

A Comparison of Wait Times for Diagnosis, Staging, and Treatment of Head and Neck Cancer Before and During the COVID-19 Pandemic

Peter Yao, BSE¹, Victoria Cooley, MS², William Kuhel, MD³, Andrew Tassler, MD³, Victoria Banuchi, MD³, Sallie Long, MD³, Oleksandr Savenkov, PhD², David Kutler, MD³
(1) Weill Cornell Medical College (2) Department of Population Health Sciences (3) Department of Otolaryngology-Head and Neck Surgery, Weill Cornell Medicine



BACKGROUND

Delays in head and neck cancer care are associated with increased patient morbidity and mortality. There is limited knowledge about the impact of the COVID-19 pandemic on the times to diagnosis, staging, and treatment for head and neck cancers.

This study compares the times to diagnosis, staging, and treatment of head and neck cancers before and during the COVID-19 pandemic in New York City.

METHODS

Primary Outcome: Time-to-event analysis comparing the times from suspicion to diagnosis, suspicion to staging, and diagnosis to treatment for patients with newly diagnosed head and neck cancer during a pre-COVID period from 9/16/2019 to 1/16/2020 and a COVID period from 3/16/2020 to 7/16/2020.

Setting: Tertiary academic medical center in New York City.

Study Design: Retrospective cohort study.

RESULTS

68 patients in the pre-COVID period and 26 patients in the COVID period presented with newly diagnosed head and neck cancer. Patients in the COVID group had a **significantly longer time to diagnosis** than the pre-COVID group after adjustment for age and cancer diagnosis ($p=0.02$, HR 0.54, 95% CI 0.32-0.92). Patients in the pre-COVID and COVID groups had **no statistically significant differences in time to staging** ($p>0.9$, HR 1.01, 95% CI 0.58-1.74) **or time to treatment** ($p=0.12$, HR 1.55, 95% CI 0.89-2.72).

Characteristic	Overall, N = 94	Pre-Covid, N = 68	Covid, N = 26	p-value
Age	64 (50, 73)	55 (47, 72)	70 (65, 82)	0.004
Patient Sex				0.2
Female	43 (46%)	34 (50%)	9 (35%)	
Male	51 (54%)	34 (50%)	17 (65%)	
History of Tobacco Use	43 (46%)	31 (46%)	12 (46%)	>0.9
History of Alcohol Use	7 (7.4%)	5 (7.4%)	2 (7.7%)	>0.9
Cancer Diagnosis				0.007
HNSCC	31 (33%)	23 (34%)	8 (31%)	
Lymphoma	23 (24%)	14 (21%)	9 (35%)	
Other	6 (6.4%)	5 (7.4%)	1 (3.8%)	
Skin Cancer	9 (9.6%)	3 (4.4%)	6 (23%)	
Thyroid Cancer	25 (27%)	23 (34%)	2 (7.7%)	

Table - Comparison of demographic and clinical characteristics between the pre-COVID and COVID groups.

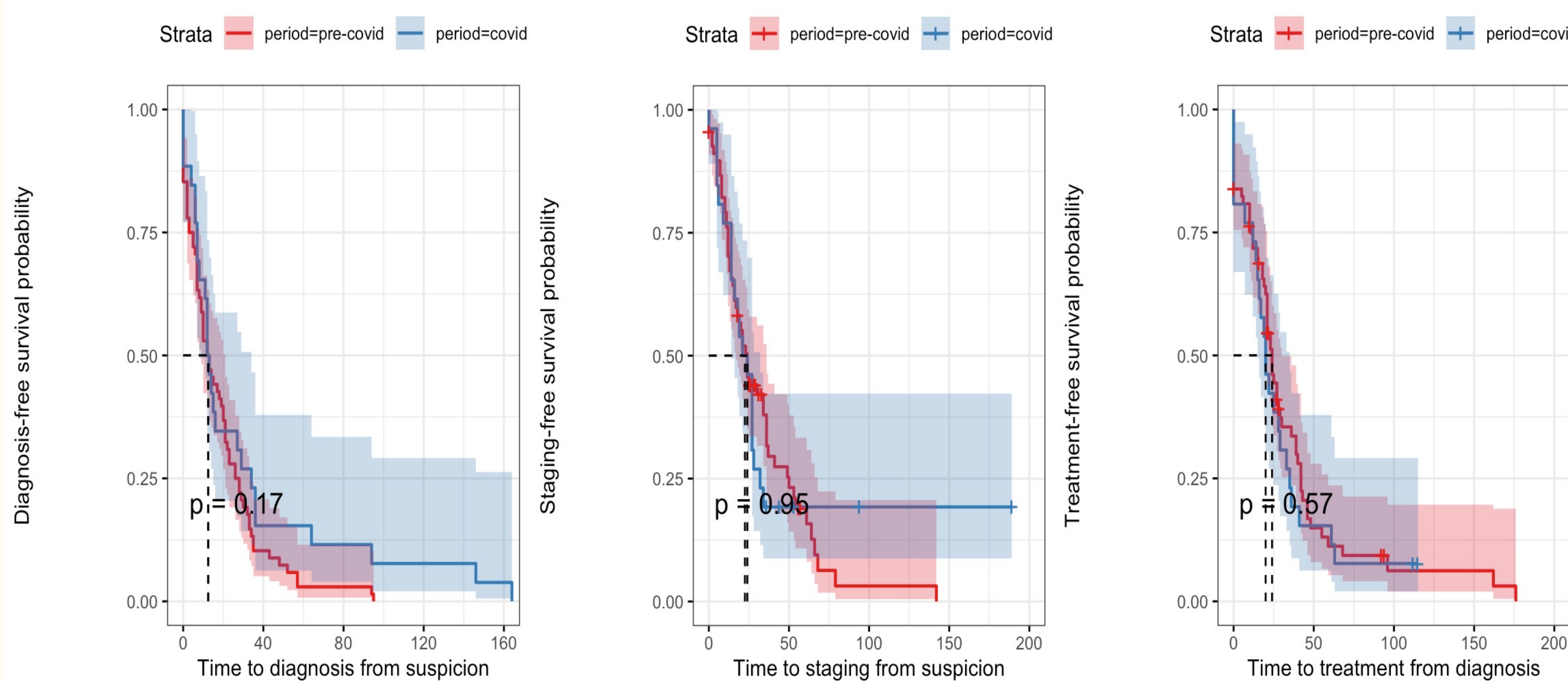


Figure - Kaplan-Meier curves comparing the time to diagnosis (A), time to staging (B), and time to treatment (C) between the pre-COVID and COVID groups. After adjustment for age and diagnosis using Cox proportional-hazards models, the difference in time to diagnosis became statistically significant ($p=0.02$, HR 0.54) while the differences in time to staging and time to treatment remained insignificant.

CONCLUSIONS

Time to diagnosis for head and neck cancers was delayed during a COVID period compared to a pre-COVID period. However, there was no evidence of delays in time to staging and time to treatment during the COVID period.