

Largest study of its kind reveals women have superior response to esophageal cancer treatment

August 22 2017

Female patients with locally advanced esophageal cancer that is treated with chemotherapy and radiation therapy before surgery are more likely to have a favorable response to the treatment than male patients are, and women are less likely to experience cancer recurrence, according to a study published online today in *The Annals of Thoracic Surgery*.

"Esophageal cancer is one of the deadliest cancers in the world," said senior author K. Robert Shen, MD, of the Mayo Clinic in Rochester, MN. "It affects men and women differently. Men are more at risk to develop this cancer, and it appears that women respond better to the treatments."

Esophageal cancer is four times more common in men than in women, according to the American Cancer Society (ACS). The ACS estimates that there will be about 16,940 (13,360 men and 3,580 women) new [esophageal cancer](#) cases diagnosed in 2017, with approximately 15,690 deaths (12,720 men and 2,970 women). The lifetime risk to develop esophageal cancer is 1 in 125 for men and 1 in 454 for women.

Dr. Shen and colleagues from the Mayo Clinic analyzed data from all [female patients](#) with locally advanced esophageal cancer who underwent chemotherapy and radiation prior to surgery between 1990 and 2013 at all three Mayo Clinic sites (Rochester, MN, Scottsdale, AZ, and Jacksonville, FL). A comparison group of [male patients](#) were identified

based on matching criteria such as age, pretreatment clinical stage, histologic type, and surgical era. Only patients staged preoperatively with computed tomographic scans and endoscopic ultrasonography were included.

The final cohort included 366 patients (145 women, 221 men). The median age for female patients was 64 years and 61 years for male patients. They had two primary types of esophageal cancer—adenocarcinoma (cancer originating in gland cells/lower part of the esophagus), found in 105 (72 percent) women and 192 (87 percent) men, and squamous cell carcinoma (cancer starting in cells that line the esophagus), diagnosed in 40 (28 percent) women and 29 (13 percent) men.

"We believe our study represents the largest group of female patients ever studied specifically to analyze the impact of gender on response to treatment and long-term outcomes," said Dr. Shen. "It is also the only one to use a methodology where female and male patients were matched based on certain characteristics to eliminate possible confounding factors."

The study showed that either complete or near complete pathologic response occurred in 84 women (58 percent) vs. 103 men (47 percent). In addition, tumor recurrences occurred in 116 (32 percent) patients (38 female, 69 male), resulting in men having an 80 percent increased risk of recurrence. There also was a trend toward superior 5-year survival for [women](#) vs. men (52.1 percent vs. 44.0 percent), but this did not reach statistical significance.

"The results of this study are intriguing because they suggest that by focusing on individualized and targeted approaches to esophageal cancer treatment, we may be more successful in improving outcomes for future [patients](#)," said Dr. Shen.

In fact, Dr. Shen explained that the research group recognizes that most cancers affect individuals in different ways, which reflects possible variations in the biology and genetics of the tumor. This remains an active area of research at the Mayo Clinic.

"If the genetic or molecular basis that explains our findings can be elucidated, one can conceive of chemoradiation therapy regimens that are more targeted based on the genetic signatures of each patient's tumors," said Dr. Shen. "An individualized approach to [cancer](#) treatment will likely lead to the greatest gains in the treatment of many cancers."

More information: Phillip G. Rowse et al. Sex Disparities After Induction Chemoradiotherapy and Esophagogastrectomy for Esophageal Cancer, *The Annals of Thoracic Surgery* (2017). [DOI: 10.1016/j.athoracsur.2017.05.030](#)

Provided by Elsevier

Citation: Largest study of its kind reveals women have superior response to esophageal cancer treatment (2017, August 22) retrieved 10 April 2024 from <https://medicalxpress.com/news/2017-08-largest-kind-reveals-women-superior.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
