

# The Complex Dual Diagnosis of Diabetes and Cancer

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Diabetes and cancer are two of the top three killers in the United States. As the number of people surviving cancer increases, more patients will be living with both cancer and diabetes. This integrative review of the literature will provide an overview of diabetes, cancer, and the complex interactions between the two. A literature search was conducted and three main areas were identified that warrant additional discussion: the relationship between glucocorticoids and hyperglycemia, glucose control in the management of diabetes in patients with cancer, and an increased risk of certain cancers with the comorbid condition of diabetes. The hope is that, through additional research, evidence-based practice guidelines can be developed to direct the care of these challenging comorbid conditions. To provide holistic care to patients, diabetes and cancer management must be incorporated into healthcare curricula and should be an essential part of clinical diabetes educator certification.

**D**iabetes and cancer are among the leading causes of death in the United States (Xu, Kochanek, Murphy, & Tejada-Vera, 2010). To date, one in four deaths in the United States is caused by cancer. New cases of cancer are projected to reach 1,596,670 in 2011, with 569,490 deaths attributed (American Cancer Society [ACS], 2011). Among men, cancers of the prostate, lung, bronchus, colon, and rectum continue to be the most common and fatal cancers. For women, lung, breast, and colorectal cancers are the most common and fatal (Centers for Disease Control and Prevention [CDC], 2011a). As the number of people becoming long-term survivors of cancer increases, a greater number of patients will have to face the challenge of living with both cancer and diabetes. However, very little information is available about the implications of these two serious diseases for patients and practitioners. Understanding the pathophysiology of cancer and diabetes, identifying links between the two, and identifying areas of concern for healthcare providers caring for patients with these comorbidities may improve patient quality of life. This integrative review of the literature will provide an overview of diabetes and cancer and their complex interaction.

A literature search was conducted using CINAHL®, ProQuest, and MEDLINE® and the key terms *diabetes*, *cancer*, *comorbid*, and *dual diagnosis*. About 75 articles were identified. Ar-

## At a Glance

- ◆ The dual diagnoses of diabetes and cancer are complex for patients and providers.
- ◆ Cancer treatments can influence control of diabetes.
- ◆ Healthcare education curricula must include more information on the relationship between diabetes and cancer.

ticles selected included English-language articles written from 1998–2011 that discussed the relationship between cancer and diabetes. Three main areas warrant additional discussion: the relationship between glucocorticoids and hyperglycemia, glucose control in the management of diabetes in patients with cancer, and an increased risk of certain cancers along with the comorbid condition of diabetes.

## Diabetes

Diabetes is a complex disease with multiple pathologic components and is an epidemic in the United States. An estimated 8% of the U.S. population (or about 25.8 million people) have

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