



EVALUATING POSSIBLE RISK AND PROTECTIVE FACTORS RELATED TO HOSPITALIZATIONS OF HEAD AND NECK CANCER PATIENTS



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Introduction

Head and neck cancer (HNC) patients suffer from various tumor- and treatment-related toxicities, which can lead to detrimental and costly hospitalizations.

Long-term follow-up and physical therapy have been shown to improve HNC patient outcomes, and these methods have been increasingly utilized by survivorship clinics.

However, no studies have shown that survivorship clinics can decrease hospitalization rates in HNC patients.

Purpose:

- better understand what factors may affect hospitalization risk
- evaluate the role of a multidisciplinary survivorship clinic as a potential protective factor

Methods

Retrospective study of 336 HNC patients that started radiation therapy between December 2015 and December 2018 for primary carcinomas in either the oral cavity, oropharynx, or laryngopharynx.

Demographic and clinical characteristics were obtained. Univariate and multivariate logistic regression models were used to determine associations between the collected variables and hospitalizations over a 1-year period after beginning radiation therapy.

- Hospitalizations were defined as inpatient admissions during this one-year period after starting radiation therapy.

Demographics and Clinical Characteristics	Number of Patients	No Survivorship Clinic Visit (n=175)	Survivorship Clinic Visit Present (n=161)
Age, y	60.08 ± 9.80	59.95 ± 9.92	60.23 ± 9.70
Gender			
Male	268 (79.8%)	138 (78.9%)	130 (80.7%)
Female	68 (20.2%)	37 (21.1%)	31 (19.3%)
Marital Status			
Married	196 (58.3%)	101 (57.8%)	95 (59.0%)
Single	80 (23.8%)	40 (22.9%)	40 (24.8%)
Others (Divorced, Separated, or Widowed)	55 (16.4%)	29 (16.5%)	26 (16.2%)
Site			
Laryngopharynx	93 (27.7%)	60 (34.3%)	33 (20.4%)
Oral cavity	75 (22.3%)	40 (22.9%)	35 (21.7%)
Oropharynx	168 (50.0%)	75 (42.8%)	93 (57.9%)
Stage			
Tis-II/Early	28 (8.3%)	4 (2.3%)	24 (14.9%)
III-IV/Advanced	308 (91.7%)	171 (97.7%)	137 (85.1%)
Radiation			
<60	27 (8.0%)	12 (6.9%)	15 (9.4%)
60-69	141 (42.0%)	68 (38.9%)	73 (45.3%)
>70	168 (50.0%)	95 (54.3%)	73 (45.3%)
Surgery			
Yes	157 (46.7%)	81 (46.3%)	76 (47.2%)
No	179 (53.3%)	94 (53.7%)	85 (52.8%)
Chemotherapy			
Yes	288 (85.7%)	169 (96.6%)	119 (73.9%)
No	48 (14.3%)	6 (3.4%)	42 (26.1%)
Mortality in 1 Year			
Yes	35 (10.4%)	30 (17.1%)	5 (3.1%)
No	301 (89.6%)	145 (82.9%)	156 (96.9%)

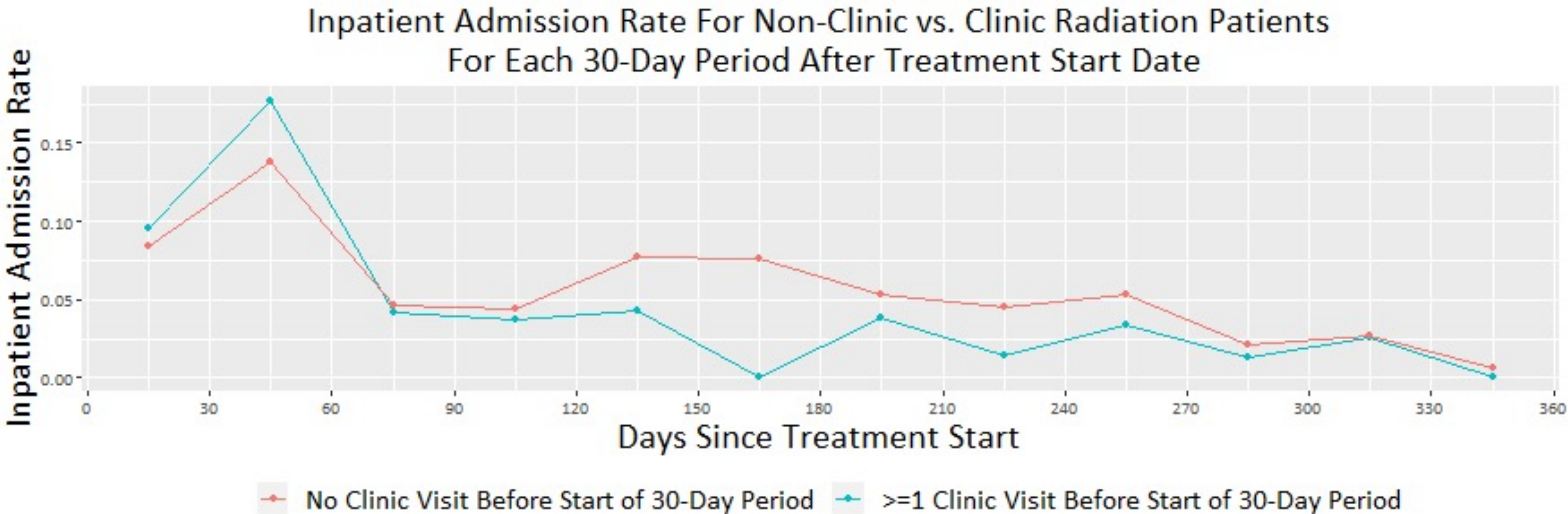
Results

As opposed to patients that did not visit the survivorship clinic, survivorship clinic patients were

- More likely to have tumors in the oropharynx and less likely to have tumors in the laryngopharynx ($p < 0.05$)
- More likely to have tumors of earlier stages ($p < 0.01$)
- Less likely to have undergoing chemotherapy ($p < 0.01$)

Under univariate logistic regression models, only three variables were significantly associated with hospitalization. Visiting the survivorship clinic ($p < 0.01$), undergoing surgery ($p < 0.05$), and not undergoing chemotherapy ($p < 0.01$) were associated with lower likelihoods of hospitalizations.

After controlling for all measured variables, visiting the survivorship clinic was the only variable found to be significantly associated ($p < 0.05$) with hospitalizations: survivorship clinic patients were less likely to have been hospitalized.



Conclusion

Visiting the survivorship clinic was associated with decreased hospitalizations and was the only factor to have any significant association with hospitalization likelihoods across both the univariate and multivariate logistic regression models.

This highlights a possible protective effect of survivorship clinics on the hospitalization of HNC patients.

Further studies into what other factors may influence hospitalization likelihoods—as well as other outcome measures—can help survivorship clinics further improve HNC patient outcomes.