Systematic Review of Cognitive Impairment in Colorectal Cancer Survivors Who Received Chemotherapy

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Cognitive impairment is experienced by as many as 75% of cancer survivors who have received chemotherapy (Janelsins et al., 2014). It is a complex treatment-related side effect experienced by cancer survivors both during chemotherapy (Hess et al., 2015; Moore et al., 2019) and more than 20 years after chemotherapy (Koppelmans et al., 2012; Stouten-Kemperman et al., 2015; Von Ah & Tallman, 2015). Cognitive impairment affects several domains, including attention/concentration, executive function, visuospatial ability, verbal/language skills, and memory (Kanaskie, 2012). These deficits are problematic because they may affect individuals' abilities to carry out daily activities, experience social connectedness (Selamat et al., 2014), adhere to treatment plans (Bender et al., 2014), and achieve a high quality of life (Lycke et al., 2019). Cognitive impairment may be measured using self-report (e.g., questionnaires used to assess cancer survivors' perceptions of their own cognitive function, including the Functional Assessment of Cancer Therapy–Cognitive Function [FACT-Cog]) (Wagner et al., 2004) and objective measures (a battery of neuropsychological assessments is the gold standard for assessing cognitive impairment in cancer survivors) (Wefel et al., 2011).

Although survivors across various cancer types report cognitive impairment (Lindner et al., 2014), previous studies focus primarily on breast cancer survivors (Bray et al., 2018). Similar to breast cancer, colorectal cancer has a high survival rate, and a large percentage of survivors receive chemotherapy as part of their treatment. Colorectal cancer is the third most common cancer worldwide, with 149,500 newly diagnosed individuals anticipated in 2021 (Siegel et al., 2021). Colorectal cancer survivors may receive surgery, radiation therapy, immunotherapy,