

Does BMI affect post-surgical complications, survival in esophageal adenocarcinoma?

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Researchers at Moffitt Cancer Center in Tampa, Fla., have found – contrary to previous studies linking inferior outcomes in patients with gastrointestinal malignancies to higher body mass index (BMI) – that in their study of BMI and negative outcomes, there was no such link. They concluded that BMI was not associated with either surgical complications or esophageal cancer patient survival.

Their study was published in the current online issue of the *Journal of Gastrointestinal Surgery*, published by the Society for Surgery of the Alimentary Tract.

"The incidence of [esophageal cancer](#) in North America is rising," said study co-author Kenneth L. Meredith, M.D., assistant member at Moffitt and chief of the Esophagogastric Oncology Section. "Corresponding to that rise, there has been a dramatic rise in overweight and obese people as defined by the World Health Organization's guidelines indicating those having a BMI of 25 to 29.9 as being overweight and those who are obese as having a BMI of over 30."

According to the researchers, the increase in obesity and the increase in esophageal cancer has been linked, as has obesity been similarly linked with other kinds of cancers. Obesity is recognized as a risk factor for esophageal cancer. What remains in question, however, is whether a high BMI affects post-surgical complications and overall survival among esophageal cancer patients who have been treated with chemotherapy, radiation and surgery.

"The correlation of obesity with surgical risks and postoperative survival is more important given the rise in obesity rates, yet more clarity on potential correlation is needed," said Meredith. "The literature shows mixed study results."

In their paper, the authors cited a number of studies that correlated lower BMI with better outcomes for a variety of cancers as well as studies that found no prognostic significance correlating higher BMI with poorer outcomes.

Because of the prevailing belief that patients with a high BMI tend to have more surgical complications as compared to normal weight patients, the Moffitt researchers examined esophageal cancer patient data on BMI for links to surgical risk and postoperative survival, especially for those patients with high BMI.

Their study included 303 esophageal cancer patients treated with chemotherapy, radiation and surgery who were stratified by their BMI to include those with BMIs less than 25 to greater than 35. The only demographic differences were in gender, with a higher proportion of males in the BMI 25 to 30 group.

"Our study demonstrated no significant differences in overall survival or disease-free [survival](#) in relation to BMI for [patients](#) with [esophageal adenocarcinoma](#) who underwent surgery after prior treatment with chemotherapy and radiation," said Meredith. "Additionally, there were no differences in perioperative complications or mortality associated with BMI. In short, our data failed to demonstrate a link between BMI and surgical outcome."

Provided by H. Lee Moffitt Cancer Center & Research Institute

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