

Chemotherapy under cachectic conditions and the possibility of cachexia-controlled chemotherapy

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We studied the role of chemotherapy in cancer cachexia, which is well known to lower QOL as well as responsiveness to chemotherapy. In BALB/c mice we used two clones derived from the murine colon 26 adenocarcinoma cell line, clone 5, a non-cachexigenic tumor and clone 20, a cachexigenic tumor, in which IL-6 mRNA was selectively detected. While maximum tolerated dose (MTD) of CPM and CPT-11 showed significantly smaller tumor weight and higher survival than 1/2 MTD in both drug groups with clone 5, the results were reversed with clone 20 (Fig 1). The tumor weights with MTD of CPM or CPT-11 in combination with anti-IL-6 antibody treatment, which decreases serum IL-6 level and improves cachexia status, were significantly smaller than those in the MTD treatment-alone group with clone 20, but not with clone 5 (Fig 2).

From these results, we suggest that lower dose chemotherapy or cachexia-controlled chemotherapy such as some chemotherapeutic agents with neutralizing cachexia-related cytokine effects, elicits superior antitumor effects in cachectic individuals than conventional MTD chemotherapy.

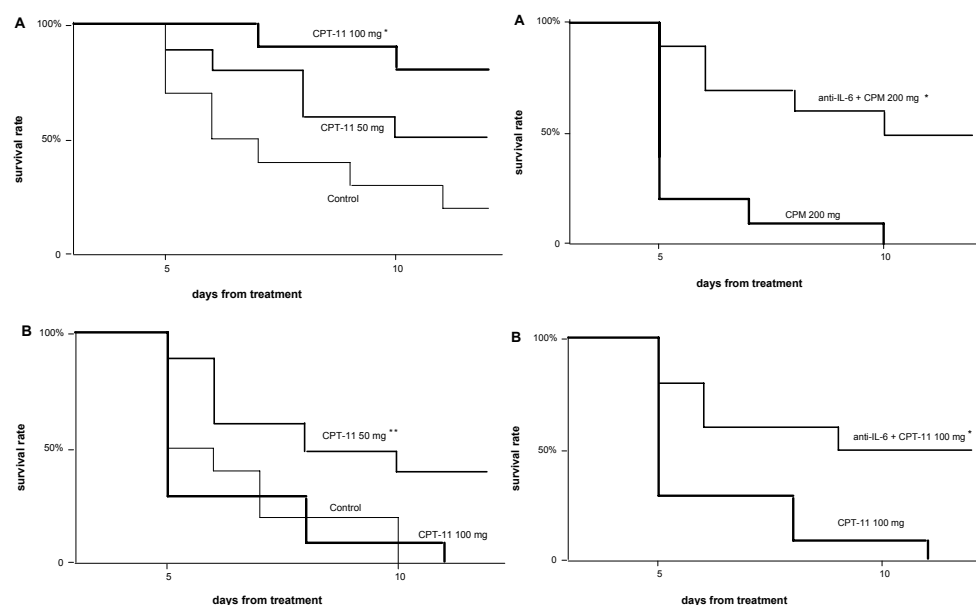


Fig 1. Survival curves of CPT-11 therapy

Fig 2. The effect of anti-IL-6 antibody