Geospatial Travel Patterns of Major Cancer Surgery Patients within a Regionalized Health System

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Nothing To Disclose
Background, Hypothesis and Methods

• The volume-outcome relationship led to regionalization of complex surgical care and increased travel time for some patients.

• **Hypothesis:** travel patterns vary by age, race and insurance status for patients undergoing major cancer surgery in a regionalized setting.

• We identified 6,107 patients who underwent lung, esophageal, gastric, liver, pancreatic or colorectal resections from 2002 to 2013.

• We used Geographic Information System (GIS) software in R to map patients by their characteristics and calculate travel times that we used to conduct one way ANOVAs.

Results

All Patients by Cancer Surgery Type
Results

Whites: Lung Resection at one Hospital

Blacks: Lung Resection at one Hospital
Results

>65: Lung Resection at one Hospital

<65: Lung Resection at one Hospital
Results: Travel Time by Race and Age

Log-Min by Race

Log-Min by Age

Race: African American, Asian, Hispanic/Latino, Other, White

Age: 18-60, 51-64, 65-74, 75-84, 85+, NA
Summary and Conclusion

Significance
• Understand travel patterns of major cancer surgery patients and care coordination for regionalized surgical care

Limitations
• No information on those who received their surgery outside of our system

Strengths
• Results from a large, diverse multihospital system

Conclusion
• Travel patterns to receive major cancer surgery in the greater Washington region varied by age and race.
• Future research should focus on the impact of travel distance to a regionalized system on quality measures of cancer surgery.
THANK YOU!