Weight Change Trajectory in Patients With Locally Advanced Nasopharyngeal Carcinoma During the Peri–Radiation Therapy Period

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OBJECTIVES: To analyze the weight change trajectory in patients with locally advanced nasopharyngeal carcinoma (LANPC) before, during, and after radiation therapy for a time span of 40 weeks.

SAMPLE & SETTING: 147 patients from a university-affiliated medical center in China were included.

METHODS & VARIABLES: Body weight was measured weekly during intensive treatment and biweekly after radiation therapy.

RESULTS: All 147 patients experienced critical weight loss during the peri–radiation therapy period. Overall, body weight remained basically unchanged during induction chemotherapy, followed by a sharp and severe decrease during radiation therapy. At 20 weeks after radiation therapy, body weight had increased only slightly from the lowest point.

IMPLICATIONS FOR NURSING: A time-tailored intervention based on the weight change trajectory is necessary for patients with LANPC. According to the weight change trajectory, relevant interventions for maintaining body weight should be initiated as early as the second week of radiation therapy and no later than the fourth week of radiation therapy, and these interventions should continue for at least four weeks after radiation therapy.

KEYWORDS nasopharyngeal carcinoma; body weight; radiation therapy; induction chemotherapy
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According to the International Agency for Research on Cancer, about 129,000 new cases of nasopharyngeal carcinoma (NPC) were diagnosed in 2018 (Bray et al., 2018; Tang, Chen, et al., 2016). Unlike other head and neck cancers, NPC is highly sensitive to radiation therapy; because of the distinct anatomical location for NPC, radiation therapy is the mainstay treatment modality (Chen et al., 2019; Chow, 2020; Chua et al., 2019; Colevas et al., 2018; He, Wu, et al., 2017; Sun et al., 2020). For early-stage NPC, radiation therapy has achieved a local control rate of 80%–90% (Chen et al., 2016; Chow, 2020; Colevas et al., 2018). For locally advanced NPC (LANPC), radiation therapy, combined with chemotherapy, is the standard treatment (Chen et al., 2019; Chow, 2020; Chua et al., 2019; Colevas et al., 2018; He, Wu, et al., 2017; Sun et al., 2020). Once NPC is diagnosed, anticancer treatment is intensive and continuous, generally bringing about systemic reactions. Several symptom clusters have been identified in patients with NPC during radiation therapy, including symptoms with general, gastrointestinal, nutritional, and social interaction effects (Langius et al., 2013; Qiu et al., 2011; Xiao et al., 2017). All symptom clusters were correlated with weight loss, and patients who lost more body weight experienced more severe symptom clusters (Langius et al., 2013; Xiao et al., 2017). Unintentional weight loss within a certain time frame renders many adverse effects, induces local recurrence and distant metastasis (Li et al., 2016; OuYang et al., 2016; Qiu et al., 2011; Shen et al., 2013; Solheim et al., 2014; Tang, Li, et al., 2016; Zeng et al., 2016), decreases quality of life (Haberer-Guillerm et al., 2015; Langius et al., 2013; Qiu et al., 2011), impairs treatment tolerance (Ravasco et al., 2005; Xu et