Title of Plenary Presentation:

Korean Stroke Cohort for Functioning and Rehabilitation (KOSCO): Study Rationale and Protocol of a Multi-center Prospective Cohort Study

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Abstract:

**Background:** Development of a long-term stroke care plan requires serial assessment of long-term patient function and consideration of caregivers’ burden. However, to date, few comprehensive cohort studies have included detailed functional assessment of stroke patients and status of caregivers.

**Methods/Design:** KOSCO is a large, multi-centre prospective cohort study for all acute first-
ever stroke patients admitted to participating hospitals in nine distinct areas of Korea. This study is designed as a 10-year, longitudinal follow-up investigating the residual disabilities, activity limitations, and quality of life issues arising in patients suffering from first-ever stroke using a standardized assessment battery. The main objectives of this study are to identify the residual functional disabilities after first-ever stroke and factors that influence residual disability and long-term quality of life. We also investigate the risk of mortality and recurrent vascular events in patients with acute first-ever stroke as well as longitudinal health behaviors and patterns of healthcare utilization including rehabilitation. The long-term health status, mood, and quality of life of caregivers are also assessed.

**Results:** Out of 8,014 patients who agreed with participation, 4,490 patients completed face-to-face assessments at 1 year after stroke onset. Among 4,490 patients, 77.2% of patients suffered from ischemic and 22.8% hemorrhagic stroke, respectively. Their mean age was 64.3 years-old and the ratio of male to female was 1.31:1. Functional assessment at 1 year demonstrated that significant proportion of stroke survivors were suffered from residual disabilities; motor disorder 45.4%, cognitive disorder 32.4%, language disorder 44.6%, swallowing disorder 19.2%. At 1 year after stroke, 68.2% of stroke survivors were independent in performing their activities daily of living (ADL), while 31.8% needed assistance of caregivers for their ADL. Significant independent factors influencing on functional independence at 1 year were age, duration of hospitalization, and functional levels in motor, ambulation, language, and swallowing at discharge (p<0.05).

**Discussion:** KOSCO is a prospective, multi-center, 10-year longitudinal follow-up study investigating the residual disabilities, activity limitations, and quality of life issues arising in patients suffering from first-ever stroke and caregivers. Longitudinal data are continuously...
acquired and prepared for further analysis.

**Keywords:** Stroke, Disability, Function, Rehabilitation, Burden