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## **Cancer incidence and characteristics in the dialysis patients; a Korean nationwide study**

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### **Objectives:**

As population of ESRD patients are increasing, detecting and managing cancer in the ESRD should be emphasized. However, it is still not recognized the incidence of cancer in ESRD, and the difference of primary cancer site is also unveiled. We investigated the incidence of cancer among dialysis patients and the difference of cancer characteristics between ESRD patients with age matched control group, and differences by economical status.

### **Methods:**

The data of dialysis patients were obtained from Korean National Health Information database. We also analyzed KNHIS National Sample Cohort (NSC) originating from the National Health Information database established by the KNHIS in 2011 which approximated 1,000,000 individuals, extracted by sampling from the 2002 records of National Health Information database.

### **Results:**

Total 45,312 patients and controls were observed for 17,1329.45 person-year and 220,464.18 person years respectively. Incidence of cancer is 463.8 vs 244.8 per 10,000 person-year. Hazard ratio of cancer in ESRD is 2.008 ( $p < 0.001$ ). The most common malignancy in the ESRD patients is liver cell carcinoma same as control. ESRD showed markedly higher incidence of oral cavity area cancer which was second most common site of malignancy. The kidney and bladder cancer were also higher, but prostate was similar to control. There was no difference between hemodialysis and peritoneal dialysis. Comparing control group with economical status, lowest tertile showed biggest difference of cancer incidence in the ESRD (IRR 2.3 vs 1.8 vs 1.6; low, middle, high respectively).

### **Conclusions:**

Patients on dialysis treatment should be considered the incidence of head and neck malignancy, and all patients should be screened to detect oral cavity and pharynx cancers as well as liver and common site of malignancies in the dialysis clinic.