Supplement 1. Explanation of survey tools, including validity test.

The socio-demographic and clinical survey form consisted of 28 questions. Six questions detailed the demographic characteristics of cancer patients, including gender, age, marital status, education, income, and employment status. Three questions pertained to habits such as smoking, alcohol consumption, and daily television viewing. Another three questions inquired about clinical characteristics, specifically the type of cancer, its stage, and the treatment received. The form also included four questions for diagnosing RLS, three questions for diagnosing bruxism, six questions for diagnosing parasomnias, and three questions for diagnosing insomnia.

☐   Epworth Sleepiness Scale

The ESS is designed to assess the likelihood of falling asleep in eight different situations commonly encountered in daily life. It utilizes a 4-point Likert-type scale, with the following designations: 0 for "never', 1 for "slight chance of sleeping," 2 for "moderate chance of sleeping," and 3 for "high chance of sleeping." The ESS yields scores ranging from 0 to 24. To differentiate between individuals with and without excessive daytime sleepiness (EDS), a threshold ESS score of greater than 10 is used. Scores of 10 or higher are indicative of increasing levels of EDS. The validity and reliability of the scale developed by Miletin and Hanly [16] were confirmed by Ağargün et al. [17] for Turkish society.

Diagnostic Criteria for Sleep Respiratory Disorders (Berlin Sleep Questionnaire)

The self-administered Berlin Sleep Questionnaire was developed to identify individuals with obstructive sleep apnea in primary care settings [18]. It is composed of three categories and includes 10 questions. This study assessed the questionnaire's effectiveness in predicting obstructive sleep apnea among patients with various types of cancer.

Category 1: Snoring and witnessed apnea (4 questions). Category 1 is considered positive if at least two of the following criteria are met. If the answer to "do you snore?" is "yes," this counts as 1 point. For the question

"how often do you snore?" if the response is "almost every day," it earns 1 point, and "3-4 days a week" also receives 1 point. If the answer to "does your snoring bother other people?" is "yes," this is worth 1 point. Regarding the question "has anyone else noticed that your breathing stops during sleep?", if the answer is "almost every day," it is assigned 1 point, and "3-4 days a week" is likewise given 1 point. In Category I, a score of 2 points or more is classified as high risk.

Category 2: Daytime sleepiness (4 questions). A positive result for Category 2 requires the presence of at least two affirmative responses. Within this category, the question "How frequently do you feel tired and sluggish when you wake up?" scores 1 point for the response "almost every day," and likewise, 1 point for "3-4 days a week." Similarly, for the question "Do you ever feel tired and sluggish during the day?" a response of "almost every day" yields 1 point, as does "3-4 days a week." In category 2, a score of 2 points or more is considered to indicate high risk.

Category 3: Hypertension or obesity (1 question).

According to the scale guidelines, if two of the three categories are positive, the patient is considered to be at high risk for sleep-disordered breathing. In summary, in this study, a score of 2 points or above in total (in Categories 1 and 2) were considered to indicate high-risk status.

Diagnostic Criteria for Insomnia

The diagnosis of insomnia, characterized by difficulties such as the inability to fall asleep, sleep interruptions, and early awakening, should meet criteria that correspond with the items on the scale developed by Jenkins et al. [19]. In the present study, insomnia was defined as answers of "3-4 days a week" or "almost every day" to questions "Do you have difficulty falling asleep at least 3-4 days a week?", "Do you have interruption of your sleep and have difficulty falling back to sleep again for at least 3-4 days a week?" or "Do you have at least 3 midnight or early morning awakenings per week?"

Sleep-related Movement Disorders

Diagnostic Criteria for Restless Legs Syndrome (RLS)

The Restless Legs Syndrome Diagnosis Form, developed by the International Restless Legs Syndrome Study Group (IRLSSG) and based on patient history, is utilized for the diagnosis of RLS [20].

The initial evaluation was based on affirmative responses to the following questions: "Do you experience unpleasant sensations in your legs (pain, tingling, restlessness) at least 15 days a month at rest (for example, sitting or lying down)?", "Do these sensations occur sometimes in one leg, sometimes in the other, or both?", "Do these feelings increase in the evening? *Do you feel the need to move your leg because of these feelings?", and "Do you feel comfortable when you move your leg?" The following questions were assessed as factors supporting RLS diagnosis; "Do the unpleasant sensations in the leg prevent you from falling asleep?", "Do you have painful contractions (cramps) in your legs or feet at night?", and "Do these contractions decrease with stretching?"

Diagnostic Criteria for Bruxism

In this study, bruxism (a history of teeth grinding while sleeping) was primarily assessed based on a definite "yes" response to the question, "Have you ever been told that you grind your teeth at night?" As supporting factors, the following questions were considered: "Do you have pain or discomfort in your jaw in the morning?" and "Do you wake up with your jaw locked?"

Diagnostic Criteria for Parasomnias

-Sleep terror: A definitive "yes" answer to the question "Have you ever been told that you suddenly get up out of bed with a shout and make senseless movements out of anger and fear?" was considered to indicate episodes that start with a sudden scream during sleep and are excessive fear-related behaviors and autonomic symptoms.

-Sleep-related eating syndrome: Episodes of involuntary eating or drinking during sleep that occurred recurrently in childhood and adulthood were evaluated using the question "Have you ever woken up from sleep and involuntarily had something to eat or drink?"

-Recurrent isolated sleep paralysis (nightmare): The patient's complaint of inability to move his or her trunk and all extremities at the beginning of sleep or waking up from sleep in childhood and adulthood was assessed with the question "Have you experienced the inability to move or make a sound (nightmare) while falling asleep or waking up?".

-Disordered rapid eye movement (REM) sleep behavior: Disordered REM sleep behavior, which is characterized by episodes in which an individual acts out their dreams during REM sleep, can manifest in both childhood and adulthood. It was assessed by asking the individual, "Have you ever been told that you hit someone sleeping next to you because you were acting out your dreams?"

-Sleepwalking: The presence of a sleepwalking history in childhood and adulthood was evaluated with the question "Have you ever been told that you walk while asleep?"

-Sleep talking: The presence of a history of sleep talking in childhood or adulthood was assessed using the question "Have you ever been told that you talk while asleep?"

In summary, in this study, parasomnia behaviors are classified as "present" if they are reported either in childhood or adulthood. The frequency of these behaviors, averaging 1-2 times, 3-10 times, or more than 10 times per year, was considered a supporting factor in the evaluation.

Pittsburgh Sleep Quality Index (PSQI)

The PSQI is a 19-item self-report scale designed to assess sleep quality and disturbances over the preceding month. It comprises 24 questions: 19 pertain to self-reported measures (including subjective sleep quality, sleep latency, duration, efficiency, disturbances, use of sleep medication, and daytime dysfunction), while the remaining 5 are intended for a spouse or roommate to answer, and are not factored into the scoring. Each component is rated on a 4-point scale ranging from 0 to 3. The cumulative score from the seven components can range from 0 to 21, with a higher score indicating poorer sleep quality. Individuals with a total score of 5 or less are categorized as "good sleepers," whereas those with scores above 5 are considered "poor sleepers."

Short Form-36 (SF-36)

HRQoL was assessed using the SF-36, a tool developed by Ware et al. (1993) and subsequently validated by Pinar (21) for use with Turkish patients. The SF-36 is a thoroughly researched instrument for measuring HRQoL, comprising 36 items organized into eight scales that contribute to two overarching dimensions: the PCS and MCS. The scales that primarily contribute to the PCS include physical functioning (PF), role-physical (RP), and bodily pain (BP). Conversely, the scales that primarily contribute to the MCS include social functioning (SF), role-emotional (RE), and mental health (MH). The general health (GH) and vitality (VT) scales are considered integral to both the physical and mental dimensions. Each scale is scored on a 100-point scale, with higher scores indicating better QoL.