

# Paving the Way for Health Equity in Cancer: Moving Beyond Disparities



## OPCC Virtual General Membership Meeting

**March 12, 2020**

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Ohio Department of Health

## Presentation Goals

- 1) Provide recommendations for the Ohio Comprehensive Cancer Plan to transition from addressing cancer disparities to the pursuit of health equity in cancer.**
- 2) Highlight resources and tools to help make the transition to health equity initiatives in cancer.**

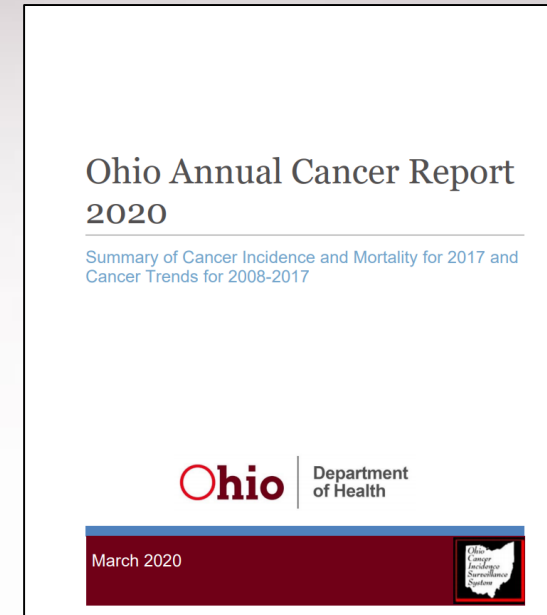
# Understanding Health Equity

**Health Equity** is when everyone in society has the same opportunity to achieve and sustain optimal health.

**Health Disparities** are measurable differences in the incidence and prevalence of health conditions, health status and outcomes between groups.

**Health Inequities** result when **Health Disparities** are the systematic and unjust distribution of these critical conditions (social determinants).

**Social Determinants** are the conditions in which people are born, grow, live, work and age which govern health.



The Ohio Comprehensive Cancer Control Plan 2015-2020

### Cancer Disparities

Significant disparities exist in cancer incidence rates by race/ethnicity. As shown in Table 3, the 2012 age-adjusted incidence rate for African Americans in Ohio (438.0 per 100,000) is 2 percent higher than the rate for whites (430.6 per 100,000) and is nearly double the rate for Asian/Pacific Islanders (253.7 per 100,000) for all cancer site/types combined.<sup>3</sup> The incidence rate for prostate cancer is 77 percent higher among African American males (157.2 per 100,000) compared to white males (89.0 per 100,000), and the incidence rate of multiple myeloma is more than twice as high among African Americans (10.4 per 100,000) compared to whites. Whites have a disproportionate burden of melanoma of the skin, with a 2012 incidence rate (20.0 per 100,000) that is 21 times higher compared to African Americans (0.9 per 100,000). Asian/Pacific Islanders in Ohio had lower incidence rates than other races for most cancer sites/types.<sup>3</sup>

# Key Health Equity Concepts: Interrelated but Different!

## Health Equity

Everyone has the same opportunity for optimal health.



## Health Disparities

Measurable differences in the incidence and prevalence of health conditions, health status and outcomes between groups.



## Health Inequities

When measurable differences in the incidence, prevalence and health outcomes between groups are the result of underlying social injustice.



This concept is difficult for many to understand because it does not yet exist for everyone in Ohio.



This concept is easiest to understand because there are multiple examples (e.g., disproportionate burden of opioids on the poor; Black infants die at 2 ½ times the rate of White infants; Ohioans in Appalachia have higher suicide rates than the rest of Ohio).



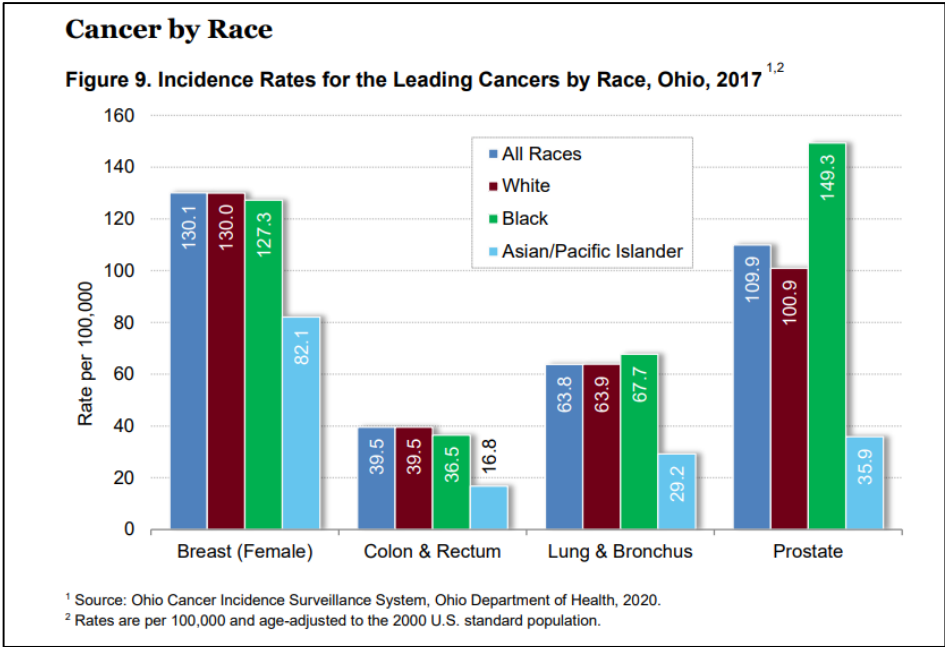
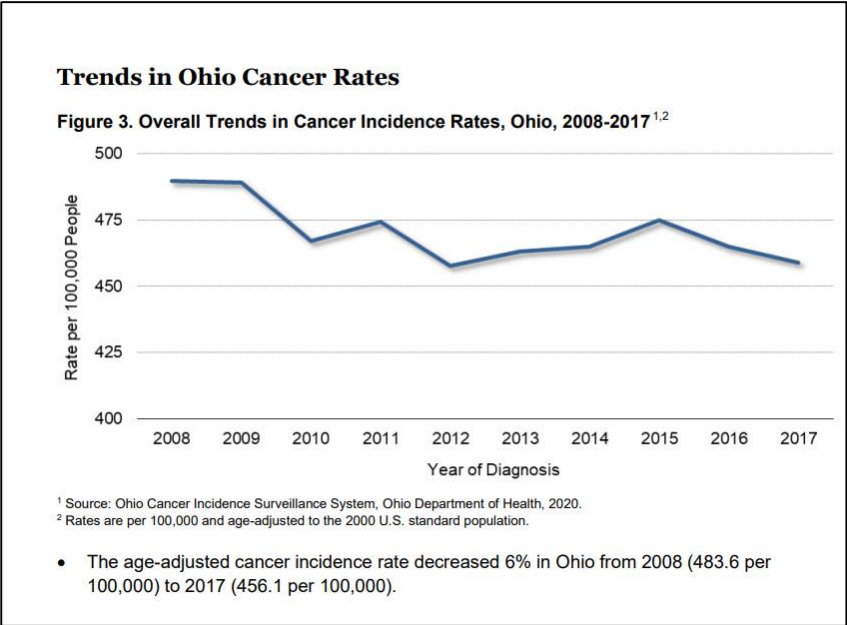
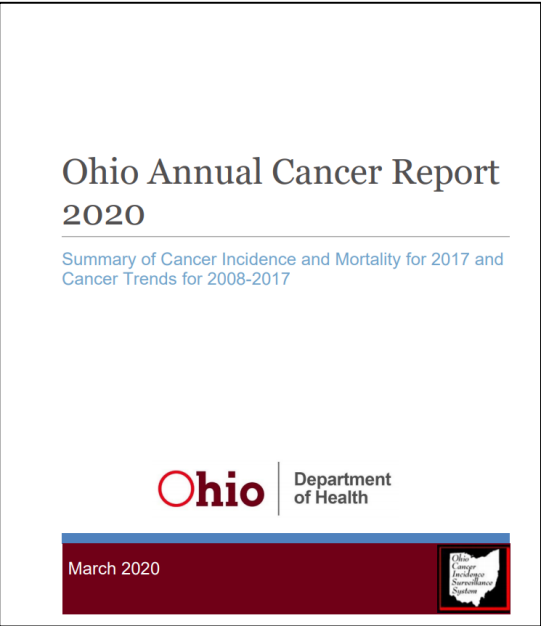
This concept is easier to understand but hard to accept. It is often shocking for Ohioans to learn that the disproportionate burden of disease and death are based on specific social, economic and environmental factors.

## Recommendations for Achieving Health Equity in Cancer

1. Develop a Universal Health Equity Goal for Cancer.
2. Visualize where cancer exists at its worst levels.
3. Understand where cancer disparities simultaneously exist at their worst levels in with other disparities Connect disparate health outcomes.
4. Understand Cancer within the Context of Overall Health Opportunity (***Health Opportunity Index***).
5. Create objectives which reflect targeted strategies to reach universal goals based on how different segments of the population are situated.

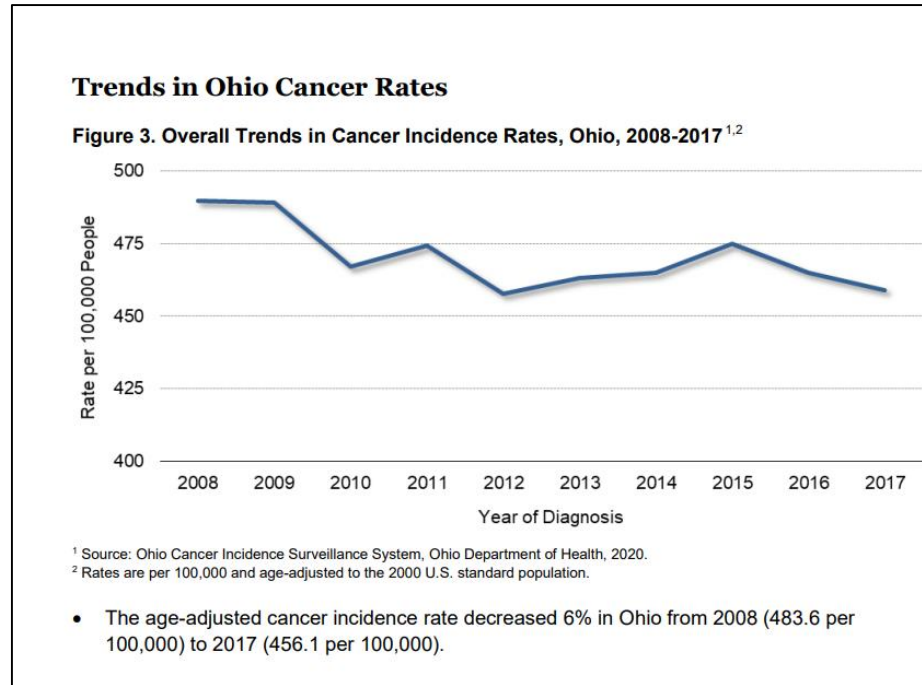
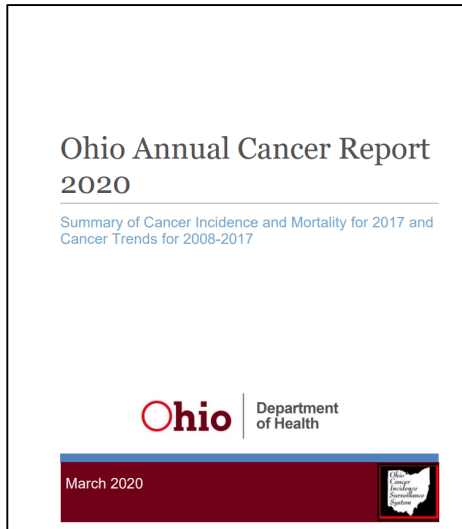
# Achieving Health Equity in Cancer

## 1. Develop a Universal Health Equity Goal for Cancer.



# Considerations for Developing a Universal Health Equity Cancer Goal

1. **Develop a Universal Health Equity Goal for Cancer.**
2. Goals must be multidimensional.
3. Have to take into account spatial differences.



1. What should be the **universal health equity** goal for cancer incidence that is achievable in Ohio over the next 10 years? This will require the identification of an achievable rate.

Maybe here?

2. Assess where is the general population relative to these proposed goals?

Maybe here?

3. What specific groups perform differently based on this goal?

# Achieving Health Equity in Cancer

## 1. Develop a Universal Health Equity Goal for Cancer.

- Cannot just have one health equity goal for cancer.
- It should be incorporated throughout the document.
- Consider health equity provisions in each component of the plan.

### 2015-2020 Cancer Control Plan

There are three components to the Cancer Plan:

- Primary Prevention
- Early Detection
- Patient-Centered Services

Each section of the plan is organized with one over-arching goal, multiple SMART (see below) objectives and evidence-based strategies for each objective. With the exception of a few developmental objectives, a data source is identified to measure the outcomes of each objective, as well as baseline and target data.

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# Achieving Health Equity in Cancer

## 1. Develop a Universal Health Equity Goal for Cancer.

- Assess where different groups are relative to the goal.
- Below are examples of how to set different goals.

### 2015-2020 Cancer Control Plan

There are three components to the Cancer Plan:

- Primary Prevention
- Early Detection
- Patient-Centered Services

Each section of the plan is organized with one over-arching goal, multiple SMART (see below) objectives and evidence-based strategies for each objective. With the exception of a few developmental objectives, a data source is identified to measure the outcomes of each objective, as well as baseline and target data.



## Goal Setting

### Access to Health Care

HOPE includes six measures of access to health care. Access to timely, affordable, and needed health care—including preventive, acute, and chronic care—is necessary for promoting health, preventing and managing disease, and reducing premature mortality across the life span. HOPE measures three key components of access to care: coverage, affordability, and availability of providers and services.

INDICATOR	DISTANCE TO HOPE GOAL	GROUPS USED TO SET HOPE GOAL
<b>Access to Primary Care</b> Portion of people living in counties with a population-to-primary care physician ratio of less than 2,000:1	NATIONAL RATE <b>81%</b> HOPE GOAL <b>100%</b>	All people in CT, DC, HI, ME, MA, NH, and RI
<b>Access to Psychiatric Care</b> Portion of people living in counties with a population-to-psychiatrist ratio of less than 30,000:1	NATIONAL RATE <b>80%</b> HOPE GOAL <b>100%</b>	All people in DE, DC, HI, NH, and MA
<b>Health Insurance Coverage</b> Portion of people under age 65 with any kind of health insurance	NATIONAL RATE <b>85%</b> HOPE GOAL <b>97%</b>	People with incomes 400% FPL or greater in MA, IA, MN, WI, and HI
<b>Affordable Health Care</b> Portion of adults who did not delay or forego any medical care they needed due to cost in the past year	NATIONAL RATE <b>85%</b> HOPE GOAL <b>95%</b>	College graduates in ND, MA, HI, IA, and MD
<b>Usual Source of Care</b> Portion of adults who have someone they consider their personal health care provider	NATIONAL RATE <b>80%</b> HOPE GOAL <b>92%</b>	College graduates in ME, MA, DE, NH, and RI
<b>Colorectal Cancer Screening</b> Portion of adults age 50-75 receiving recommended	NATIONAL RATE <b>68%</b> HOPE GOAL <b>92%</b>	College graduates in MA, RI, ME, CT, and DE

Primary Prevention

Early Detection

Patient Centered Services

### Ohio Annual Cancer Report 2020

Summary of Cancer Incidence and Mortality for 2017 and Cancer Trends for 2008-2017

Ohio Department of Health

March 2020



# Achieving Health Equity in Cancer

1. Develop a Universal Health Equity Goal for Cancer.
2. **Goals must be multidimensional and move beyond disparities.**
3. Have to take into account spatial differences.
4. Must account for health opportunity, social determinants and opportunity structures.

## Ohio Annual Cancer Report 2020

Summary of Cancer Incidence and Mortality for 2017 and Cancer Trends for 2008-2017



March 2020

## We must move beyond this approach

The Ohio Comprehensive Cancer Control Plan 2015-2020

### Cancer Disparities

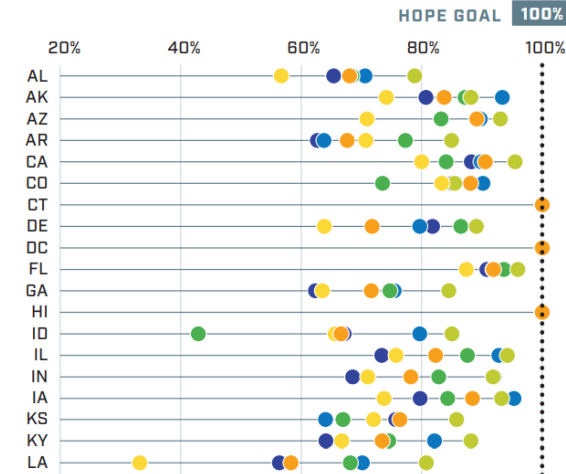
Significant disparities exist in cancer incidence rates by race/ethnicity. As shown in Table 3, the 2012 age-adjusted incidence rate for African Americans in Ohio (438.0 per 100,000) is 2 percent higher than the rate for whites (430.6 per 100,000) and is nearly double the rate for Asian/Pacific Islanders (253.7 per 100,000) for all cancer site/types combined.<sup>3</sup> The incidence rate for prostate cancer is 77 percent higher among African American males (157.2 per 100,000) compared to white males (89.0 per 100,000), and the incidence rate of multiple myeloma is more than twice as high among African Americans (10.4 per 100,000) compared to whites. Whites have a disproportionate burden of melanoma of the skin, with a 2012 incidence rate (20.0 per 100,000) that is 21 times higher compared to African Americans (0.9 per 100,000). Asian/Pacific Islanders in Ohio had lower incidence rates than other races for most cancer sites/types.<sup>3</sup>

## State Progress Toward HOPE Goal

### PERCENT LIVING IN COUNTIES WITH ACCESS TO PRIMARY CARE

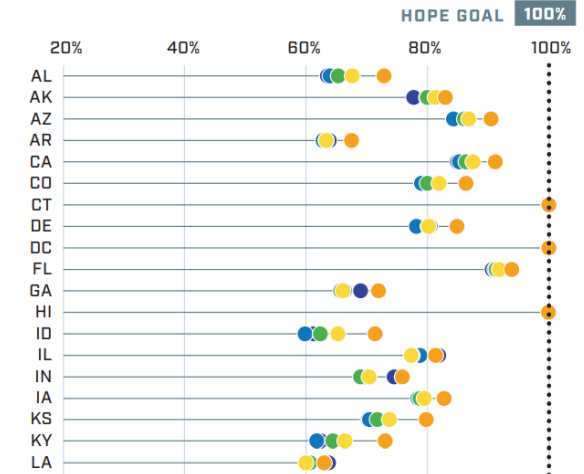
#### By Race and Ethnicity

● White   ● Black   ● Hispanic  
● Asian/PI   ● AI/AN   ● Multiracial



#### By Income

● 0-99% FPL   ● 100-199% FPL   ● 200-299% FPL  
● 300-399% FPL   ● 400%+ FPL

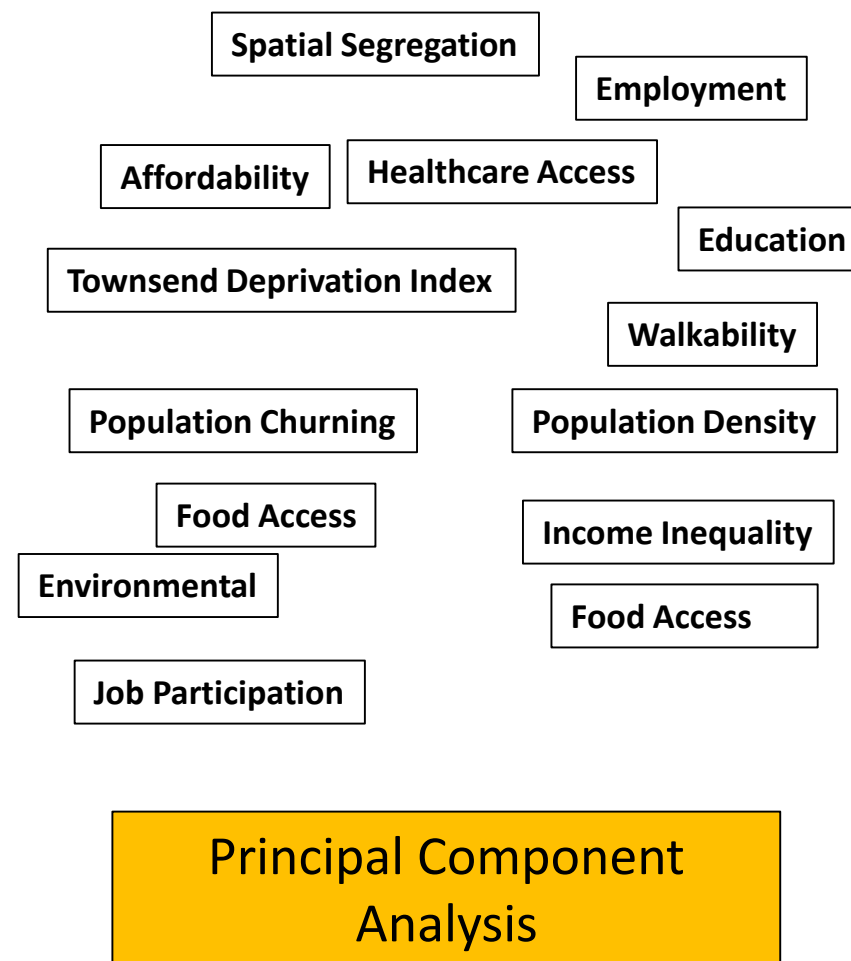


# Health Opportunity Index (HOI)

- A composite measure of the influence various Social Determinants of Health (SDOH) on health outcomes.

The HOI is developed using the statistical technique of **Principal Component Analysis (PCA)**.

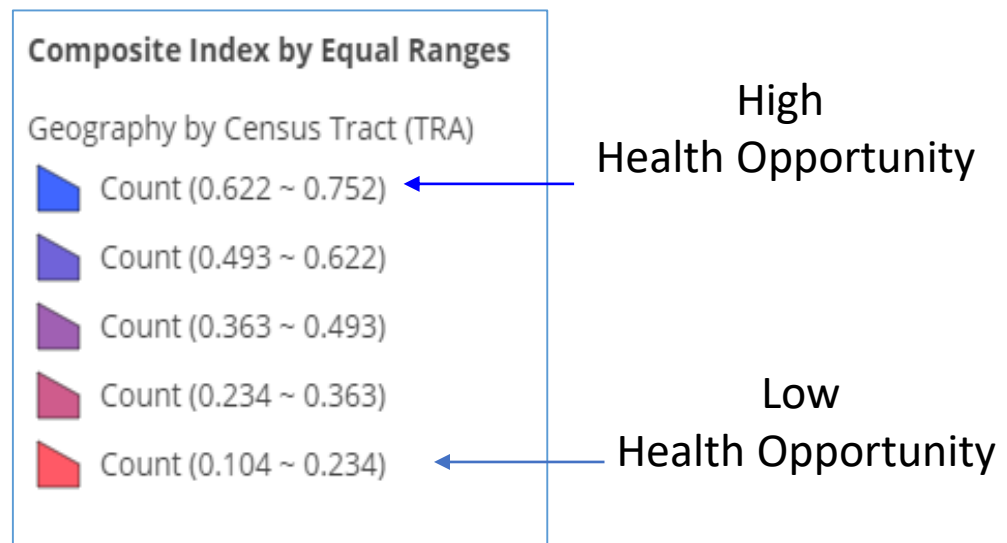
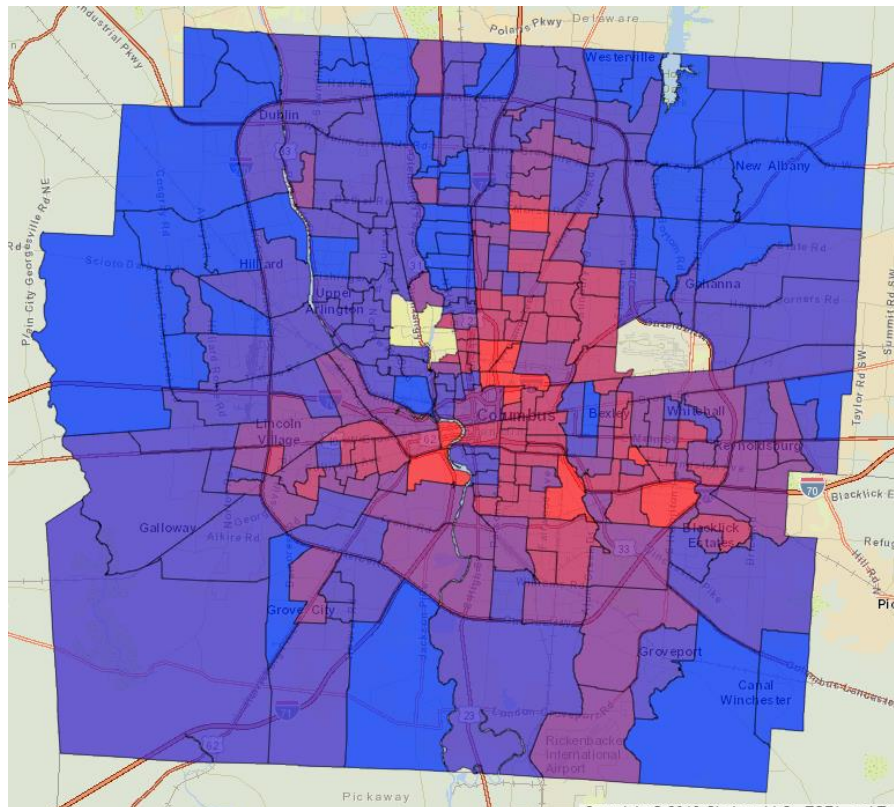
- This technique analyzes and simplifies data on SDOH into four into smaller categories(or Components).
- Enables communities to come together and focus on solutions.
- For Ohio, these components include **Environmental, Consumer, Mobility and Economic.**



# Health Opportunity Index (HOI)

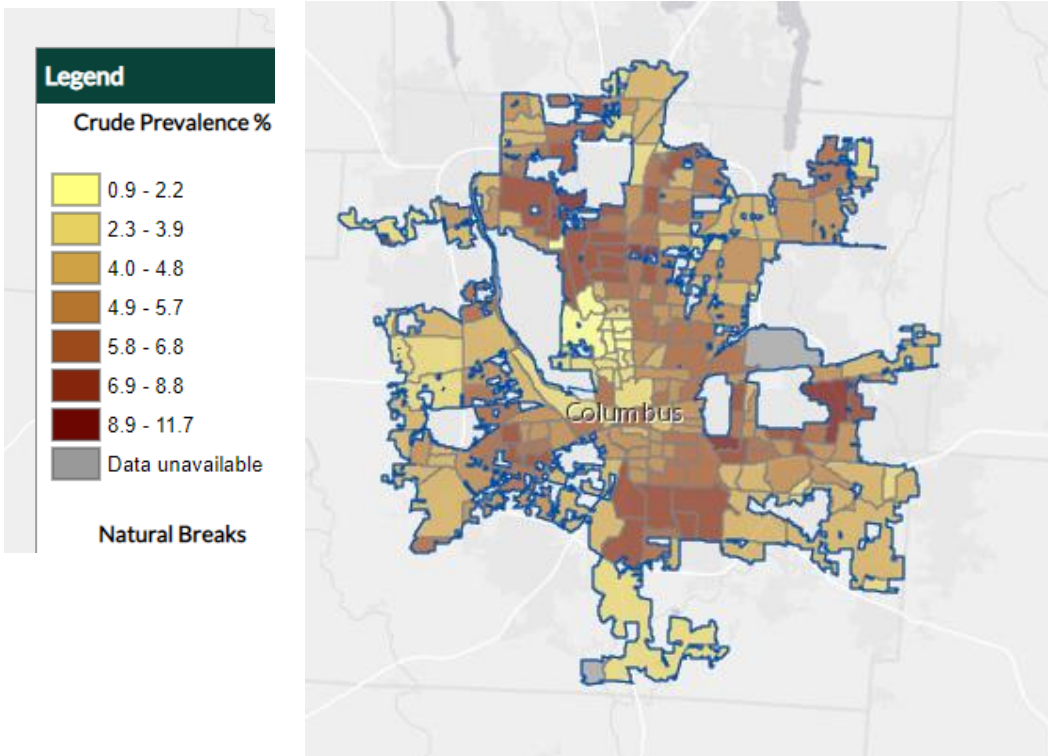
- A composite measure of overall opportunity for residents in a neighborhood to achieve good health. It also highlights the influence various Social Determinants of Health (SDOH) on health outcomes.

Health Opportunity Index by Census Tract Projected to Franklin County, Ohio

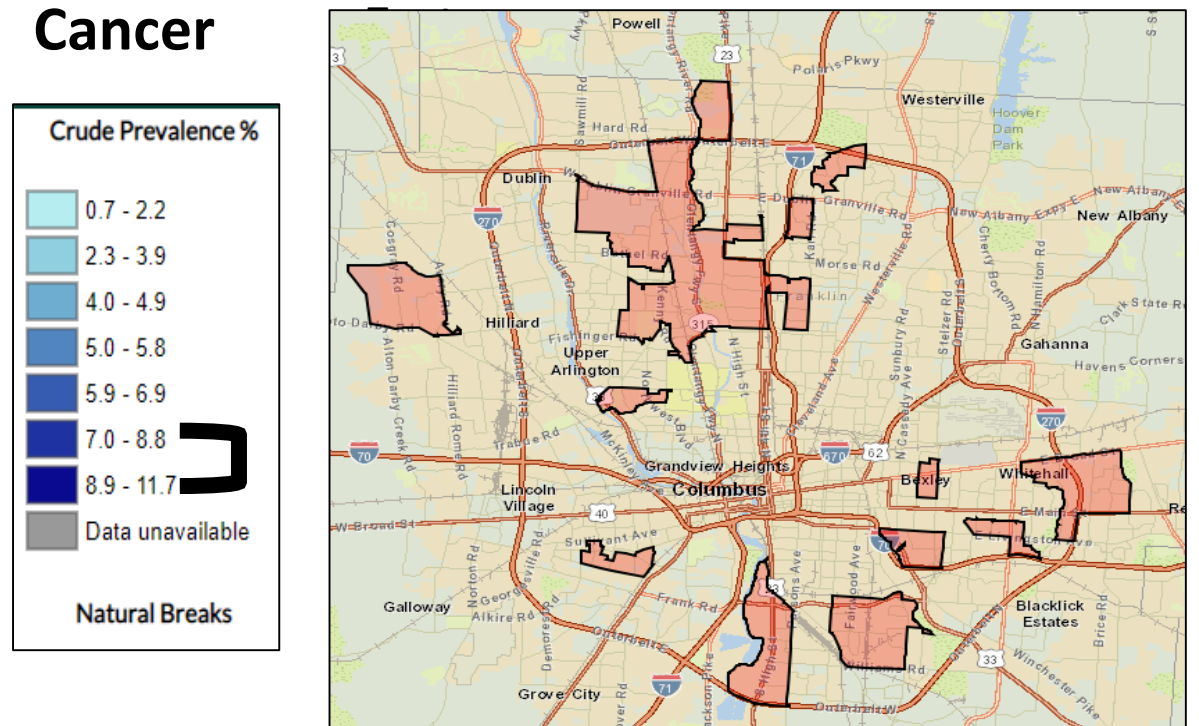


# Visualize Cancer Burden

Columbus, Ohio. 2017 CDC 500 Cities Crude Prevalence of Cancer by Census Tracts.



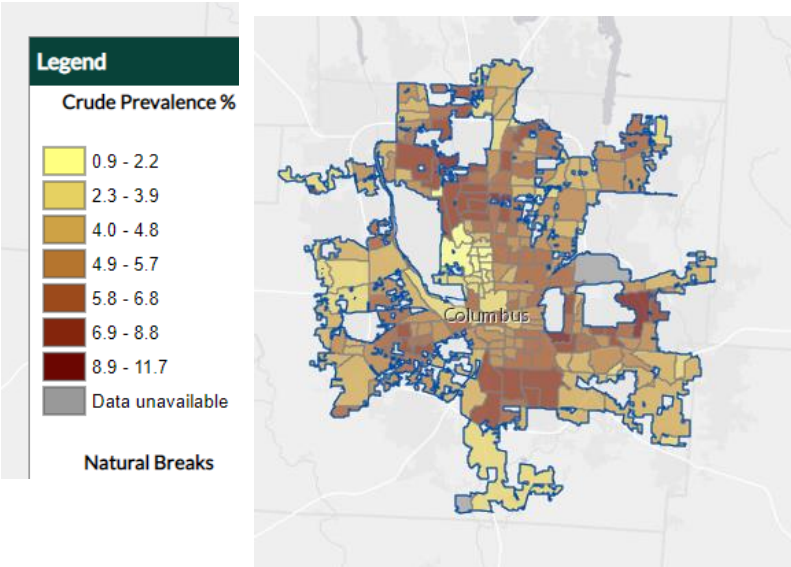
Columbus, Ohio. 2016 CDC 500 Cities Crude Prevalence of Cancer (7.0% to 11.7% by Census



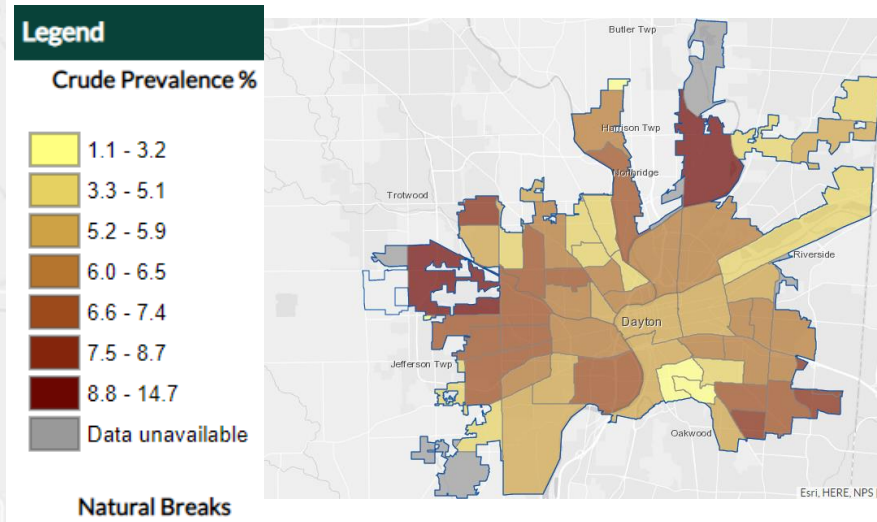
# Visualize Cancer Burden

## Targeted Strategies

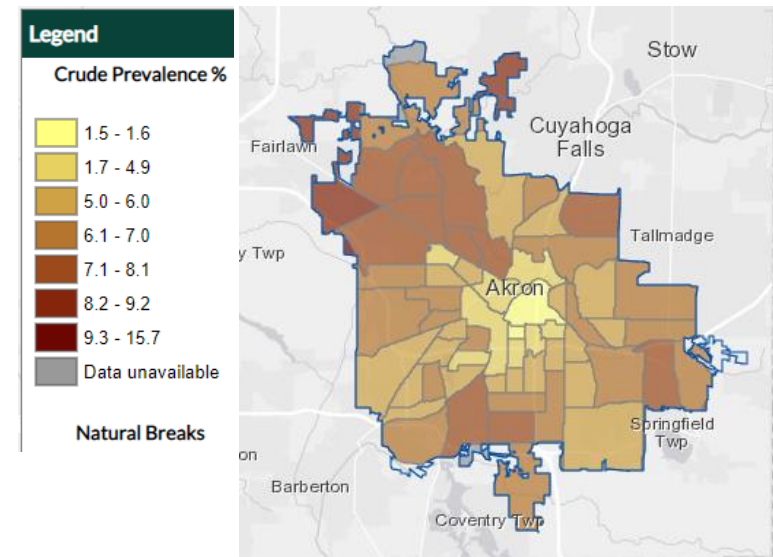
**Columbus, Ohio. 2017 CDC 500 Cities Crude Prevalence of Cancer by Census Tracts.**



**Dayton, Ohio. 2017 CDC 500 Cities Crude Prevalence of Cancer by Census Tracts**



**Akron, Ohio. 2017 CDC 500 Cities Crude Prevalence of Cancer by Census Tracts**

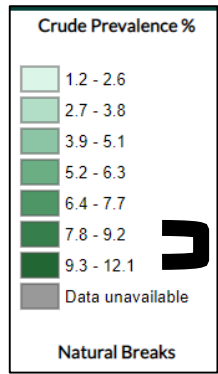


# Convergence Analysis

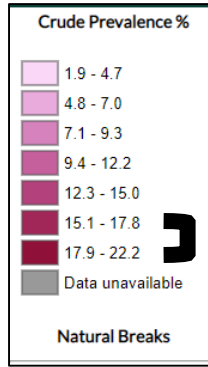
*Understand Cancer within the Context of Other Health Conditions.*

**Columbus, Ohio. Selected Health Conditions/Outcomes by Census Tract at the Highest (Worst) Levels.**

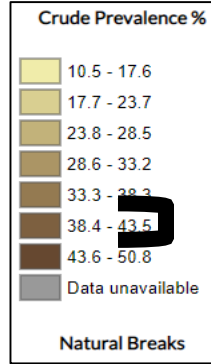
Heart Disease



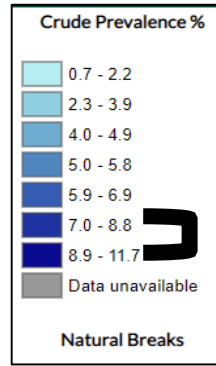
Diabetes



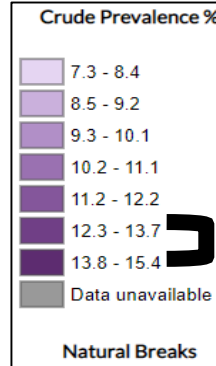
High Blood Pressure



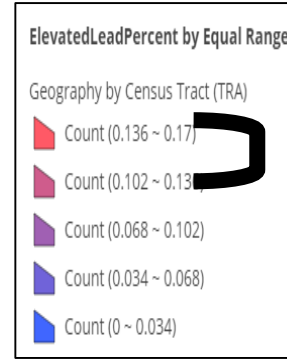
Cancer



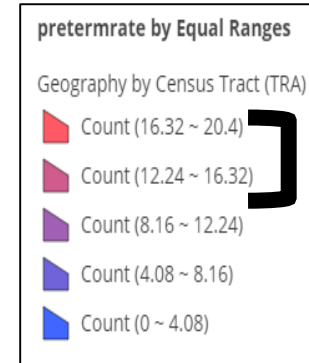
Asthma



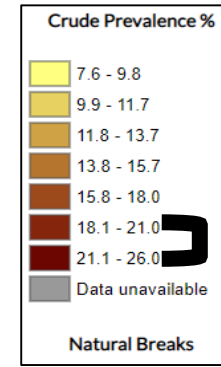
Elevated Lead



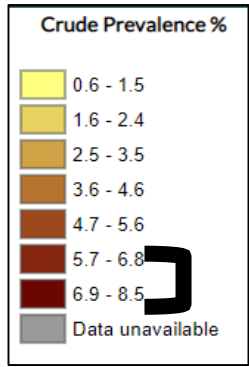
Preterm Birth



Poor Mental Health



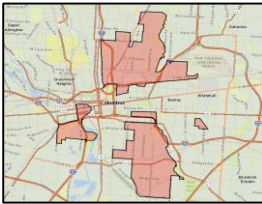
Stroke



Heart Disease



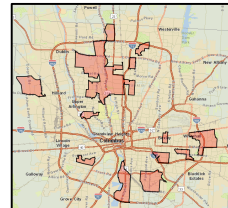
Diabetes



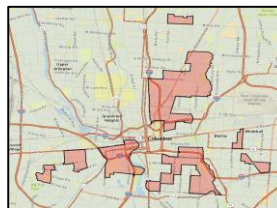
High BP



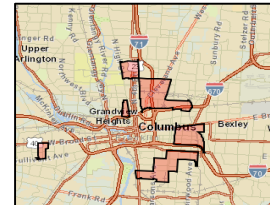
Cancer



Asthma



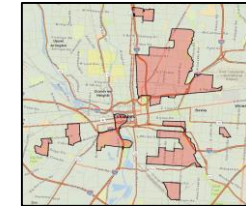
Lead



Prematurity



Stroke

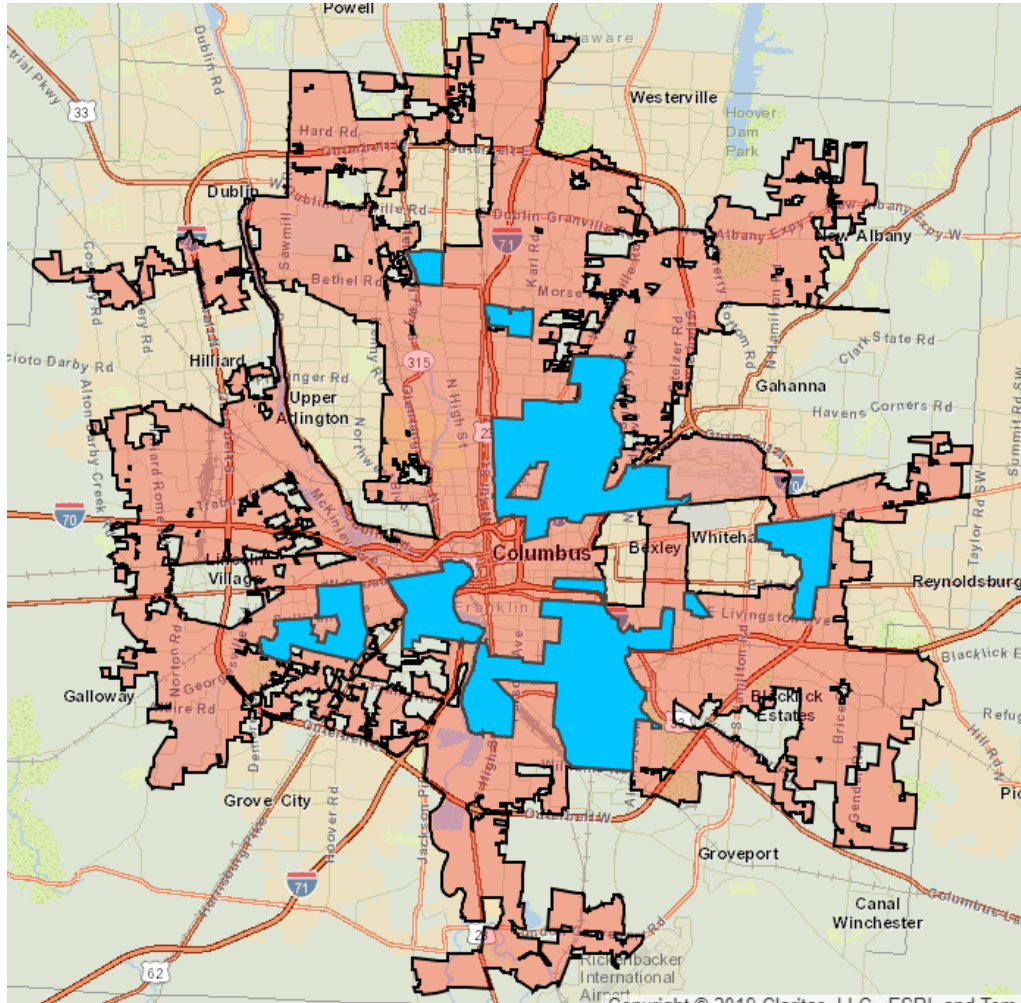


Mental Health



Using GIS technology and market research demographic data to identify census tracts with more than four (4) health conditions simultaneously at the worst levels (convergence) in Columbus, Ohio.

## Columbus City



- 37 Census Tracts
- 114,835 Population
- 54% Black (29% in Columbus)
- 36% White (60% in Columbus)
- 2% Asian
- 0.45% Native Amer/AN
- 0.17 Native Hawaiian/PI
- 3% Some Other Race
- 5% Two or More Races

- 6% Hispanic/Latino

- 0.02% Armed Forces
- 48% Employed
- 7.5% Unemployed (4.70 % in Columbus)
- 44 % Not in Labor Force



# Understanding Social Determinants Related to Cancer: Health Opportunity & Convergence Report

This tool helps to identify three dimensions. 1) Place; 2) disease convergence (where different disparities occur at their worst levels in the same place); and (3) specific social determinants which drive poor health outcomes out of control.

**Step 1:** HOI composite score and profile scores range from 0 to 1. The closer the score is to zero, the lower the chances for residents in the census tract to experience opportunity for good health. **Conversely, the closer the score is to 1, the greater chances that residents will experience high opportunities for good health.** You can also gauge health opportunity by looking at the **Quintile**. Quintile 1 reflects low health opportunity. Quintile 5 reflects high health opportunity. Life expectancy can also help gauge health opportunity.

**Step 2:** Once overall health opportunity is determined, you then can search for the social determinants which drive health opportunity. This requires you to analyze each of the Profile scores (**Environmental, Consumer, Economic and Population Mobility**) to detect which profile with the **lowest** score.

**Step 5: Interpret/Summarize Findings (2016 Data):**  
**Census Tract 3903511211** has overall low health opportunity for the residents to achieve good health. There are six (6) health conditions that exist in this census tract simultaneously at their worst levels. They include **Cancer, High Blood Pressure, Stroke, Coronary Heart Disease, Diabetes and Asthma**. The 2017 500 Cities data also reflects **COPD and Kidney Disease** also at their worst levels. A deeper examination of the HOI data reveals that the social determinants of the **Economic and Consumer Profile** drive poor health opportunity. A closer look at the Consumer Profile reveals that **material deprivation** (concentrated poverty) and **segregation** are major factors contributing to poor health opportunity in this area. Interventions to improve overall health opportunity and disparate health conditions must take into account Food Access.

Census Tract FIPS Code	Health Opportunity Index			
39035112100	<b>Environmental Profile</b> 0.724	<b>Consumer Profile</b> 0.176	<b>Economic Profile</b> 0.170	<b>Population Mobility Profile</b> 0.857
<b>Composite Index</b> 0.102	<b>Affordability</b> 0.797	<b>Education</b> 0.336	<b>Job Participation</b> 0.387	<b>Population Churning</b> 0.946
<b>Quintile</b> 1	<b>Healthcare Access</b> 0.593	<b>Food Access</b> 0.655	<b>Segregation</b> 0.088	
<b>Life Expectancy</b> 65.7	<b>Walkability</b> 0.692	<b>Material Deprivation</b> Economically active residents unemployed, households without cars, private households not owner occupied, overcrowded homes. 0.093	<b>Income Inequality</b> 0.304	
	<b>Employment</b> 0.855			
	<b>Pop Density</b> 0.842			
	<b>Pollution</b> 0.612			
	<b>Environmental Profile</b> 0.724			

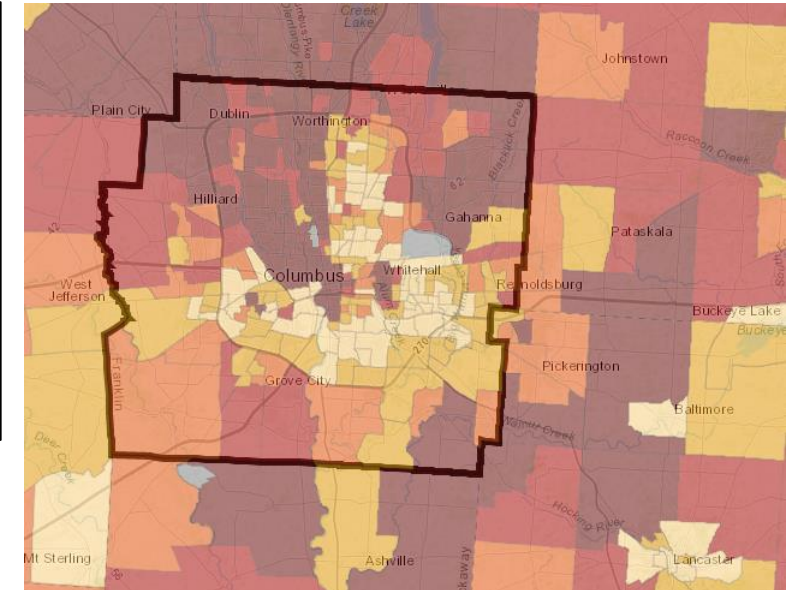
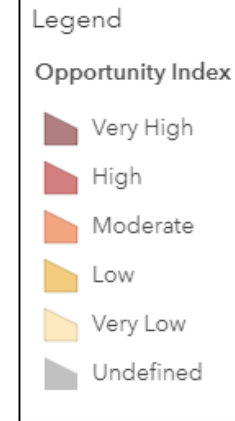
**Convergence Analysis** 6 Health outcome(s) simultaneously at their worst levels:  
 Cancer  
 High Blood Pressure  
 Stroke  
 Coronary Heart Disease  
 Diabetes  
 Asthma

**Step 3:** Based on the Profile with the lowest score, (in this case, Economic & Consumer Profiles) then select the social determinant(s) for that profile with the lowest score (in this case, **Material Deprivation and Segregation**).

**Step 4:** Available data is used for the Convergence Analysis (CA). The CA reveals that there are six (6) health outcomes that simultaneously at their worst levels in this census tract.

## Kirwan Institute for the Study of Race & Ethnicity 2020-2021 Opportunity Index by Census Tract Projected to Franklin County, Ohio.

- The maps allow for an examination of the relationship between marginalized populations and opportunity, placing the equity challenges facing marginalized communities in a geographical perspective, and giving insights into the range of meaningful choices available to an individual or a community.
- Maps can stimulate dialogue and consensus-building among stakeholders that can help inform the design of equity advocacy efforts, strategic planning, and program evaluation and design.”
- ***Opportunity Mapping Issue Brief. Place Matters: Using Mapping to Plan for Opportunity, Equity, and Sustainability.***



This animated slide is designed to illustrate how to use GIS technology to help address social determinants and opportunity structures related to achieving equity in cancer.

Combine All Four

This is the map when you combine all four analysis.

Kirwan Institute O

Legend

Ohio HOI Spatially Joined with Opportunity Index

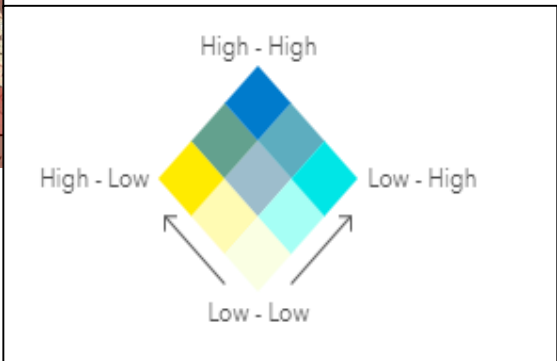
Relationship

- ↖ CompOIn
- ↗ Composite Index

Legend

Opportunity Index

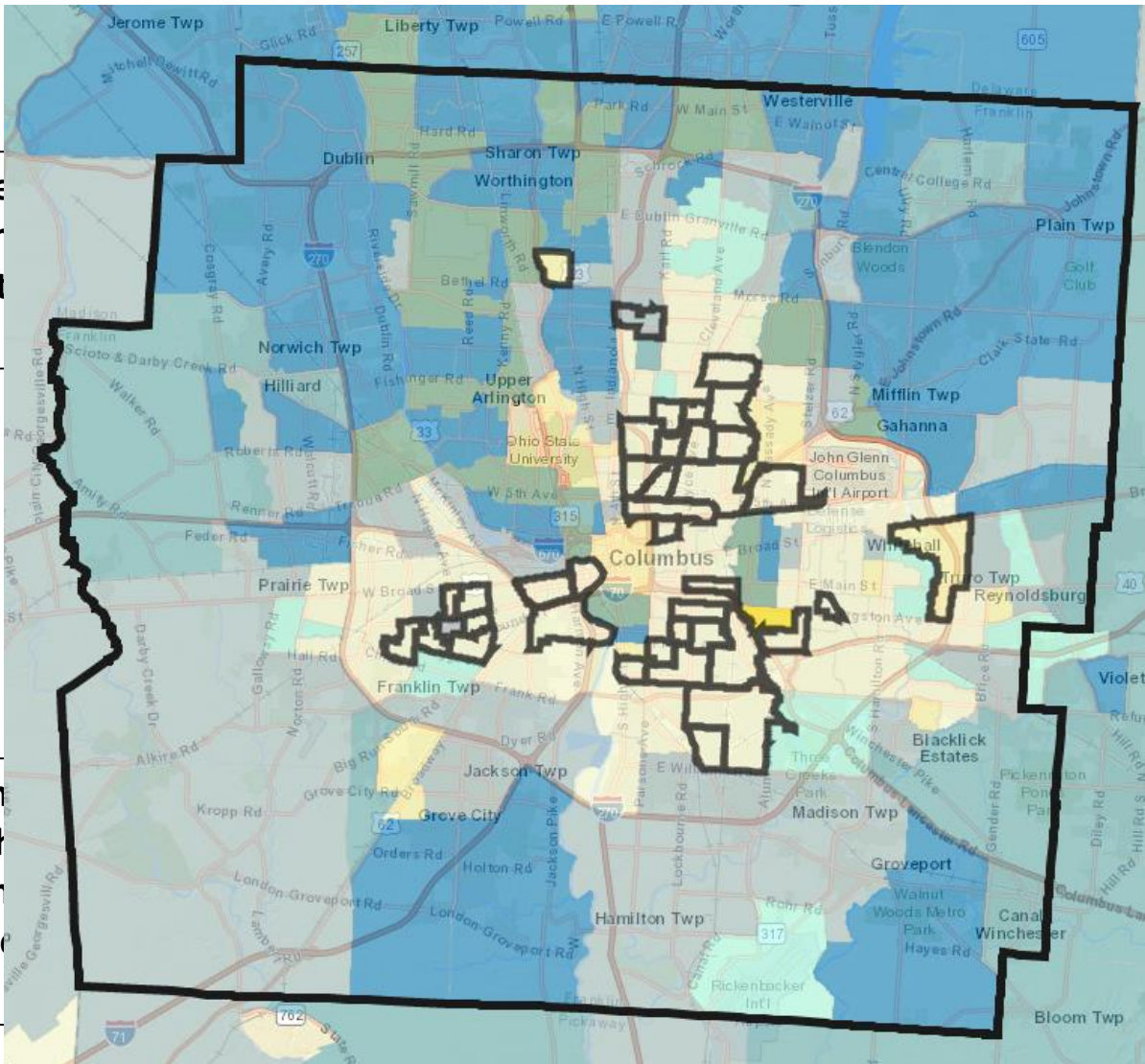
- Very High
- High
- Moderate
- Low
- Very Low
- Undefined



Disparate Convergence Analysis

CDC's Social Vulnerability Index (SVI) - 2014 overall SVI, census tract level

Low Health Opportunity

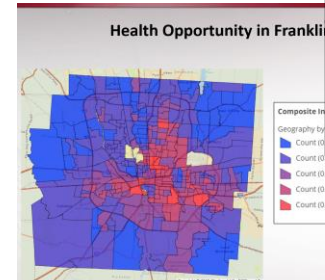


data helps identify 4 or more health inequities that exist (with cancer) in the worst levels in neighborhoods.

ty Index

a helps the resilience of neighborhoods to fully endure natural and man-made disasters.

Health Opportuni



and worst opportunity structures related to health and associated social determinants.