



Diffusion

SY15-2

Application of Diffusion in Neurological Imaging **Diffusion 의 신경계 영상 적용**

Koung Mi Kang

Seoul National University Hospital, Korea

Diffusion-weighted imaging (DWI) is a widely used MRI sequence for the detection of acute stroke and has important therapeutic implications. Beyond its traditional role, DWI provides valuable insights into a broad range of neurological conditions and assists in differentiating disorders that may clinically resemble stroke. Because it is fast, reproducible, and available on most clinical scanners, DWI has also proven useful in the evaluation of inflammatory diseases, central nervous system neoplasms, and other brain pathologies. In this lecture, I will provide a concise overview of diffusion imaging techniques and emphasize the clinical utility of DWI in common neurological entities outside of stroke. Furthermore, I will briefly introduce findings from my recent research applying DWI and advanced diffusion metrics to neurological disorders, highlighting their potential to enhance diagnosis and management in routine practice.

Keywords: Diffusion, Neurological imaging