10.1.3 Signs and Symptoms

Cancer can cause any sign or symptom which will depend on the location, size, and the degree that it affects the organs or tissues. If cancer has metastasized, signs may appear in different locations of the body.

However, cancer can start in a location where it does not cause any signs or symptoms until it has grown to a large size. Pancreatic cancer, for instance, normally does not cause any symptoms until the tumor grows large enough to press against the nearby organs or nerves, causing belly or back pain (Anon., 2014d). Others may grow around the bile duct and block the flow of bile. This causes the eyes and skin to appear yellowish in color (Anon., 2014d). By the time a pancreatic cancer causes signs or symptoms like those above, an advanced stage will be expected.

Cancer may also cause symptoms like fever, fatigue, or weight loss (Anon., 2014e). A possible reason is that cancer cells consume much of the body's energy, or they may release substances that change the way the body makes energy obtained from food supply (Anon., 2014e). Cancer can also cause the immune system to react in ways that produce these signs and symptoms.

Sometimes, cancer cells release substances into the blood vessels that cause symptoms that are not usually linked to cancer. For example, some cancers of the pancreas can release substances that generate blood clots in veins of the legs (Anon., 2014e). Some lung cancers make hormone-like substances that raise blood calcium levels. This affects nerves and muscles, making the person feel weak and dizzy (Anon., 2014e).

10.1.4 Possible Causes

There is typically no definitive evidence to prove what caused a particular cancer, since the various possible causes do not have specific fingerprints. For example, if a person who smokes tobacco heavily develops lung cancer, the cancer is most likely due to the tobacco habit (Bassiony et al., 2015). However, since everyone has a small chance of developing lung cancer as a result of other reasons such as air pollution or radiation, the cancer may have developed for one of those reasons. Except for the rare transmissions that occur with pregnancies and occasionally through organ donation, cancer is typically not an infectious disease. The majority of cancers, some 90%–95% of cases, are due to environmental factors (Anand et al., 2008) (Fig. 10.2). The remaining 5%–10% is due to inherited genetics. All the cancer-causing agents can be classified into six main categories, which include:

(1) Chemical carcinogens

Several chemicals and environmental toxins are responsible for mutations in normal cellular DNA. Substances that cause DNA mutations are known as mutagens, and mutagens that cause cancers are known as carcinogens (Anand et al., 2008).