

Scientists create model to inform treatment decisions for esophageal cancer

March 3 2017, by Deborah Pettibone

Cancer of the esophagus, the hollow tube connecting the oral cavity to the stomach, is more often diagnosed in men than in women and is usually treated surgically. Roswell Park Cancer Institute researchers have created a novel calculator that more readily identifies patients who may benefit from therapy that reduces the extent of the disease prior to surgery. The study has been published online ahead of print by the *Journal of the American College of Surgeons*.

Using the National Cancer Data Base, the Roswell Park team evaluated clinical data for 8,974 patients diagnosed with early-stage esophageal cancer. The database records information for as many as 70% of the nation's [cancer](#) cases through participating hospitals. The researchers evaluated characteristics such as patients' comorbidity score, tumor grade and neoadjuvant chemoradiation status (whether they had chemotherapy and/or radiation prior to surgery). Only preoperative data were used to develop the calculator. The scientists found that patients who benefit more from neoadjuvant chemoradiation included those whose tumors had metastasized to nearby lymph nodes, older patients and those with more aggressive cancers, such as tumors of higher grade and greater depth of invasion. These findings indicate that the calculator would assist physicians and patients with treatment decision-making.

"The use of calculators to estimate outcomes is becoming increasingly common, and is being applied to real-time clinical situations to aid in treatment decision-making and individualizing therapy," says the lead author of the study, Emmanuel Gabriel, MD, PhD, of the Department of

Surgical Oncology at Roswell Park.

"Our effort is a good example of how you can use large national databases to create calculators to guide and improve preoperative decision-making. Such tools can help us, for example, to avoid the toxic side effects of upfront chemoradiotherapy in a subset of [patients](#). However, our calculator should be validated prospectively before firm conclusions can be drawn about its value in treatment selection," notes the senior author of the study, Moshim Kukar, MD, Assistant Professor of Surgery in the Department of Surgical Oncology at Roswell Park.

More information: Emmanuel Gabriel et al. Novel Calculator to Estimate Overall Survival Benefit from Neoadjuvant Chemoradiation in Patients with Esophageal Adenocarcinoma, *Journal of the American College of Surgeons* (2017). [DOI: 10.1016/j.jamcollsurg.2017.01.043](https://doi.org/10.1016/j.jamcollsurg.2017.01.043)

Provided by Roswell Park Cancer Institute

Citation: Scientists create model to inform treatment decisions for esophageal cancer (2017, March 3) retrieved 8 May 2024 from <https://medicalxpress.com/news/2017-03-scientists-treatment-decisions-esophageal-cancer.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>
--