

# Evaluation of the efficacy of oral nanocurcumin formulation in preventing cisplatin-induced nephrotoxicity in cancer patients: A triple-blind placebo-controlled clinical trial

sare hosseini<sup>1</sup>, Sara Rahsepar<sup>2</sup>, Sara Naghipour<sup>2</sup>, and sepideh elyasi<sup>2</sup>

<sup>1</sup>medicine

<sup>2</sup>Mashhad University of Medical Sciences

February 14, 2023

## Abstract

Chemotherapy induced nephrotoxicity is one of the most common complications in cancer patients, especially under treatment with cisplatin containing regimens, which may require cisplatin dose reduction and in some cases discontinuation of the treatment, which interferes with treatment process. Curcumin is an antioxidant and anti-inflammatory compound and the most important active component of curcuma longa. In this study, the preventive effect of nano-curcumin oral formulation on cisplatin-induced nephrotoxicity in cancer patients was investigated. In this triple-blind clinical trial 30 cancer patients were randomly divided into the treatment group, receiving 40 mg nano-curcumin capsules (15 patients) and the placebo group (15 patients) twice a day for four chemotherapy courses. Kidney function was measured at the beginning of the study and then at the end of each course of chemotherapy. There was no significant difference in acute kidney injury occurrence rate and creatinine and blood urine nitrogen serum levels between the treatment and placebo groups at the end of each chemotherapy course. (P value>0.05) and was not effective in preventing the cisplatin induced nephrotoxicity in cancer patients in comparison with the placebo. Additional studies with different doses and durations of administration are recommended.

## Hosted file

curcumin\_updated\_4.docx available at <https://authorea.com/users/586123/articles/624393-evaluation-of-the-efficacy-of-oral-nanocurcumin-formulation-in-preventing-cisplatin-induced-nephrotoxicity-in-cancer-patients-a-triple-blind-placebo-controlled-clinical-trial>