

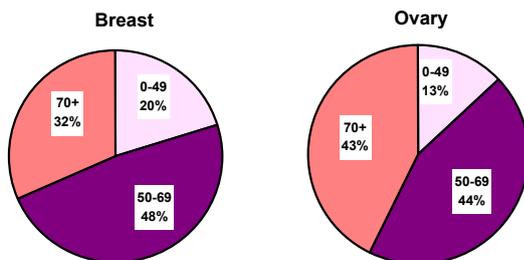
## Female Breast and Ovary NICER and Swiss Cancer Registries

### Raw data - Period 2002-2005

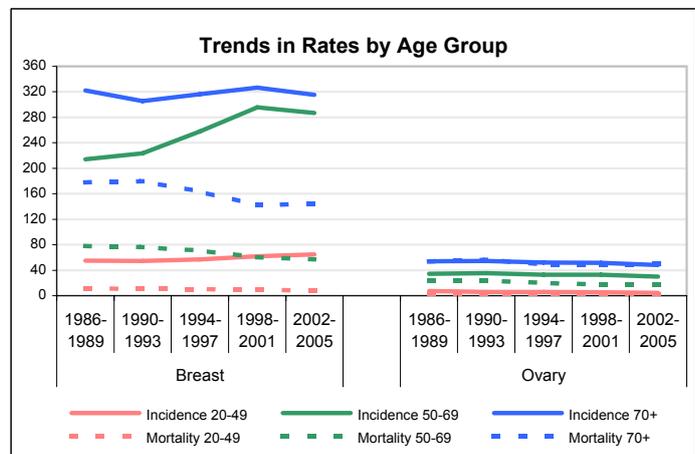
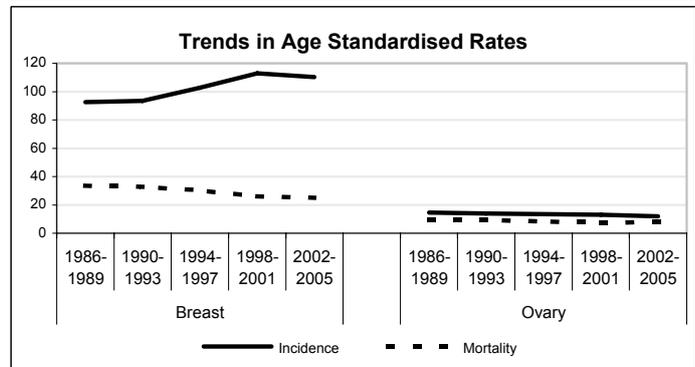
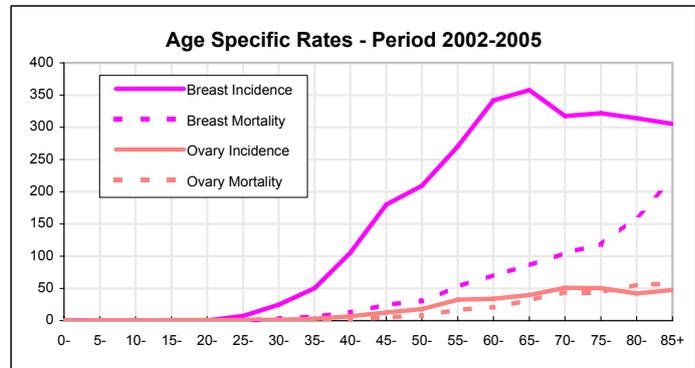
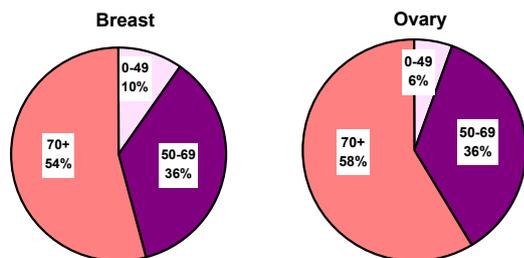
Site	Yearly averages		5-year Prevalence (3)	Years of life lost (4)
	New cases (1)	Deaths (2)		
Breast	5091	1352	21990	11296
Ovary	578	430	2049	2953

- (1) Swiss estimates on basis of nine registries
- (2) Computed from data of Statistical Federal Office
- (3) Estimated from Globocan 2002, IARC - Lyon
- (4) Years lost each year before age 75

### New cases by age group



### Deaths by age group



### Breast and ovarian cancer, risk factors

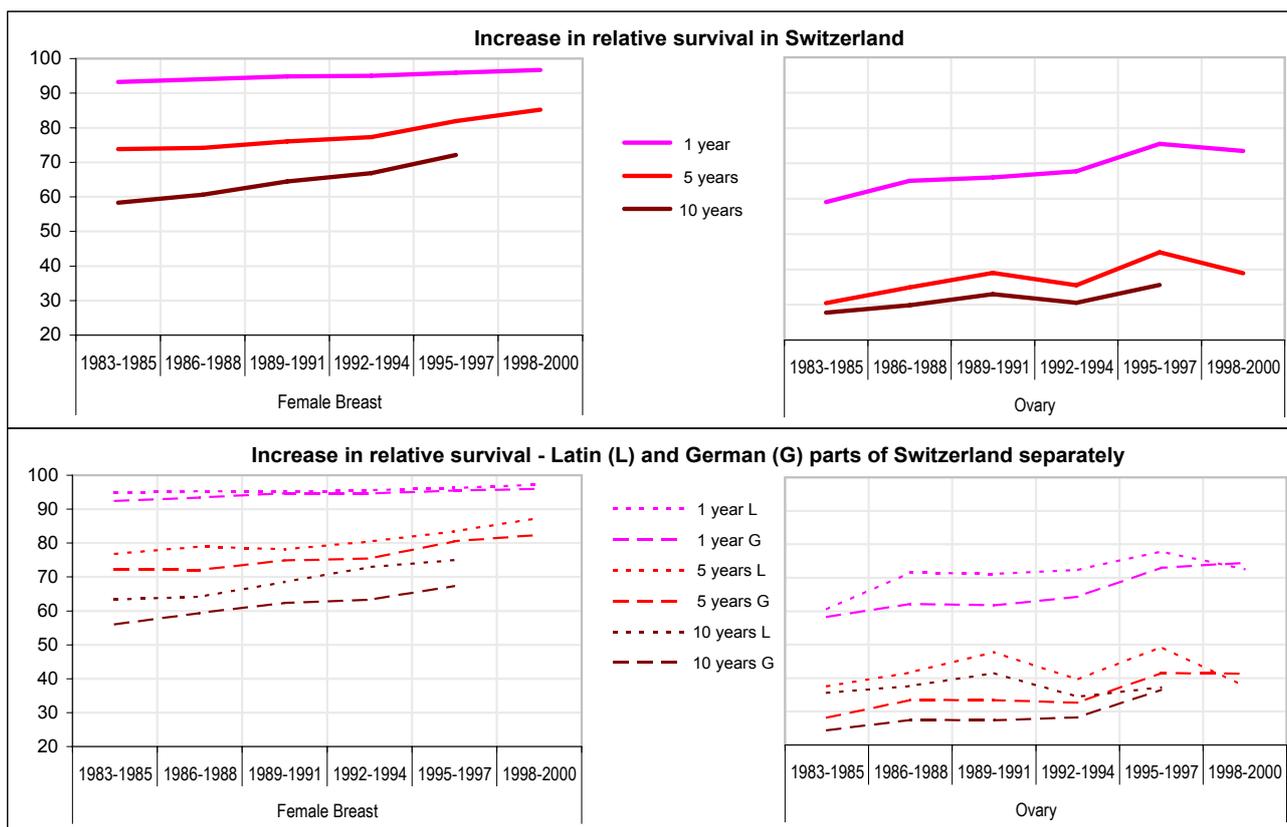
Among women, breast cancer is the most commonly diagnosed cancer in Switzerland and is the first leading cause of cancer deaths. Annually, more than 5'000 new cases and 1'300 deaths are counted for breast cancer, 600 new cases and 430 deaths for ovarian cancer.

A possible genetic contribution to *both breast and ovarian cancer risk* is indicated by the increased incidence of these cancers among women with a family history, and by the observation of rare families in which multiple family members are affected with breast and/or ovarian cancer, in a pattern compatible with autosomal dominant inheritance of cancer susceptibility. Of all women with breast cancer, 5% to 10% may have a germ-line mutation of the genes BRCA1 and BRCA2.

The estimated lifetime risk of developing breast cancer for women with BRCA1 and BRCA2 mutations is high, up to 60%. Carriers with a history of breast cancer have an increased risk of contralateral disease that may be as great as 5% per year. Mutations in these genes are rare in the general population and are estimated to account for no more than 5% to 10% of breast and ovarian cancer cases overall. It is likely that other genetic factors contribute to the etiology of some of these cancers. Ovarian-only inherited cancer syndromes have also been described, but the gene or genes involved have not yet been identified.

Several well-established factors have been associated with an increased risk of breast cancer, including age, family history, nulliparity, early menarche, a personal history of breast cancer, a history of benign breast disease, radiation exposure, alcohol intake and physical inactivity. Hormone therapy is one of the most discussed risk factors: combination hormone replacement therapy (HRT; estrogen-progestin), also called hormone therapy (HT), is associated with approximately a 24% increase in incidence of invasive breast cancer. The evidence concerning the association between estrogen-only therapy and breast cancer incidence is mixed.

*Factors that increase risk for ovarian cancer* include increasing age and nulliparity, while those that decrease risk include surgical history and oral contraceptives. Relatively few studies have addressed the effect of these risk factors among women who are genetically susceptible to ovarian cancer. An increased risk of ovarian cancer is also associated with hereditary nonpolyposis colorectal cancer, also known as Lynch syndrome.



**Breast Cancer Prevention**

It is now recognized that screening mammography in women aged 40 to 70 years decreases breast cancer mortality by 15% to 20% and that the benefit is higher for older women. However, as side effect, it has been assessed that about 10% of women with invasive cancer will have false-negative mammograms, especially if young, with dense breasts, or with mucinous, lobular, or fast-growing cancers, leading to a false sense of security and/or delay in cancer diagnosis. Screening by breast self-examination does not reduce breast cancer mortality and it has been observed that it leads to 80% more breast biopsies and to the diagnosis of more benign breast lesions.

**Breast Cancer Survival**

According to Concord study, breast cancer survival in Switzerland is among the highest in Europe. However discrepancies between cantons are observed and are currently being investigated.

**Ovarian Cancer Prevention**

Today, there is no evidence to determine whether routine screening for ovarian cancer with serum markers such as CA 125 levels, transvaginal ultrasound, or pelvic examinations would result in a decrease in mortality from ovarian cancer. It has been described an association between a prophylactic bilateral oophorectomy and a decreased risk of ovarian cancer. However, peritoneal carcinomatosis has been reported following prophylactic removal of the ovaries. Therefore, prophylactic oophorectomy with salpingo-oophorectomy is generally reserved for women at high risk of developing ovarian cancer, such as women who have a deleterious mutation in the BRCA1 or BRCA2 genes.

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