

Statin use and risk of contralateral breast cancer:

- a nationwide cohort study

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Background

Breast cancer



- Most common cancer in women with high survival rates
- Higher risk of developing a 2nd primary cancer in the contralateral breast compared to the risk of a 1st breast cancer in the general population
- Patients with ER-negative breast cancer at increased risk of contralateral breast cancer (CBC) compared to patients with the ER-positive phenotype
- Preventive treatment for patients with ER-negative breast cancer highly needed



Background

Statins



- Reduce cholesterol and prevent cardiovascular disease
- Antineoplastic properties – stronger effect in ER-negative cell lines
- No association between statin use and breast cancer incidence
- Breast cancer patients at higher risk so preventive measures may have larger impact



Hypotheses

Statins reduce the risk of contralateral breast cancer
among women with breast cancer

Most pronounced effect for ER-negative disease

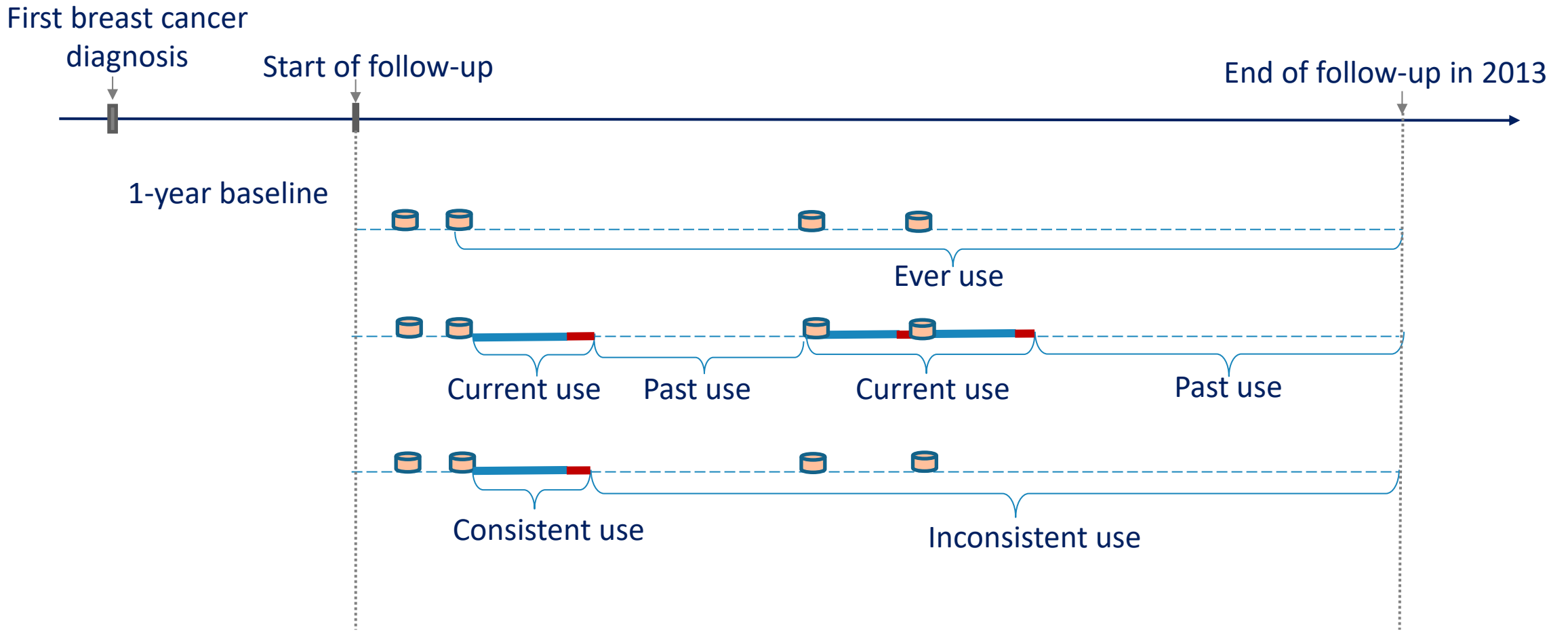




Women with first breast cancer
1996-2012
N= 52,723

Contralateral breast cancer
database
N=1,382





 Prescriptions lagged by 1 year
  Number of tablets in a prescription
  90 days grace period



Duration

The interval between the 1st and the latest prescription
+ number of tablets in the latest prescription

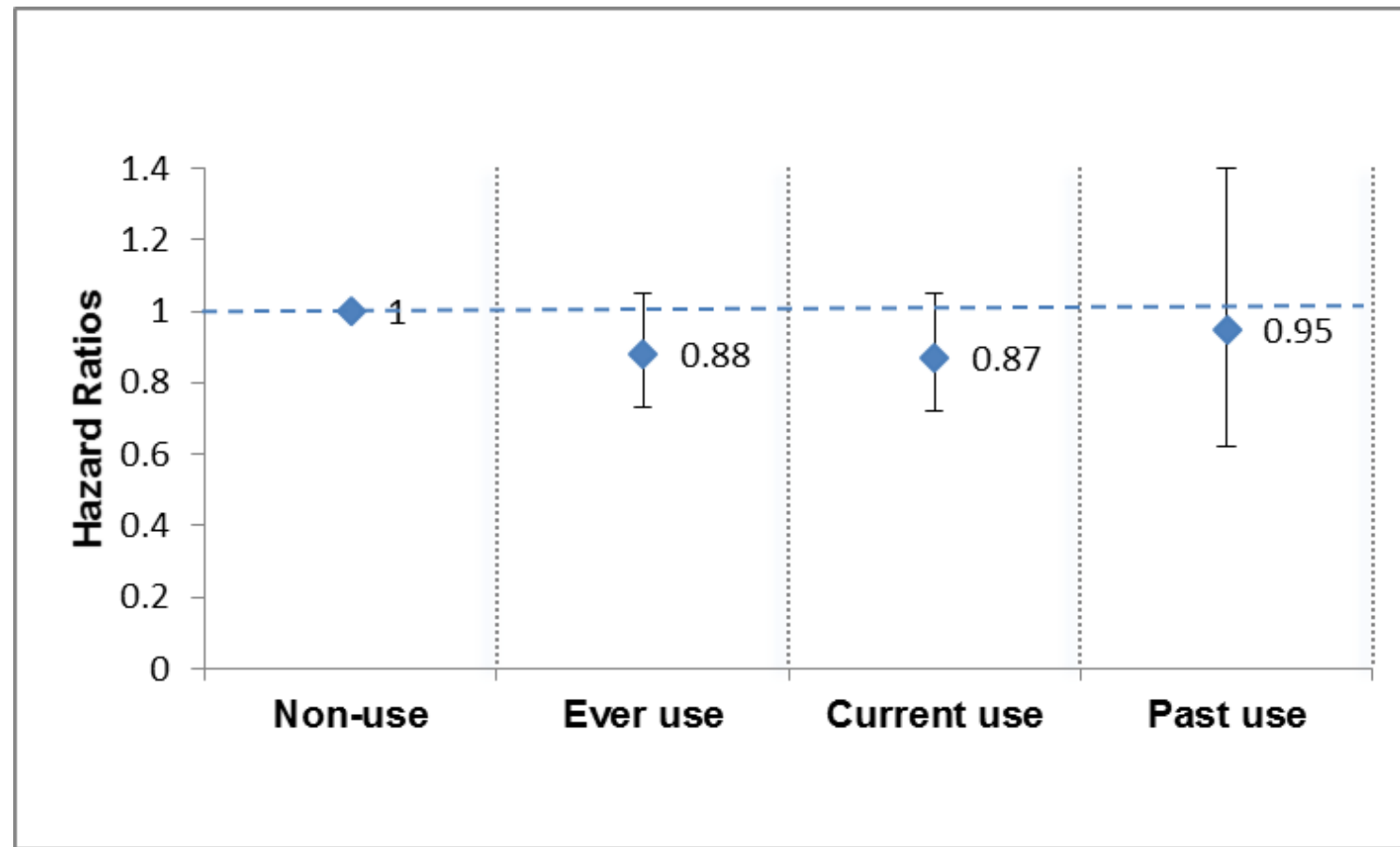
Intensity

Cumulative number of DDDs divided by duration



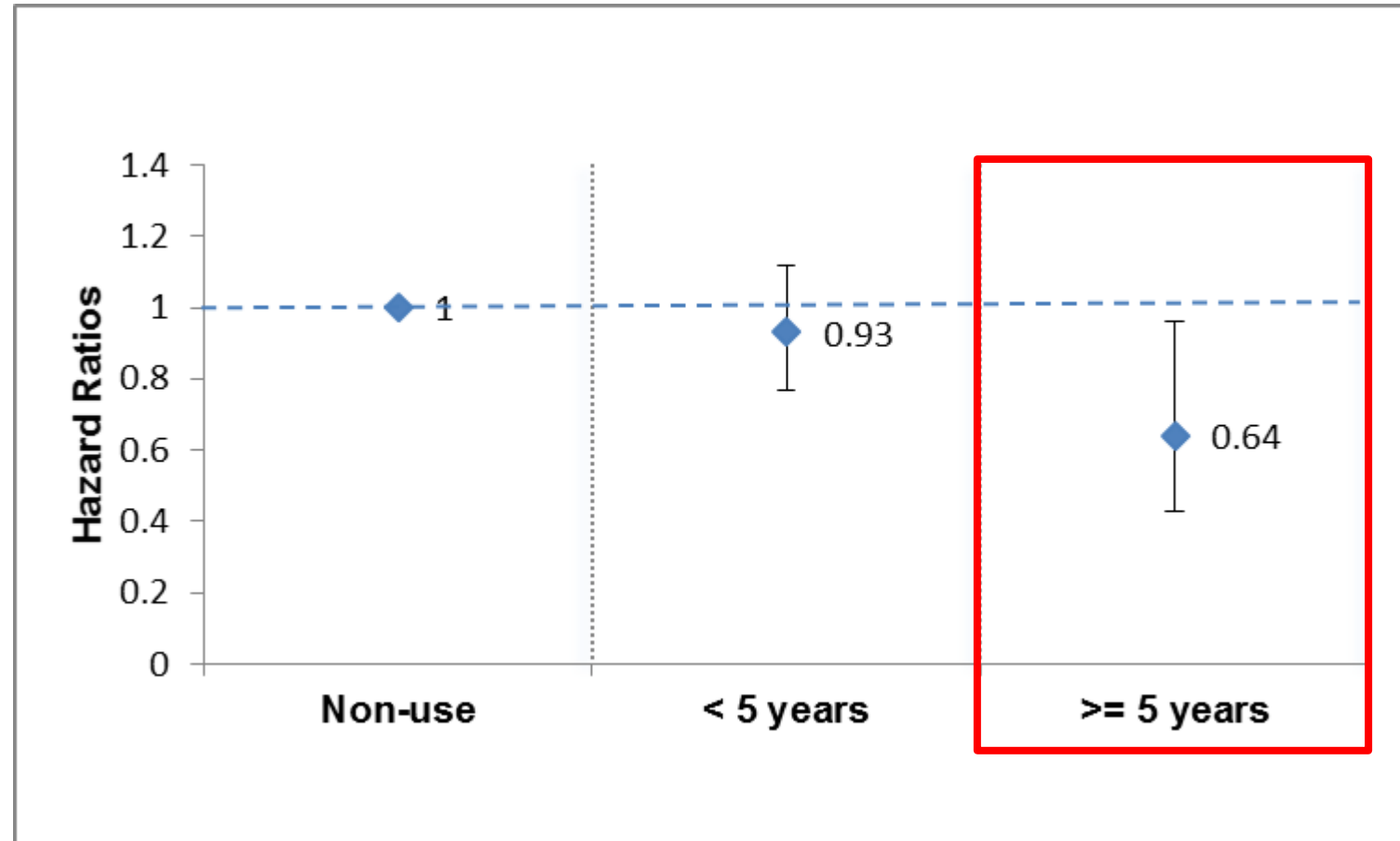
Results

Ever statin use and current/past use



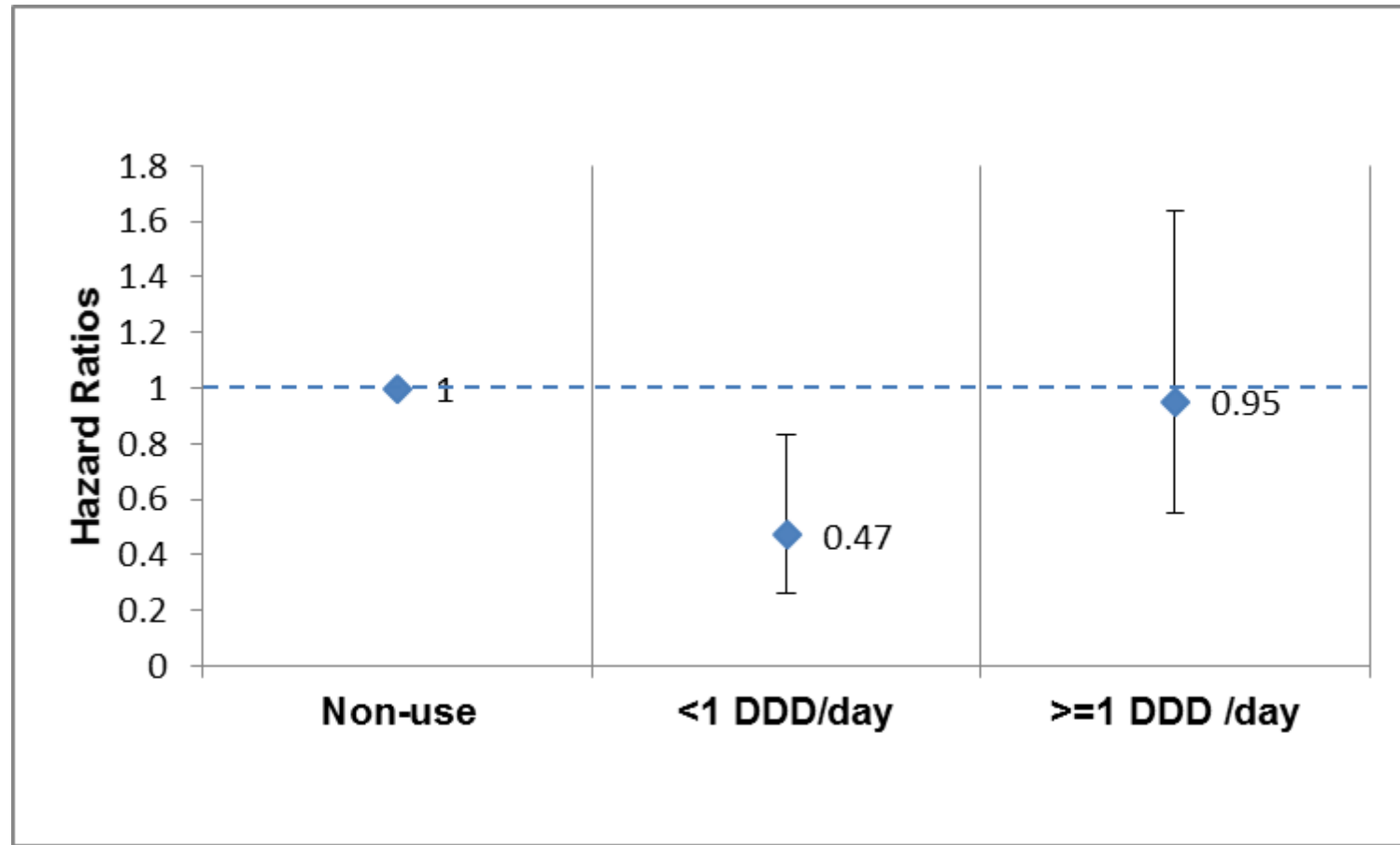
Results

Duration of use



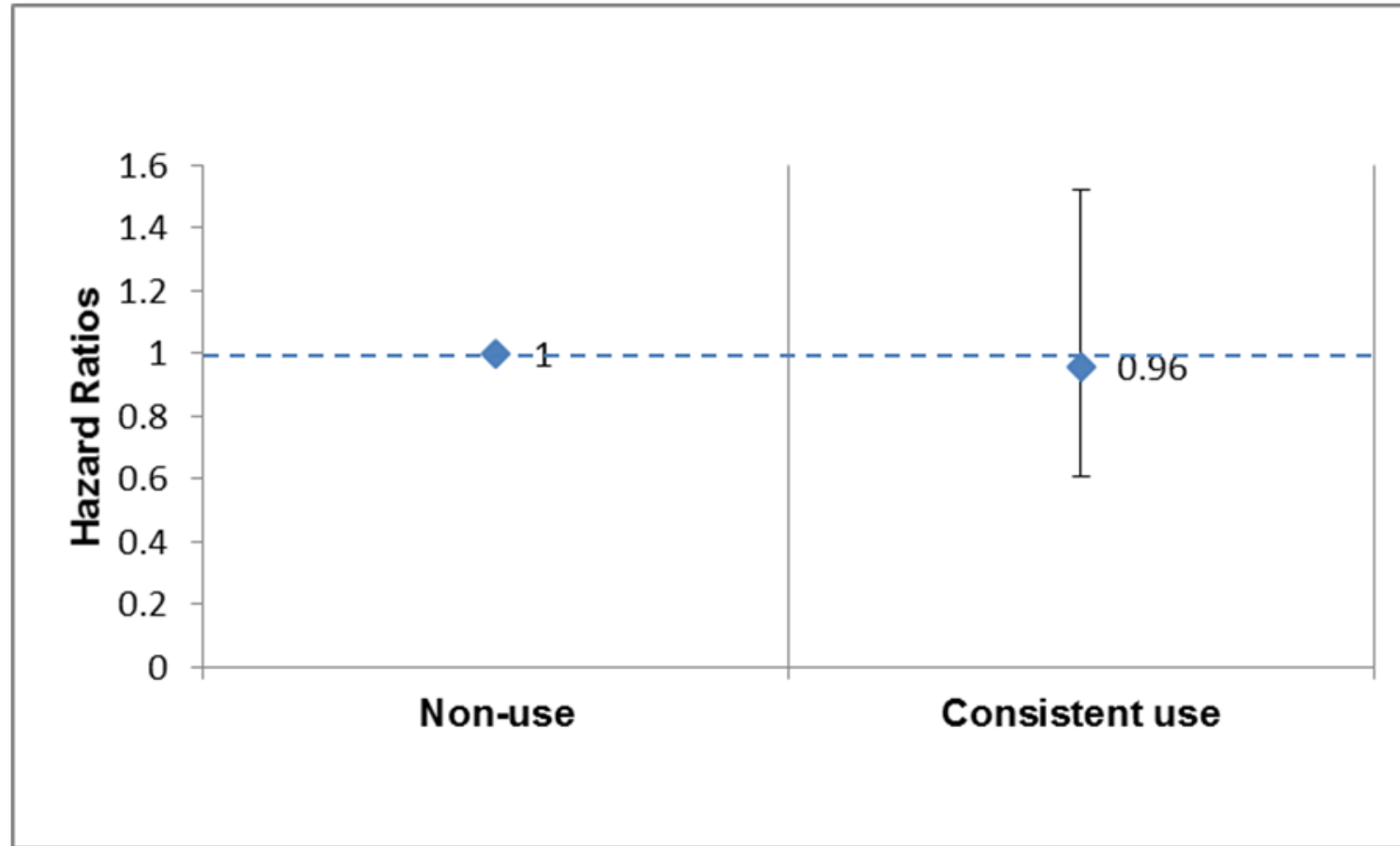
Results

Long-term use >5 years by intensity



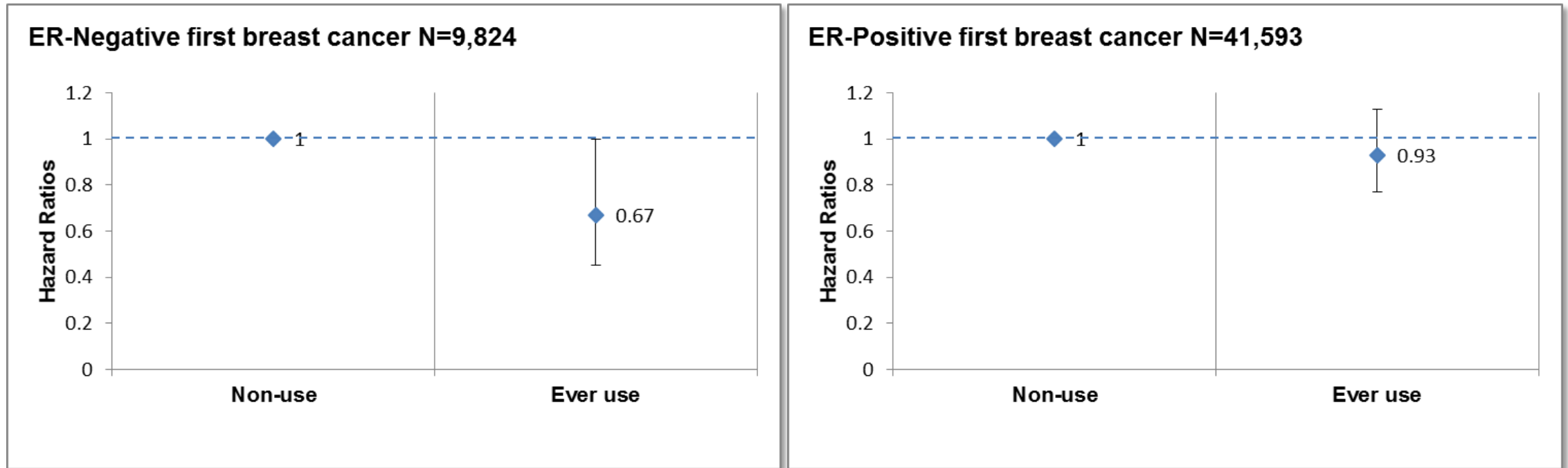
Results

Long-term use >5 years by consistency



Results

ER status of first primary breast cancer



Conclusion and perspectives



- No clear evidence of a protective effect of statins on the risk of CBC
- The markedly reduced risk of CBC with statin use among women with ER-negative first breast cancer warrants further investigation
- Particularly useful for ER-negative breast cancer patients who are not eligible for endocrine therapy for prevention of CBC



Collaborators

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