



## Research Project

### The CASCADE II Study

#### Third-party funded project

**Project title** The CASCADE II Study

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**Organisation / Research unit**

Departement Klinische Forschung

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**Project Website** <https://swisscascade.ch>

**Project start** 01.08.2021

**Probable end** 31.07.2024

**Status** Active

Several hundred cancer patients in Switzerland carry pathogenic germline variants associated with hereditary breast/ovarian cancer (HBOC) and Lynch syndrome (LS). HBOC and LS cases are at significantly higher risk of primary and secondary cancers and need lifelong cancer surveillance and access to different risk management options. Their close blood relatives have 12.5%-50% probability of inheriting the respective cancer predisposition and need access to genetic evaluation. European-based studies suggest that most cancer patients with hereditary cancer syndromes are not identified and do not receive adequate cancer surveillance. Most evidence comes from cross-sectional studies; there is little available information about changes in adherence to surveillance over time. Little is known about how genetic test results affect subsequent surveillance for HBOC and LS cases and blood relatives, and the overall response of the Swiss healthcare system to mutation carriers' and relatives' needs for long-term surveillance and cancer prevention. CASCADE II will collect prospective three-year data from confirmed mutation carriers and blood relatives to examine how cancer surveillance practices, uptake of risk management options, and access to genetic services (for untested relatives) change over time. Specific Aim 1: Monitor changes over time in cancer status, surveillance practices, uptake of risk management options, and uptake of genetic testing (for previously untested relatives), and explore whether there are differences in occurrence of these events (or cumulative incidence of events) during the follow-up period among the different participant groups.

Specific Aim 2: Examine the predictive value of individual domain clusters (e.g., cancer status), interpersonal domain clusters (e.g., family environment), and healthcare system domain clusters (e.g., provider specialty) on cancer surveillance practices, uptake of risk management options, and uptake of genetic testing (for previously untested relatives).

Specific Aim 3: Explore participants' preferences for the role and involvement of healthcare providers in organization of cancer surveillance and follow-up care.

Longitudinal data from the CASCADE cohort, a prospective, family-based cohort targeting HBOC and LS confirmed cases and blood relatives will address these aims. CASCADE uses surveys to assess cancer status, surveillance, management of hereditary cancer risk, and coordination of care, covering multi-level factors affecting cancer prevention and survivorship. Data from the CASCADE I and CASCADE II studies span a period of over 6 years and 4 data collection points, each approximately 18 months

apart, for participants entering the cohort since its initiation. Recruitment takes place in oncology and/or genetic testing centres in three linguistic regions of Switzerland.

Longitudinal survey data will address Aims 1 and 2. We will use Kaplan-Meier analyses and multivariate and/or multi-level Cox Proportional Hazards models to regress “cancer surveillance” event and “use of genetic services” event on predictors. Exploratory factor analyses and hierarchical cluster analyses will generate domain clusters for participants. Narrative data (focus groups and interviews) from selected participants to present diverse perspectives, triangulated with survey data, will address Aim 3.

Data from the CASCADE cohort have considerable potential to enhance the development of high-quality comprehensive support systems to improve cancer surveillance and access to genetic specialists and coordination of cancer care services in Switzerland.

#### **Financed by**

Foundations and Associations

**Follow-up project of** [4214199 The CASCADE cohort: a family-based cohort for investigating the use and impact of genetic testing, and the development of comprehensive interventions for hereditary breast/ovarian and Lynch syndromes in Switzerland](#)

**Add publication**

**Add documents**

**Specify cooperation partners**