

Cancer du Sein et Travail de Nuit (CaSeTraN)

Breast Cancer and Night Work

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What do a basic science researcher, a nurse and a flight attendant have in common? These are the three professions with an increased risk of breast cancer! Breast cancer is the first cancer in terms of incidence and the first cause of death due to cancer in women. Impacting intimate and professional life, it also causes psychological morbidity. Etiological research identifies night work as an occupational risk factor for this disease. But its recognition as an occupational disease is difficult, especially in Switzerland, where 6'250 new cases and 1'410 deaths due to breast cancer are recorded every year.

The CaSeTraN project will examine the effect of night work on the incidence of female breast cancer in French-speaking Switzerland in order to advance its recognition, if necessary, as an occupational disease. The specific objectives of the project are:

- 1- to create a tool for estimating occupational exposure to night work in Switzerland between 1990 and now,
- 2- to decide the prevalence of exposure to night work by gender,
- 3- to study the role of this exposure in the development of breast cancer.

The exposure assessment tool created, medical data from the six French-speaking tumor registries, and sociodemographic and occupational data from the Swiss National Cohort will be used to test the hypothesis of a positive association between the probability of working at night and the incidence rate of female breast cancer over a period from December 1990 to December 2015. The study will involve a cohort of 742,484 women (13,583,598 person-years) including 21,249 breast cancer cases, making it one of the largest studies in the world on this topic.

The study will be carried out in collaboration with all the French-speaking tumor registries and with researchers from the International Center for research on cancer and experts who have expertise in the evaluation of exposure to night work and are in charge of a similar study in France. The necessary partnerships and agreements for this study have been established, ensuring the scientific interest, methodological relevance and logistical feasibility of this study over the next two years. The tool created will allow further research on other cancers and pathologies (e.g., colorectal cancer, metabolic syndrome) suspected to be related to night work.

Keywords: cohort; incidence rate; etiology; occupational exposure assessment; job-exposure matrix