

# Parkinson's disease appears associated with many cancers in Taiwan

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Immunohistochemistry for alpha-synuclein showing positive staining (brown) of an intraneural Lewy-body in the Substantia nigra in Parkinson's disease. Credit: Wikipedia

Parkinson disease (PD) appeared associated with 16 types of cancer in a

study in Taiwan, an effort to explain the association in an East Asian population because most prior research has been conducted in Western populations, according to an article published online by *JAMA Oncology*.

During the past 50 years, more than 25 [epidemiological studies](#) have been conducted on the association between PD and cancer, and most of those studies showed that individuals with PD had a decreased risk of cancer compared to those without PD. However, most of those studies were done in Western populations and it has become clearer that genetic backgrounds play an important role in disease development.

Pan-Chyr Yang, M.D., Ph.D., of the National Taiwan University College of Medicine, Taipei, and coauthors used the Taiwan National Health Insurance Research Database to build a final study group of 62,023 patients newly diagnosed with PD from 2004 through 2010 and 124,046 control participants without PD.

The authors found a PD diagnosis was not associated with increased risk of breast, ovarian or thyroid cancers. However, PD appeared associated (as measured by increased hazard ratios) with 16 other cancers including malignant brain tumors, gastrointestinal tracts cancers, lung cancers, some hormone-related cancers, urinary tract cancers, lymphoma/leukemia, melanoma and other skin cancers.

The authors note limitations in their research, including possible underestimation of PD incidence, smoking status not included in their analysis, speculation about pesticide exposure, and remaining questions regarding genetic correlations.

"Based on this nationwide study on the association between PD [Parkinson disease] and [cancer risk](#), we conclude that PD is a risk factor for most cancer in Taiwan. In our cohort, only breast, ovarian and thyroid cancers show no association with PD. Further studies are needed

to clarify whether our findings can be applied to other East Asian populations. The striking differences between our study and the previous studies in Western cohorts suggest the importance of ethnicity and environmental exposures in disease pathogenesis," the article concludes.

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