Is Age Just A Number?: Exploring the Relationship Between Patient Age and Survival Outcomes in Oral Cavity SCC

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BACKGROUND

- Average age of diagnosis = 64 years
- Conventional risk factors = tobacco, alcohol
- 1 in 5 cases experienced by younger patients
- **Data conflict on whether age at diagnosis is associated with OCSCC outcomes**
- Even if this association exists, the **specific age breakdown as it relates to different outcomes is unclear**

OUTCOMES OF INTEREST

1. **Overall Survival (OS)**
2. **Disease-Free Survival (DFS)**
3. **Locoregional Recurrence-Free Survival (LRRFS)**
4. **Distant Recurrence-Free Survival (DRFS)**

METHODS

- Retrospective chart review (2010 - 2020)
- 249 patients who received curative intent therapy

Statistical methods:
- Fisher's exact and Kruskal-Wallis tests
- Restricted cubic splines (Figure 1)
- Cox proportional hazard regression models

RESULTS

Figure 1: Adjusted association between age at diagnosis and outcomes, depicted via restricted cubic spline plots and suggests inflection points at ages 45 and 60 (green bars). This suggested a piecewise linear approach, dividing age at diagnosis into three segments (18-44, 45-60, >60 years).

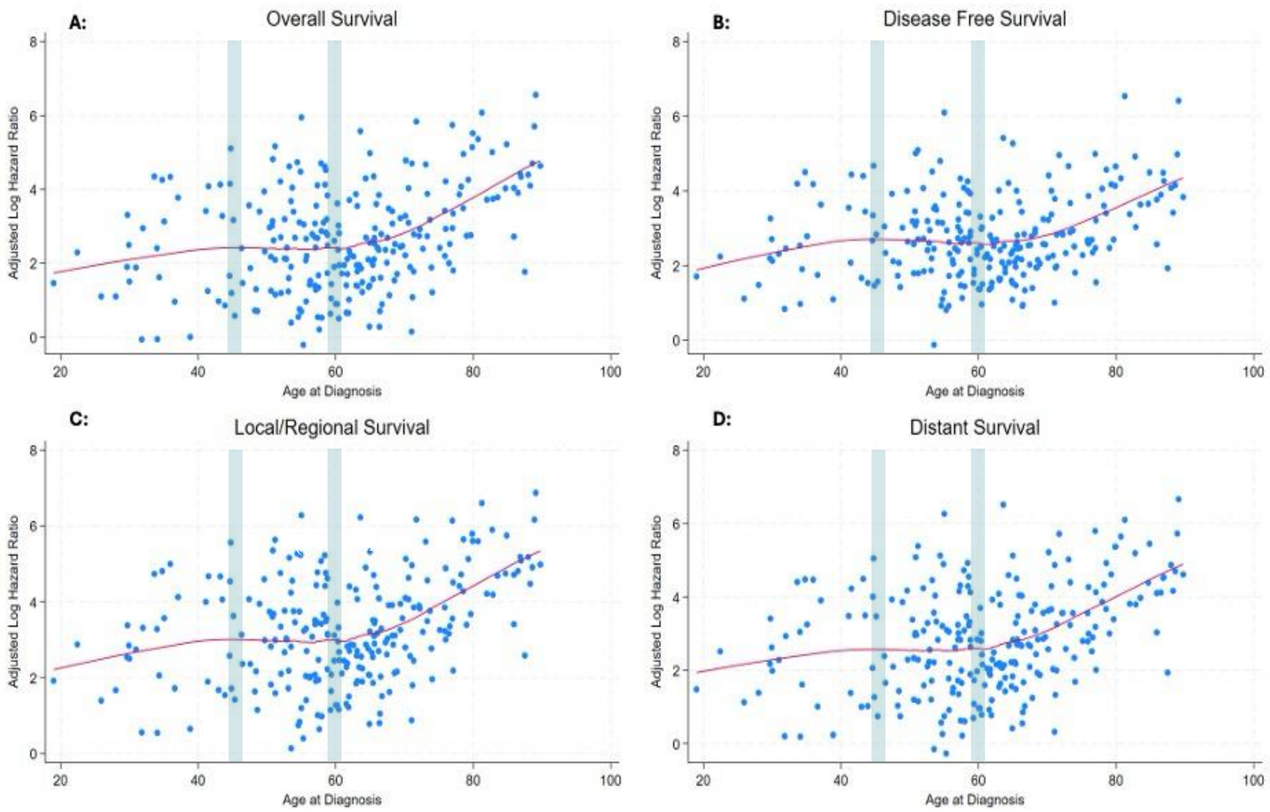

Figure 2: Breakdown of patients by age group.

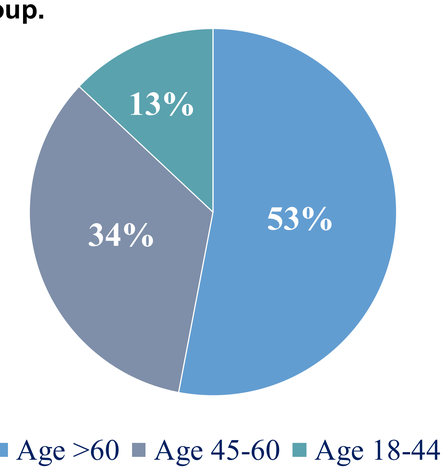

Table 1: Data for adverse survival outcomes in older patients (>60 years).

	HR	95% CI
OS	1.06	1.02-1.09
DFS	1.04	1.01-1.07
LRRFS	1.07	1.03-1.10
DRFS	1.06	1.03-1.10

CONCLUSION

- **Age at OCSCC diagnosis may be significantly associated with OS, DFS, LRRFS, and DRFS for older patients (>60 years)**
- Association of age and oncologic outcomes following OCSCC is complex and **poorly suited to analyses employing dichotomization of age**
- **Findings support incorporating continuous or segmented age models** into prognostic tools to better guide treatment decisions and personalize patient care

REFERENCES