Food Safety Knowledge and Self-Reported Food-Handling Practices in Cancer Treatment

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Because of the cytotoxic drugs used in chemotherapy for the treatment of cancer, immune responses in patients with cancer are suppressed (Oliver & Nouri, 1992). Consequently, patients with cancer receiving chemotherapy treatment have an increased risk of infection, including foodborne infections. Given that patients with cancer have very little defense against opportunistic pathogens, these infections may be more difficult and take longer to treat; consequently, the mortality rates of enteric viral infections are elevated in patients with cancer (Gerba, Rose, & Haas, 1996). Cancer and chemotherapy are recognized as underlying conditions for foodborne infections from *Campylobacter* (Pacanowski et al., 2008), *Salmonella* (Rolston & Bodey, 2000), and *Listeria monocytogenes* (Silk et al., 2012; Swaminathan & Gerner-Smidt, 2007). Among people with suppressed immune systems, infections (e.g., norovirus) are reported to pose an increased risk of more severe consequences (Mattner et al., 2006). The evidence suggests that 15%–25% of serious *Salmonella* infections occur among patients with cancer (Rolston & Bodey, 2000). A large proportion of listeriosis cases in England and Wales is reported to be associated with patients with cancer (Gillespie et al., 2009; Mook, O’Brien, & Gillespie, 2011). Patients with cancer are reported to have a five-fold increased risk of listeriosis, and one-third of non–pregnancy-associated listeriosis cases are reported to be among patients with cancer (Mook et al., 2011). Invasive listeriosis has a hospitalization rate of less than 90% (Centers for Disease Control and Prevention, 2011) and a mortality rate of less than 41% (Mook, Patel, & Gillespie, 2012); therefore, reducing the risk of developing such foodborne infections among patients receiving chemotherapy is essential.

**Background**

**Neutropenic Diet**

To reduce the risk of foodborne infection, a need exists to reduce the likelihood of consuming foodborne...