Lifestyle can directly and overwhelmingly impact on the probabilities for an individual to suffer from cancer in the course his/her existence. This influence can be positive or negative depending on the case, and is directly related to discipline with respect to alimentary habits and regularly practiced physical activity. It is well known that overweight, obesity, smoking, alcohol ingestion and sedentarism are some of the environmental factors that can be modified to reduce the risk for suffering some oncologic conditions. First of all, I would like to make it clear that I exclude from this list those people who suffer weight gain secondary to metabolic or endocrine disorders or any other less common condition.

Cancer is a global health problem, and Mexico is not the exception, since it constitutes the third cause of death after cardiovascular diseases and diabetes mellitus with their complications (by the way, in both cases, there is clear influence of the same factors as in many types of cancer). With regard to incidence, most common malignancies are prostate, colorectal and lung cancer in males, whereas in the female gender, breast, lung and colorectal cancer are on top of the list. On the other hand, the types of malignancies that cause the highest numbers of deaths among males are lung, prostate and colorectal cancer; in the case of the ladies, lung, breast and colorectal cancer are the malignancies with the highest mortality.

Overweight and obesity have become a pandemic, and over the past few years, the incidence of both entities was increased even in countries where traditionally this wasn’t a public health problem. Lifestyle changes and big and successful fast-food chains globalization are considered to have played an important role in the genesis of this serious problem. It is much easier adopting bad alimentary habits from countries with high overweight rates than the healthy, balanced diet that still predominates in few countries in the world or, more specifically, in few, small regions of the world. We hide behind the “I don’t have time” excuse to routinely attend junk-food centers that are currently abundant.

In our country, 70% of the population suffers from overweight (body mass index [BMI] > 25), and 36%, obesity (BMI > 30). Both these conditions have been associated with different types of cancer based on plenty of evidence, with breast, pancreas, kidney, endometrial, esophagus, colon and rectum cancer, just to mention a few, standing out. In the USA, there are 100,000 new cancer cases estimated per year that might be related to alimentary habits.

Between 1990 and 2015, data from 195 countries around the world were analyzed. By the year 2015, there were 107.7 million children and 603.7 million adults with obesity, which means that, over the past 15 years, the prevalence of this condition has doubled in 70 of these countries and it has increased in most of the rest. Overweight/obesity is estimated to have caused four million deaths. The increase in obesity incidence after 15 years of age is quite evident, unlike what occurred in previous generations, where weight gain arrived at later stages of life. The percentage of obesity in adults increased constantly from the beginning to the end of the study.

In an analysis carried out in 2009 in American urban population, it is highly surprising that, in contrast with the high...
awareness there is on the relationship of smoking, sun exposure and genetics with cancer risk (90% of individuals were aware of this or at least had heard about it), only around 50% of surveyed subjects had heard about the association between obesity and cancer. The same or even a lower number knew about the increased risk for developing cancer with a diet poor in vegetables, with alcohol intake, with high consumption of red meat and with poor physical activity. It is hard to believe that in this day and age, when most the population has access to bread, first hand information, obesity is not causally associated with cancer. There is the possibility that public health programs fail to reach half the population, or maybe they are simply ignored; I am inclined to think on the latter, and all the more so I insist that cancer can be caused by our indiscipline in daily living. This is with no doubt one of the reasons why the number of people with obesity in that country increased from 35 million in 2001 to 51 million in the year of the study, 2009. It is important for health authorities in Mexico to know these sort data in our population (probably they are quite similar), in order to appropriately focus the efforts made to educate and create awareness on the seriousness and consequences of this problem.

In another study, when questioning about the main causes of death, more than 35% of interviewees mentioned cancer as number one, even on top of cardiovascular disease, diabetes and stroke. Curiously, when the same group of individuals was asked if these four causes of death could be prevented, only 20% considered cancer could; conversely, the other three entities were considered by 30% to almost 50% of cases. This is another piece of information that is quite surprising and, again, I put on the table the question whether public health programs in matters of cancer prevention are being well focused or whether health authorities are fighting against the population’s apathy and disinterest assigning resources that are being less fruitful than expected.

If we consider the impact we might cause on some of the different risk factors for developing cancer that have been described, we might find that obesity is gaining ground towards replacing smoking as the main preventable cause of cancer. The percentage of cancer cases that are attributed to obesity is highly variable, and it can be as high as 40% in some types such as endometrial and esophageal (adenocarcinoma) cancer. Furthermore, overweight and obesity contribute to one of every 5 cancer-related deaths. Hence, we can conclude that obesity is the new smoking with respect to the risk of developing cancer.

Overweight and obesity can cause cancer by different mechanisms: cell hypoxia, fatty tissue produces higher levels of estrogen in the female population, increased levels of insulin with insulin resistance can also occur; a chronic or subacute inflammation state can be produced in obese people and, finally, adipocytes can have regulating effects on the growth of certain tumors.

With obesity, there isn’t only higher risk of having some types of cancer, but in subjects who already have cancer, it can occur with worse prognosis and there is higher recurrence rate, increased metastasis, decreased survival, higher mortality and second cancers.1

BMI increase has been shown to impact on a higher incidence of many malignancies, with the most documented in men including esophagus adenocarcinoma and thyroid, colorectal, pancreas, prostate, kidney and liver cancer, whereas in women the most documented are endometrial and gallbladder cancer, as well as esophagus adenocarcinoma, and kidney, breast (post-menopause), colorectal and pancreatic cancer.4

An elevated BMI (> 25) can cause death for different reasons, with the most common being ischemic heart disease, stroke, other vascular diseases, diabetes mellitus, different types of cancer and non-neoplastic renal and hepatic conditions, among others.5

The association between some overweight and obesity-related metabolic diseases such as diabetes mellitus also impacts by increasing the risk for certain types of cancer such as breast, endometrial and liver cancer. Furthermore, mortality can be increased, since this coexistence has been shown to be a factor of poor prognosis in certain malignancies such as breast and colorectal cancer.6,7 Conversely, there is information indicating that in this patient subgroup metformin can reduce cancer risk and mortality by decreasing distant metastases and it probably improves chemotherapy outcomes in breast cancer.

Regular physical activity, especially if initiated at early ages, results in an up to 20% decrease in the risk of developing breast and colorectal cancer. Modern societies are more sedentary, and 5% of cancers are considered to possibly be directly associated with low exercise practice. In addition, regular aerobic activity can bring different benefits in cancer-diagnosed patients: it decreases some treatment adverse effects, improves the quality of life, reduces emotional stress, there is less fatigue, increases functional capacity and strengthens physical health, it decreases overweight, reduces insulin resistance and serum glucose levels, in addition to lowering estrogen and/or androgen levels. Weekly hours of exercise are directly related to survival and mortality in breast cancer-diagnosed patients, and the group with best outcomes is that which practices more than 9 h of physical activity per week.8,9

Surgical interventions focusing on overweight and obesity control have also been studied, and have been associated with a decrease in obesity-related tumors, as well as with a reduction in cancer-related mortality.10

The hardest question to answer is whether treating obesity is more complicated than treating cancer. What percentage of people with obesity manages to eradicate it? Is it probable that the cure rate of many types of cancer is higher than that of obesity? What are the factors that make it so complex? Are there physical mediators that make it difficult? Can obesity be considered an emotional disease? Is it a bit of all the above or is it that over the past few decades we simply have changed personal satisfiers and feel the obligation to cover our immediate “needs” every day, without thinking about the consequences in the medium or long term? Are we able to trade our health for the pleasure of eating or drinking whatever we feel like regardless of what tomorrow is going to happen? Why, if we know the considerable high impact it may have, we are not able to control and/or solve it? In countries such as Mexico and the USA, which are at first and second place in obesity worldwide, more than 90% of citizens do not meet the requirements in the consumption of grains, fruit and vegetables. Why, as a society, we keep on drinking alcohol, smoking cigarettes,
being sedentary and maintaining an above-recommended BMI? What gives the health professional, who knows the risks, the right to demand from the patient, who “doesn’t know”, to abandon certain everyday practices that are deleterious for health? In short, I think I am leaving more doubts than answers and, to be true, I do it intentionally, since this is a topic for self-analysis. How much should we change to further help our patients... and ourselves?

REFERENCES