

# Developing Useful Data on American Indian Health



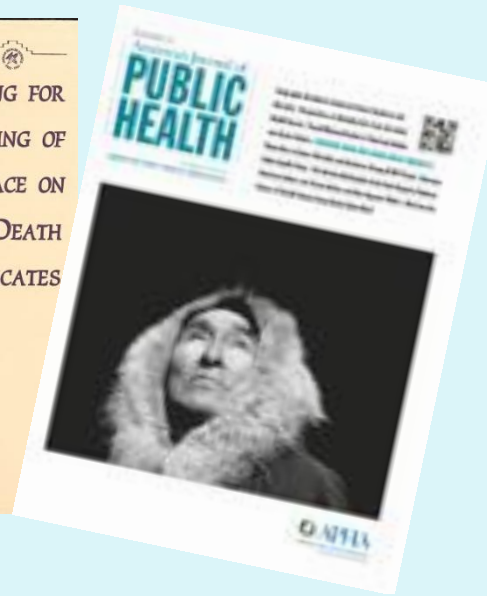
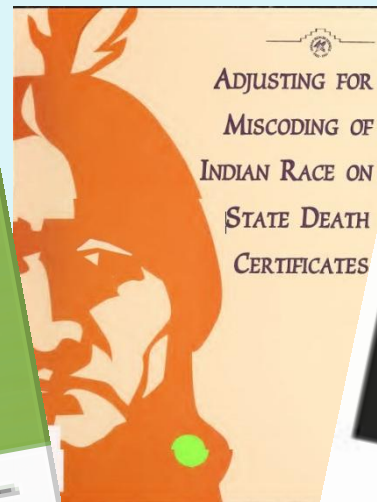
**ADDRESSING THE PROBLEM OF MISREPORTING  
THE MICHIGAN APPROACH**

**MCSF**  
MICHIGAN  
CANCER SURVEILLANCE PROGRAM

# Known Issues



- Misclassification studies
  - Vital Records
  - Cancer
- IHS linkages



# Effort to Improve Available Data



- Established a Cancer Epidemiology Internship – UofM
  - Amr Soliman
- Collaboration with Intertribal Council
  - Rick Haverkate, Health Services Director MITC
- Internship – Summer of 2007
  - Need for hard data on cancer – Tribal Health Directors
  - Develop a strategy to assess data quality issues
  - Initial tribal link - Jennifer Johnson
  - Framework for an acceptable process

# Exploratory Meeting



- Invited Tribal Health Program Staff
  - September 7, 2006
  - Traverse City
- Attended by Tribal Health Representatives, GLITC, IHS, MITC
- Covered issues of Misclassification
- Gave examples of how linkages could improve quality

# Process



- **Provide Funds to MITC to explore possibilities**
  - MITC works with tribes on logistics
  - Provides tribes with analytical support
- **Develop a framework**
  - Address confidentiality – patient level and tribe level
  - Maintain tribal control
- **Objectives**
  - Provide each tribal with analytical file
  - Improve statewide data

# Mechanics



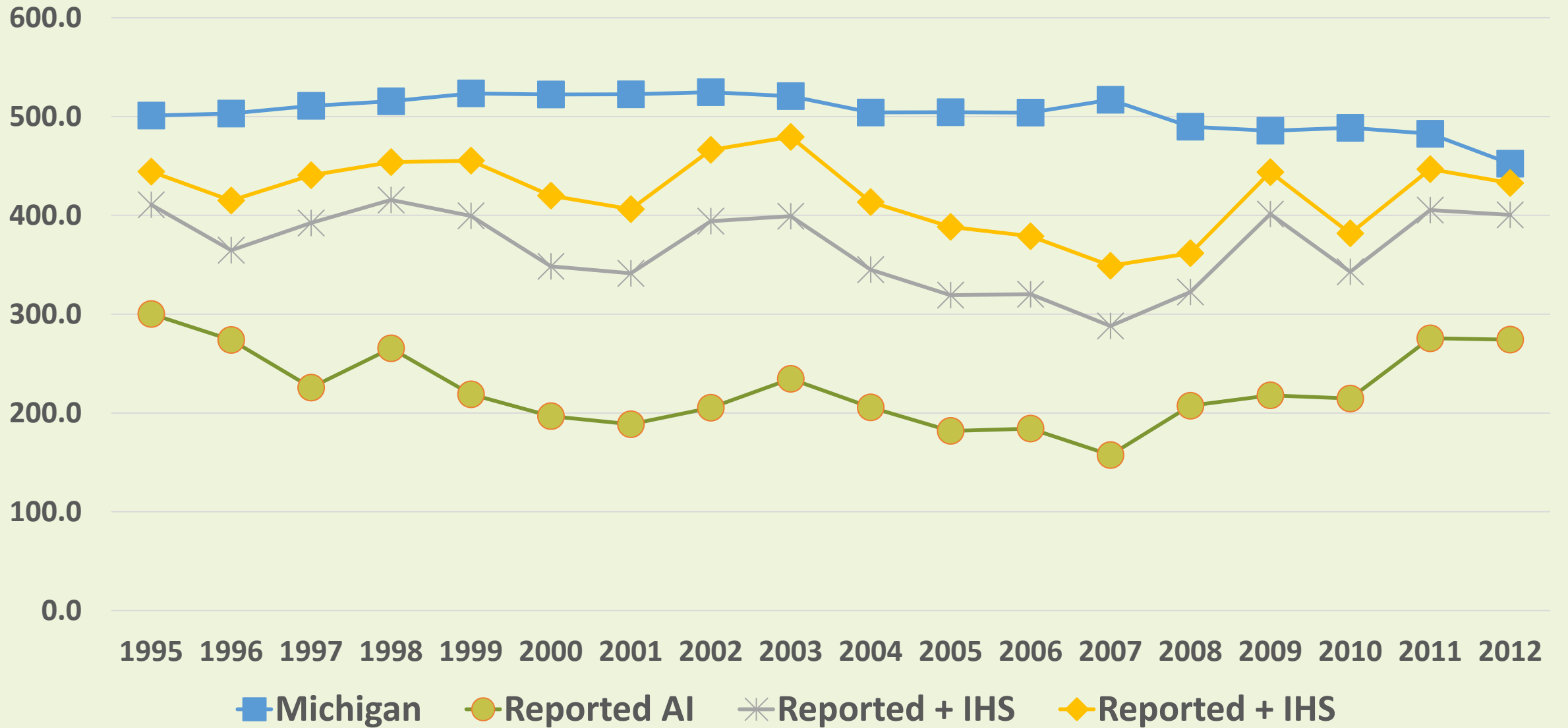
- Initiated by the Tribe
- Written Agreements
- Linkage Session in Controlled Environment
  - Jointly monitored by tribe, state and ITC
- Links to cancer, mortality and live birth
- Analytical files developed following linkage
- Resulting de-identified files provided to tribe
- Case id of confirmed links provided to the state
- All identifiable files computer shredded.

# Results



- **Analytical data set for tribal use**
  - De-identified file with selected variables
  - Tribal data reports
  - Help shape tribal health initiatives
- **Race corrections to statewide data**
  - Adjust state data based on linkages
  - Statewide data still not ideal
  - Data are available for special requests

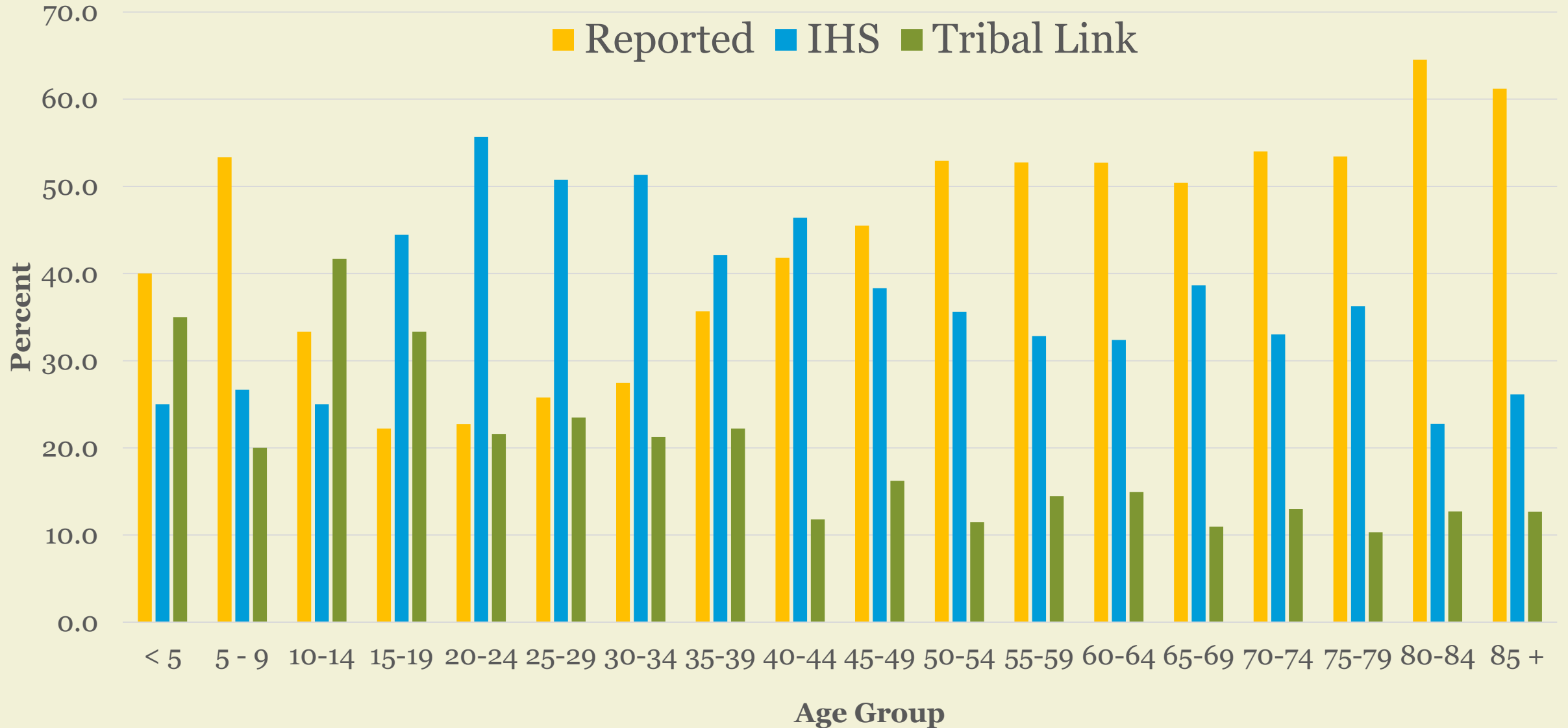
# Age-adjusted American Indian Cancer Incidence by Link Status by Year, Michigan 1995-2012



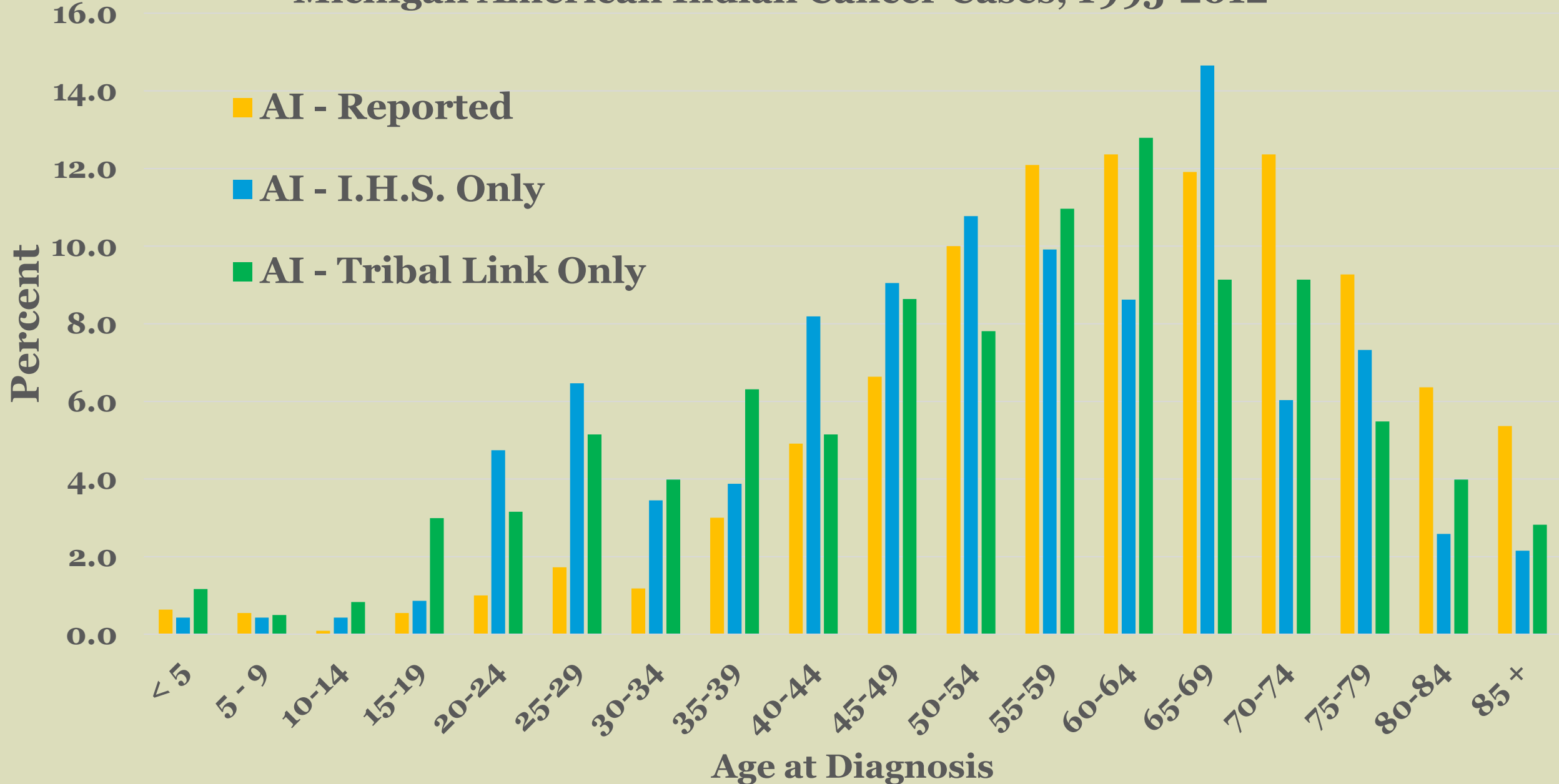


# Proportion of Cases by Age and Ascertainment Method

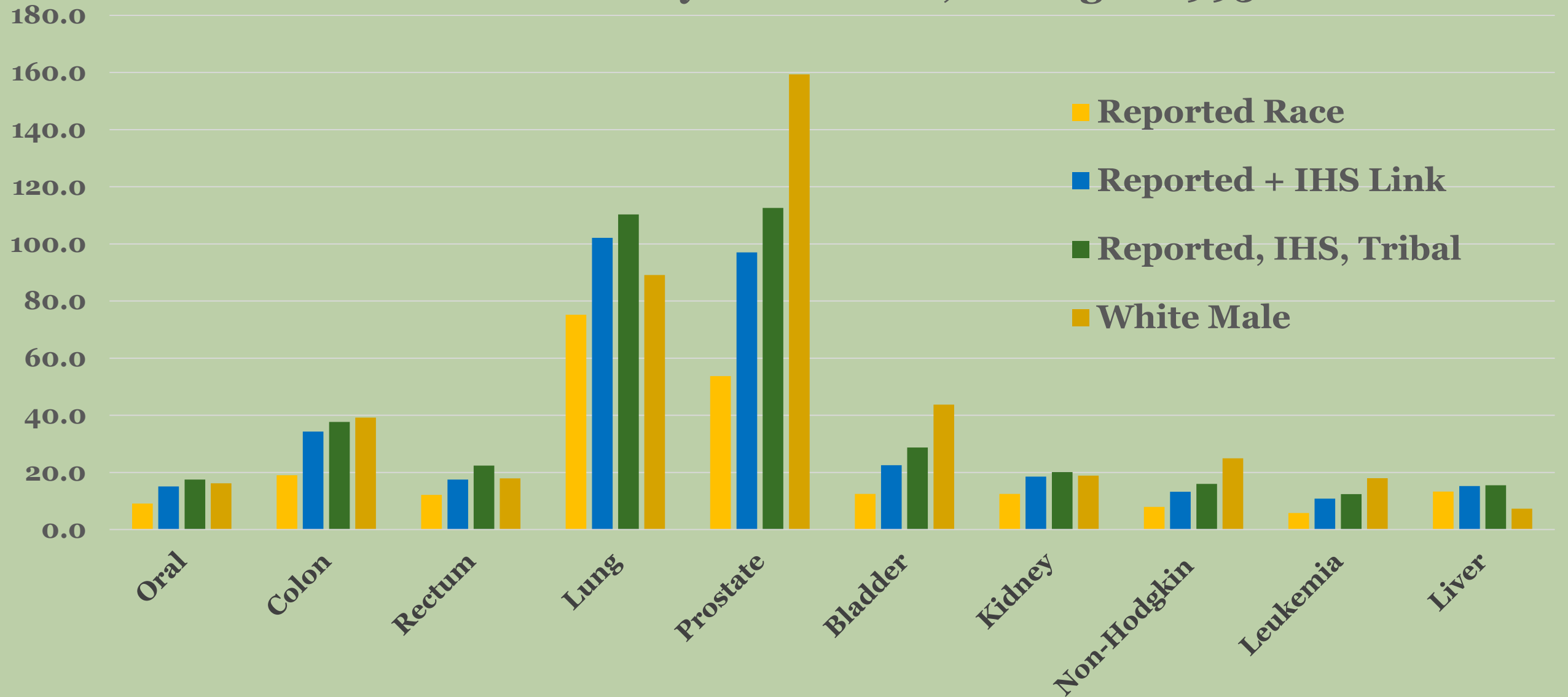
## Michigan American Indian Cancer Cases, 1995-2012



# Age at Diagnosis Distribution Ascertained through Single Source Michigan American Indian Cancer Cases, 1995-2012

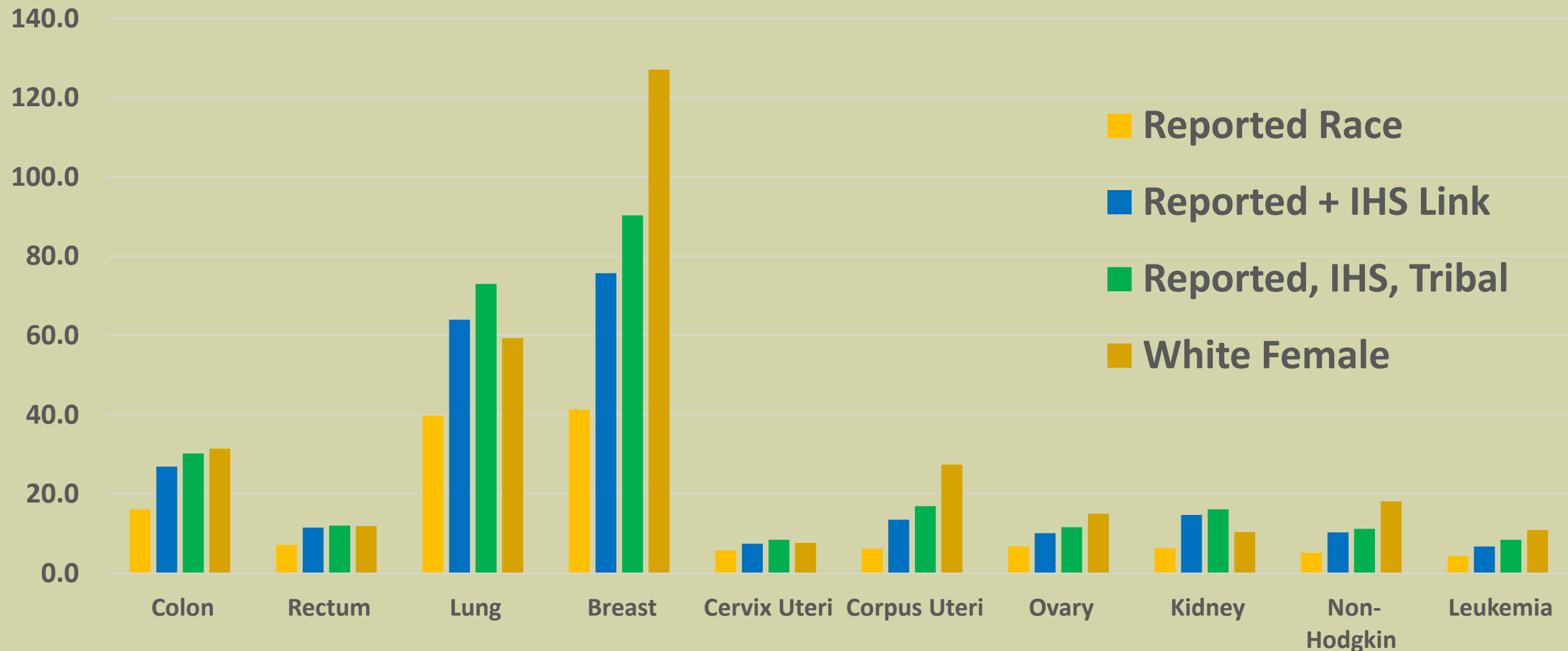


# Site-specific Age Adjusted Cancer Incidence Rates American Indian Males by Link Status, Michigan 1995-2012



# Site-specific Age Adjusted Cancer Incidence Rates by Link Status

## American Indian Females, Michigan 1995-2012



# Leading Cancer Sites, American Indian and White Males Michigan Residents, 1995-2012

| American Indian Male |                              |        |       | White Male |                              |        |       |
|----------------------|------------------------------|--------|-------|------------|------------------------------|--------|-------|
| Rank                 | Site                         | Number | Rate  | Rank       | Site                         | Number | Rate  |
| 1                    | Prostate Gland               | 382    | 112.6 | 1          | Prostate Gland               | 117814 | 159.4 |
| 2                    | Lung and Bronchus            | 352    | 110.3 | 2          | Lung and Bronchus            | 63902  | 89.1  |
| 3                    | Colon                        | 133    | 37.7  | 3          | Urinary Bladder              | 30395  | 43.7  |
| 4                    | Rectum                       | 88     | 22.4  | 4          | Colon                        | 27404  | 39.2  |
| 5                    | Kidney and Renal Pelvis      | 83     | 20.1  | 5          | Non-Hodgkin Lymphoma         | 17865  | 24.9  |
| 6                    | Urinary Bladder              | 80     | 28.7  | 6          | Melanoma of the Skin         | 17297  | 23.8  |
| 7                    | Lip, Oral Cavity and Pharynx | 70     | 17.5  | 7          | Kidney and Renal Pelvis      | 13994  | 18.9  |
| 8                    | Non-Hodgkin Lymphoma         | 69     | 16.0  | 8          | Rectum                       | 13021  | 17.9  |
| 9                    | Liver                        | 62     | 15.5  | 9          | Leukemia                     | 12658  | 18.0  |
| 10                   | Leukemia                     | 54     | 12.4  | 10         | Lip, Oral Cavity and Pharynx | 12212  | 16.2  |

# Leading Cancer Sites, American Indian and White Females Michigan Residents, 1995-2012

| American Indian Female |                         |        |      | White Female |                      |        |       |
|------------------------|-------------------------|--------|------|--------------|----------------------|--------|-------|
| Rank                   | Site                    | Number | Rate | Rank         | Site                 | Number | Rate  |
| 1                      | Breast                  | 486    | 90.3 | 1            | Breast               | 109810 | 127.1 |
| 2                      | Lung and Bronchus       | 332    | 73.0 | 2            | Lung and Bronchus    | 53428  | 59.3  |
| 3                      | Colon                   | 137    | 30.2 | 3            | Colon                | 29273  | 31.4  |
| 4                      | Corpus Uteri            | 93     | 16.9 | 4            | Corpus Uteri         | 24018  | 27.4  |
| 5                      | Kidney and Renal Pelvis | 80     | 16.1 | 5            | Non-Hodgkin Lymphoma | 16103  | 18.1  |
| 6                      | Ovary                   | 60     | 11.6 | 6            | Melanoma of the Skin | 13689  | 16.9  |
| 7                      | Rectum                  | 56     | 12.0 | 7            | Ovary                | 12958  | 15.0  |
|                        | Non-Hodgkin Lymphoma    | 56     | 11.2 | 8            | Rectum               | 10655  | 11.9  |
| 9                      | Cervix Uteri            | 48     | 8.4  | 9            | Urinary Bladder      | 10047  | 10.9  |
| 10                     | Leukemia                | 43     | 8.4  | 10           | Leukemia             | 9602   | 10.9  |

# Directions



- Continue the Service
- Expand linkages to mortality and natality
- Find alternatives to census data on AI/AN
  - Work toward tribal denominators
- Identify resources for live birth linkage and analysis
- Continue efforts to improve statewide data
  - Explore Regionalized Data

# Acknowledgements



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- Amr Soliman
- Shinobu Watanabe-Galloway

- MSCP

- Georgia Spivak

- MPHI

- Loan Nuyen



# Students



- Jennifer Johnson
  - Misclassification and Linkage to Tribal Rolls
- Elizabeth Roen
  - Disparities in Breast Cancer
- Tess Hansen
  - Tobacco and Alcohol Related Cancer
- Beeta Kashani
  - HPV and Cervical Cancer

# Contact Information



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