

INVESTIGATING QUALITY OF LIFE AND PSYCHOSOCIAL OUTCOMES IN POST-TREATMENT HPV-POSITIVE HEAD AND NECK CANCER PATIENTS

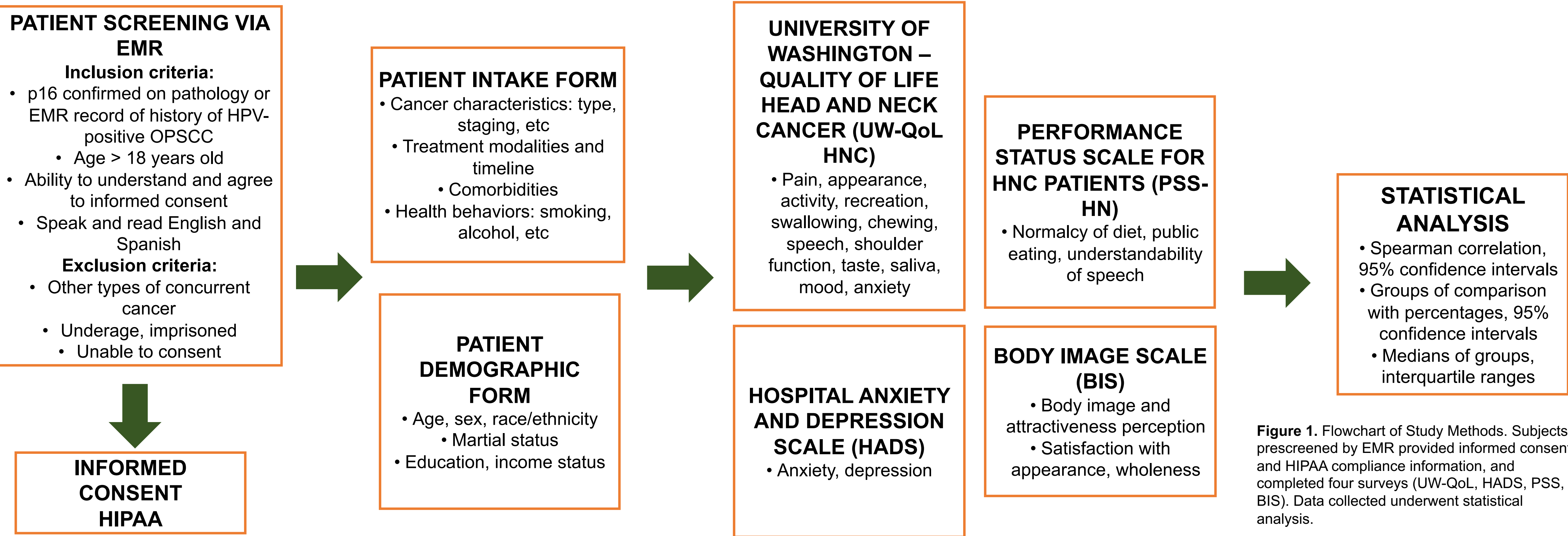
Christine Mei, MD^[1], Taylor Hartlein, BS^[1], Torin Thielhelm, BS^[1], Veronica Nunez, BS^[1], Maria Lugo-Fegundo, BS^[1], Elizabeth Nicolli, MD^[1], Donald Weed, MD^[1], Cristina Pozo-Kaderman, PhD^[2], Donna Lundy, PhD^[1], Zoukaa Sargi MD, MPH^[1]

^[1]Department of Otolaryngology, University of Miami Miller School of Medicine, ^[2]Department of Psychology, University of Miami Miller School of Medicine

Background / Objectives

Head and neck cancer survivors experience significant distress related to quality of life (QoL) and psychosocial outcomes. The central location and functional changes of HNC can exacerbate psychosocial issues in treatment and recovery. In fact, HNC survivors are among the most likely to suffer from anxiety and depression, maladjustment, and reduced QoL compared to other cancer sites^[1]. In more recent years, oropharyngeal squamous cell carcinoma (OPSCC) is most commonly attributed to human papillomavirus (HPV)^[2], as opposed to other HNC subsites where smoking and alcohol use are implicated as major risk factors. p16 immunohistochemistry staining is considered an acceptable surrogate marker of HPV-associated HNSCC, and it has been shown that p16 positivity in OPSCC correlates with better treatment response and more favorable prognoses, leading to improved survival compared to HPV-negative OPSCC^[3]. Given their favorable survival outcomes, these patients may face a new set of potential long-term functional, QoL, and mental health issues in subsequent life-years. Preliminary studies have shown that both baseline and post-treatment QoL is better in HPV-negative patients, though treatment modality did not have a significant impact in HPV-positive patients^[4,5]. Further investigations are necessary regarding patient-specific quality of life and psychosocial impact of diagnosis and treatment of HPV-positive HNC. With our study, we aimed to assess psychosocial and quality outcomes in a population of post-treatment HPV-positive OPSCC patients at a single institution, Sylvester Comprehensive Cancer Center, and to determine if patient demographic factors, comorbidities, cancer characteristics, or treatment modality influence anxiety and depression, body image changes, or quality of life in populations treated for HPV-positive OPSCC with an observational pilot study using four well-validated surveys, the University of Washington – Quality of Life: Head and Neck Cancer (UW-QoL HNC) survey, Performance Status Scale for HNC Patients (PSS-HN), Hospital Anxiety and Depression Scale (HADS), and Body Image Scale (BIS).

Methods



Conclusions

- Quality of life and psychosocial outcomes in HPV positive HNC patients are complex, with multiple variables impacting long-term outcomes.
- Smoking, alcohol, and treatment modality had no impact on outcome measures in our study.
- Certain groups, such as APIA ethnicity and widowed marital status, were associated with worse functional and QoL outcomes compared to other groups.
- Level of education and time post treatment may have protective effects on functional and QoL outcomes in HPV-positive HNC patients.
- There remains a role for further investigation of predisposing factors for worse outcomes in the HPV-positive OPSCC patient population to develop early and effective preventative or therapeutic interventions.

Results

Fig 2.

Age at Screening	Overall
Mean (SD)	61.9 (7.99)
Median [Min, Max]	61.5 [48,83]

Marital Status	Overall
Single	7 (7.3%)
Married	61 (63.5%)
Divorced	25 (26.0%)
Widowed	3 (3.1%)

Race/Ethnicity	Overall
White, non-Hispanic	42 (43.8%)
White, Hispanic	37 (38.5%)
Black, non-Hispanic	4 (4.2%)
Black, Hispanic	1 (1.0%)
Caribbean	6 (6.3%)
Hispanic, other race	4 (4.2%)
Asian/Pacific Islander	2 (2.1%)

Highest Level of Education	Overall
Less than high school	3 (3.1%)
High school degree	18 (18.8%)
Some college	24 (25.0%)
College degree	24 (25%)
Graduate degree	27 (28.1%)

Alcohol Status	Overall
Current	61 (63.5%)
Former	19 (19.8%)
Never	16 (16.7%)

Smoking Status	Overall
Current	0 (0%)
Former	40 (41.7%)
Never	56 (58.3%)

96 patients were included in statistical analysis. Demographic and cancer/treatment information was gathered and tallied by # of patients (% of subjects). **Figure 2 (Tables with Green Header).** Demographic and health behavior data. **Figure 3 (Tables with Orange Header)** Treatment characteristics. **Figure 4 (Table with Gray Header).** Variables with Survey Outcomes and Summary Effect. Results from UW-QoL, HADS, BIS, and PSS data between nominal groups (ex: race/ethnicity, marital status) were compared and generated median (IQR) data, though not included on this poster. Continuous variables were compared and generated Spearman correlations with 95% confidence intervals, reported below as (p (95% CI)).

Fig 3.

Time Post-Treatment	Overall
0-3 months	11 (11.5%)
>3-6 months	10 (10.4%)
>6 months-1 year	11 (11.5%)
>1 year-5 years	52 (54.2%)
>5 years-10 years	10 (10.4%)
>10 years	2 (2.1%)

Fig 4.

Subject Variable	Outcomes	Effect
Asian/Pacific Islander ethnicity	• Worse PSS scores than all other race/ethnicities • Worse UW-QoL swallowing, chewing, speech scores than all other race/ethnicities	• Negative effect on functional and QoL outcomes
Widowed marital status	• Worse PSS scores than all other marital statuses • Worse UW-QoL activity, recreation, anxiety, QoL in month before diagnosis, overall QoL scores than single subjects • Worse UW-QoL swallowing, speech than all other marital statuses • Worse BIS scores than single subjects	• Negative effect on functional and QoL outcomes
Higher education level	• Positive correlation with UW-QoL activity (0.26 (0.06, 0.44)), recreation (0.22 (0.01, 0.41)), swallowing (0.23 (0.02, 0.45)), overall QoL (0.23 (0.03, 0.44)) • Negative correlation with HADS anxiety (-0.23 (-0.4, -0.01)) and total scores (-0.29 (-0.47, -0.11))	• Positive effect on functional and QoL outcomes
Smoking	• No significant correlations to outcomes measured	• No effect on functional and QoL outcomes
Alcohol	• No significant correlations to outcomes measured	• No effect on functional and QoL outcomes
Time post-treatment	• Positive correlation with UW-QoL activity (0.22 (0.01,0.4)), taste (0.25 (0.05, 0.43)) • Negative correlation with HADS depression score (-0.23 (0.-41, -0.04))	• Positive effect on QoL outcomes
Treatment modality	• No significant correlations to outcomes measured	• No effect on functional and QoL outcomes

Treatment Modality	Overall
Surgery only	10 (10.4%)
Chemotherapy only	2 (2.1%)
Radiation only	5 (5.2%)
Chemoradiation	44 (45.8%)
Surgery, chemotherapy, radiation	18 (18.8%)

References:

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^[5] Laryngoscope 2014, 124(7), 1592-1597.

^[3] Otolaryngol Head Neck Surg 2009; 140(2), 228-234.