Measurement of Hyperglycemia and Impact on Health Outcomes in People With Cancer: Challenges and Opportunities

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Hyperglycemia, an elevation in blood glucose, is a major side effect of cancer and its treatment. In patients with cancer, hyperglycemia frequently occurs independent of the diagnosis of diabetes (Farrokhi, Smiley, & Umpierrez, 2011). Among patients with various types of cancer, the prevalence of hyperglycemia ranges from 39%–99% (Hammer et al., 2009; Karnchanasorn, Malamug, Jin, Karanes, & Chiu, 2012; Storey & Von Ah, 2015).

Among critically and noncritically ill patients, hyperglycemia has been associated with infection and sepsis, stroke, hemorrhage, ileus, and venous thromboembolism (Jiménez-Ibáñez, Castillojos-López, Hernández, Gorocica, & Alvarado-Vásquez, 2012; Mraovic et al., 2010; Zuurbier et al., 2016); longer hospital length of stay (Masrur et al., 2015); and increased morbidity and mortality (Egi et al., 2008; Hermanides et al., 2010). Harmful consequences of hyperglycemia...