

# INCIDENCE AND CLINICO-PATHOLOGICAL CHARACTERISTICS OF METACHRONOUS CONTRALATERAL BREAST CANCER IN THE CANTON OF ZURICH

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## Introduction

Since 1980, the Cancer Registry of Zurich and Zug has been collecting cancer data of all inhabitants of Canton Zurich. This analysis concentrates on the incidences and the characteristics of metachronous contralateral breast cancer (CBC) cases among females.

## Methods

For the period 1980-2005, patients with unilateral, invasive breast cancer were analysed for metachronous CBC incidence, allowing for a minimum observation period of five years. Patient and tumor characteristics were examined. Poisson regression was used to estimate incidence rates of metachronous CBC according to age at diagnosis, year of diagnosis, observation period and morphology. A cutoff of three months for distinguishing between simultaneous and metachronous breast cancer was used.

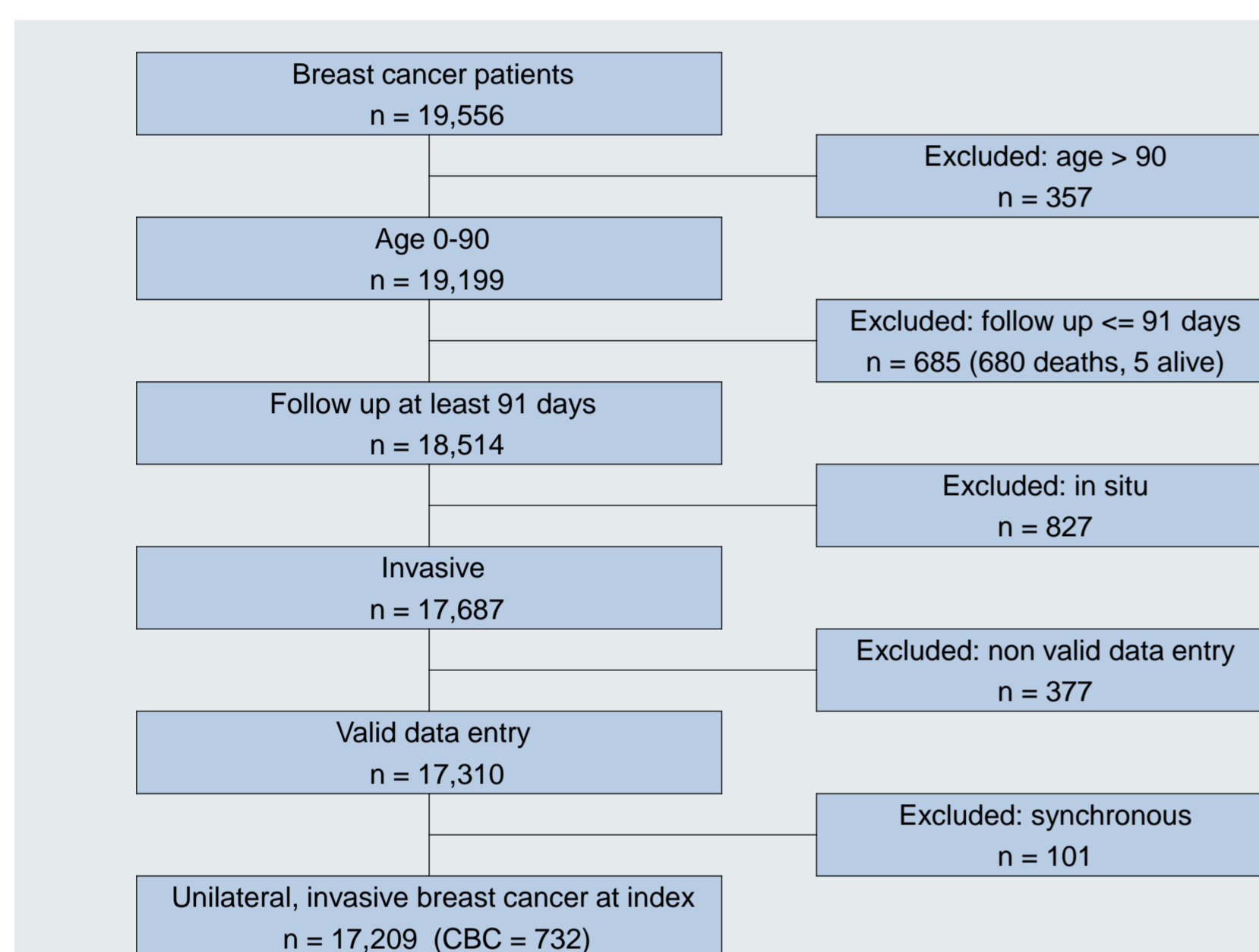


Figure 1: Eligibility criteria.

	cohort	CBC	
		BC1	BC2
<b>N</b>	17,208	732	732
<b>Age (years)</b>			
mean (SD)	62 (14)	57 (13)	64 (13)
median (IQR)	62 (51-73)	56 (47-66)	65 (54-74)
<b>Follow up time (years)</b>			
mean (SD)	10.4 (7.5)		
median (IQR)	8.6 (4.7-14.9)		
<b>Interval time to CBC (years)</b>			
mean (SD)		7.1 (5.6)	
median (IQR)		5.5 (2.8-10.2)	

Table 1: Baseline characteristics (SD=Standard deviation, IQR=interquartile range, BC1 = breast cancer at index, BC2 = second breast cancer incidence).

## Results

Of 17,209 patients with unilateral, invasive breast cancer 732 (4.1%) developed a second malignancy of the opposite breast (figure 1). Median age at first breast cancer incidence was lower in the CBC group than in the cohort (table 1). Incidence rates of CBC decreased by age, period of diagnosis and observation period (figures 2,3 and 4). Adjusted incidence rate ratio of CBC for patients with lobular carcinoma was 1.43 (95%CI 1.13-1.80) compared to patients with other morphologies (adjusted by age class and period of diagnosis).

## Conclusions

The results of our study are comparable to findings from literature. A reduction in the incidence of metachronous CBC, as is generally thought to be due to adjuvant therapies, is also seen in our data. In our cohort younger age and lobular carcinoma had an increased risk of developing CBC. The survival of breast cancer patients is generally improving. As the risk of developing CBC remains high, a close follow-up after primary breast cancer is required.

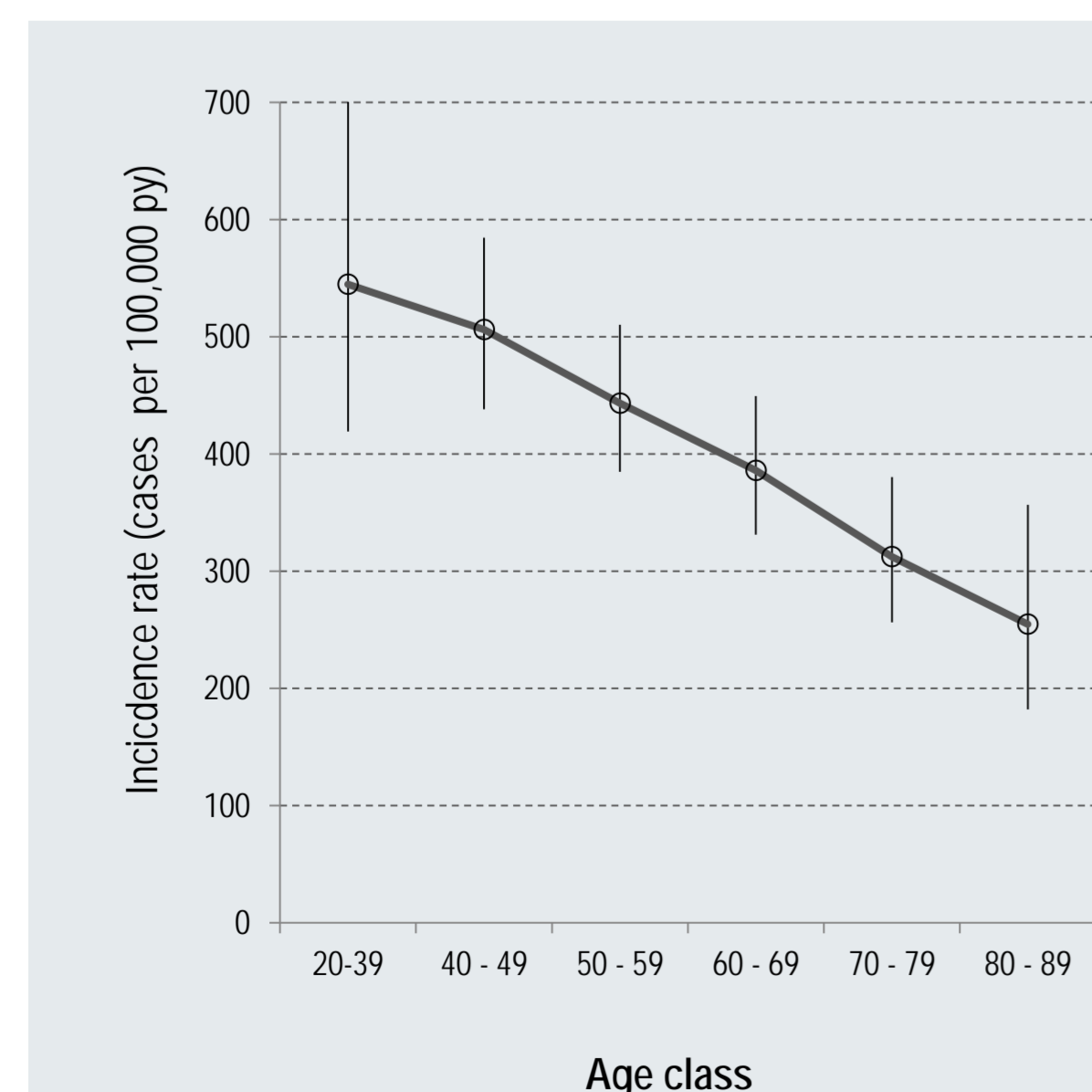


Figure 2: Crude incidence rates according to age classes.

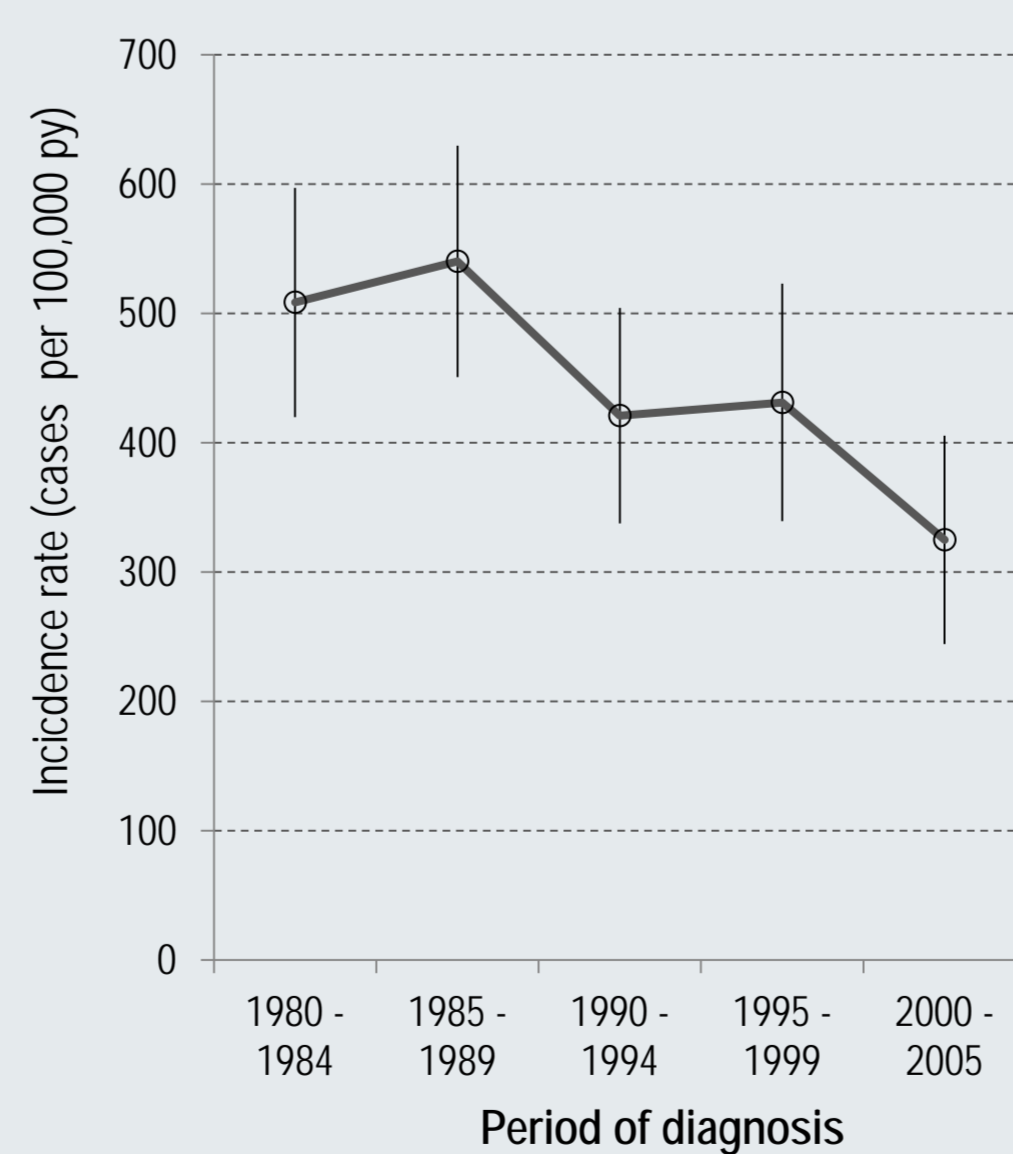


Figure 3: Age-adjusted incidence rates according to periods of diagnosis.

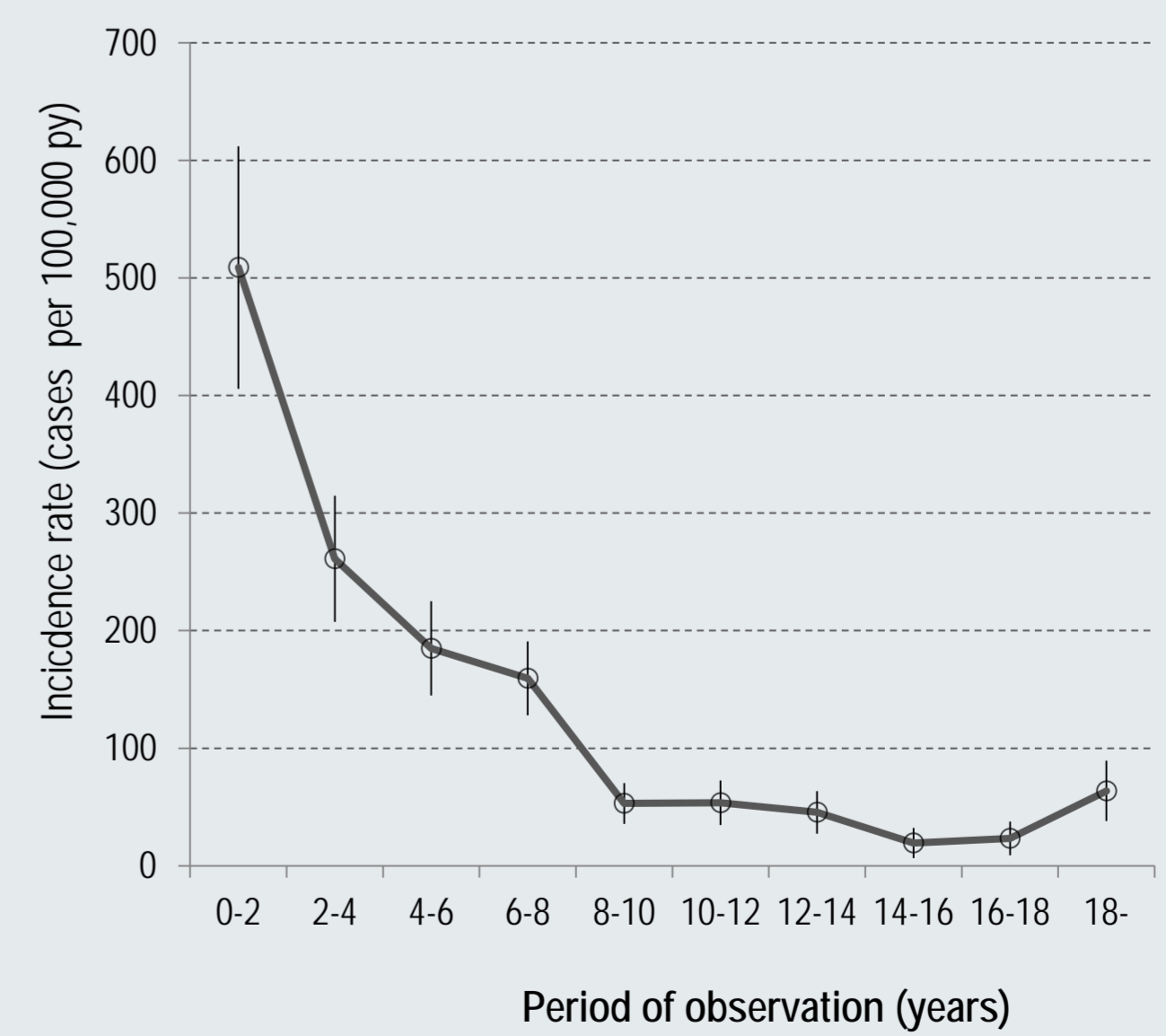


Figure 4: Age-adjusted incidence rates according to observation period.