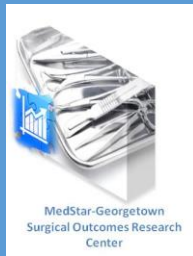




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Geospatial Travel Patterns of Major Cancer Surgery Patients within a Regionalized Health System

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2015 Disclosure Slide

Andrew Smith
Nothing To Disclose

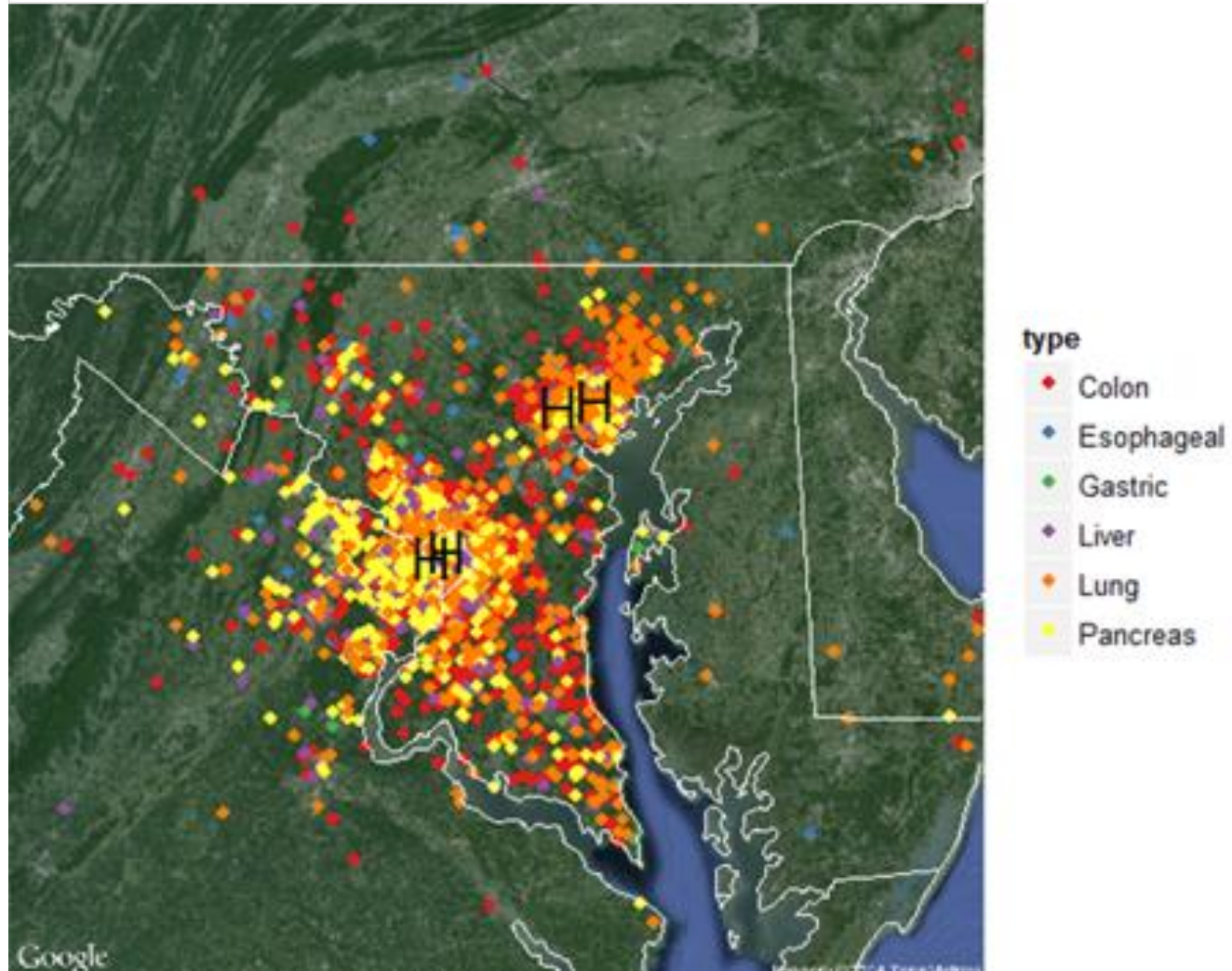
Background, Hypothesis and Methods

- 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.

1. Milstein A, Galvin RS, Delbanco SF et al. Improving the safety of healthcare: the leapfrog initiative. *Eff Clin Pract* 2000; 3:313-316.
2. Birkmeyer JD, Sun Y, Wong SL, Stukel TA. Hospital volume and late survival after cancer surgery. *Ann Surg*. 2007;245(5):777-783. doi: 10.1097/01.sla.0000252402.33814.dd [doi]
3. Centers for Medicare and Medicaid Services. National Coverage Determination (NCD) for Bariatric Surgery for Treatment of Morbid Obesity (100.1). CMS 2014
4. BlueCross BlueShield Association. Blue Distinction Centers for Complex and Rare Cancers: Directory of Providers. BlueCross BlueShield Association 2014
5. Stitzenberg KB. Centralization of Cancer Surgery: Implications for patient access to optimal care. *J Clin Oncol* 2009
6. Harris K, Al-Refaie W. et al. Racial and Ethnic Differences in Use of High-Volume Hospitals for Total Gastrectomy. Presented at the Society of Black Academic Surgeons Conference.

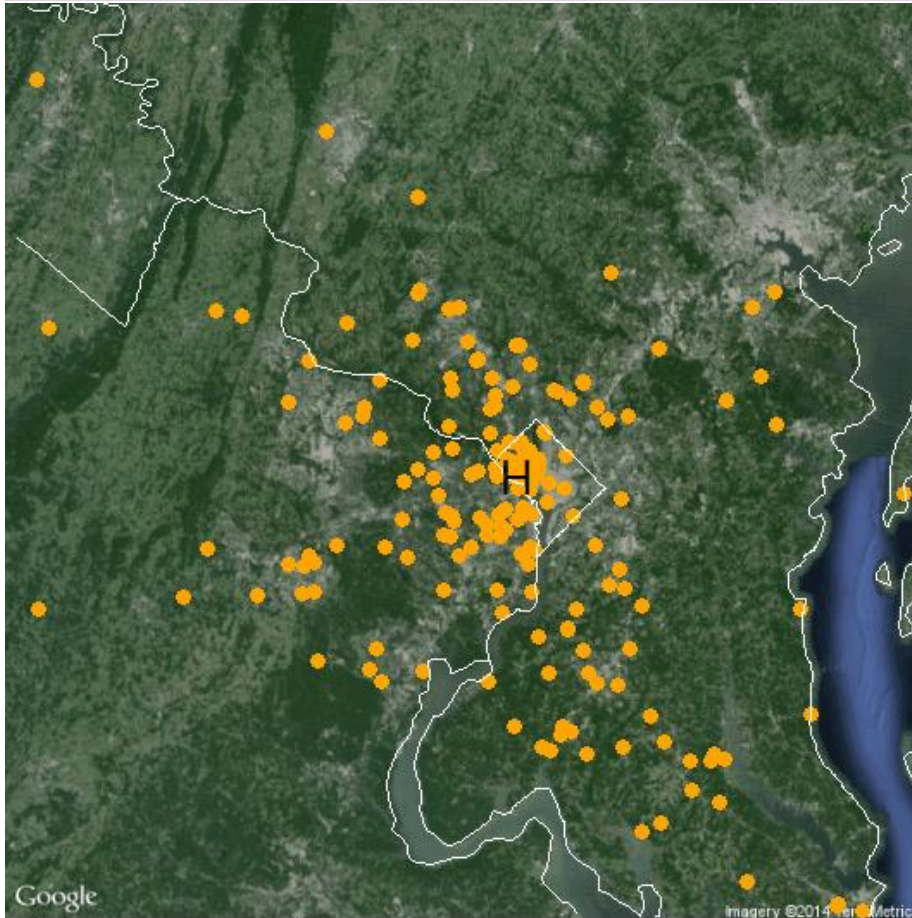
Results

All Patients by Cancer Surgery Type

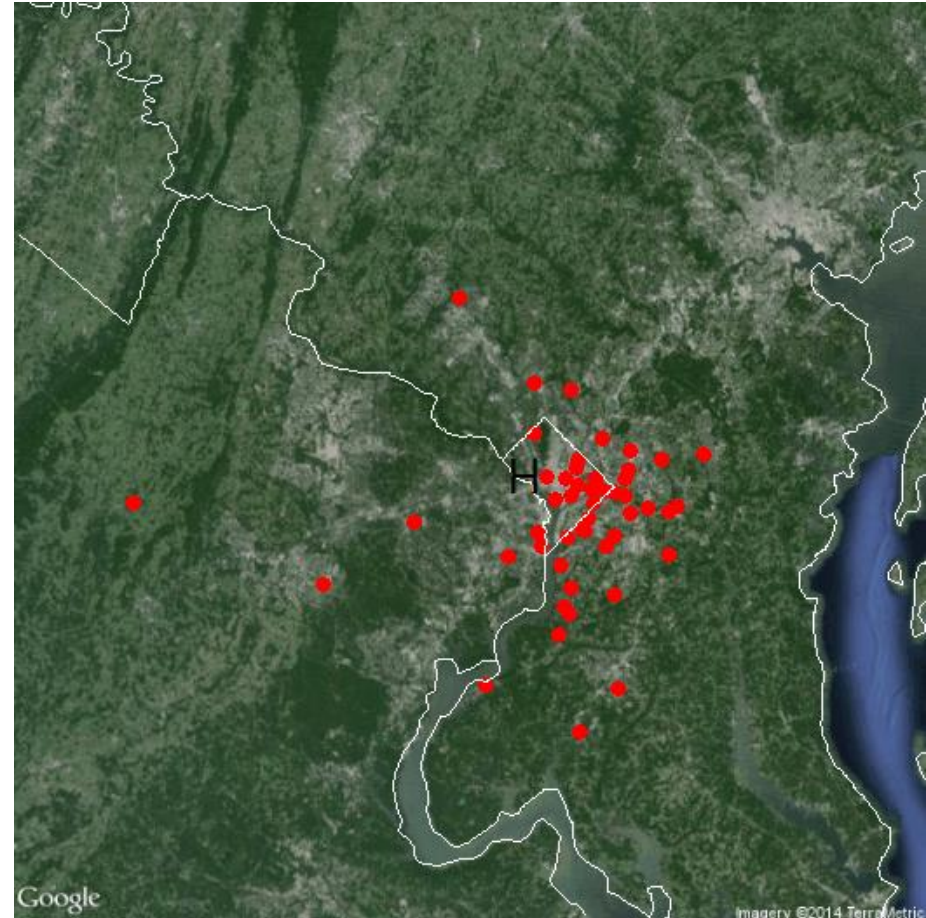


Results

Whites: Lung Resection at one Hospital

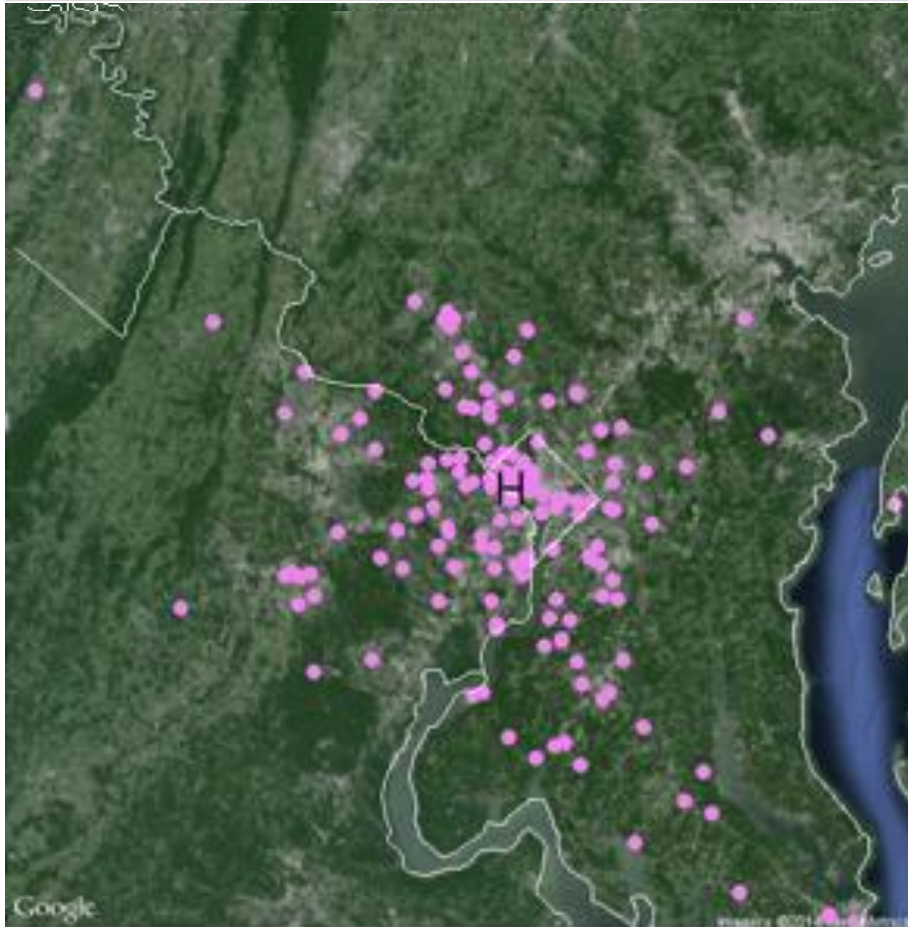


Blacks: Lung Resection at one Hospital

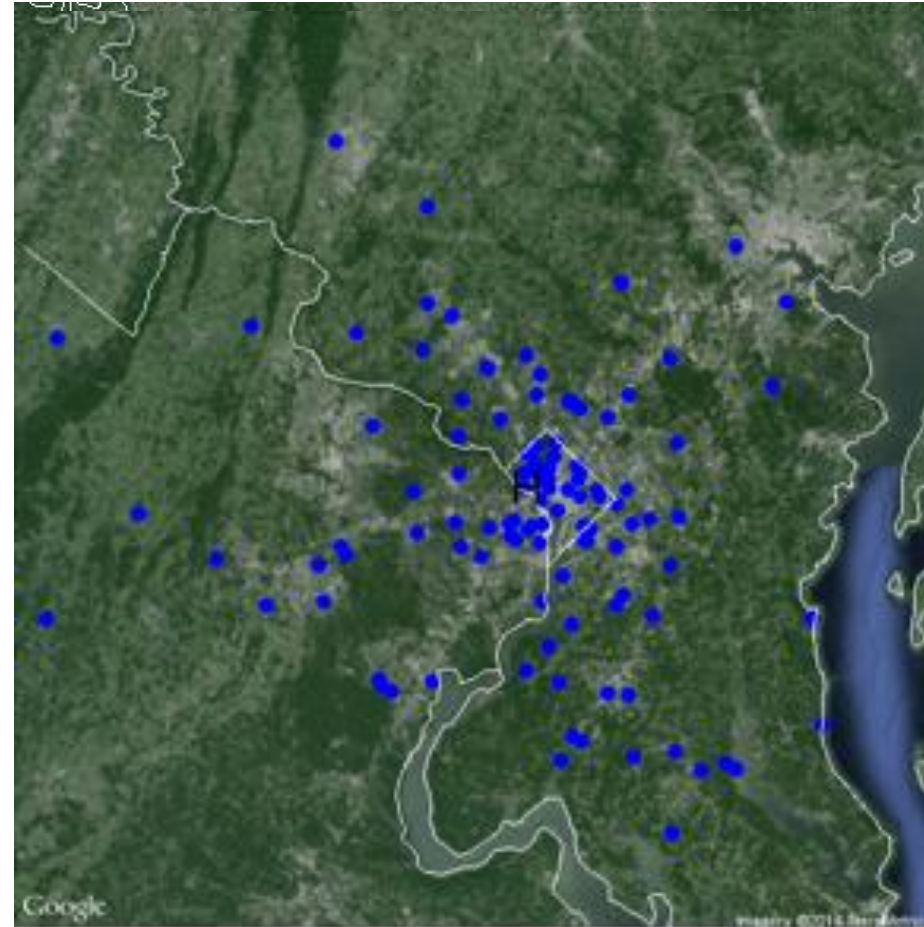


Results

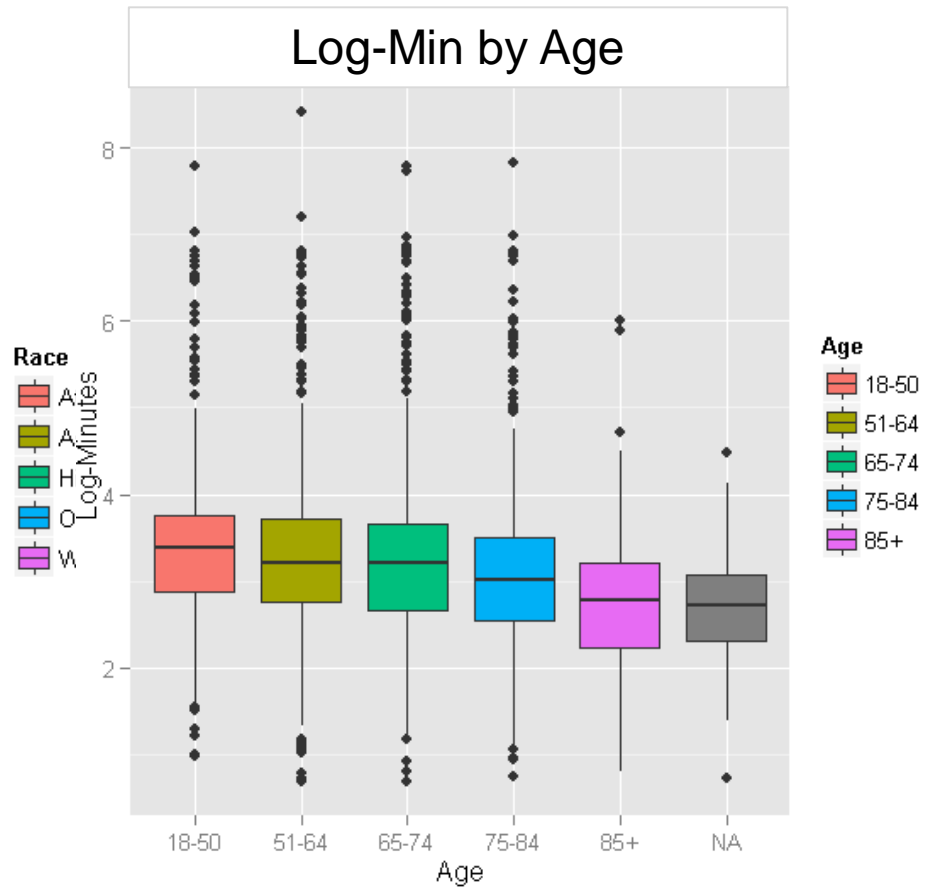
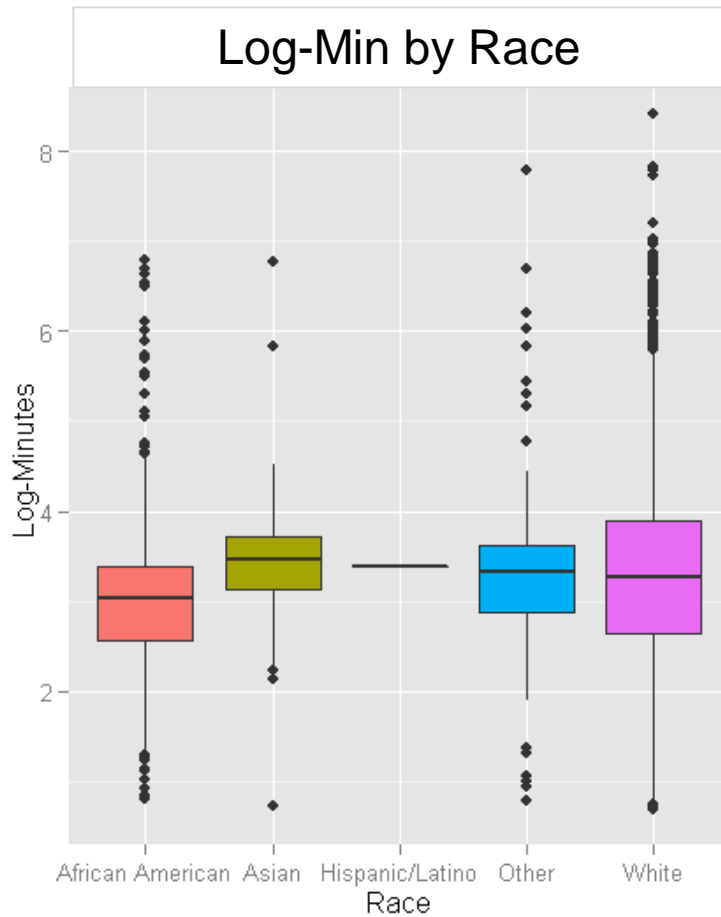
>65: Lung Resection at one Hospital



<65: Lung Resection at one Hospital



Results: Travel Time by Race and Age



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!

