

# Epidemiological studies on gastroesophageal reflux disease and esophageal cancer

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Esophageal cancer is the seventh most common cancer world-wide and a lethal malignancy causing a considerably high number of deaths. There is currently no promising method for prevention, early detection, or screening of esophageal cancer so most patients are diagnosed at an advanced stage, which is associated with a poor prognosis.

The most common treatment for <u>esophageal cancer</u> patients is surgery, which might be associated with complex complications or infections,



with a low survival after 5 years.

In her thesis, Ji Zhang at the Department of Medical Epidemiology and Biostatistics aimed to shed light on etiological factors for esophageal cancer and gastroesophageal reflux disease (GERD), which is a risk factor for esophageal adenocarcinoma (EAC). The study goals were to help the prevention of the occurrence and improve the survival for esophageal cancer patients.

Four studies are included in Ji's thesis, with the first two covering sex disparities in postoperative survival after curative surgical treatment in esophageal cancer patients and examinations of the association between 15 antibodies against Helicobacter pylori (H. pylori), gastric atrophy and EAC. She then explored the association between dental health and esophageal cancer and studied the association between atrophic gastritis (AG) and GERD in twins.

#### What are the most important results in your thesis?

My thesis covers different aspects of esophageal cancer from etiology towards prognosis, it's hard to summarize in only one sentence. But in general, we found that dental health might be a novel risk factor associated with esophageal cancer. We became aware of a potential protective mechanism for esophageal adenocarcinoma, and a sex differentiated treatment strategy should be introduced for better survival in male patients.

### Why did you choose to study this particular area?

Because esophageal cancer is a relatively rare disease, lack of statistical power is a problem faced by many studies in the field, Swedish register data provides value resources to study these intriguing yet interesting



questions.

## What do you think should be done moving forward in this research area?

There have been many hypotheses proposed related to the etiology or prognosis of esophageal cancer, but substantial heterogeneity hampered any conclusive conclusions. Thus confirming studies, with great statistical power, careful study design, or randomized interventional studies are needed to draw a conclusion, and therefore be applied to the real world.

**More information:** Epidemiological studies on gastroesophageal reflux disease and esophageal cancer.

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