

# An Evaluation of Health-Related Quality of Life in Head and Neck Cancer Patients at a Tertiary Referral Hospital in Bandung

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## ABSTRACT

**Background:** Head and neck cancer (HNC) represents a significant public health issue in West Java, Indonesia. The clinical manifestation of HNC can lead to negative effects on the quality-of-life HNC.

**Objective:** This study aimed to evaluate the health-related quality of life of HNC patients at tertiary referral hospital, Dr. Hasan Sadikin General Hospital, using the European Organization for Research and Treatment of Cancer core questionnaire (EORTC QLQ-C30) and EORTC head and neck specific questionnaire (QLQ-H&N35).

**Methods:** This was a prospective cross-sectional study involving 21 patients HNC cancer during July 2025. Data were collected using the EORTC QLQ-C30 to assess general functioning and symptoms, along with the QLQ-H&N35 module to evaluate HNC cancer specific issues. Descriptive analysis was conducted on the scores of major domains.

**Results:** The majority of respondents were male (66.6%) with a mean age of 49.4 years. A total of 52.4% of patients were in stage IV. The highest scores in the QLQ-C30 were financial difficulties (81.16%), pain (73.10%), and emotional disturbances (57.09%). In the QLQ-H&N35, the most prominent complaints were feeling ill

(83.9%), eating difficulties (74.7%), and social hindrance (59.6%).

**Conclusion:** HNC patients experience a substantial decline in quality of life, particularly in physical, emotional, social, and financial domains. The use of the EORTC QLQ-C30 and QLQ-H&N35 questionnaires effectively provides a comprehensive overview of patient conditions and is recommended for integration into routine clinical practice.

**Keywords:** Head and neck cancer, quality of life, EORTC QLQ-C30, QLQ-H&N35, Bandung

## INTRODUCTION

Head and neck cancer (HNC) is a broad term that encompasses epithelial malignancies that arise in the paranasal sinuses, nasal cavity, oral cavity, pharynx, and larynx.<sup>1</sup> Globally, HNC ranks sixteenth among the most common cancers, with more than 389,485 new cases and 188,230 deaths annually according to GLOBOCAN 2022.<sup>2</sup> HNC arise in areas which are structurally complex and functionally imperative for critical activities such as speech and swallowing. Furthermore, head and neck deformities that result in loss of facial integrity may have profound emotional and social effects. Thus, evaluation of the

biopsychosocial sequellae of HNC and its treatment is of great importance. By understanding these effects, we can potentially design interventions that lessen the adverse impact of this disease process.<sup>3</sup>

Health-related quality of life (HRQoL) is a focused measure that enables clinicians to understand how a disease and its treatment affect patients across psychological, physical, and social domains.<sup>4</sup> The most widely used instruments to assess HRQoL in cancer patients are the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire Core 30 (EORTC QLQ-C30) and the disease-specific module EORTC QLQ-H&N35. The QLQ-H&N35, in conjunction with the QLQ-C30, provides a valuable tool for the assessment of health-related quality of life in clinical studies of H&N cancer patients before, during, and after treatment with radiotherapy, surgery, or chemotherapy.<sup>5</sup>

In West Java Indonesia, HNC represents a significant public health problem. Dr. Hasan Sadikin General Hospital Bandung, as a tertiary referral center, treats patients from various regions, with a large proportion presenting in stage III–IV. This study aims to evaluate HRQoL in HNC patients at Dr. Hasan Sadikin General Hospital Bandung using the EORTC QLQ-C30 and QLQ-H&N35, in order to provide a comprehensive overview of patient conditions and support service improvement.

## MATERIALS AND METHODS

### Study Design and Setting

This study was a prospective cross-sectional study conducted in July 2025 at Dr. Hasan Sadikin General Hospital Bandung, a national referral hospital for the West Java region.

### Study Participants

A total of 21 HNC patients who met the inclusion criteria were enrolled.

### Inclusion criteria:

1. Patients with a histopathological diagnosis of HNC.

2. Age  $\geq 18$  years.
3. Willing to complete the questionnaire (independently or with assistance from the researcher).

### Exclusion criteria:

1. Severe cognitive impairment that interferes with questionnaire completion.
2. Other terminal comorbid diseases.

## Data Collection and Assessment

### Instruments

Data were collected through direct interviews using the validated Indonesian versions of the EORTC QLQ-C30 and QLQ-H&N35 questionnaires.<sup>6,7</sup>

- EORTC QLQ-C30: assesses general functioning (physical, role, emotional, cognitive, social), major symptoms (fatigue, pain, nausea/vomiting), and single-item symptoms (dyspnea, insomnia, loss of appetite, constipation, diarrhea, financial difficulties).<sup>9</sup>
- EORTC QLQ-H&N35: assesses HNC specific symptoms, including head/neck pain, dysphagia, speech problems, taste/smell changes, and social issues.<sup>6</sup>

### Key Demographic Characteristics

- Mean age: 49.4 years
  - Sex: 71.4% male and 28.6% female
  - Socioeconomic status: 90.4% lower-middle class
  - Marital status: Married 90.4%; unmarried 9.6%
  - Family type: Nuclear family 95.2%; extended family 4.8%
  - Cancer stage:
    - Stage I: 3 (14.2%)
    - Stage II: 6 (28.6%)
    - Stage III: 1 (4.7%)
    - Stage IV: 11 (52.4%)
  - Most common pathology types:
    - Squamous cell carcinoma 11 (52.4%)
    - Basal cell carcinoma 3 (14.2%)
    - Adenoid cystic carcinoma 1 (4.7%)
    - Dermatofibrosarcoma protuberans 1 (4.7%)
    - Diffuse non-Hodgkin lymphoma 1 (4.7%)
- 4 cases still undergoing diagnostic evaluation.

- Therapy: 47.6% of patients had recently completed biopsy and histopathological examination.

better functioning, whereas higher symptom scores indicate more severe symptoms.

### STATISTICAL ANALYSIS

Descriptive analysis was performed using a 0–100 scale score according to the EORTC guidelines. Higher functional scores indicate

### RESULTS

Compliance with Questionnaire Completion A 100% response rate was achieved, similar to previous EORTC studies.

**Table 1. Domain Scores of EORTC QLQ-C30**

Domain / Symptom	Never (1)	Rarely (2)	Quite Often (3)	Very Often (4)
Physical Functioning	31.90	6.09	25.52	36.48
Role Functioning	18.75	13.69	9.82	57.74
Emotional Functioning	11.53	7.93	23.44	57.10
Cognitive Functioning	32.49	15.97	30.25	21.28
Social Functioning	27.99	18.62	18.55	34.82
Fatigue	16.56	12.78	47.15	23.50
Pain	7.802	8.622	10.47	73.10
Nausea/Vomiting	56.63	21.49	21.88	0
Dyspnea	73.1	0	11.54	15.38
Insomnia	10.3	3.448	31.03	55.17
Loss Of Appetite	21.6	21.62	24.32	32.43
Constipation	41.9	25.81	19.35	12.9
Diarrhea	60.7	7.143	32.14	0
Financial Difficulties	4.35	5.797	8.696	81.16

**Table 2. Domain Scores of EORTC QLQ-H&N35**

Domain / Symptom	Never (1)	Rarely (2)	Quite Often (3)	Very Often (4)
Head/Neck Pain	26.1	9.6	22.5	41.9
Soreness	6.5	9.7	0.0	83.9
Difficulty Swallowing	26.7	11.6	21.5	40.2
Difficulty Eating	11.5	9.3	4.4	74.7
Speech Problems	24.6	13.5	14.6	47.3
Social Barriers	19.6	11.9	8.9	59.6
Taste/Smell Changes	35.6	7.6	25.0	31.8
Dry Mouth	19.1	17.0	12.8	51.1
Difficulty Opening the Mouth	27.9	9.3	7.0	55.8
Dental Problems	22.7	13.6	27.3	36.4

### DISCUSSION

The results of this study show that HNC patients at Dr. Hasan Sadikin General Hospital experienced a significant decline in HRQoL, particularly in physical, emotional, social, and financial functioning. The financial difficulty score of 81.16% reflects “financial toxicity,” namely a substantial economic burden due to medical and non-medical expenses. A study from Argentina reported that 70.3% of patients experienced financial toxicity and 37.1% of their families faced “catastrophic” health expenditures.<sup>8</sup> In other study, financial difficulties was also a considerable problem, with adjusted mean

scores ranging from 36.9 to 42.5, whereas the general population measurement was considerably lower at 10.6.<sup>9</sup>

Pain score 73.10% is one of the most common and burdensome symptoms in this study, but in other study found pain prevalence rates for clinically important problems ranging from 22.9 %.<sup>10</sup> In another study, the high prevalence of general pain in HNC; the percentage reporting clinically-important pain was high at baseline (41%), increased to almost half (48%) at 4 months, then declined, but only to 36%, at 12 months.<sup>11</sup>

Emotional distress (57.09%) in this study also indicates a significant psychosocial problem. In another study, the mean emotional functioning score was 69.3.<sup>12</sup> The threshold for emotional dysfunction on the EORTC QLQ-C30 ( $\leq 70$ ) suggests that patients may need psychosocial or psychiatric counseling, emotional support from family and healthcare providers, as well as pharmacologic or non-pharmacologic interventions.<sup>10</sup>

Complaints such as dysphagia (difficulty swallowing), pain, and social barriers are the predominant symptoms experienced by head and neck cancer survivors following treatment. Several longitudinal studies using instruments such as the EORTC QLQ-C30 and EORTC QLQ-H&N35 have shown that long-term treatment effects particularly following radiotherapy and chemoradiotherapy include persistent dysphagia, which frequently results in dependence on feeding tubes and an overall decline in quality of life.<sup>13,14</sup> The dual physiological and psychological challenges posed by dysphagia profoundly affect patients' daily lives, prompting ongoing adjustments to cope with these changes.<sup>15</sup>

Therefore, multidisciplinary support is strongly recommended. Optimal management includes speech language pathology to improve swallowing function; psychosocial counseling (psycho-oncology) to address anxiety, depression, and emotional isolation; and intensive nutritional management such as dietary counseling and oral supplementation which have been shown to improve caloric intake, nutritional status, and overall quality of life.<sup>16</sup>

The use of the EORTC QLQ-C30 and QLQ-H&N35 has proven effective in identifying clinical problems that may be missed during routine examinations. Integrating HRQoL assessment into routine clinical practice can enhance doctor patient communication and lead to more personalized care plans.

## CONCLUSION

HNC patients at Dr. Hasan Sadikin General Hospital experience a marked decline in

HRQoL, with major complaints including financial difficulties, pain, feeling unwell, difficulty eating, and social barriers. The EORTC QLQ-C30 and QLQ-H&N35 are recommended as routine evaluation tools to support treatment planning tailored to patient needs.

## Declaration by Authors

**Ethical Approval:** Approved and Informed consent was signed by all four patients.

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**Conflict of Interest:** The authors declare no conflicts of interest

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