Treatment and Survival in 30,561 Patients with Oropharyngeal Cancer: A Population-Based Analysis

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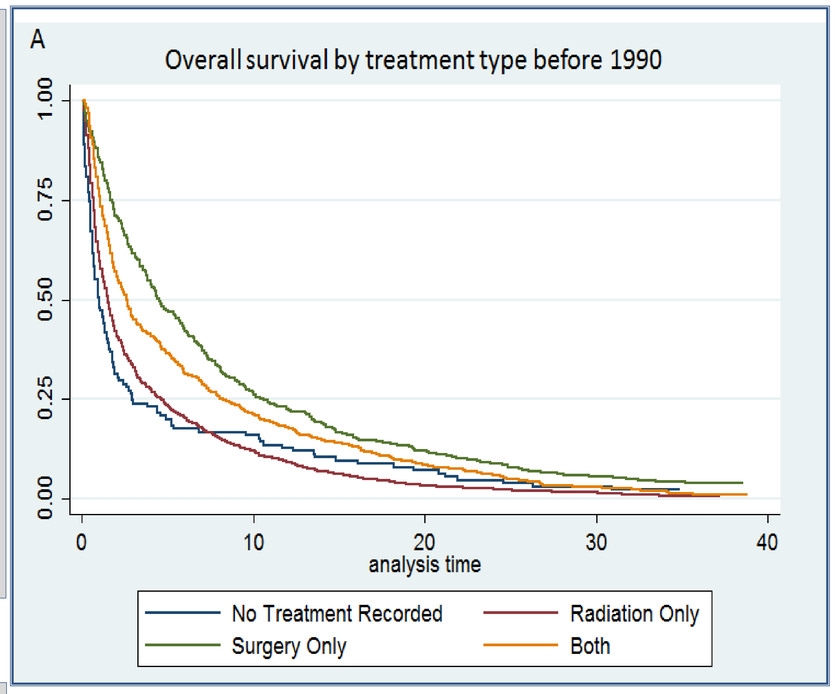
BACKGROUND:

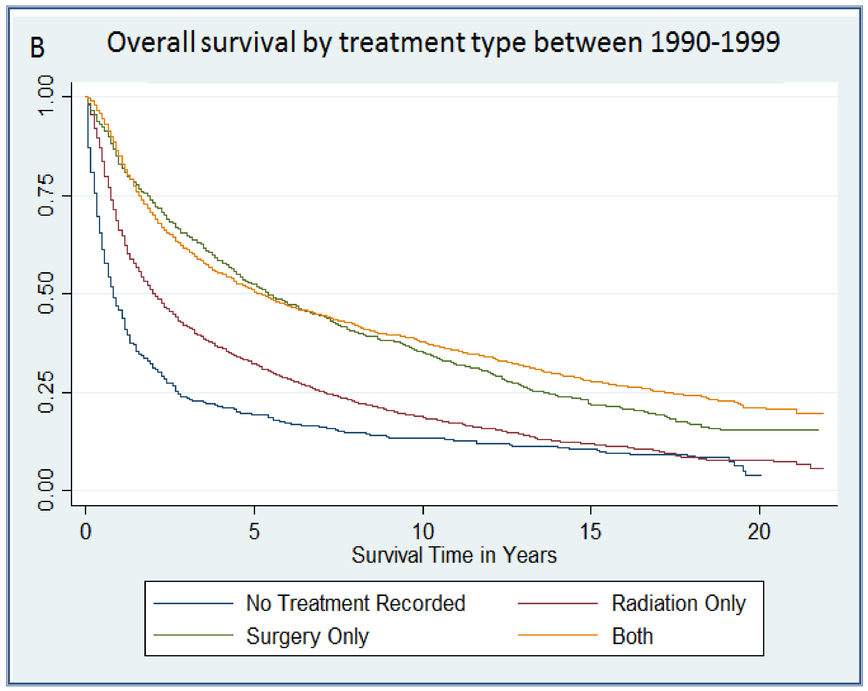
The goals of this review were to characterize changes in the treatment of oropharyngeal cancer over time and to compare survival across different treatment types and patient populations.

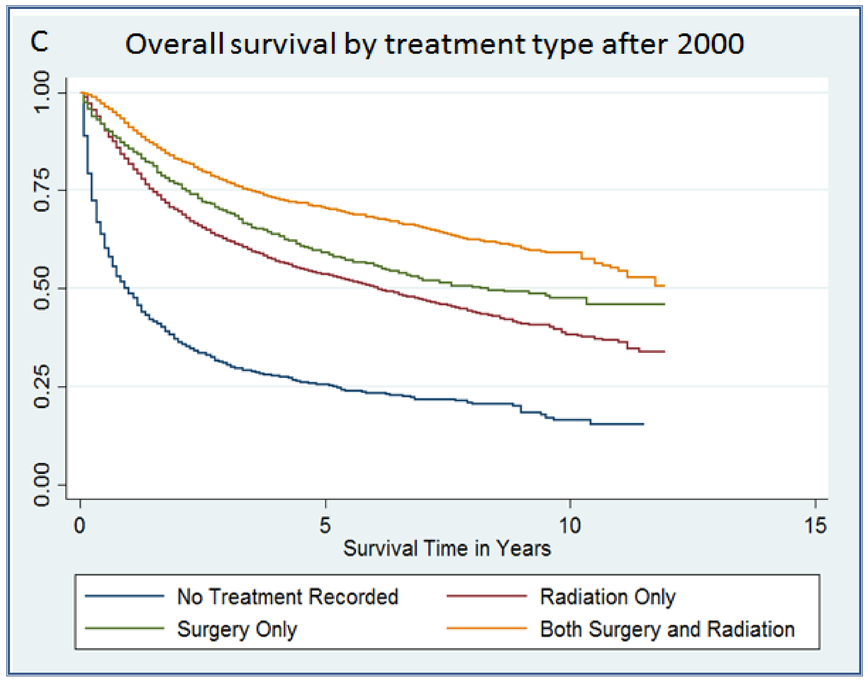
Methods:

In order to analyze treatment paradigms for oropharyngeal cancer in the United States, the population-based Surveillance, Epidemiology, and End Results (SEER) cancer registry was reviewed for all patients between 1972-2011 diagnosed with oropharyngeal malignancy.

A retrospective cohort analysis of this group was compiled and treatments recorded. Differences in outcomes based on treatment modality, year of diagnosis, and demographic factors were evaluated using Kaplan-Meier methods and multivariate analysis.







Figures A-C. The above Kaplan-Meier survival curves demonstrate changes in survival outcomes based on specific treatment time. We were able to show a significant difference ($p < 0.005$) between patients treated before 1990, between 1990 and 1999, and after 1999. Similar findings were seen in patients of very young or very old age or those of African American race.

Discussion:

We identified a total of 30,561 patients diagnosed with oropharyngeal malignancy. Of all patients identified, 73% were male. The majority of patients (91%) fell between the ages of 41 and 80. Three treatment groups were identified, with 75% of patients receiving radiation therapy. Surgery was the next most common treatment (20%), with only 14% having surgery and radiation.

There was a significant difference in treatment modality depending on race, age, and gender. Improved survival was associated with female patients, Caucasians, younger age at diagnosis, and those with an overall more recent diagnosis. Variation in overall survival was also noted to depend on the specific registry of treatment.

CONCLUSION:

We have identified factors associated with the treatment and survival of oropharyngeal cancer that should be taken into consideration when approaching this disease.

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