

Population Health Epidemiology Week 1 Initial Discussion Exercise 1.5

Exercise 1.5 The relationship between obesity and cancer is described and discussed in this chapter.

Excess weight is associated with increased cancer risk, morbidity, and mortality. “In 2009, researchers published their analysis of the cost of obesity in the United States...the annual medical costs for people who are obese were \$1,429 higher than those for normal-weight people” (Curley, 2019, p. 9). The rate of obesity in the United States is currently ranked at 31.9% (affecting nearly 1 in 3 persons), it has grown 170% since 1990 and is projected to continue to increase (America’s Health Rankings, 2022). With the increased incidence of obesity is a concurrent population increase in the diagnosis of Metabolic Syndrome, a cluster of conditions that include abdominal obesity, increased blood pressure, high blood sugars, and abnormal cholesterol and triglyceride levels. In combination, these conditions stimulate the inflammatory processes within the body and increase insulin resistance which can result in multiple health conditions including the growth of cancers (NIH, 2022).

The incidence rates for six cancers associated with obesity are increasing in young Americans. Identify them.

Obesity is generally associated with an increased risk for many cancers, including esophageal, pancreatic, colorectal, breast, endometrial, kidney, thyroid, and gallbladder. Obesity is a contributory factor in as much as 54% of certain cancers (Curley, 2019, p. 10). High fat diets have been shown to accelerate tumor growth rates in association with production of increased growth factors, such as Insulin, IGF-1, Leptin, and RBP4 (Berger, 2019).

“Multiple models indicate that obesity not only increases cancer incidence, but also accelerates its development...and obesity may be contributing to appearance of specific malignancies at younger ages” (Berger, 2019, p. 3). Six cancers in young Americans more closely associated with obesity. These cancers include colorectal (CRC), thyroid, kidney (RCC), liver (HCC), and Multiple Myeloma (MM). In addition, there has been a noted increase in premenopausal breast and endometrial cancer risks in association with younger female obesity.

Some interesting facts gleaned from the research include:

*CRC has shown an average 1.5% increase per year among younger persons (aged 20-40).

“Younger obese patients were noted to present with more advanced, higher staged, and more poorly differentiated disease...with those presenting with stage IV CRC showing inferior survival” (Berger, 2019, p. 7).

*RCC is the third most common obesity related carcinoma and early adult obesity accounts for a 60% increase in risk of developing this cancer.