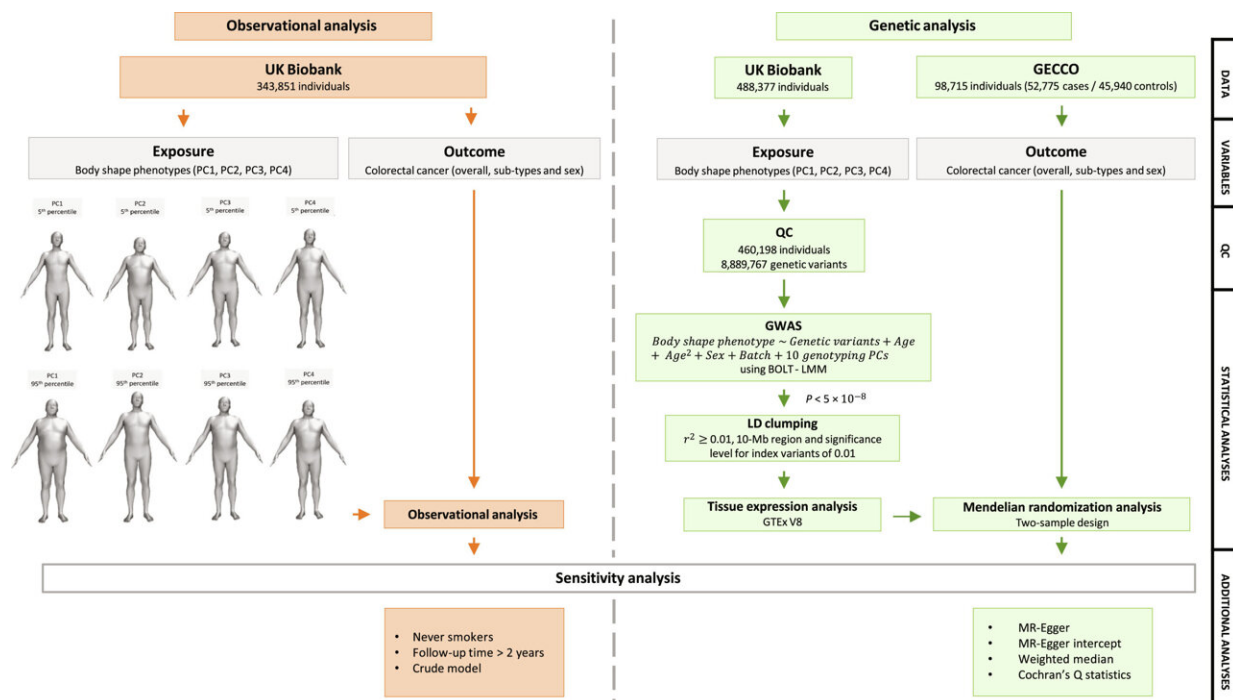


Researchers find obese people and tall, centrally obese people are more likely to get colorectal cancer

April 22 2024, by Bob Yirka



Flowchart summarizing study methods. Body shape phenotypes have been derived by a PCA on six anthropometric traits (BMI, weight, height, WHR, WC, and HC). PC1 showed high and same sign loadings for all traits except height. PC2 showed high but opposite loadings for height and WHR. PC3 was characterized by high and same direction loadings for height and WHR. PC4 showed high loadings for weight and BMI and low loadings for HC and WC.

Credit: *Science Advances* (2024). DOI: 10.1126/sciadv.adj1987

A large international team of medical researchers has found that people with two types of body shape are more likely to develop colorectal cancer than people with other body types. In their study, [published](#) in the journal *Science Advances*, the group assessed body shape and genetic tendencies in thousands of people for risks of developing colorectal cancer.

Colorectal cancers develop in the colon or rectum. Prior research has shown that [colorectal cancer](#) is the No. 2 leading cause of cancer deaths in the U.S.—approximately 150,000 cases are diagnosed each year. The [lifetime risk](#) for the disease is 1 in 23 for men and 1 in 25 for women, though other factors also play a role in the likelihood of developing the disease, primarily lifestyle choices.

In 2016, a different team of researchers found evidence linking obesity in general, and central obesity in tall people, with a higher likelihood of developing colorectal cancer. In this new effort, the research team conducted similar research with a much larger group of people.

The study, the largest of its kind to date, involved gathering and studying data collected from 550,000 adults documented in the U.K. Biobank. They also studied [genetic data](#) from [tissue samples](#) collected from an additional 800 donors.

The research team found that tall people with an "apple" shape, which means they have a genetic tendency to put on weight around the middle, were more likely to develop colorectal cancer than people with other

genetically coded body shapes. They found that tall people with an apple shape also tended to have more [health problems](#) related to the digestive system.

People who had genes that made them more likely to become obese due to unhealthy diet were also more susceptible to developing the disease. They also noted that the two body types had unique molecular pathways to the disease that were driven by certain genetic patterns.

More information: Laia Peruchet-Noray et al, Tissue-specific genetic variation suggests distinct molecular pathways between body shape phenotypes and colorectal cancer, *Science Advances* (2024). [DOI: 10.1126/sciadv.adj1987](https://doi.org/10.1126/sciadv.adj1987)

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