

19th Euro Congress on Cancer Science and Therapy & 25th Cancer Nursing & Nurse Practitioners Conference

July 17-19, 2017 Lisbon, Portugal

Cancer patients' perspectives on fall risk and fall prevention programs: A systematic search and thematic analysis

Deenar Alwani

University of Calgary, Canada

Falls contribute to increased morbidity and quality of life among the elderly and chronically ill populations. In particular, oncology patients represent an especially vulnerable population at risk for falls due to treatment related fatigue, side effects associated with toxic medications, unrelated co-morbidities, decreased muscle tone, altered mental status, and anemia. Besides that preventing patient from injuries from falls during hospitalization has been a concern within health care organizations for many years. The purpose of the study is to explore patients' perceptions on fall prevention and identify the gaps between research and practice to improve fall prevention strategies in cancer population. This systematic review explores the perceptions of adult patients with cancer regarding the risks of accidental falls in oncology setting. The systematic review of the literature uses key terms for concepts associated with oncology/cancer, accidental falls, fear of falling, fall prevention, perception, lived experiences, meaning, view by using data bases PubMed, Embase, CINAHL, PsycInfo, JBI and Cochrane database of clinical trials. Eligible studies included all primary study types (qualitative, quantitative, mixed methods) in the English language of adults more than 18 years, with cancer diagnosis and in which accidental falls represent either the primary or secondary outcome in an oncology setting (hospital, hospice, community). A total of 1033 abstracts underwent inspection. Two reviewers examined the abstracts according to inclusion and exclusion criteria and total of 69 were identified for eligibility. Eligible research studies will be evaluated using documented tools: Qualitative data will be assessed by means of the critical appraisal skills program (CASP), quantitative data by means of McMaster University quantitative critical review form, and mixed method studies will be assessed by means of the mixed method appraisal tool (MMAT). Next, qualified studies undergo thematic analysis. This systematic review results can help to explore perception of accidental falls and can also help to develop and improve existing fall prevention strategies tailored to prevent falls in adult cancer population.

daalwani@ucalgary.ca

Cancer cell targeting via surface electrical charges and instant photothermal ablation by nano-photothermal effects

Donglu Shi, Xiao Han, Yilong Wang, Wenjun Le, Bingdi Chen and Zheng Cui

Tongji University, China

Cell targeting in cancer therapy has been a great challenge due to the heterogeneities of cancer biomarkers. The key, therefore, is to develop a new targeting strategy that does not rely on biomarkers. A general hallmark of cancer cells is the much increased level of glycolysis. The loss of the highly mobile lactate from the cytoplasm inevitably removes the labile inorganic cations to form lactic salts and acids as part of the lactate cycle, creating a net negative surface charge. This net negative charge on cancer cell surfaces distinguishes them from normal cells. In this study, cancer cells are targeted by using the negative charge to advantage via a fluorescent, superparamagnetic Fe₃O₄-nanocomposite, which has a positive surface charge. The positively charged Fe₃O₄ nanocomposite binds predominantly to cancer cells due to their negative surface charge. This simple strategy provides a new path for effective cancer cell targeting and treatment without relying on biochemical markers.

donglushi@tongji.edu.cn