

# Study: Prostate cancer patients' weight linked to tumor size

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The size of tumors in prostate cancer patients is directly linked to their weight, according to a new six-year study conducted by researchers at Henry Ford Hospital in Detroit.

The research team, led by Nilesh Patil, M.D., of Henry Ford's Vattikuti Urology Institute and Department of Radiology, found heavier patients, or those with the highest body mass index (BMI), also had the largest tumors. They discovered the connection after studying 3,327 patients who had undergone robotic removal of their cancerous prostate glands and surrounding tissue.

"As the patients [body mass index](#) increased, the tumor volume increased synchronously," says Dr. Patil. "Based on our results, we believe having a larger percentage of tumor volume may be contributing to the aggressive nature of the disease in men with a higher BMI."

The study will be presented June 2 at the 2010 American Urology Association's annual meeting in San Francisco.

Working from a well-established link between aggressive [prostate cancer](#) and higher BMI, the team set out to find if overweight and obesity specifically affects the tumor volume in cancerous prostates.

The BMI measures [body fat](#) based on combined height and weight in adult men and women, and sets a number that defines underweight, normal weight, overweight, and obesity - from 18.5 or less for

underweight to 30 or higher for obesity. Tumor volume is the size of a [malignant tumor](#) as a percentage of the space it takes up in the affected tissue, in this case the prostate gland.

Patients were studied from October 2001 to October 2007. They were divided into six categories based on their BMI - 24.9 or less (normal or underweight), 25 to 29.9 (overweight), 30 to 34.9 (obese), and 40 or higher (morbidly obese). In each category, the mean age was about 60.

After their tumors were removed, each was weighed and compared to a categorized database of prostate weight. In each BMI category, they found the weight of the patient to be directly correlated to the size of the tumor (i.e. the smaller the patient, the smaller the tumor, and the heavier the patient, the larger the tumor).

Provided by Henry Ford Health System

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