate correlation between DTPA-PF and PF using conventional method. Without blood and urine collection, the accuracy and easiness make this method very useful in practical renal function test.