

National Socioeconomic Disparities in Oncologic Resection for Small Cell Lung Cancer

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Background

Small cell lung cancer (SCLC) is a rare but aggressive malignancy. Surgery is an essential component of treatment for patients with early-stage SCLC. This study examined socioeconomic disparities in utilization and outcomes for SCLC.

Research Objectives

Assess racial disparities in the receipt of oncologic resection for patients diagnosed with SCLC and quantify the survival benefit associated with oncologic resection in patients with SCLC and explore potential barriers to surgical treatment among Black patients with SCLC.

Methods

The National Cancer Database (NCDB) SCLC participant use file (PUF) was used to identify patients with T1/T2, N0, M0 (clinical stage I-IIA) SCLC diagnosed between 2004 and 2017. Multivariable logistic regression identified predictors of oncologic resection, while Cox regression assessed overall survival (OS):

Cohort Formation (NCDB 2004–2017)

Total SCLC cases: 356,960

→ Exclude Stage IV or unknown stage: –267,310

→ Exclude non-T1/T2: –41,176

→ Exclude non-N0: –32,828

→ Exclude unknown M status: –1,658

→ Exclude unknown surgery status: –265

→ Exclude no diagnostic confirmation: –704

Final analytic cohort:

12,946 patients with T1/T2, N0, M0 SCLC, known metastatic & surgery status, and diagnostic confirmation

Results

Black patients had significantly lower odds of receiving oncologic resection compared to White patients (aOR 0.71, 95% CI: 0.58–0.87; Figure 1)

Despite this disparity, Black patients demonstrated longer overall survival than White patients (aHR 0.88, 95% CI: 0.80–0.96; Figure 2).

Figure 1: Predictors of receiving oncologic resection

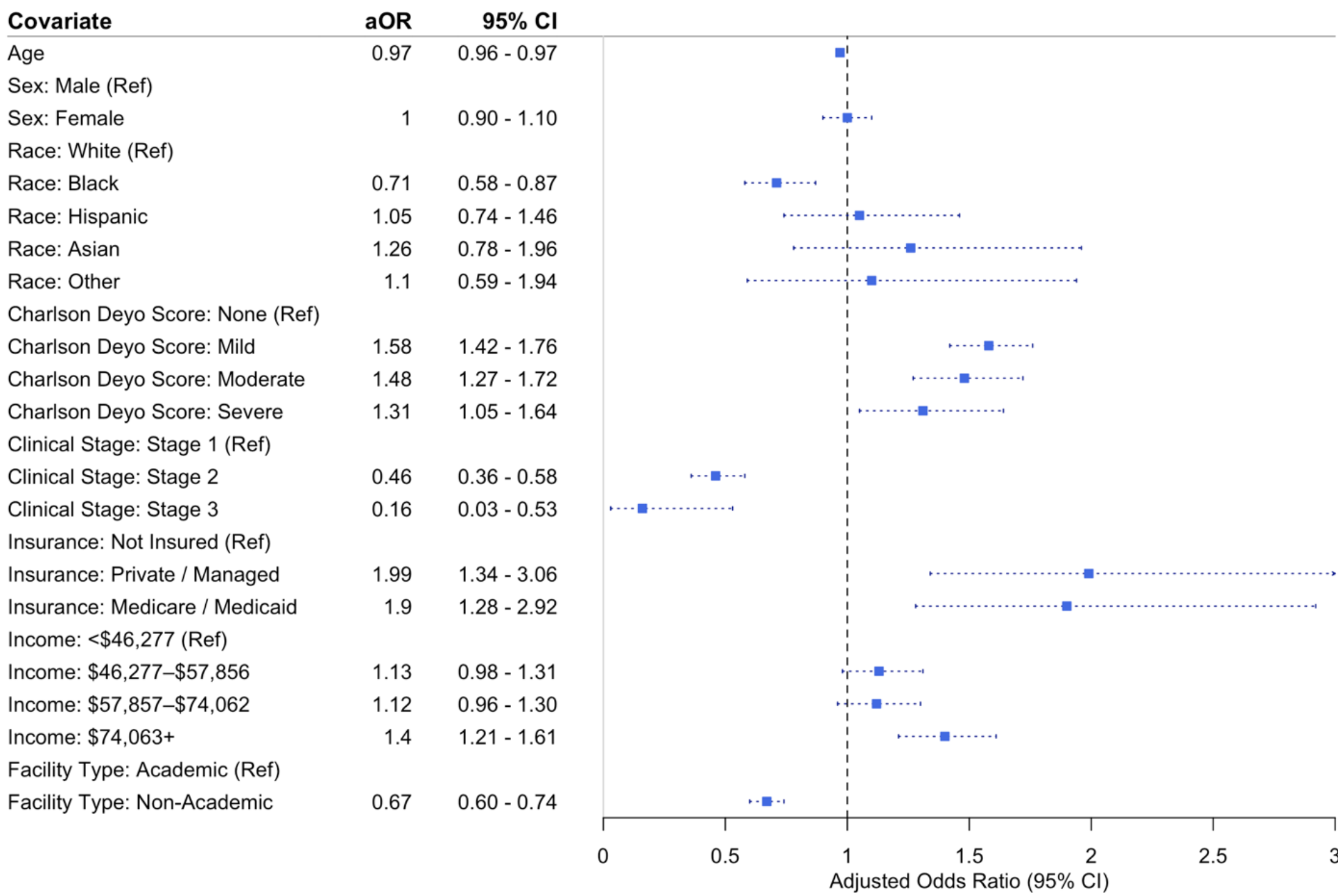


Figure 2: Predictors associated with overall survival

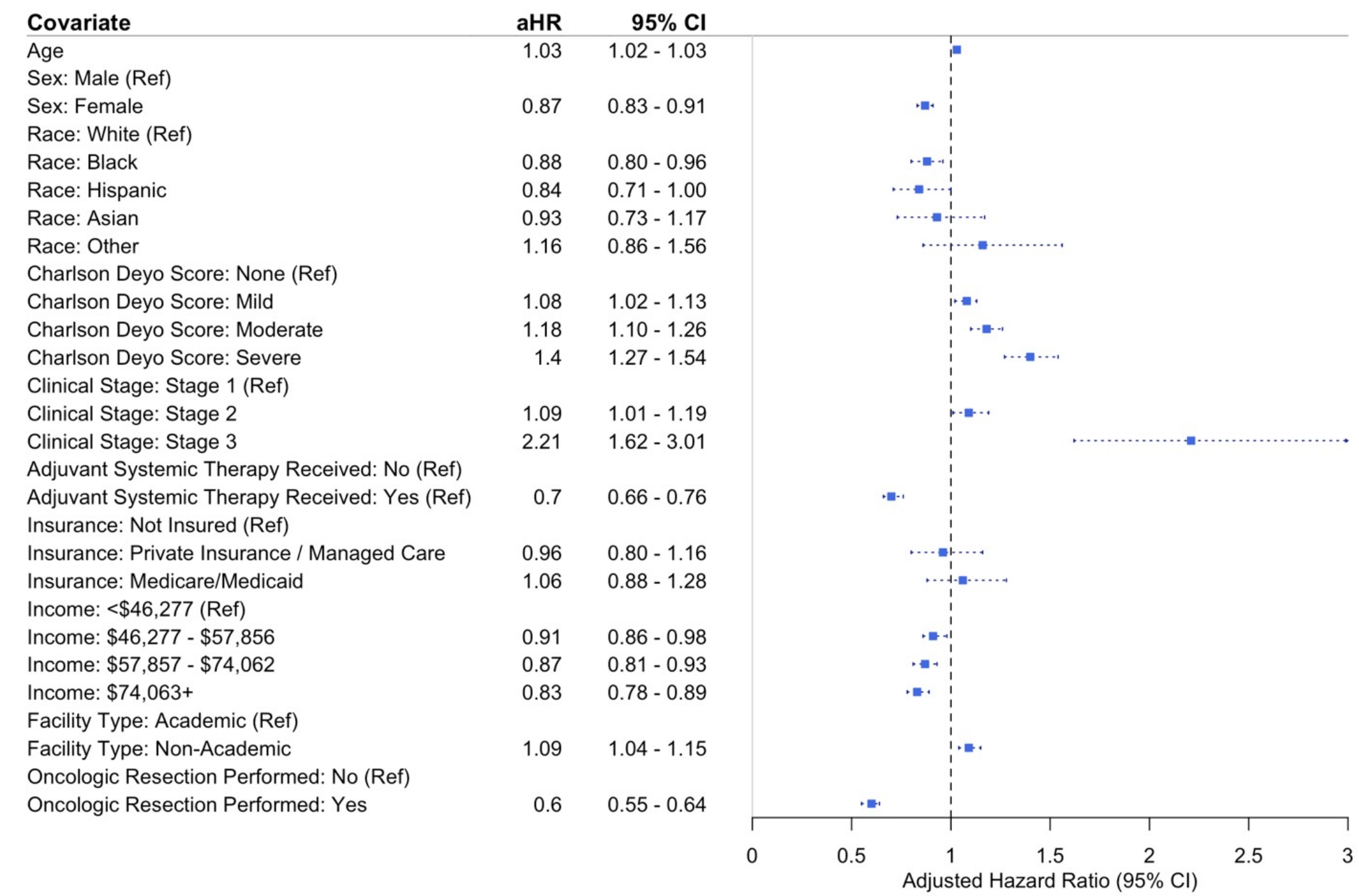
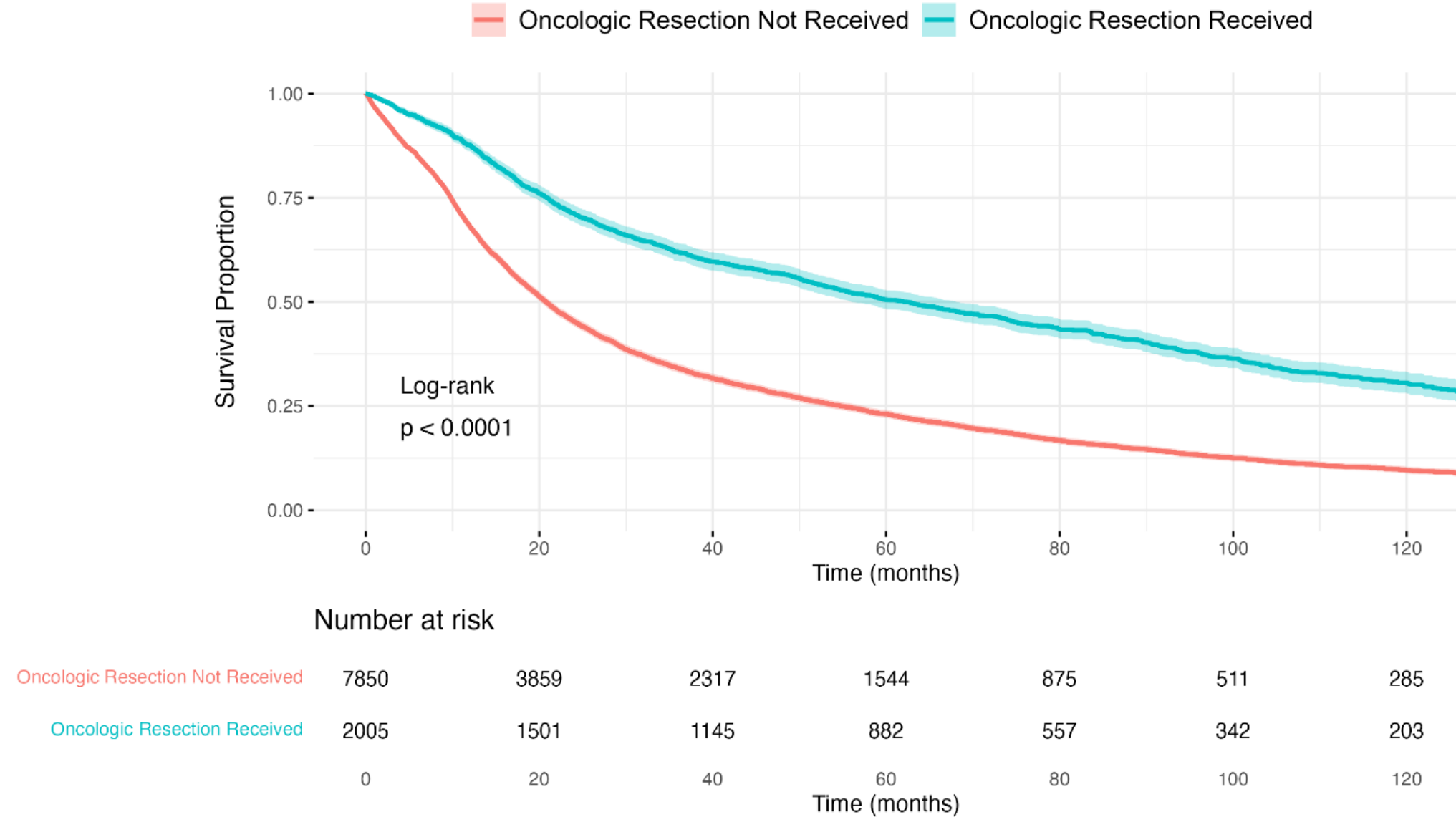


Figure 3: Kaplan-Meier survival estimates by Resection



Limitations

Unmeasured confounders (e.g., smoking status) may influence results.

The NCDB captures data only from participating hospitals, which may not be representative of the broader U.S population.

Marginalized groups may be underrepresented potentially underestimating true disparities.

Conclusion

Despite national guidelines, this study showed that oncologic resection is underutilized in Black patients even though it is associated with a survival benefit, highlighting its potential to improve outcomes if more widely adopted. Addressing these disparities through targeted interventions is essential to ensuring equitable access to guideline-concordant care. Future studies may perform qualitative analyses of surgical consultations for Black patients with SCLC to better understand reasons for underutilization.

References

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