

Body fat distribution linked to higher risk of aggressive prostate cancer

June 10 2019



Micrograph showing prostatic acinar adenocarcinoma (the most common form of prostate cancer) Credit: Wikipedia, [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/)

In the first prospective study of directly measured body fat distribution and prostate cancer risk, investigators found that higher levels of abdominal and thigh fat are associated with an increased risk of aggressive prostate cancer. Published early online in *Cancer*, a peer-reviewed journal of the American Cancer Society, the findings may lead to a better understanding of the relationship between obesity and prostate

cancer and provide new insights for treatment.

Previous studies have shown that obesity is associated with an elevated risk of advanced [prostate cancer](#) and a poorer prognosis after diagnosis. Also, emerging evidence suggests that the specific distribution of fat in the body may be an important factor.

To provide high quality evidence, Barbra Dickerman, Ph.D., of the Harvard T.H. Chan School of Public Health, and her colleagues analyzed [body fat distribution](#) using the gold-standard measure of computed tomography imaging and assessed the risk of being diagnosed with, and dying from, prostate cancer among 1,832 Icelandic men who were followed for up to 13 years.

During the study, 172 men developed prostate cancer and 31 died from the disease. The accumulation of fat in specific areas—such as visceral fat (deep in the abdomen, surrounding the organs) and thigh subcutaneous fat (just beneath the skin)—was associated with the risk of advanced and fatal prostate cancer. High body mass index (BMI) and high waist circumference were also associated with higher risks of advanced and fatal prostate cancer.

"Interestingly, when we looked separately at men with a high BMI versus low BMI, we found that the association between visceral fat and advanced and fatal prostate cancer was stronger among men with a lower BMI. The precision of these estimates was limited in this subgroup analysis, but this is an intriguing signal for future research," Dickerman noted.

Additional studies are needed to investigate the role of fat distribution in the development and progression of prostate cancer and how changes in fat stores over time may affect patients' health. "Ultimately, identifying the patterns of fat distribution that are associated with the highest risk of

clinically significant prostate cancer may help to elucidate the mechanisms linking obesity with aggressive disease and target men for intervention strategies," said Dickerman.

An accompanying editorial notes that lifestyle interventions—such as diet and exercise—that target fat loss may also reduce the risk of [prostate cancer](#).

More information: "Body fat distribution on CT imaging and prostate cancer risk and mortality in the AGES-Reykjavik Study." *Cancer* (2019). doi.wiley.com/10.1002/cncr.32167

"Obesity, visceral and prostate cancer: What is the role of lifestyle interventions?" *Cancer* (2019). doi.wiley.com/10.1002/cncr.32165

Provided by Wiley

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