

BURDEN OF ADULT SKIN CANCER: ANALYSIS OF POPULATION-BASED FLORIDA CANCER DATA REGISTRY (1981-2009)

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INTRODUCTION

- ❖ Skin cancer (SC) is the most common cancer in the US; 1-in-5 develops it in their lifetime.
- ❖ The rates have increased steadily over the past few decades worldwide.
- ❖ The increasing incidence in SC is a public health threat and warrants study to determine which groups carry the most burden of mortality due to skin cancer.
- ❖ We report the sociodemographic and survival trends of SC from 1981 to 2009 in the Florida adult population (≥ 18 yrs) to study disparities between certain ethnic, racial, gender, and socioeconomic (SES) groups and mortality due to skin cancer.

METHODS

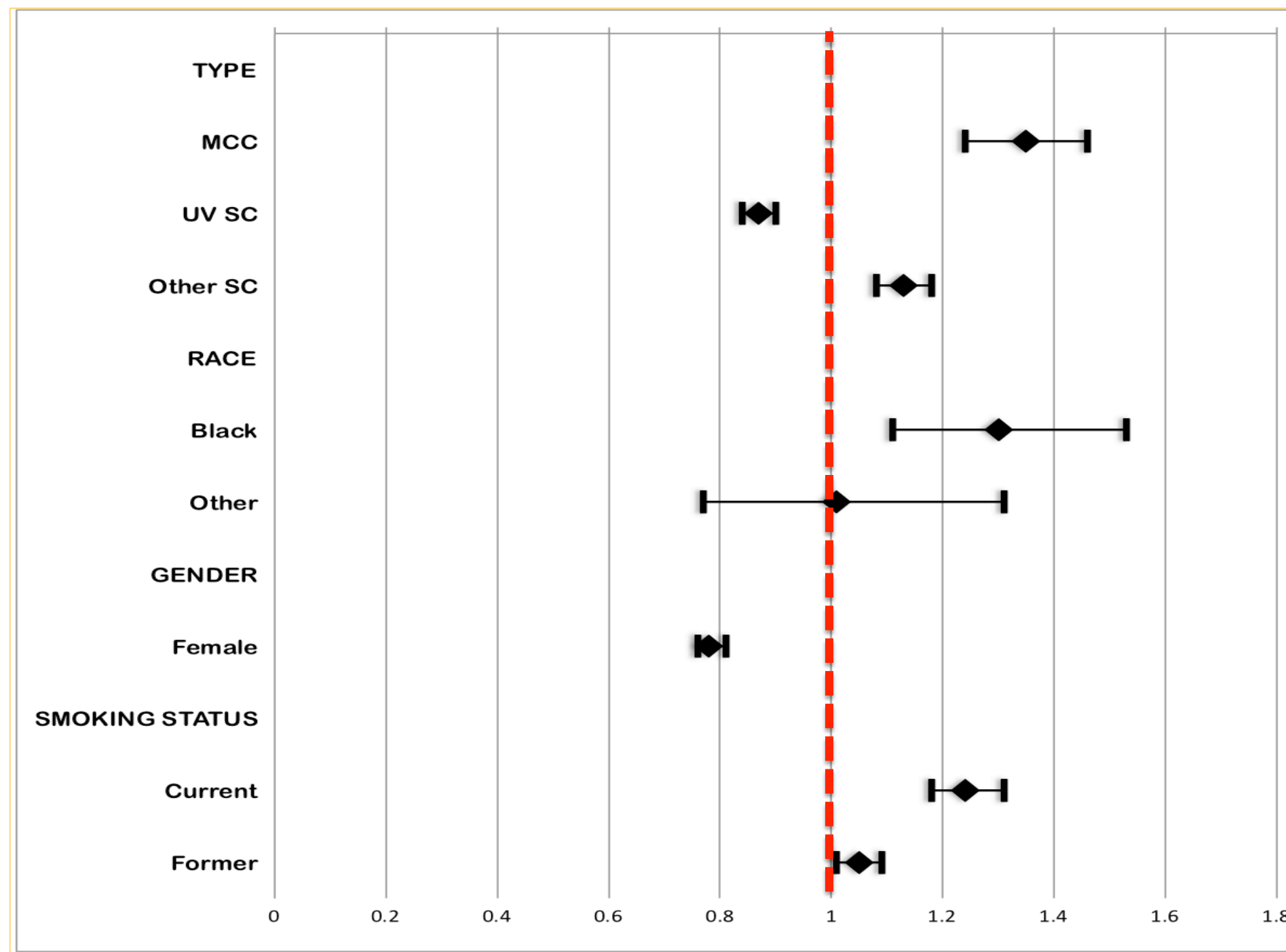
- ❖ The Florida Cancer Data System (1981-2009) was linked with US census to explore median survival and survival rates by sociodemographics for all type of SC.
- ❖ Survival time, primary clinical endpoint, is calculated as the elapsed time from date of SC diagnosis to date of death or the date of last contact if patient is still alive.
- ❖ Survival was compared by SC type, gender, race, ethnicity, SES, and modeled with multivariable Cox regression to calculate adjusted hazard ratio (HR) and 95% confidence interval (95%CI).

Table 1: Sociodemographics

SC TYPE	All (n=80,924)	
	n	%
Malignant Melanoma	54,296	67.0
Merkel Cell Carcinoma	1,951	2.4
UV-Related	15,289	18.8
GENDER		
Male	48,018	59.3
Female	32,906	40.7
RACE		
White	79,868	99.0
Black	816	0.8
Other	240	0.3
ETHNICITY		
Hispanic	2,650	3.0
Non-Hispanic	78,274	97.0
SES		
Lowest	6,096	7.1
Middle-Low	22,095	27.1
Middle-High	32,700	40.5
Highest	20,033	25.3
SMOKING STATUS		
Never	32,386	40.0
Former	12,788	18.3
Current	9,104	11.3

SES: %households living below the poverty in the neighborhood as lowest ($\geq 20\%$), middle-low ($\geq 10\%$ and $< 20\%$), middle-high ($\geq 5\%$ and $< 10\%$), or highest ($< 5\%$)

Figure 1: Adjusted Hazard Ratios with 95% Confidence Intervals

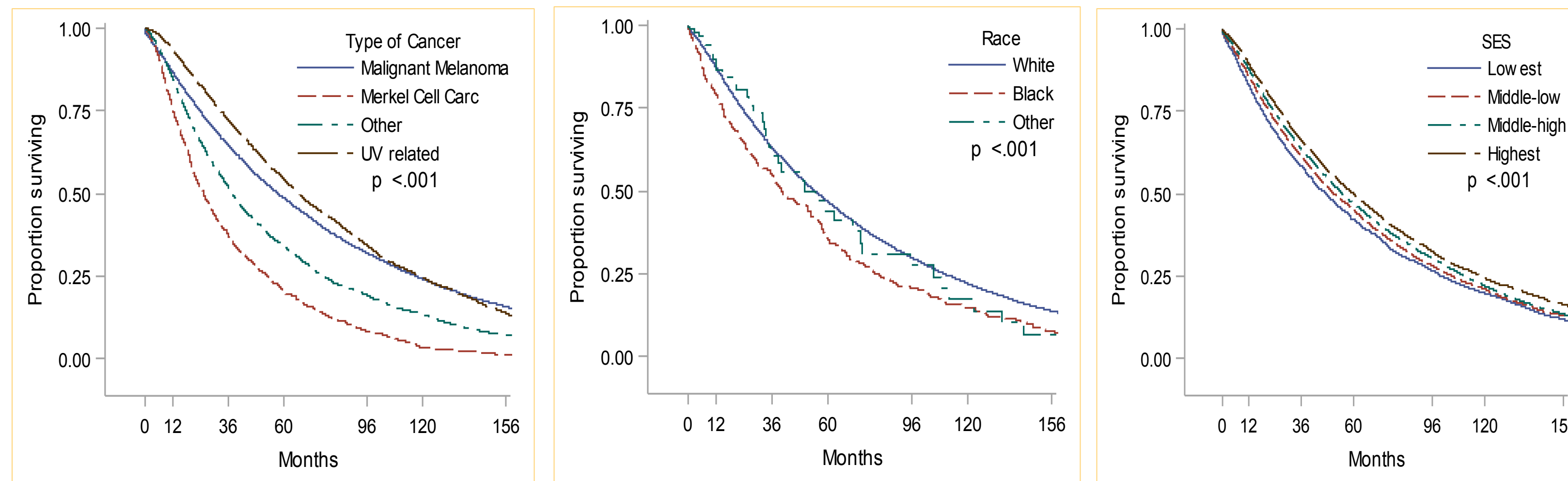


A multivariable Cox regression model included type of SC, race, ethnicity, SES, age at diagnosis, gender, smoking status, marital status, grade, stage, regional node positivity, surgery
In the figure reference category for the respective groups are Malignant Melanoma, White, Male, and Never Smoker

RESULTS

- ❖ There were 80,924 patients with SC where 67% malignant melanoma (MM), 19% UV-related, and 14% other types of SC including 2.4% Merkel Cell Carcinoma (MCC).
- ❖ The majority were male (59.3%), White (99%), middle-high/highest SES (75%), living in urban (95%) and had localized cancer (53%).
- ❖ Overall median survival was 4.5 yrs (95%CI: 4.5-4.6) including MM (4.8), UV related (5.5).
- ❖ Higher median survival time was seen in White (4.5) than Black (3.4), female (5.4) vs male (4.1) and non-Hispanic (4.5) vs Hispanic (3.9).
- ❖ The 5-yr survival rates were higher in UV-related SC (54.3%) than MM (48.7%), White (46.8%) vs. Black (35.4), non-Hispanic (46.8%) vs. Hispanic (42.5%), female (52.6%) vs male (43.3%).
- ❖ Compared to MM, MCC (HR [2.11]; 95%CI: 2.01-2.26) and other SC subtypes ([1.39]; 1.34-1.43) had significantly higher mortality, but UV-related SC ([0.91]; 0.88, 0.94) had better survival.
- ❖ Significantly higher mortality was seen in Black vs White ([1.33]; 1.19-1.48), Hispanics vs non-Hispanic ([1.08]; 1.01-1.15) but not female vs male ([0.78]; 0.76-0.80).

Figure 2: Kaplan-Meier Survival Curves by Skin Cancer Types, Race, and SES



CONCLUSION

- ❖ Looking at the trends and modeling, there are disparities in skin cancer survival across ethnicities, races, genders, and geographic location.
- ❖ This study of skin cancer survival and mortality identifies groups with the highest mortality burden in addition to high-risk types of cancer.
- ❖ Further research into the rationale behind these disparities is necessary.
- ❖ Culturally competent and group-specific public health prevention and screening programs are needed to reduce the burden of skin cancer.