AN ANALYSIS OF EARLY PHASE RENOGRAF USING FAST FOURIER TRANSFORM. N. Takizawa, T. Kobavashi, M. Miyazawa and K. Tsurumi*. Shinshu University Hospital, Suwa Red-Cross Hospital. Matsumoto and Suwa

There are many informations in the renogram by the dual time interval method with 99mTc-DTPA. Early excretory phase of this renogram has been not analyzed. The authors report a trial to analysis in this phase by the fast Fourier transform (FFT) and power spectrum.

99mTc-DTPA renogram is corrected by 200 frames with 300 msec interval, continuously 280 frames with 3 sec interval, 480 frames in total. Thirty second from the end of initial renal blood flow spike are processed by FFT.

Results are obtained some feature power spectrum. Cyclic change was shown on the spectrum from 0.1 to 0.3 Hz. In the case of renal hypertension, remarkable spectra is obtained. By these spectrum, both pre- and post renal diseases can be classified.

This results suggested that this method will be useful for physiological diagnosis of the renal diseases by early phase renogram.