Physicians shouldn’t underestimate link between diabetes, cancer

An association between high body mass index (BMI) and the risk for certain cancers, including colorectal, pancreas and kidney cancer, has been well established, with one study estimating that about 3% of all cancer cases in 2012 were attributable to high BMI.

However, the link between diabetes and cancer was established only just recently, according to Henry Chi Hang Fung, MD, vice chair of hematology at Fox Chase Cancer Center in Philadelphia.

A study published in *Lancet Diabetes & Endocrinology* found that diabetes and high BMI were the cause of 5.6% of new cancer cases worldwide in 2012. The study quantified the proportion of cancer attributable to diabetes and high BMI. They used data on the incidence of 12 types of cancer from 175 countries in 2012 and combined it with data on high BMI and diabetes. The researchers matched the data sets by age group and sex to take account of age differences using diabetes and BMI data from 2002 to calculate cancer incidence in 2012 attributable to these risks.

The increase in the number of people with diabetes between 1980 and 2002 led to a 26.1% increase in new cases of attributable cancers. There were no data establishing the cause for the relationship between diabetes and cancer but some proposed mechanisms included hyperinsulinemia, chronic inflammation or dysregulation of sex hormone activity. Prospective studies “with more accurate assessments of adiposity,
diabetes, and metabolic health,” are needed to draw conclusions about the relationship, according to the study.

Fung related the results of this study to the relationship between smoking and cancer.

“Not everyone who smokes will get cancer, and every cancer is associated with smoking, not only just lung cancer,” Fung told Medical Economics. “Similarly, there is no model showing that because you have diabetes you will then get cancer.”

However, the results of this study, and any future studies linking diabetes to cancer, should bring attention to what Fung called an important public health issue.

“If more and more patients are getting diabetes and it is associated with cancer, then the incidence of cancer will also be increasing,” Fung said.

With smoking, research has shown that if rates of smoking decrease so does the incidence of lung cancer.

“Moving forward, the question will be: If we can control diabetes, can we decrease the rate of cancer?,” Fung said. “That has not yet been addressed.”

For the time being, the growing association between cancer, obesity and diabetes does not necessarily change health practice, according to Fung.

“There is no need to do more screening in these patients because the diabetes itself is not causing the cancer,” Fung said. In fact, Fung implied that efforts should be made to control diabetes and obesity for their sake alone and not because of a possible association with cancer.

Indeed, commenting on the study, lead author Jonathan Pearson-Stuttard of the Imperial College in London, said in a statement, “As the prevalence of these cancer risk factors increases, clinical and public health efforts should focus on identifying preventive and screening measures for populations and for individual patients. It is important that
effective food policies are implemented to tackle the rising prevalence of diabetes, high BMI and the diseases related to these risk factors.”