Cancer Prevention Works

Future Directions in Cancer Prevention and Control at CDC

Mary C. White, ScD
Chief, Epidemiology and Applied Research Branch

CPCRN5 Kickoff Meeting
January 27-28, 2020

CDC's Mission

The nation's health protection agency, CDC works 24/7 to save lives and protects people from health threats.

- **Conducts critical science**

- **Provides health information**

- **Responds to health threats**

Division of Cancer Prevention and Control

Reliable. Trusted. Scientific.

How CDC Prevents Chronic Diseases and Promote Health

❑ **Domain 1: Epidemiology and Surveillance**
  ▪ Surveillance and epidemiology guide us in putting our resources to the best use

❑ **Domain 2: Environmental Approaches**
  ▪ Improving environments to make it easier for people to make healthy choices

❑ **Domain 3: Health Care System Interventions**
  ▪ Strengthening health care systems to deliver prevention services that keep people well and diagnose diseases early

❑ **Domain 4: Community Programs Linked to Clinical Services**
  ▪ Connecting clinical services to community programs that help people prevent and manage their chronic diseases and conditions

Leading causes of death in the U.S., 2016

Age years (Sex)	#1	#2
All ages (male)	Heart disease	Cancer
All ages (female)	Heart disease	Cancer
<20 (male)	Accidents	Assault
<20 (female)	Accidents	Cancer
20-39 (male)	Accidents	Suicide
20-39 (female)	Accidents	Cancer
40-59 (male)	Heart disease	Cancer
40-59 (female)	Cancer	Heart disease
60-79 (male)	Cancer	Heart disease
60-79 (female)	Cancer	Heart disease
≥80 (male)	Heart disease	Cancer
≥80 (female)	Heart disease	Cancer

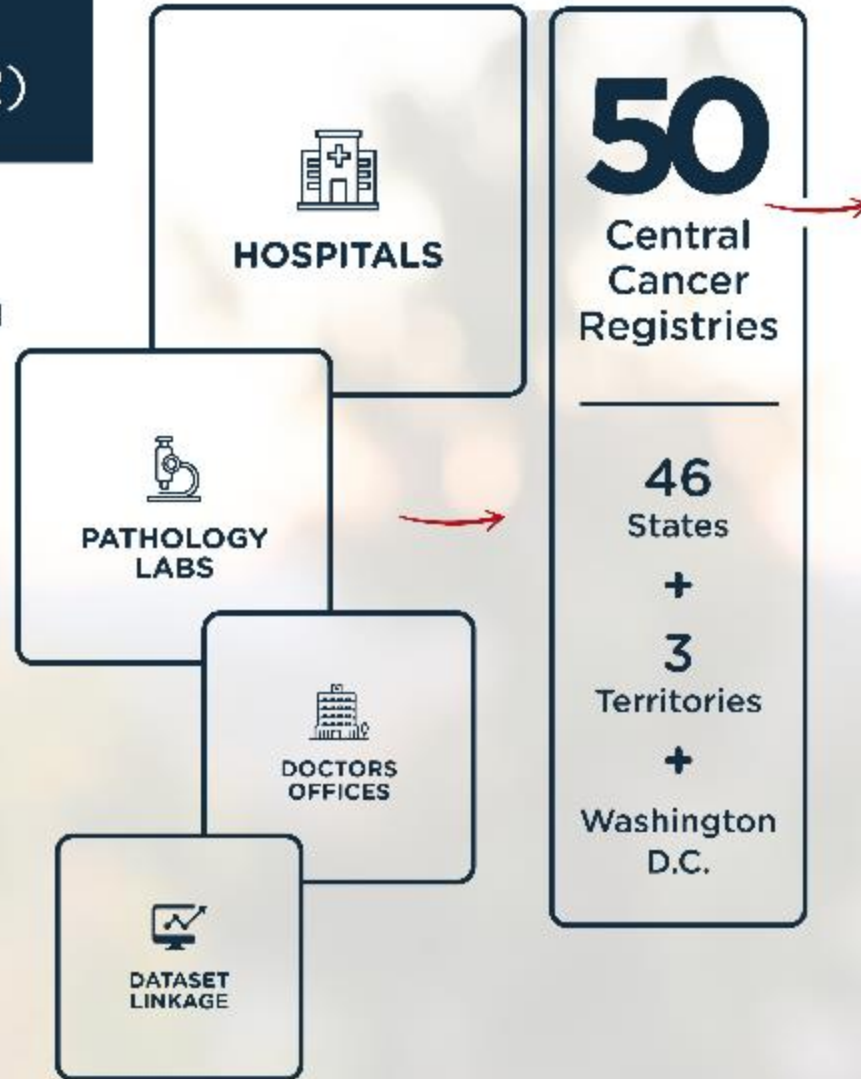*Cancer is the leading cause of premature death (before age 80)*

Catalyzing Cancer Prevention and Control
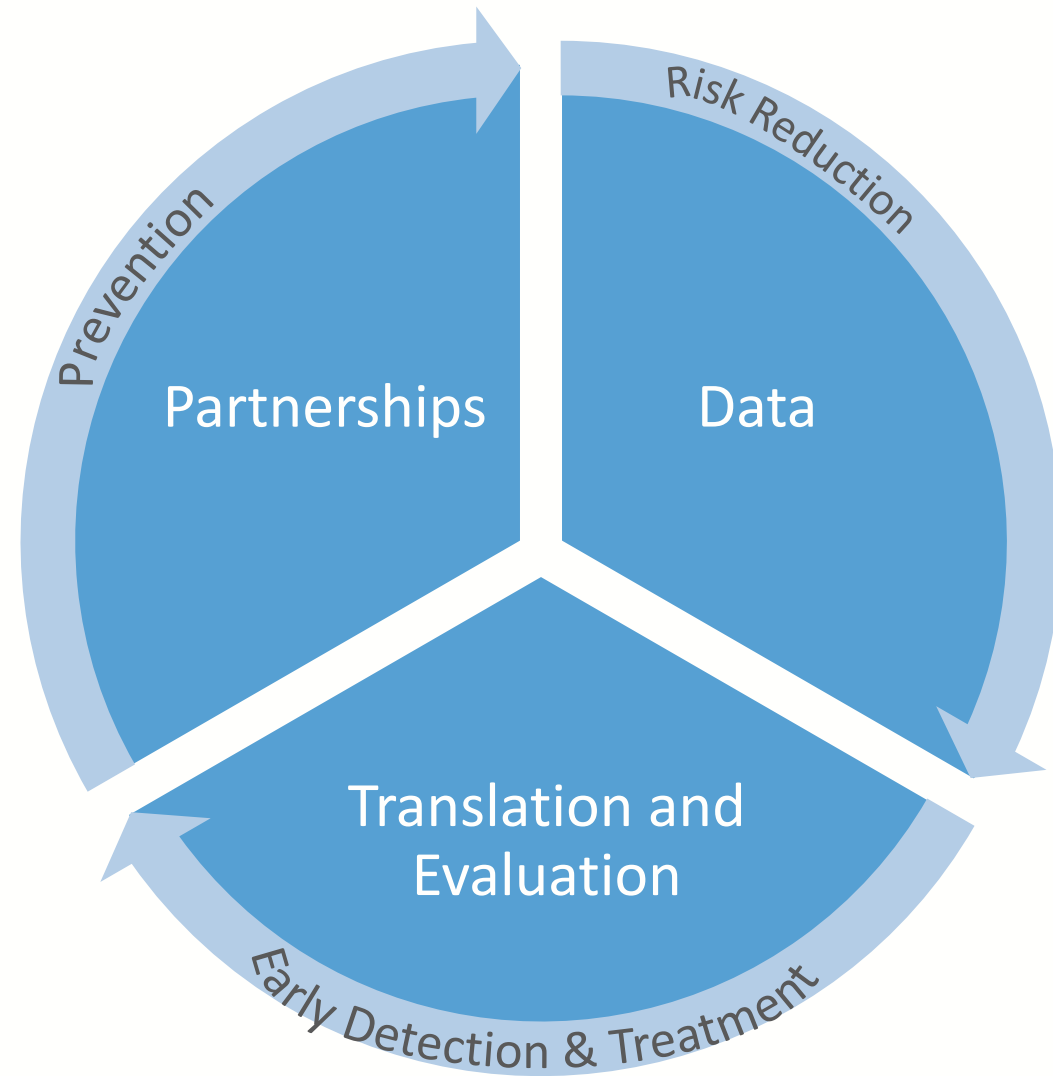
Positioned to Drive Outcomes

Division of Cancer Prevention and Control   Reliable. Trusted. Scientific.

National Program of Cancer Registries (NPCR)

- Coordinates collection, verification and reporting of important information on all reportable cancer cases.

- Helps identify better ways to prevent, treat and control cancer.

HOSPITALS

PATHOLOGY LABS

DOCTORS OFFICES

DATASET LINKAGE

50 Central Cancer Registries

---

46 States

+

3 Territories

+

Washington D.C.

NPCR
NATIONAL PROGRAM of CANCER REGISTRIES

US CS
U.S. Cancer Statistics
The Official Federal Cancer Statistics

- Data Visualization Tool
- State Cancer Plans
- Public Use Dataset
- Reports & Research

Over 1.7 million new cases & nearly 600,000 deaths annually.

Measuring Progress. Targeting Action.

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention
CDC

National Breast & Cervical Early Detection Program

Nearly 30 Years of outreach, education, screening, diagnostic testing

- Serves low-income, uninsured and underinsured women

- Screening and Diagnostic Services

- Special emphasis on women geographically or culturally isolated, or of racial or ethnic minorities

Colorectal Cancer Screening

Increasing population-level Colorectal Cancer Screening Rates

Colorectal Cancer Control Program

- System-level integration into primary care systems

- Evidence-based strategies

- Continuous evaluation and improvement

Screen for life

Colorectal Cancer Control Program
Funded by the Centers for Disease Control and Prevention

Comprehensive Cancer Control

Collaborating to Conquer Cancer

Priorities

- Emphasize Primary Prevention of Cancer
- Support Early Detection and Treatment Activities
- Address the Public Health Needs of Cancer Survivors
- Implement PSE Changes to Guide Sustainable Cancer Control
- Promote Health Equity as is relates to cancer control
- Demonstrate Outcome through Evaluation

Looking to the Future

Jan. 8, 2020

The New York Times

Cancer Death Rate in U.S. Sees Sharpest One-Year Drop

Breakthrough treatments for lung cancer and melanoma have driven down cancer mortality overall — and from 2016 to 2017 spurred the largest-ever decline.

Every cancer statistic can be followed by a "Yes, and…"

Overall cancer death rates have declined

- But not for all cancer types, subpopulations, or geographic areas
- Absolute number of cancer deaths have increased, due to changing demographics (age)
- Incidence and/or death rates have increased for several types of cancer
- Number of new cases projected to increase, even if incidence rates remain stable, due to increase in number of older adults
- Cancer disparities persist

Cancer Health Disparities Defined

- **NCI defines as**:
  "adverse differences in cancer incidence, prevalence, death, survivorship or burden of cancer or related health conditions that exist among **specific population groups** in the United States."

- **Population groups**:
  - age
  - disability
  - education
  - ethnicity
  - gender
  - geographic location
  - income
  - race

All People Free of Cancer

PREVENTION
Eliminate preventable cancers

SCREENING
All people get the right screening at the right time for the best outcome

CANCER SURVIVORS
Cancer Survivors live longer, healthier lives

Strategic Priorities

Reduce risk of cancer

Scale best practices to increase screening outcomes

Improve health and wellbeing for cancer survivors

Guiding Principles

| Equity | Begin with the End in Mind | Collaboration | Targeted Communications |

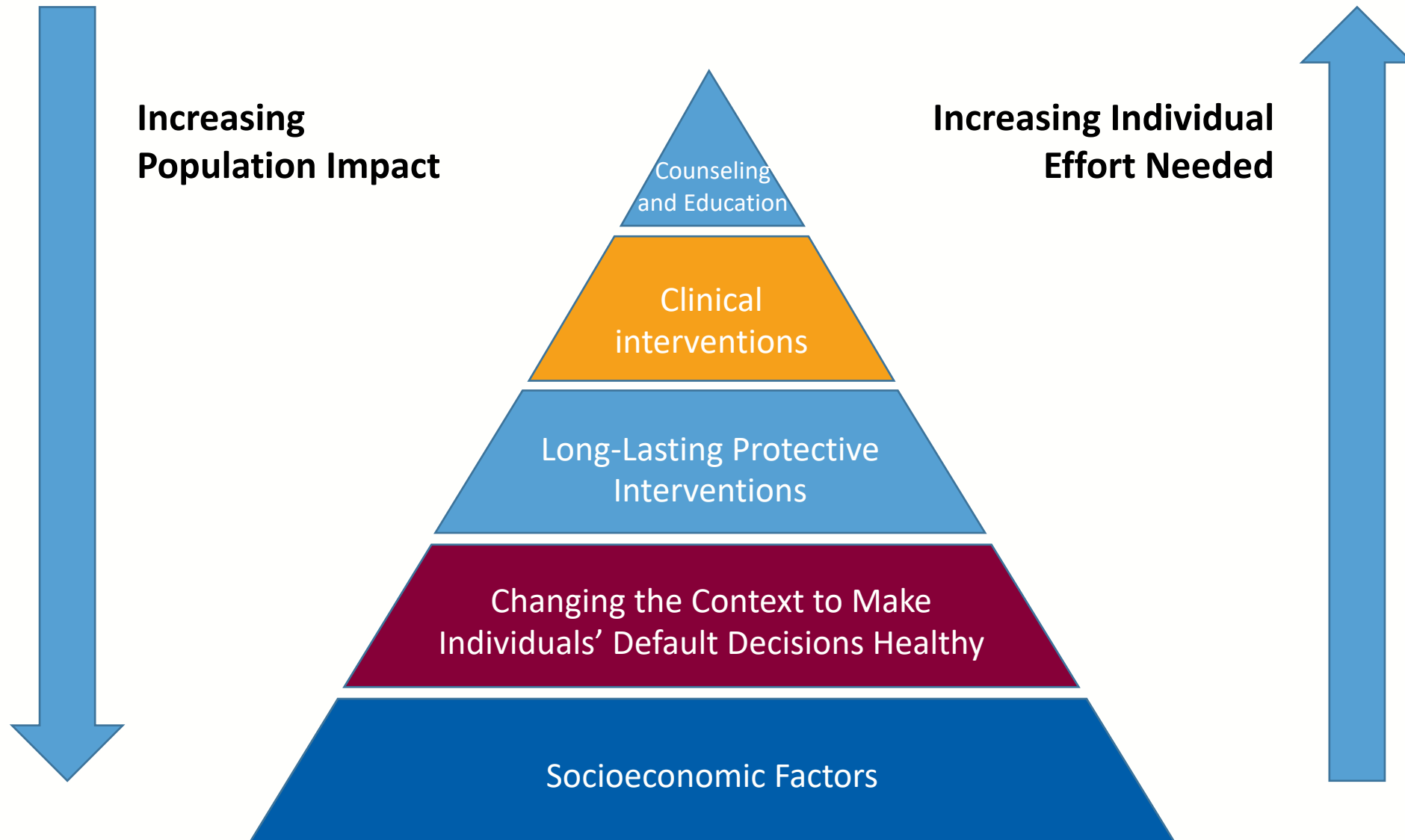### Strengths

| Data | Translation & Evaluation | Partnership |

Advancing Health Equity

Public Health 3.0: Focus on the Social Determinants of Health

The Health Impact Pyramid

Increasing Population Impact

Increasing Individual Effort Needed

Counseling and Education

Clinical interventions

Long-Lasting Protective Interventions

Changing the Context to Make Individuals' Default Decisions Healthy

Socioeconomic Factors

Frieden TR. A Framework for Pubic Health Action: The Health Impact Pyramid. AJPH 2010;100(4):590-5.
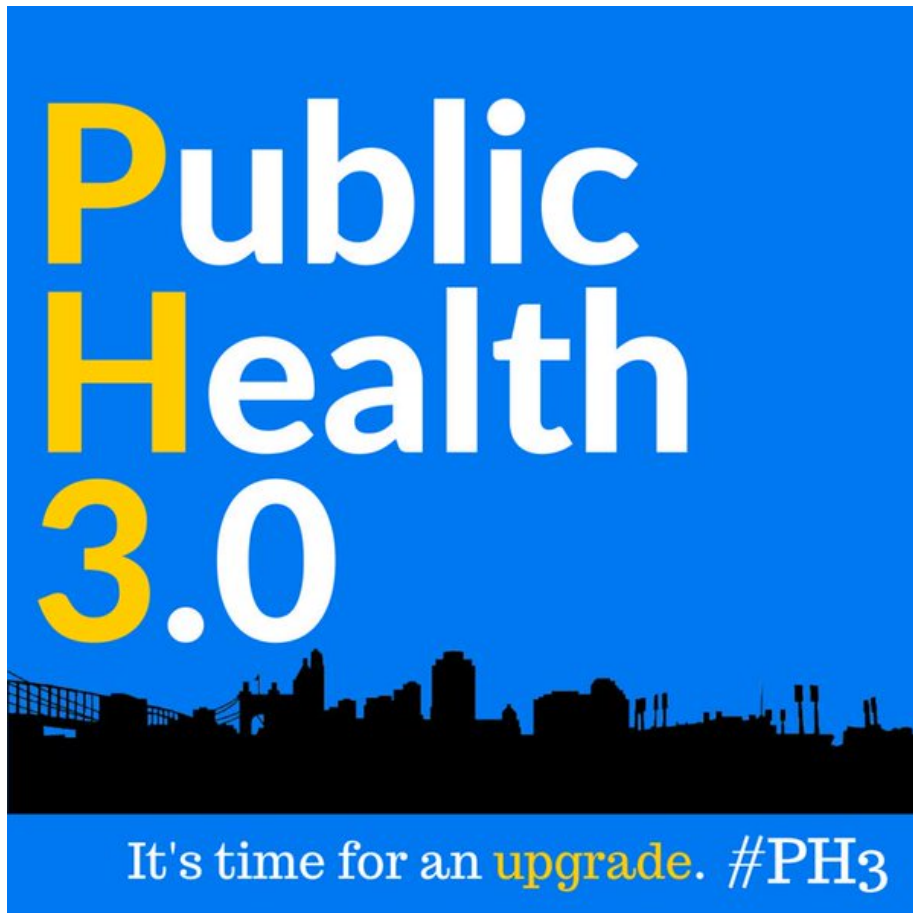
Tackling social inequities

What is "modifiable"?

- Non-modifiable
  - Age

  - Race/ethnicity

  - Genetics

  - Poverty

- Potentially modifiable
  - Factors that accelerate aging

  - Policies that prohibit discrimination

  - Gene expression (epi-genetics)

  - Educational and economic opportunities
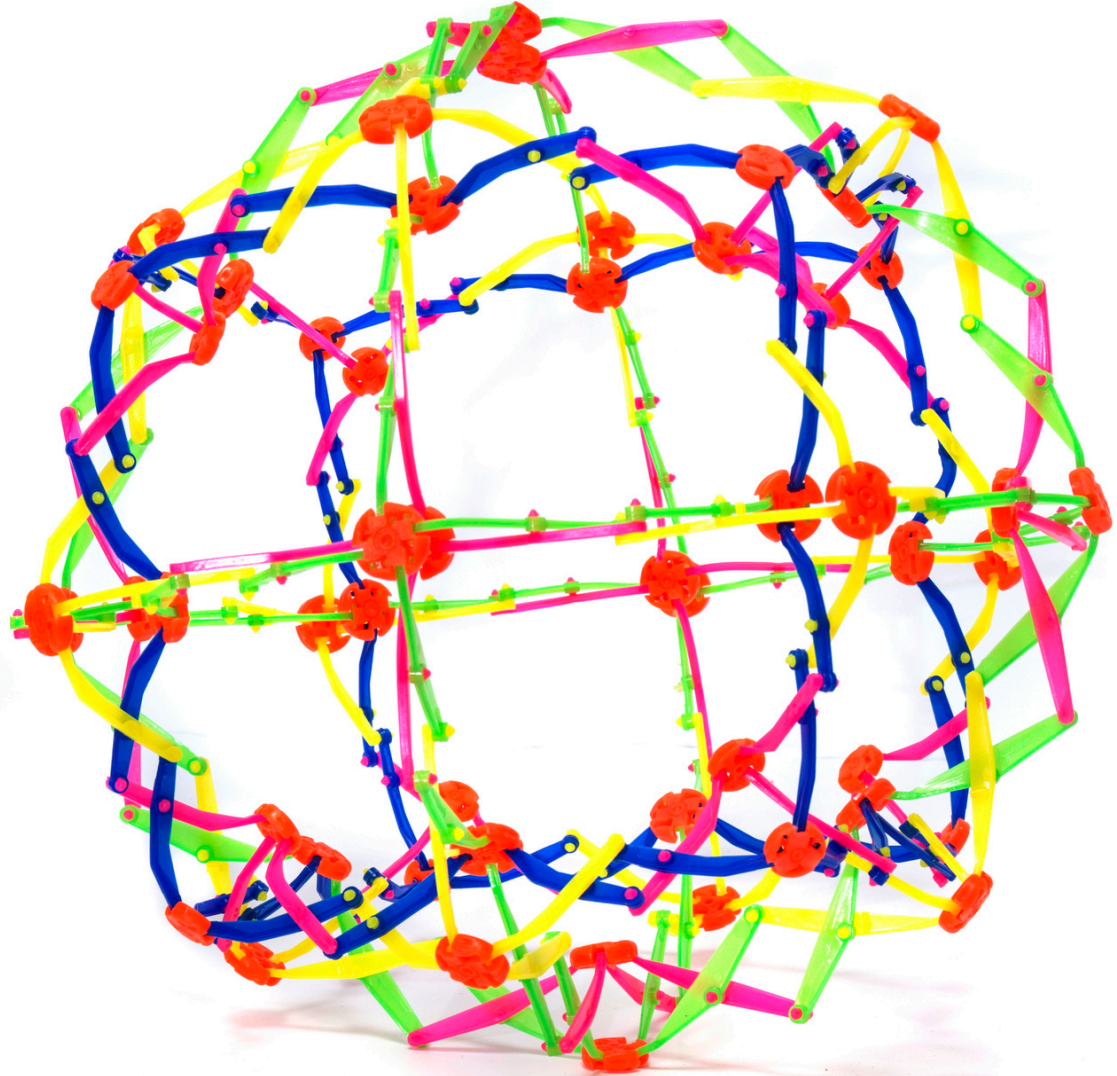
Reliable. Trusted. Scientific.

Advancing Science

Data to Action

Science Impact Framework:

- Disseminating Science
- Creating Awareness
- Catalyzing Action
- Effecting Change
- Shaping the Future

"One of the things that bothers me the most is when we leave science on the shelf."
Robert Redfield, MD, Director, CDC

Thank you!

Go to the official federal source of cancer prevention information:
www.cdc.gov/cancer

Cancer Prevention Works

Division of Cancer Prevention and Control
Reliable. Trusted. Scientific.