


Health Disparities in Esophageal Cancer

EFFECTS OF POVERTY, RACE/ETHNICITY AND TOBACCO ON ESOPHAGEAL CANCER RISK

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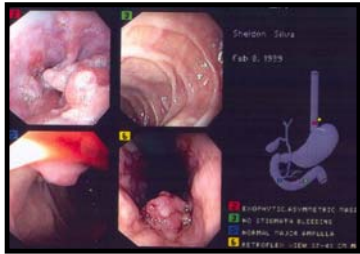
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Outline

- ▶ Background/Purpose
- ▶ Methods
- ▶ Results
- ▶ Conclusions



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Purpose

- ▶ To assess the relationship between individual race-ethnicity, and area-based socioeconomic status (SES) and community tobacco use rates and location of esophageal cancer clusters.
- ▶ To assess these relationships between tobacco related and non-tobacco related esophageal sub-types

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Incident Data

- ▶ FCDS - Legislatively mandated, statewide, population-based cancer registry
- ▶ Esophageal cancer diagnosed between 1998 and 2002 (n= 4,349 cases)
 - Squamous cell carcinoma (n=1,692) - Tobacco
 - Adenocarcinoma (n=2,202) - GERD
- ▶ Cases geocoded to Census block group

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Area-based Data

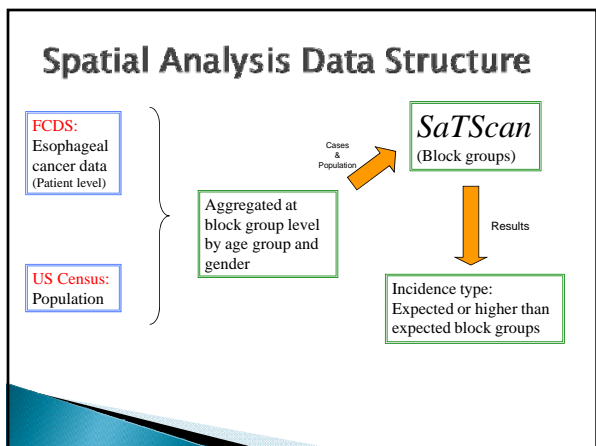
- ▶ US 2000 Census
 - Population data
 - Aggregated five years
 - Block group
 - Gender, race and age group
 - Socioeconomic status (SES)
 - Ratio of income to poverty (RIP)
- ▶ BRFSS
 - Smoking prevalence
- ▶ Beale codes (urban/rural)

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Methods

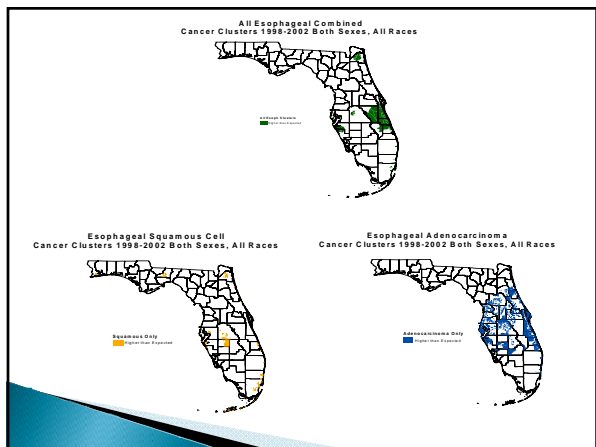
- ▶ *SaTScan* – Cluster detection software
 - Three different analyses performed
 - Detected areas with higher than expected incidence of:
 - All esophageal cases combined
 - Squamous cell carcinoma only
 - Adenocarcinoma only

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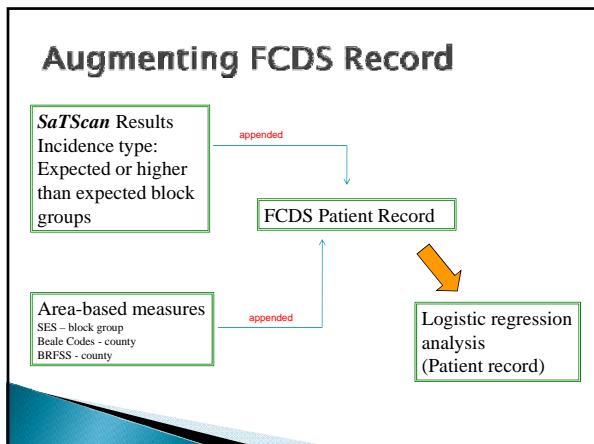
SaTScan Results

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Model Results

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Logistic Regression Model

Dependent Variable
Living in or not living in area of excess cancer

Independent Variables	
Patient Level	Area-Based
Race/ethnicity Stage at Dx * Insurance * Tobacco Usage *	Poverty status # Tobacco Usage % Obesity ** Alcohol Usage ** Urban/Rural Residence #

* Excluded from final model
 Source: # US Census
 % BRFSS - Florida

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Conclusions

- ▶ Clear SES gradient
 - Poverty and minorities → Squamous cell carcinoma
 - Wealthier white → Adenocarcinoma
- ▶ SES and race appear to confer independent risks for esophageal cancer incidence

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Conclusions Continued

- ▶ Spatial component
 - Ability to map areas of Public Health interest for targeted interventions
- ▶ Area-based measures
 - Augment cancer incidence data health disparities

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Limitations

- ▶ Cross sectional study
- ▶ Geocode accuracy
- ▶ Area-based SES

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Thank you

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