中文題目：Statins 類藥物可降低洗腎患者之癌症發生率

英文題目：The Effect of Statins in Cancer Risk Reduction in Patients on Dialysis: A Population-based Case-Control Study

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**Background:** The lifetime risk of several cancers is elevated in patients receiving dialysis following kidney failure compared with the general population, highlighting the excess burden of cancer incidence in this vulnerable population. Thus, there is an urgent need to identify specific medications associated with a lower risk of cancer incidence in patients on dialysis. However, whether statins reduce the risk of cancer in susceptible dialysis populations remains unknown. Using a large dataset available in Taiwan, we conducted a nationwide population-based cohort study to delineate the relationship between statin use and cancer risk in patients on dialysis.

**Methods:** Patients having a history of chronic kidney disease with hemodialysis or peritoneal dialysis and receiving statin prescriptions or not are enrolled. The main outcome was cancer diagnosis. The confirmation of cancer (ICD-9-CM Codes 140–209) events was based on RCIPD data from the NHIRD. Histological and pathological confirmation of cancer was required for each patient. Cox regression analyses were employed to evaluate the adjusted hazard ratios (HRs) for the influence (odds) of the analyzed variables on developing cancer. Two-sided p-values <0.05 were considered statistically significant. Kaplan–Meier analysis was performed to estimate the development of cancer in these two cohorts.

**Results:** 4,236 individuals in the statin group and 8,472 individuals in the statin nonuser group are included in the study. Multivariate Cox regression analysis demonstrated that statin users are significantly less likely to develop cancer than statin nonusers (adjusted Hazard Ratio (HR) 0.81, 95% confidence interval (CI) 0.78–0.90). Subgroup analyses reveals that statin cumulative defined daily doses > 365 was associated with a significantly decreased risk of cancer incidence (adjusted HR 0.59, 95% CI 0.45–0.87), and statin users have a reduced risk of respiratory, soft tissue and connective tissue, breast, gynecological, prostate, central nervous system, and lymphatic and hematopoietic cancer than nonusers.

**Conclusion:** Our population-based cohort study provides evidence that statins reduce the risk of malignancy in patients on dialysis, especially with longer treatment duration, and irrespective of the type of statin prescription. We also found that statin users have a statistically significantly reduced risk of respiratory, soft tissue and connective tissue, breast, gynecological, prostate, central nervous system, and lymphatic and hematopoietic cancer than nonusers.