

# **Fatigue Experiences in Hepatocellular Carcinoma Patients During Six Weeks of Stereotactic Radiotherapy**

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摘要

## **Abstract**

**Purpose.** To compare fatigue experiences and related factors during the first 6 weeks of stereotactic radiotherapy (SRT) for liver cancer patients with and without fatigue before SRT.

**Patients and Methods.** Subjects (n = 91) were liver cancer patients receiving SRT at two teaching hospitals in northern Taiwan. Data were collected at seven times: the week before SRT (T0) and the end of each of the first 6 weeks of SRT (T1, T2, T3, T4, T5, and T6). Study variables were fatigue intensity, fatigue interference (with patients' daily life), functional status, symptom distress, sleep disturbance, depressive status, radiation dose, stage of cancer, and selected laboratory data.

**Results.** Subjects were divided at T0 into two groups by fatigue level: those without (group 1, n = 32) and with (group 2, n = 59) pretreatment fatigue distress. Patients in group 2 had higher levels of fatigue intensity and interference than did patients in group 1. Both groups had similar patterns of fatigue interference, peaking at T5. However, patterns of average fatigue intensity differed slightly. In group 2, fatigue intensity remained constant until T3 and then increased to a peak at T5. In group 1, fatigue intensity increased to a peak between T4 and T5. Generalized estimating equation analysis showed significant differences between groups in fatigue intensity and interference across 6 weeks. Examination of factors related to fatigue after SRT indicated that sleep disturbance significantly predicted both fatigue intensity and interference in group 1, but depressive status, overall symptom distress, and education level predicted fatigue intensity and interference for group 2.

Conclusion. Liver cancer patients with or without fatigue before treatment had different fatigue experiences across 6 weeks of radiation therapy. Fatigue experiences of liver cancer patients receiving SRT can be better understood through future studies exploring patients' long-term fatigue changes and responses to fatigue-management interventions.