 *Responding to Cancer Cluster Concerns*

GIS – Address Edits – WHY?  
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Senior Research Analyst FCDS

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*Overview*

- What?
  - Address edits
- Why?
  - Intent
  - Importance
- Spatial Analysis/Geocoding

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*New address field edit checks*

- Edits 467-473; 484-486
  - Detailed in May email
  - June Monthly Memo
  - Updated DAM
- Warnings: effective June 2, 2008
- Mandatory: effective July 1, 2008

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*New address field edit checks*

- ◆ Address current
- ◆ Address at diagnosis
- ◆ Supplemental address
- Zipcode
  - County check
- ◆ Designed to accept valid address only

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*Registry purpose*

" The reason for collection, analyzing, and disseminating information on a disease is to control that disease. Collection and analysis should not be allowed to consume resources if action does not follow."

Foege, Hoga, Newton – International Journal Epidemiology, 1976;5:29-37

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*FCDS purpose*

"The department shall establish...a statewide cancer registry program to ensure that cancer reports required under this section shall be maintained and available for use in the course of any study for the purpose of reducing morbidity or mortality"

**Florida Statute 385.202**

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### *Address important for research*

- Cancer "cluster" investigation
- Where to target
  - Services i.e Hospice
  - Prevention i.e. Tobacco cessation
- Regional health disparities
  - Adherence to standards of care
- Epidemiologic studies
  - Distance to facilities and outcome
  - Generate hypotheses about etiology
  - Clinical trials, patient contact

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### *Spatial Analysis*

"GIS analysis lets you see patterns and relationships in your geographic data. The results of your analysis will give you insight into a place, help you focus your actions, or help you choose the best option."

Andy Mitchell—The ESRI Guide to GIS Analysis

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### *What is Geocoding?*

- Assign latitude/longitude
- Match address to street file
- Address match
- Batch & Interactive match

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 *Batch Matching*

- Automated, Probabilistic
- Match
  - 800 Conway Dr (case)
  - 800 S Conway Dr (street file)
- No match
  - 800 Conway Dr (case)
  - 800 N & 800 S Conway Dr (street file)
- No match
  - 800 S Coonway Dr (case)
  - 800 S Conway Dr (street file)

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 *Interactive Matching*

- Manual geocoding
  - Invalid address
  - Grievous spelling errors
  - Incorrect zipcode
  - Abbreviations
- 20% reviewed interactively
  - Only 50% of reviewed ultimately match
- Geocoded to Centroid
  - Zipcode

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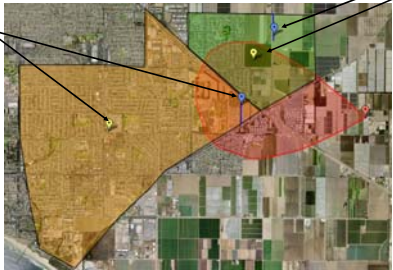
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 *Exposure Misclassification*



Bladder

Cervix

Map courtesy Dan Goldberg, USC

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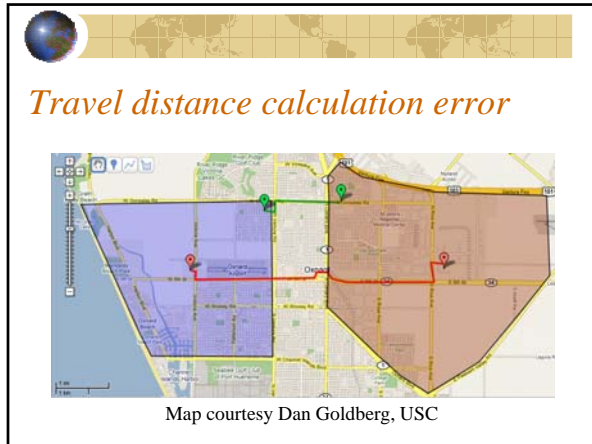
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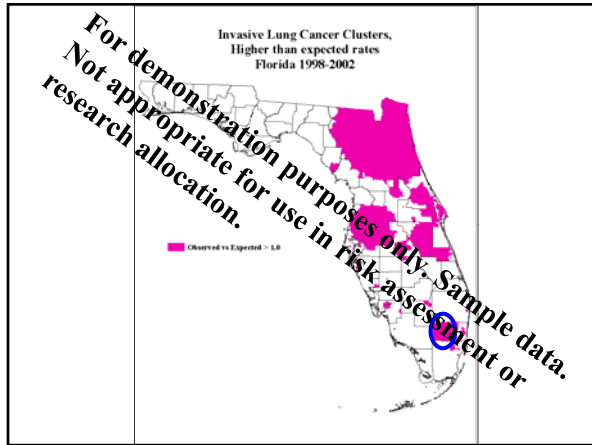
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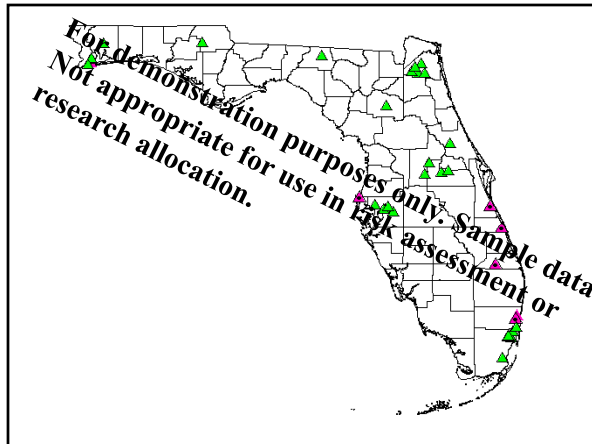
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### Poor address information

- ◆ Contact patient for follow-up/study participation
- ◆ Map cancer rates
- Inconclusive studies
  - Incorrect results
- Wasted efforts, money

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### Improving data quality

- ◆ At hospital registry
  - Typos/mistakes
- Local resources
  - Billing department, chart
- ◆ Web resources
  - Google map, on-line telephone directories, USPS (free)
  - People Finders (cost)

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### Contact

- ◆ Comments/Feedback about edits
  - Recinda Sherman  
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  - Megsys Herna  
mherna@med.miami.edu
- Problems with edits
  - Contact field coordinators

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