

# KSN 2016 Abstract Submission

## *Dialysis*

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### **Low body mass index and all-cause mortality in patient with hemodialysis**

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**Background:** Malnutrition is common in patients with hemodialysis and is a major risk factor of mortality. The Korean Society of Nephrology (KSN) collected data of end-stage renal disease registry since 1985. We evaluated whether body mass index (BMI) can affect mortality in patient with hemodialysis.

**Methods:** From 2004 to 2015, a total of 32,163 patients starting hemodialysis were included. The patients were divided into four groups according to quartiles of BMI measurement.

**Results:** At baseline, mean age was  $59.0 \pm 14.3$  years old, and 60.0% were men. The 5-year mortality of hemodialysis patients was 16.9 % (N=5,435) and ratio of unknown state was 24.9 % (N=7,996). The mean of BMI in each quartiles were  $18.2 \pm 1.2$ ,  $20.8 \pm 0.5$ ,  $22.8 \pm 0.6$ ,  $26.4 \pm 2.6$  kg/m<sup>2</sup> respectively. The mean of BMI between survivor and non-survivor were different ( $22.3 \pm 3.3$  vs.  $21.5 \pm 3.2$  kg/m<sup>2</sup>). Cox-proportional regression multivariate analysis revealed that the 5-year all-cause mortality was associated with age (HR 1.04, CI 1.03-1.05), diabetes (HR 1.34, CI 1.07-1.7), coronary heart disease or heart failure (HR 1.3, CI 0.9-1.7), 2<sup>nd</sup> BMI quartile (HR 0.7, CI 0.5-0.9), 3<sup>rd</sup> BMI quartile (HR 0.6, CI 0.46-0.88), 4<sup>th</sup> BMI quartile (HR 0.59, CI 0.43-0.82), hypoalbuminemia (HR 2.9, CI 2.3-3.7) and anemia (HR 1.6, CI 1.2-2.0).

**Conclusion:** Higher quartiles of BMI was significantly associated with better survival rate in hemodialysis patients in Korea. Traditional risk factors of malnutrition, such as hypoalbuminemia, anemia were also independent risk factors for mortality. This result suggests that hemodialysis patients require nutritional support.

**Keywords:** Body mass index, Hemodialysis, Malnutrition, Mortality