National Cancer Institute

CENTER FOR GLOBAL HEALTH

Master Course: Cancer Control Planning and Implementation

Webinar #4

Addressing the Cancer Control Continuum through National Cancer Control: from Cancer Prevention through Early Diagnosis

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

THE UNIVERSITY OF TEXAS
MD Anderson Cancer Center
Making Cancer History®

Cancer Control Planning & Implementation: Prevention

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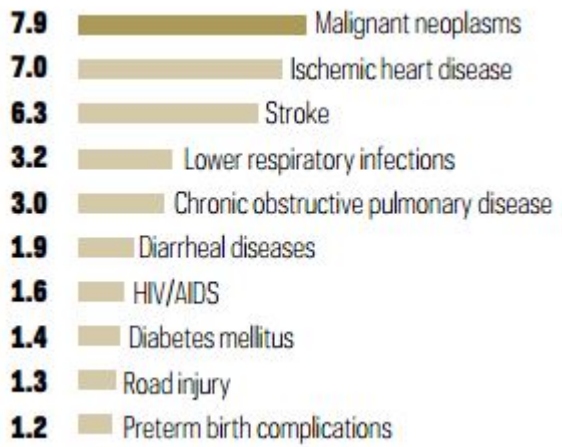
The Global Burden of Cancer

Cancer is the Leading Cause of Death Worldwide (2011)



Estimates of Total Annual Cost of Cancer Globally (2010)

$1.2 – $2.5 trillion

2012

New cases: 14.1M

57% in less-developed regions

Deaths: 8.2M

63% in less-developed regions

2025

New cases: 19.3M

59% in less-developed regions

Deaths: 11.4M

68% in less-developed regions

Sources: Jemal, et al. The Cancer Atlas, 2nd Ed. Atlanta, GA: ACS; 2014.;
The Economics of Cancer Prevention & Control, Data Digest 2014. World Cancer Leaders' Summit 2014.

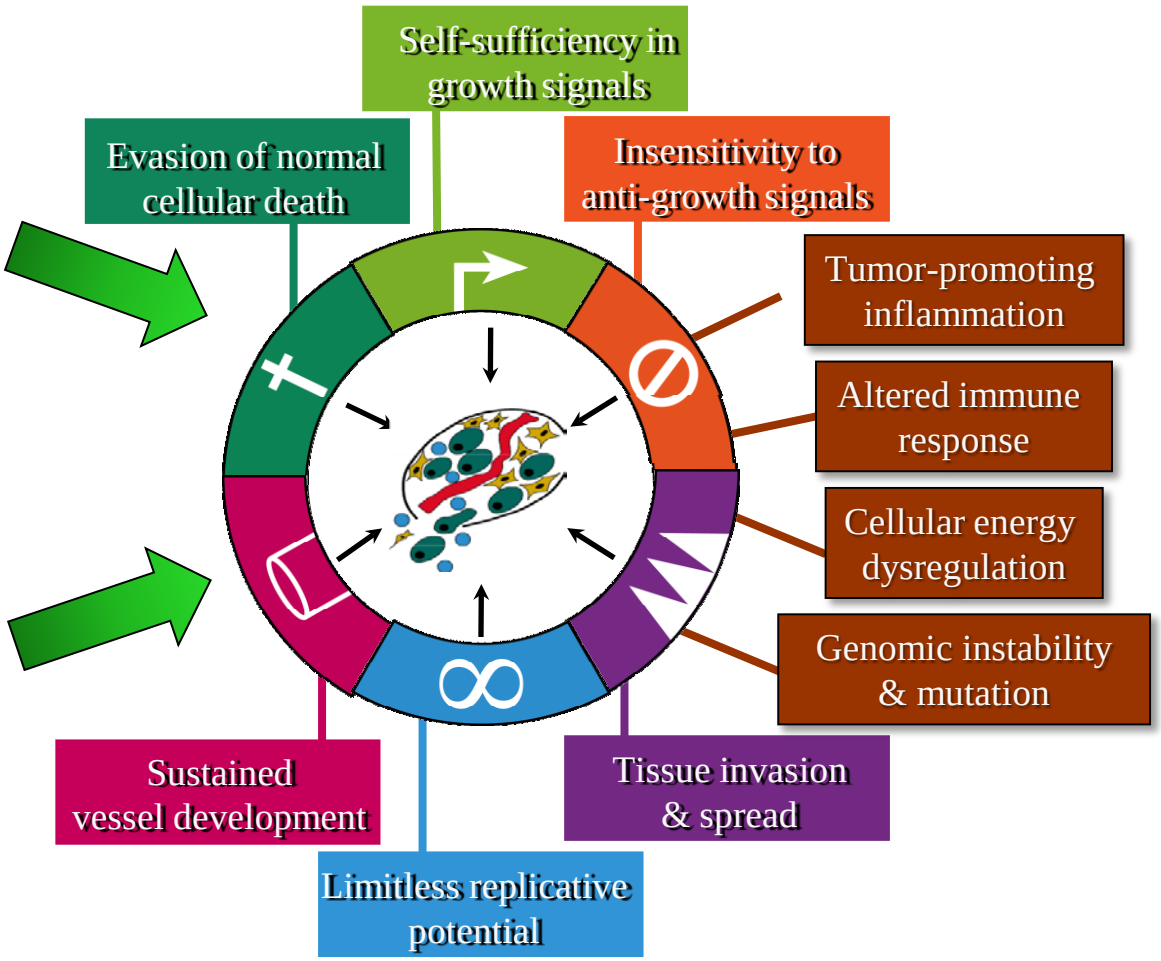
Cancer Results From An Interplay of Inherited Factors & Exposures That Damage Cellular/Tissue Growth Control & Identity

"Non-modifiable" Risk Factors

- Major defects in cancer-promoting/inhibiting genes
- Subtle differences in genetic coding or expression

"Modifiable" Risk Factors

- Tobacco
- Poor diet
- Physical inactivity
- Viruses
- Occupational exposures



Rationale for Cancer Prevention

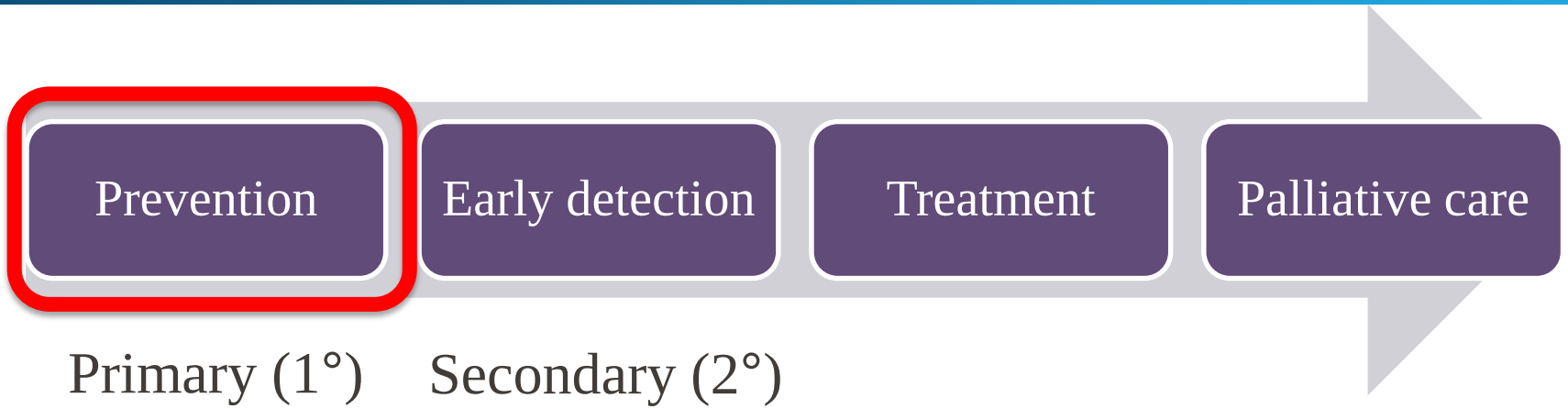
- The burden of cancer is rising due to aging and population growth
  - Particularly in less-developed, less-resourced regions
- Cost of treating cancer is rising
- Difficult global economic environment
- Cancer more often due to environment / lifestyle, than genetics
  - At least 33% - 50% of all cancers can be prevented with knowledge we already have
- Prevention may have benefits beyond those immediately anticipated by promoting health and preventing other NCDs

Investing just $11.4B in a set of core prevention strategies in LMICs can yield a savings of up to $100B in cancer treatment costs

"Cancer Prevention Offers the Most Cost-Effective Long-Term Strategy for the Control of Cancer" --WHO

Sources: Jemal, et al. The Cancer Atlas, 2nd Ed. Atlanta, GA: ACS; 2014.;
The Economics of Cancer Prevention & Control, Data Digest 2014. World Cancer Leaders' Summit 2014.

Comprehensive Cancer Control



Primary (1°) Secondary (2°)

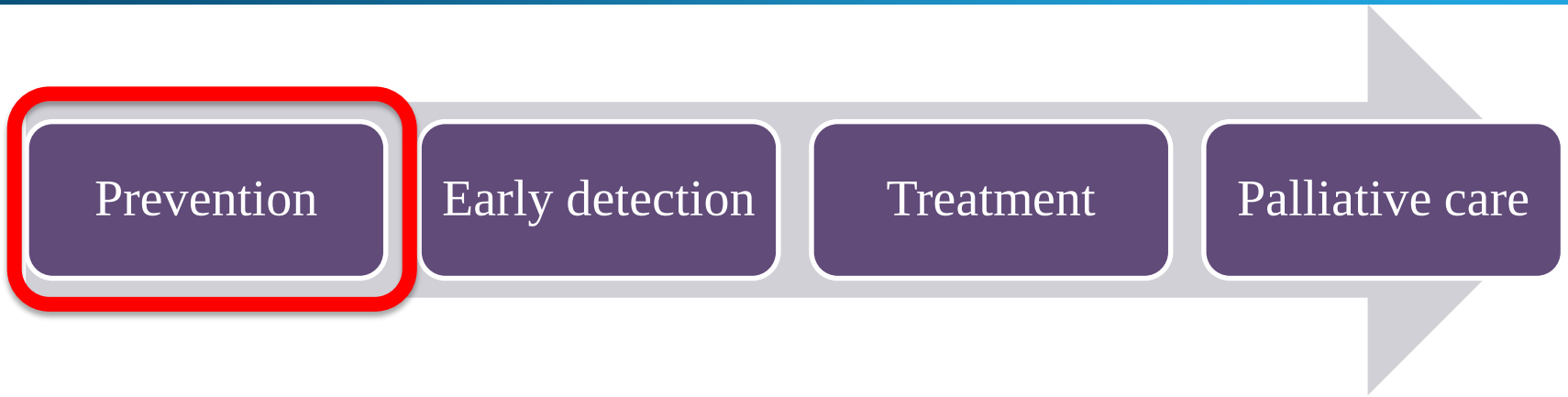
***Primary Prevention*:**

Aims to prevent a disease before it ever occurs

Focus is on reducing/controlling established risk factors

Occurs in 2 domains: personal & population

Objectives of Primary Prevention



***Primary Prevention*:**

Reduce cancer incidence

- And its associated economic & emotional costs

Improve quality of life

- Risk factors shared among top non-communicable diseases (NCDs)

Emphasize health promotion & wellness, rather than disease

The Global Burden of Lifestyle Risk Factors

TOBACCO

20% of all cancer deaths

Associated with 16 types of cancer

~ 1B people to die in 21st century

DIET, PHYSICAL ACTIVITY (PA), OBESITY

Obesity increasing worldwide

From 857M in 1980 to 2.1B in 2013

31% of adults do not meet WHO PA recommendation

INFECTIOUS AGENTS

16.1% of all cancers

~23% in less-developed regions

~7% in more-developed regions

ALCOHOL

~6% of all cancers

~6% of all cancer deaths

770,000 cases

480,000 deaths

Sources: Jemal, et al. The Cancer Atlas, 2nd Ed. Atlanta, GA: ACS; 2014.; Praud, et al., Int J Cancer, v.138(6); 2016.

WHO "Best Buys" Are a Core Set of Recommended Preventive Interventions for Priority Scale-Up

A best buy is:

- Cost-effective
  - Cost-effectiveness = the efficiency with which an intervention produces health outcomes
- Feasible
- Low-cost
- Appropriate to implement within the constraints of the local health system

'Highly cost-effective' = generates an extra year of healthy life (equivalent to averting one disability-adjusted life year) for a cost less than average annual income or GDP per person in country or region in question.

Source: Scaling up action against non-communicable diseases: How much will it cost? World Health Organization (WHO), 2011.

Tobacco Use – WHO Best Buy

4 Interventions:

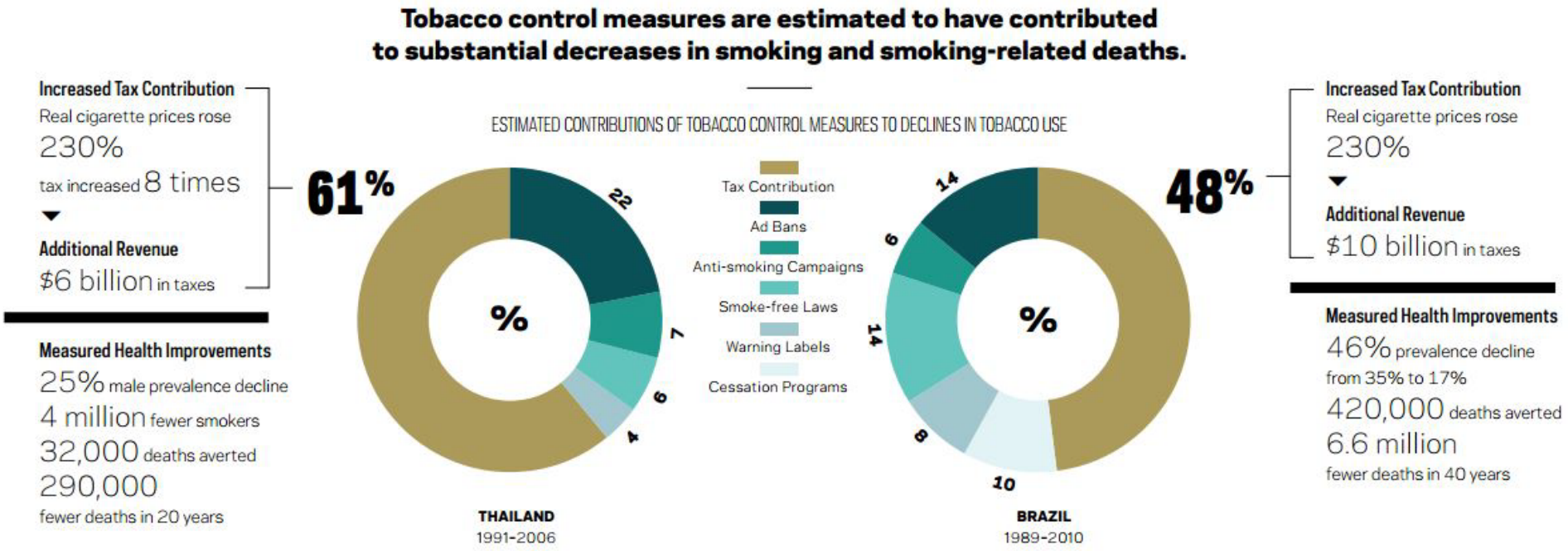
1) Tax increases $0.005/person/year
2) Smoke-free indoor workplaces & public places
3) Health information & warnings about tobacco
4) Bans on advertising & promotion

Annual cost of "tobacco best buys" = $0.11 per person

FCTC
WHO FRAMEWORK CONVENTION ON TOBACCO CONTROL

Source: Scaling up action against non-communicable diseases: How much will it cost? World Health Organization (WHO), 2011.

Examples of Tobacco Control & Associated Health Outcomes: Thailand & Brazil



Source: Jemal, et al. The Cancer Atlas, 2nd Ed. Atlanta, GA: ACS; 2014.

Unhealthy Diet & Physical Inactivity – WHO Best Buy

3 Interventions

1) Promote public awareness of diet & physical activity
2) Reduce salt intake
3) Replace trans fat with polyunsaturated fat

Annual cost of "diet & PA best buys" = $0.08 per person

Source: Scaling up action against non-communicable diseases: How much will it cost? World Health Organization (WHO), 2011.

Dietary Recommendations for Individuals from AICR/WCRF

- Be as lean as possible without becoming underweight.
- Be physically active for at least 30 minutes every day. Limit sedentary habits.
- Avoid sugary drinks. Limit consumption of energy-dense foods.
- Eat more of a variety of vegetables, fruits, whole grains and legumes such as beans.
- Limit consumption of red meats (such as beef, pork & lamb) & avoid processed meats.
- If consumed at all, limit alcoholic drinks to 2 for men and 1 for women a day.
- Limit consumption of salty foods and foods processed with salt (sodium).
- Don't use supplements to protect against cancer.

Source: AICR / World Cancer Research Fund Cancer Prevention Recommendations. http://www.aicr.org/reduce-your-cancer-risk/recommendations-for-cancer-prevention/?referrer=https://www.google.com/

Harmful Alcohol Use – WHO Best Buy

3 Interventions

1) Tax increases
2) Restrict access to retail alcohol
3) Bans on alcohol marketing

Annual cost of “alcohol best buys” = $0.14 per person

Source: Scaling up action against non-communicable diseases: How much will it cost? World Health Organization (WHO), 2011.

Global Burden of Infectious Agents

H. pylori

- 33% of all infection-related cancers

HPV

- 28% of all infection-related cancers

HBV / HCV

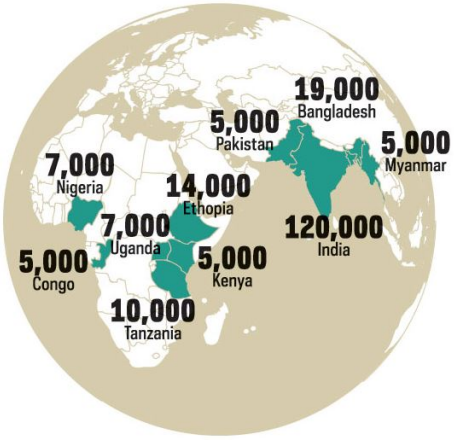
- 28% of all infection-related cancers

Source: Jemal, et al. The Cancer Atlas, 2nd Ed. Atlanta, GA: ACS; 2014.

Primary Prevention of HPV

- HPV causes 100% of cervical cancers & 25% of oropharynx cancers
- Highly effective & safe vaccines available since 2006
- Recommended for BOYS & GIRLS, ages 9-13
  - WHO recommends girls as primary target
- 9-valent vaccine now available
- Vaccines have been shown to reduce prevalence of genital warts & precancerous lesions among young women in Australia & Denmark

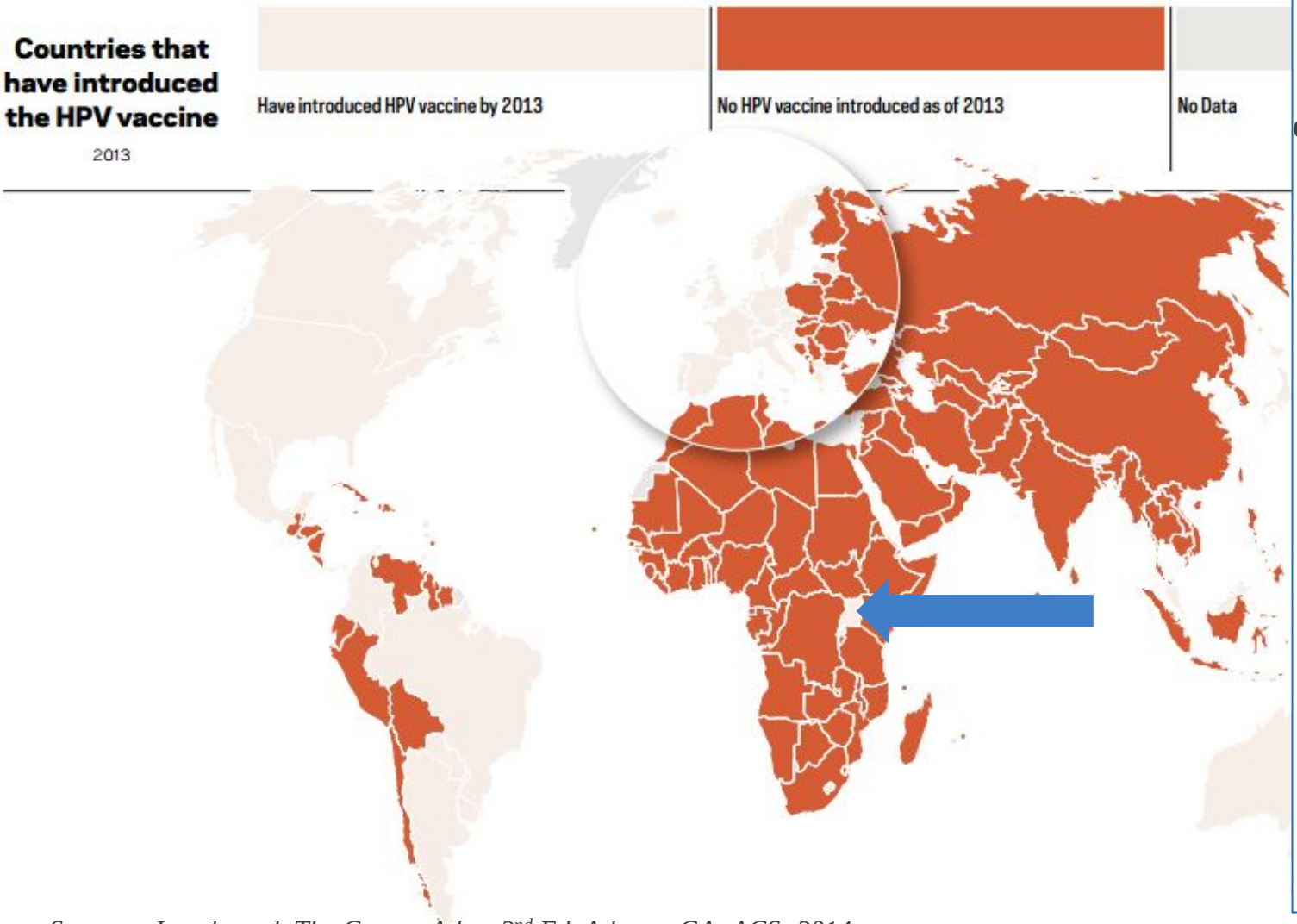
Number of future deaths that could be prevented in one year if 70% of 9-year-old girls were vaccinated



Sources: Jemal, et al. The Cancer Atlas, 2nd Ed. Atlanta, GA: ACS; 2014.;
Ali H, et al. BMJ 346: 2013;
Gertig DM, et al. BMC Med 11: Oct 22, 2013; Baldur-Felskov, et al., JNCI; online Feb. 19th, 2014

HPV Vaccine Coverage, 2013

Rwanda as Successful Example



Rwanda

Cervical cancer leading cause of death among women

Merck donated 2M doses of Gardasil over 3 yrs. (2011-2013)

School-based program, 6th grade girls & outreach to those not in school

3-Dose Coverage (2012): 97%

Transitioned to GAVI support in 2014

Also implemented HPV DNA screening followed by VIA

2020 Goal: eradicate cervical cancer

Sources: Jemal, et al. The Cancer Atlas, 2nd Ed. Atlanta, GA: ACS; 2014.;

Primary Prevention of HBV

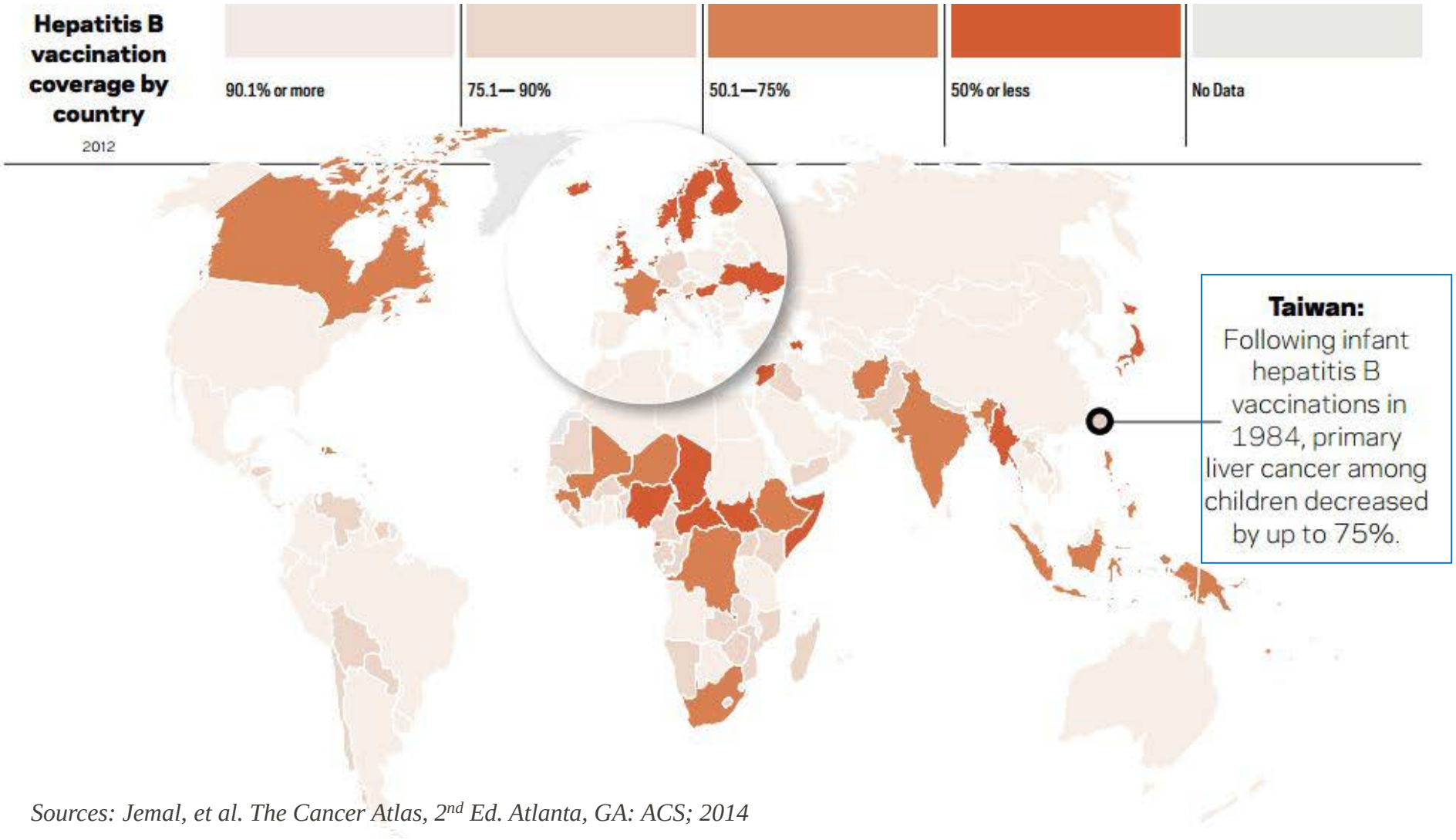
- HBV causes 750,000 deaths/yr., incl. 340,000 cases of liver cancer
- A highly-effective vaccine has been available since 1982 in a 3–dose series
- 184 countries have introduced the vaccine, as of 2014
  - Just 96 offer a birth dose, so mother-to-child transmission still a concern in some countries
  - Risk of chronic infection greatest when acquired during birth / early childhood
- 3-dose coverage globally is ~75%

700,000+ future HBV deaths averted for every vaccinated birth cohort globally

Sources: Jemal, et al. The Cancer Atlas, 2nd Ed. Atlanta, GA: ACS; 2014.

HBV Vaccine Coverage, 2012

Taiwan as Successful Example



Sources: Jemal, et al. The Cancer Atlas, 2nd Ed. Atlanta, GA: ACS; 2014

Environmental Exposures

Radiation

- UV (solar and artificial) radiation: major risk factor for melanoma & non-melanoma skin cancers
  - *Pattern of sun exposure matters*
    - Basal cell & squamous cell carcinoma correlated with cumulative sun exposure over many years
    - Melanoma more strongly correlated with brief, intense exposure, especially in early life
    - 1 blistering sunburn in childhood doubles risk of melanoma later in life
    - Higher altitudes associated with increased risk

- Radon: 2nd leading cause of lung cancer in USA & Europe (1st among non-smokers)

Sources: Jemal, et al. The Cancer Atlas, 2nd Ed. Atlanta, GA: ACS; 2014;
The Surgeon General's Call to Action to Prevent Skin Cancer, U.S. Dept. of Health & Human Services, 2014 (www.surgeongeneral.gov)

Environmental Exposures

Air Pollution

- *Outdoor*
  - IARC Group I carcinogen (Oct. 2013), causes lung cancer
  - Transportation, stationary power generation, industrial & agricultural emissions, residential heating & cooking, natural sources
- *Indoor*
  - Household combustion of solid fuels causes lung cancer
  - Coal or biomass
  - Highest use in sub-Saharan Africa, south & east Asia

Water

- Arsenic (Group I carcinogen)
  - Increases risk for bladder, skin & lung cancer
- Evidence for many other pollutants is inconclusive

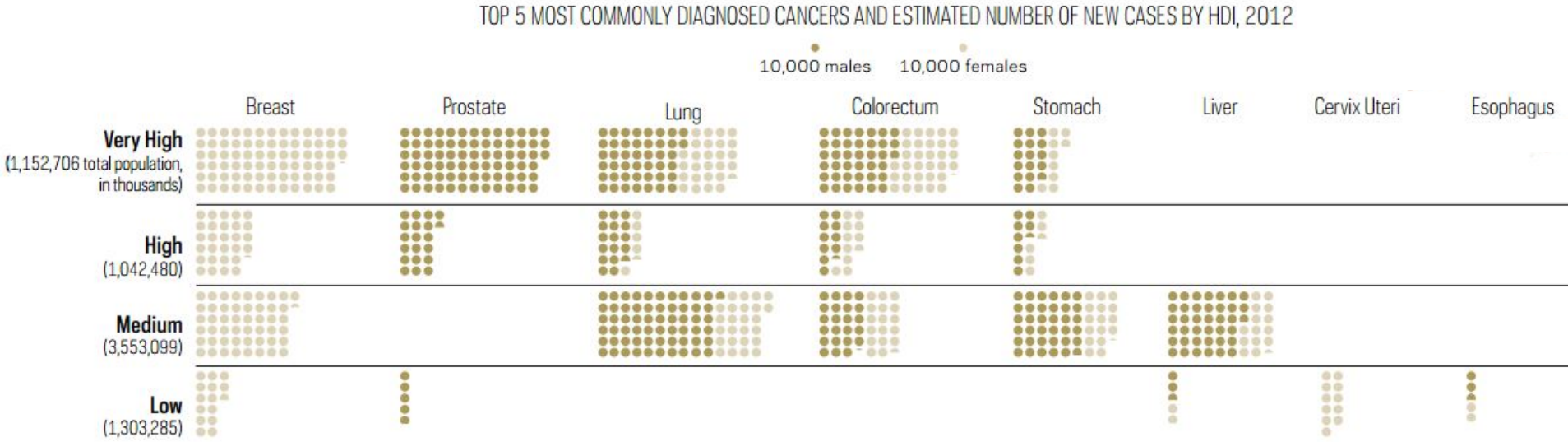
Sources: International Agency for Research on Cancer (IARC): http://www.iarc.fr/en/publications/books/sp161/index.php and World Cancer Report 2014. Ch. 2.9 Pollution of air, water and soil, Cohen AJ. and Cantor KP. IARC/WHO. Eds. Bernard W. Stewart and Christopher P. Wild.

Human Development Index (HDI) Transitions

As countries transition towards higher levels of HDI:

- Cancer burden increases
- Types of cancers observed will change
- Can impose a transient "double burden" of cancer, where prevalence of infection-related cancers is still high & non-infection-related cancers are increasing

HDI is a composite measure of educational attainment, life expectancy & level of income



Sources: Jemal, et al. The Cancer Atlas, 2nd Ed. Atlanta, GA: ACS; 2014.

Challenges of Prevention in Cancer Control Planning & Implementation

- Need for data regarding risk factors, as well as incidence, mortality, survival
- How to evaluate when:
  - Success may be invisible
  - Long-delay before rewards appear
  - Benefits may not accrue to the payer

Source: Fineberg, H. JAMA, v.310(1); 2013.

Adherence to prevention recommendations reduces cancer incidence & mortality

(as well as cardiovascular & overall mortality)

- Several large prospective cohorts as well as a systematic review demonstrate significant benefits for adherence to either AICR or ACS cancer prevention guidelines, beyond tobacco avoidance
  - Study computed scores to reflect adherence to guidelines regarding: BMI, physical activity, diet, & alcohol intake
  - Results of 2 largest studies to date:

Study	Cohort	No. of Individuals	Follow-up Time	Reduction in Cancer Incidence	Reduction in Cancer Mortality	Reduction in CVD Mortality	Reduction in All-Cause Mortality
Cancer Prevention Study-II	50-74 y.o.	111,966	14 y	N/A	Women-24% Men-30%	Women-58% Men-48%	42% (Same in men & women)
NIH-AARP Diet & Health Study	50-71 y.o.	566,401	10.5 y – 13.6 y	10-19%	Women-24% Men-25%	N/A	Women-33% Men-26%

ACS = American Cancer Society

Kabat, G., et al. Am J Clin Nutr; Jan 7, 2015; McCullough, M., et al. Cancer Epi Biomarkers & Prev; 20(6): 2011

Thank you

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Cancer Early Diagnosis and Screening:

Understanding the Difference & the Potential

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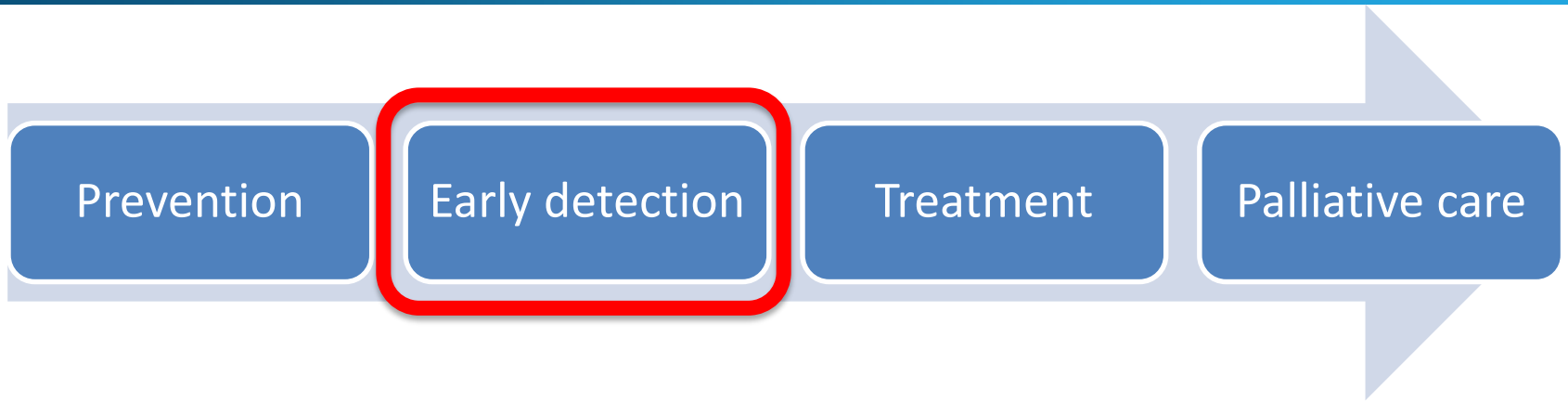
Outline

- Comprehensive cancer control & definitions
- Assessing screening & its impact
- Current status of screening globally
- When to prioritize early diagnosis

Comprehensive Cancer Control



***Early detection*:**

Aims to identify cancer in early stages or pre-cancerous lesions;

Two strategies: screening & early diagnosis

Process includes diagnosis & link to treatment

Objectives of Early Detection

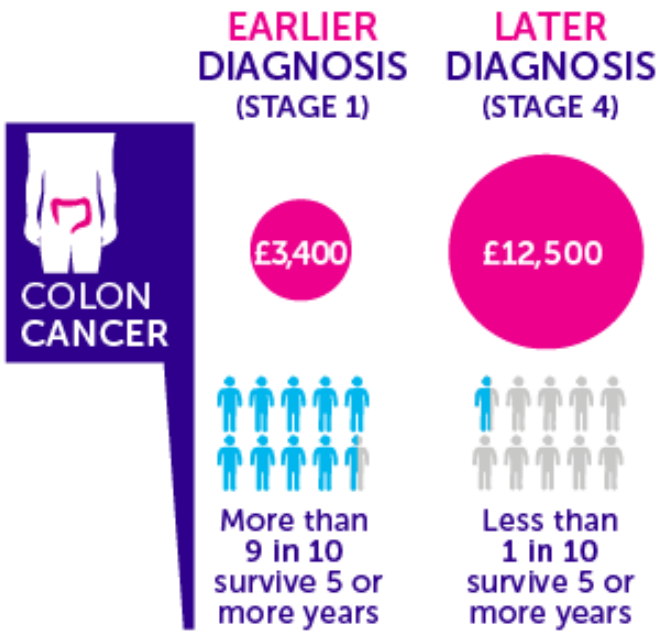
Prevention | **Early detection** | Treatment | Palliative care

Goal = early identification

→ **Improved survival**

→ **Reduced costs of care**

→ **Less morbid treatment**



Cancer Research UK. Saving lives and averting costs? The case for earlier diagnosis just got stronger. Online. http://scienceblog.cancerresearchuk.org/2014/09/22/saving-lives-and-averting-costs-the-case-for-earlier-diagnosis-just-got-stronger/

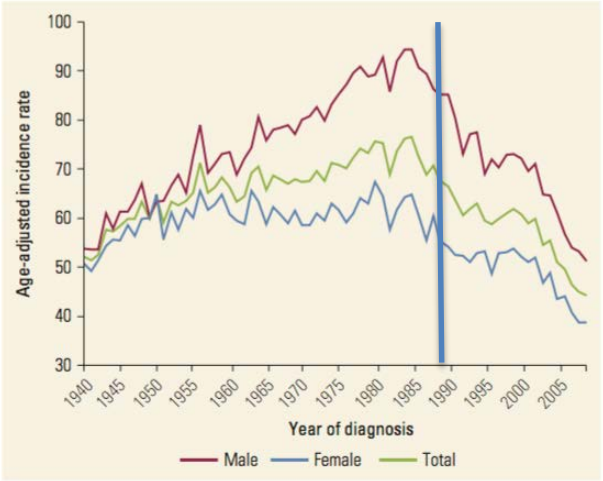
Objectives of Early Detection

Prevention | **Early detection** | Treatment | Palliative care

Goal (screening) =
early identification
(pre-invasive)

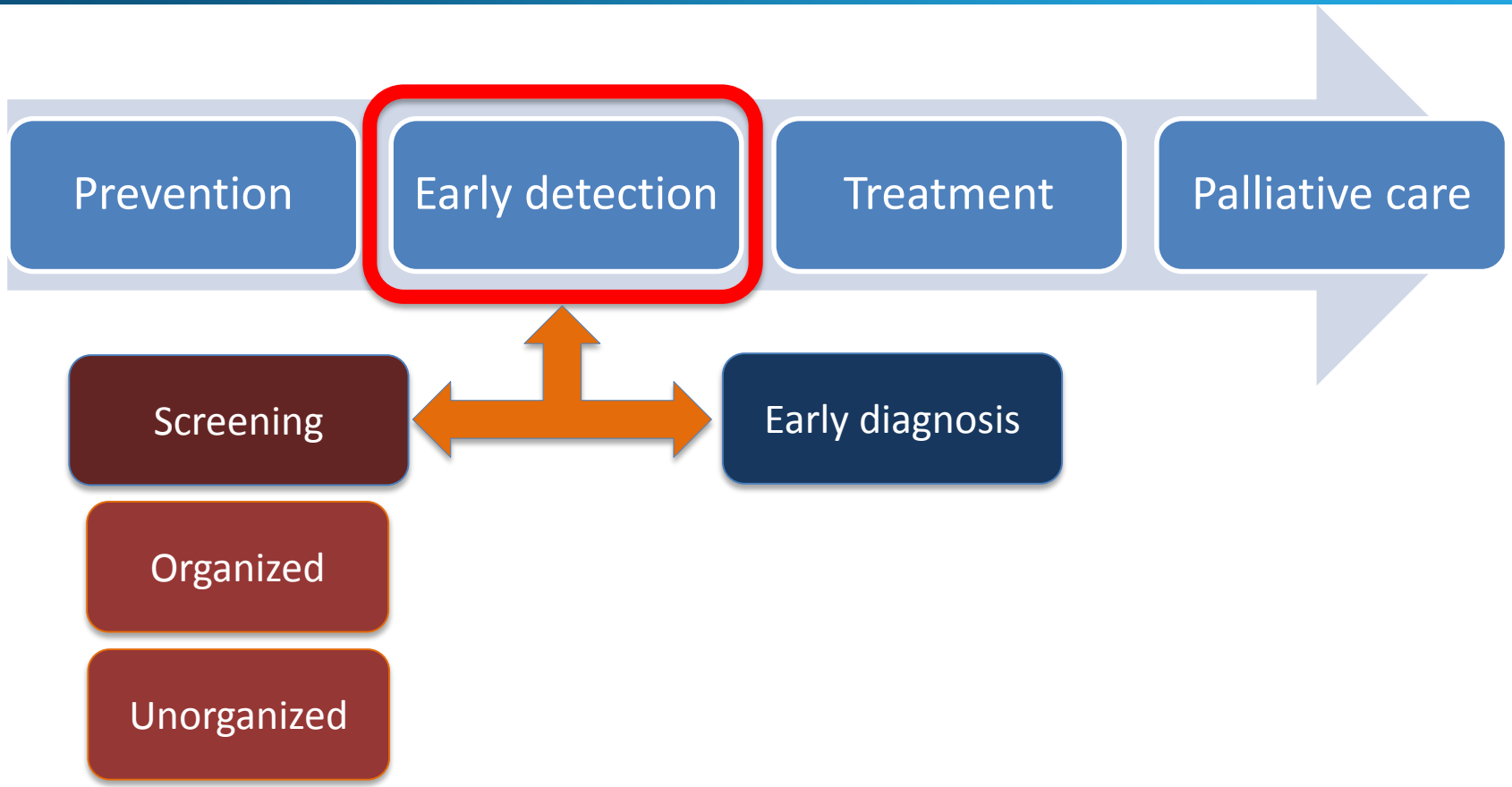
→ 2º prevent cancer

(eg, cervical, colorectal)

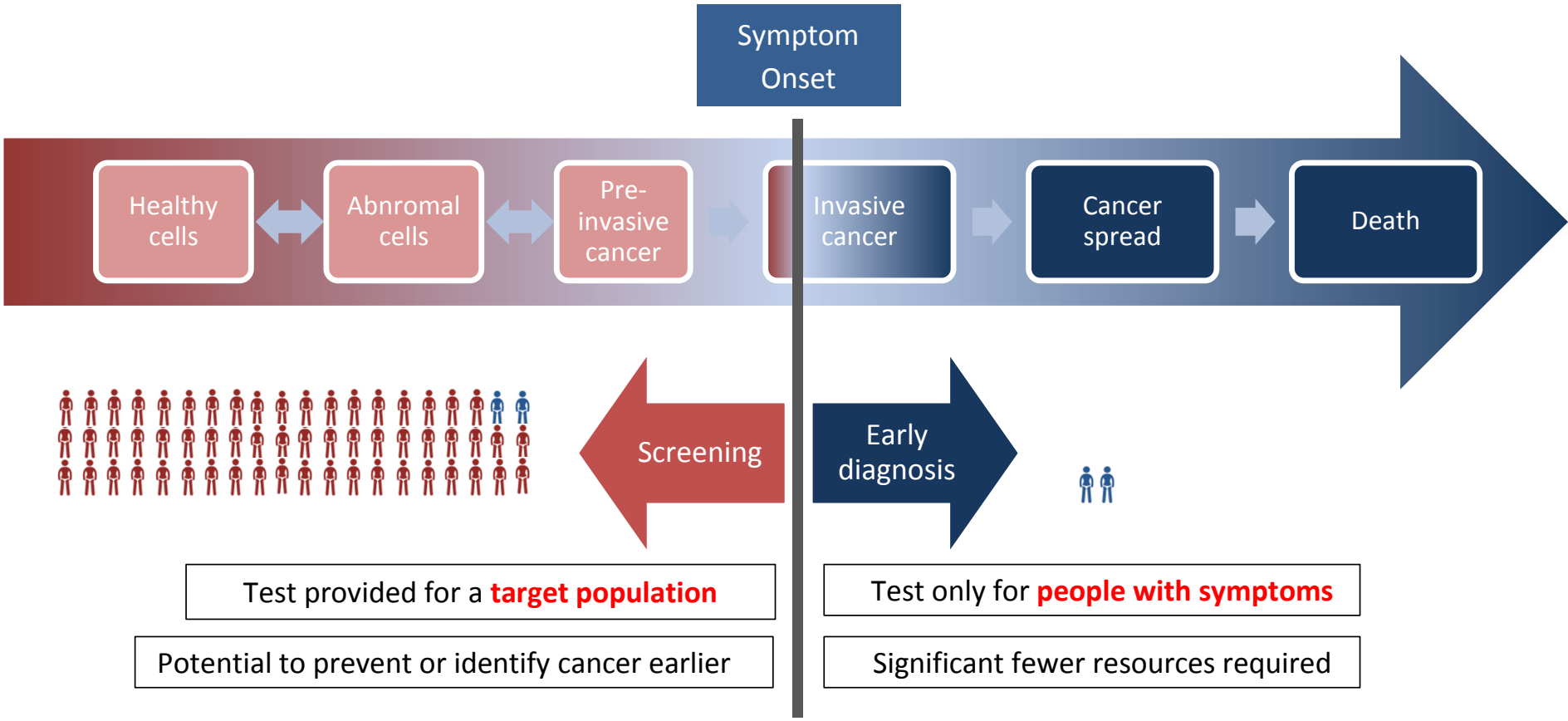


Sources: Calculated and communicated by Dr. Benjamin Hankey with data from 1) 1940-1997: Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) SEER*Stat Database: Incidence - Connecticut Historical, Aug 1999 Sub (1935-1997), National Cancer Institute, DCCPS, Surveillance Research Program, Cancer Statistics Branch; and 2) 1998-2009: Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) SEER*Stat Database: Incidence - SEER 9 Regs Research Data, Nov 2011 Sub, Vintage 2009 Pops (1973-2009) <Katrina/Rita Population Adjustment> - Linked To County Attributes - Total U.S., 1969-2010 Counties, National Cancer Institute, DCCPS, Surveillance Research Program, Surveillance Systems Branch, released April 2012, based on the November 2011 submission.
Note: Data from the two SEER files are consistent for 1985–97. Rates are age-adjusted to year 2000 U.S. standard population.

Comprehensive Cancer Control



Screening vs. Early Diagnosis



Screening vs. Early Diagnosis

- **Screening**:
  - Presumptive identification of unrecognized disease in general population
  - More than a test

- **Early diagnosis**:
  - Focuses on persons with disease
  - More than symptoms awareness; link to health system

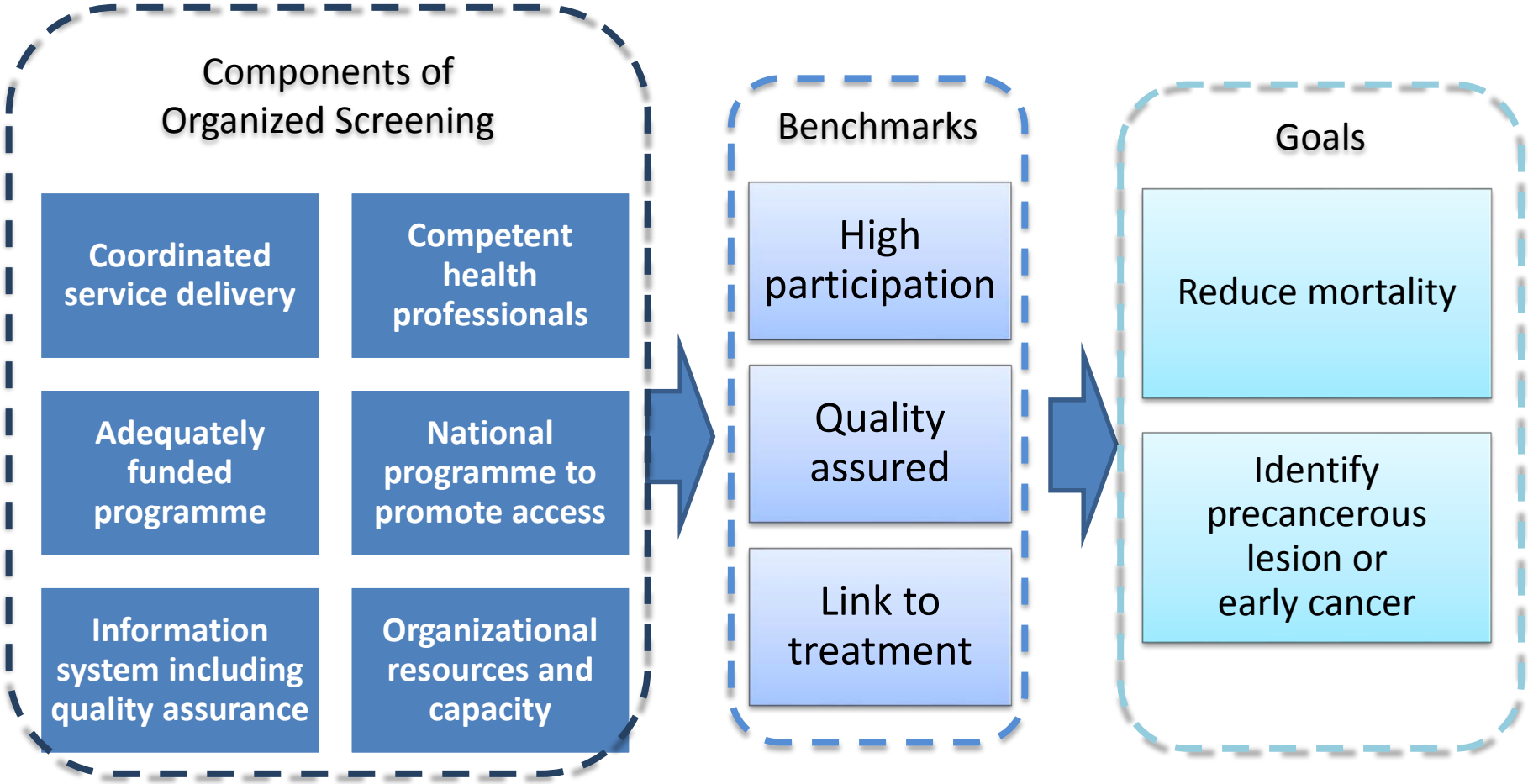
Organized Screening

WHO screening targets:

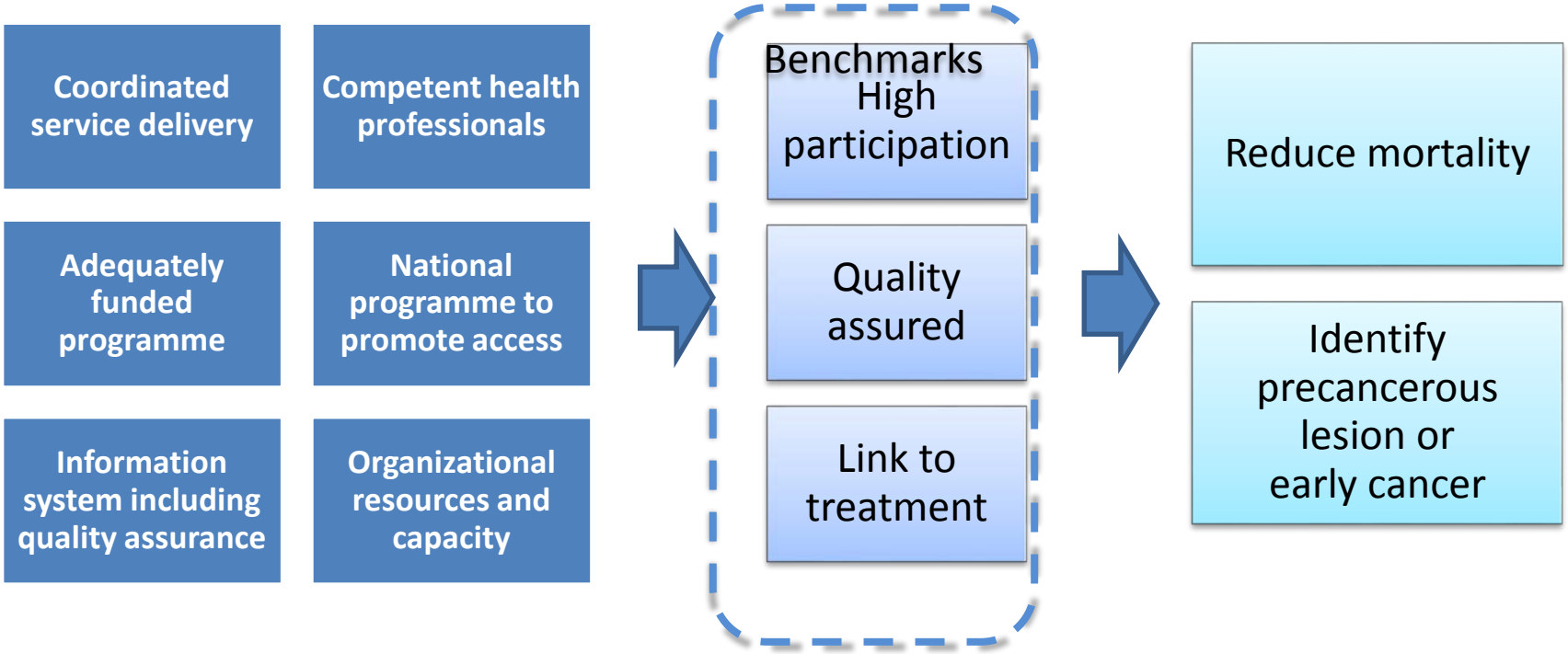
1. Organized:
   a. Greatest impact
   b. Fewest harms
   c. Equitable
2. >70% participation

Criteria for Organized Screening	Benchmark
National program to make service available	Participation
Coordination, centralized at national/regional level	Link to treatment
Protocol for screening frequency, target population	Participation
Mechanism of inviting target population systematically	Participation
Functioning health information system including registries	Quality
Monitoring & Evaluation program	Quality

Building Blocks of Cancer Screening



Understanding the Impact



- Sample screening programme
- Evaluate impact & cost-effectiveness

Breast Cancer Screening

Population sensitized to screening test

High quality, accurate, accessible screening test

Confirmatory pathologic diagnosis & staging

Referral for definitive treatment

Treatment accessible, high quality

Sample population: 1 million

55,000 women screened with mammography each year

7,000 with abnormal screening test

280 with confirmed cancer found on screening

6,720 require follow-up & found to have no abnormality

450 women will require treatment

340 women will survive without screening

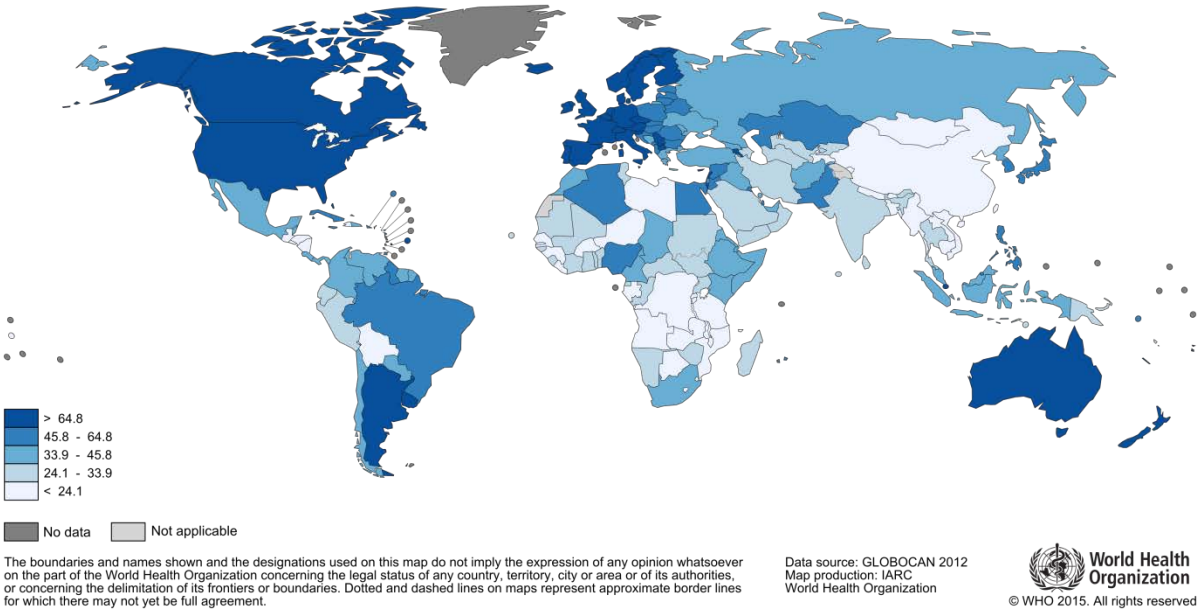
20 women avoid death from breast ca due to screening

30 women will not receive any major benefit (due to overdiagnosis)

Breast ca screening costs in US: ~$15mil per 1mil population

Breast treatment costs in US: ~ $20mil per 1mil population

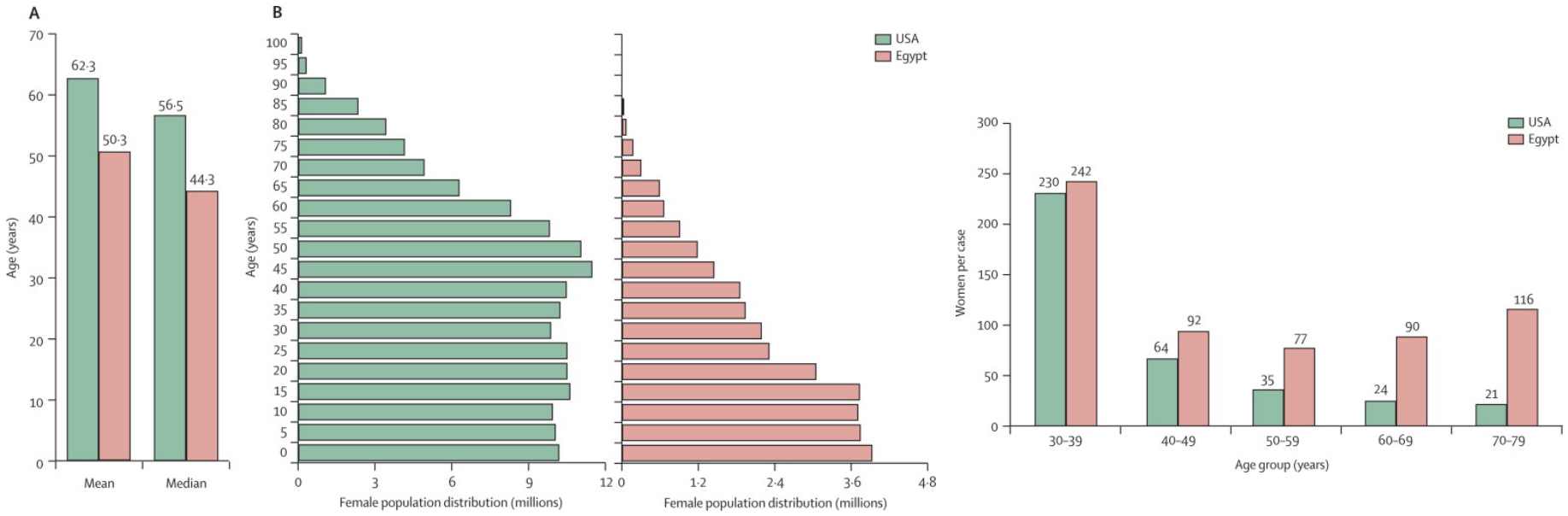
Incidence



HIC Incidence: 75 per 100,000	20 lives saved due to screen	$ 50,000 / LYS
LMIC Incidence 30 per 100,000	7 lives saved due to screen	$ 145,000 / LYS

Understanding Who to Screen

- Incidence & average age of diagnosis



Harford JB. Breast-cancer early detection in low-income and middle-income countries: do what you can versus one size fits all. Lancet Oncol. 2011 Mar;12(3):306-12. doi: 10.1016/S1470-2045(10)70273-4. PubMed PMID: 21376292.

Understanding Who to Screen

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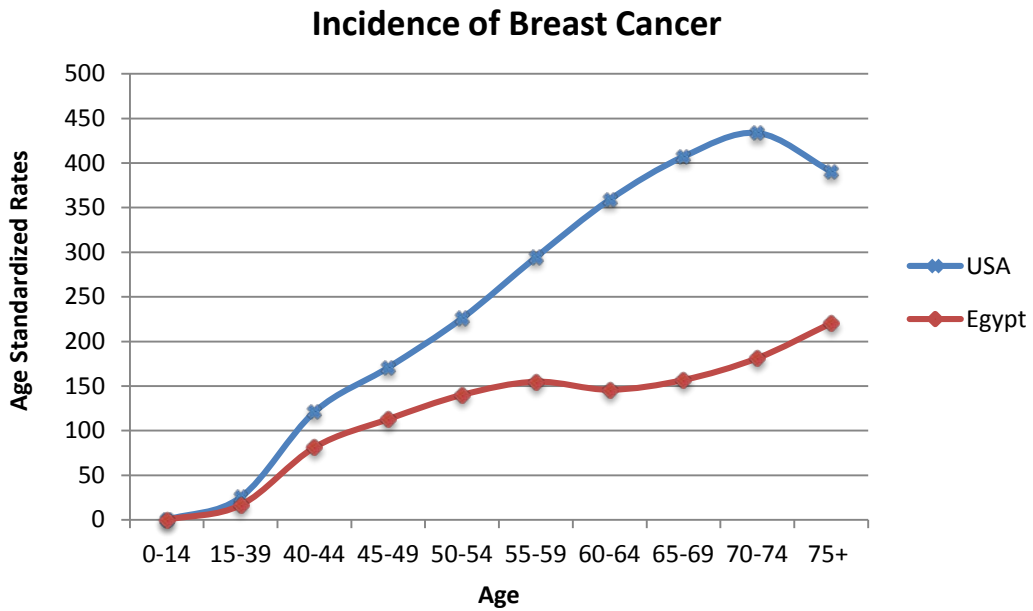

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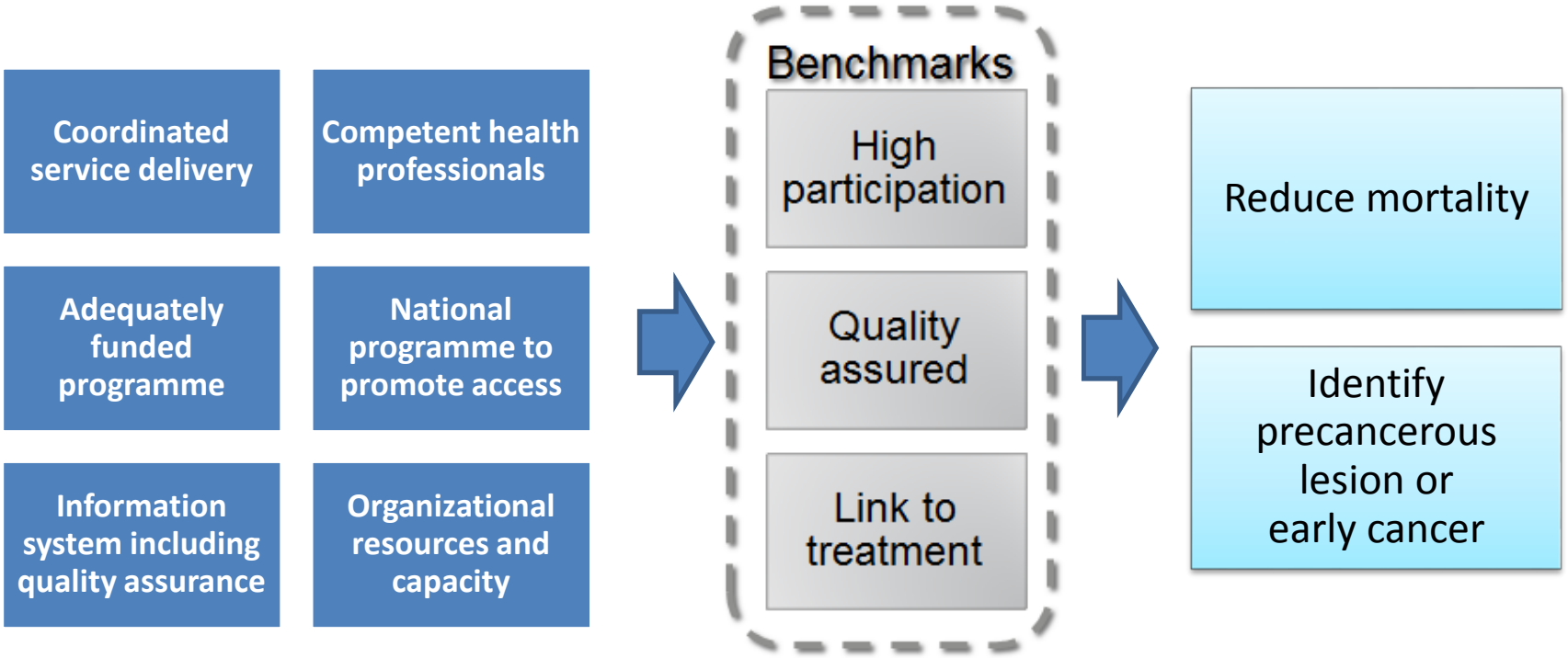
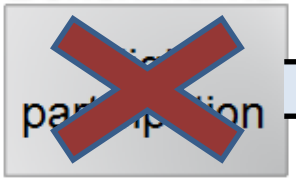
Understanding the Impact



Understanding the Impact

Situation	Women screened	Abnormal screening results	Women harmed	Women benefitting from screening	Program costs
Optimal conditions (Efficacy)	55,000	7,000	6,750	20	$ 1 million
Low participation	**25,000**	**3,000**	**2,700**	**8**	**$ 500,000**

Benchmarks



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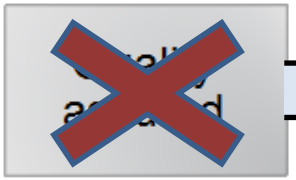
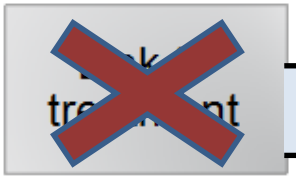


Low quality	**55,000**	**13,500**	**13,250**	**12**	**$ 1.3 million**

Understanding the Impact

Situation	Women screened	Abnormal screening results	Women harmed	Women benefitting from screening	Program costs
Optimal conditions (Efficacy)	55,000	7,000	6,750	20	$ 500,000
Poor link to diagnosis and treatment	**55,000**	**7,000**	**6,800**	**10**	**$ 1 million**

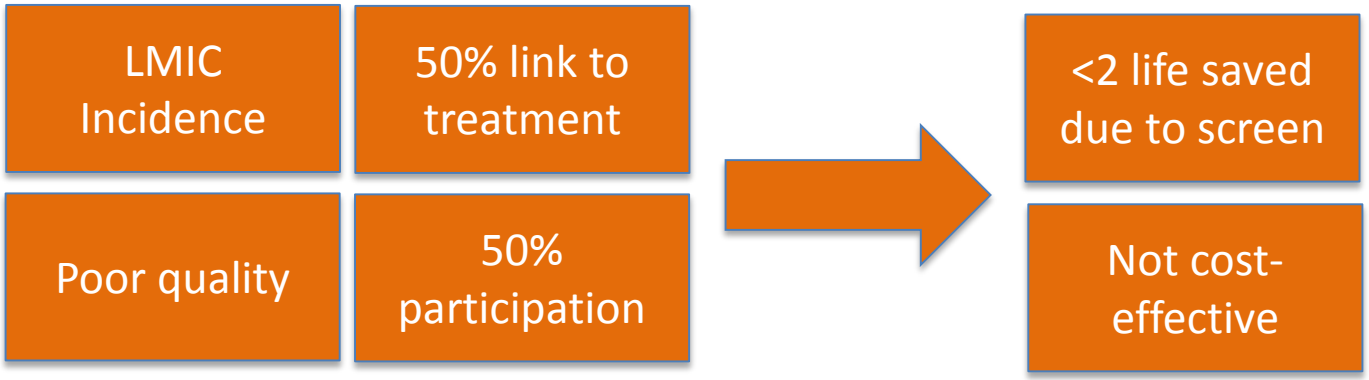
Benchmarks



Putting it all together…

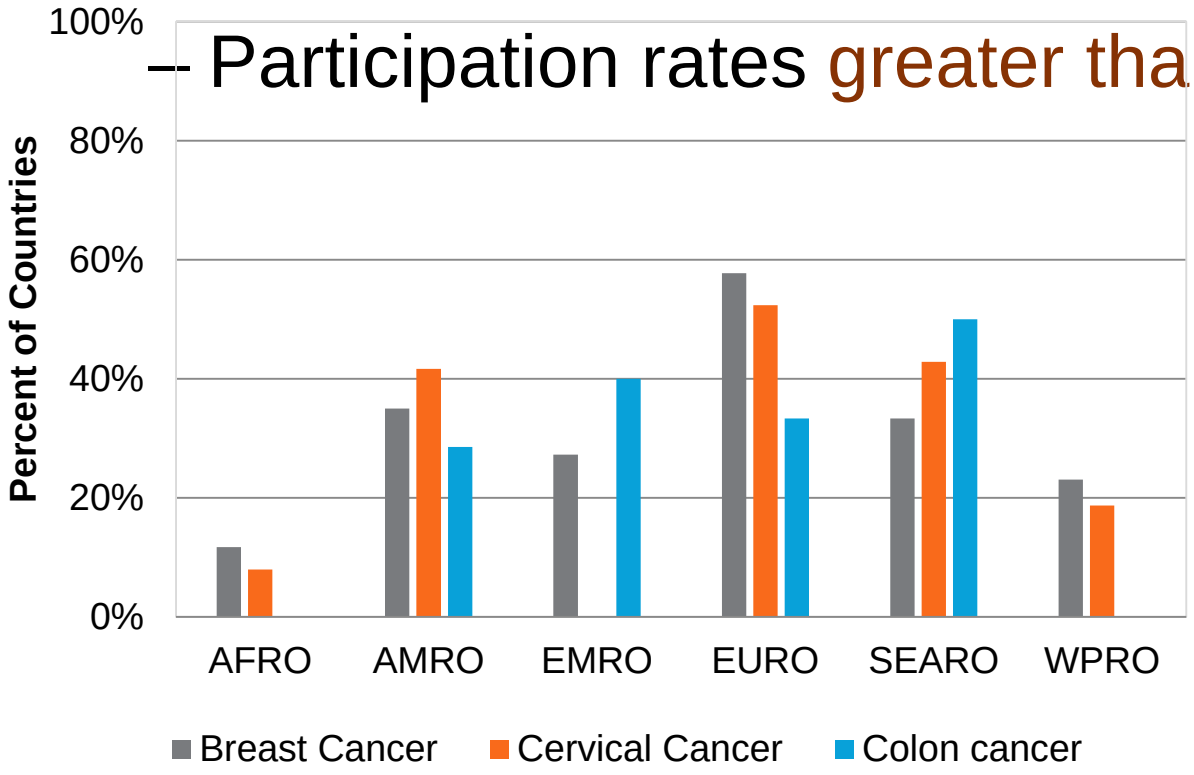
Efficacy vs. Effectiveness

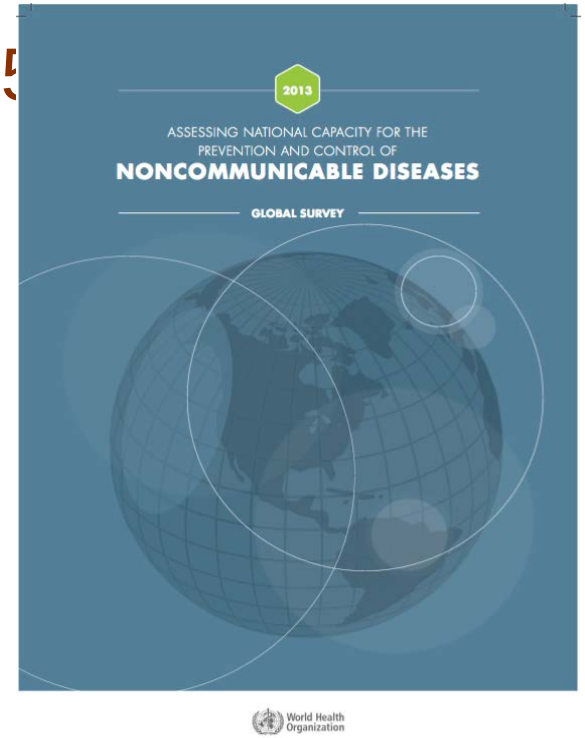
Situation	Women screened	Abnormal screening results	Women harmed (FP+FN+OD)	Women benefitting from screening	Program costs
Optimal conditions (Efficacy)	55,000	7,000	6,750	**20**	$ 1 million
Incidence 50% Participation 50% Poor quality Link to dx & rx 50%	30,000	3,600	3,600	**<2**	$ 1 million



Where Are We Now?

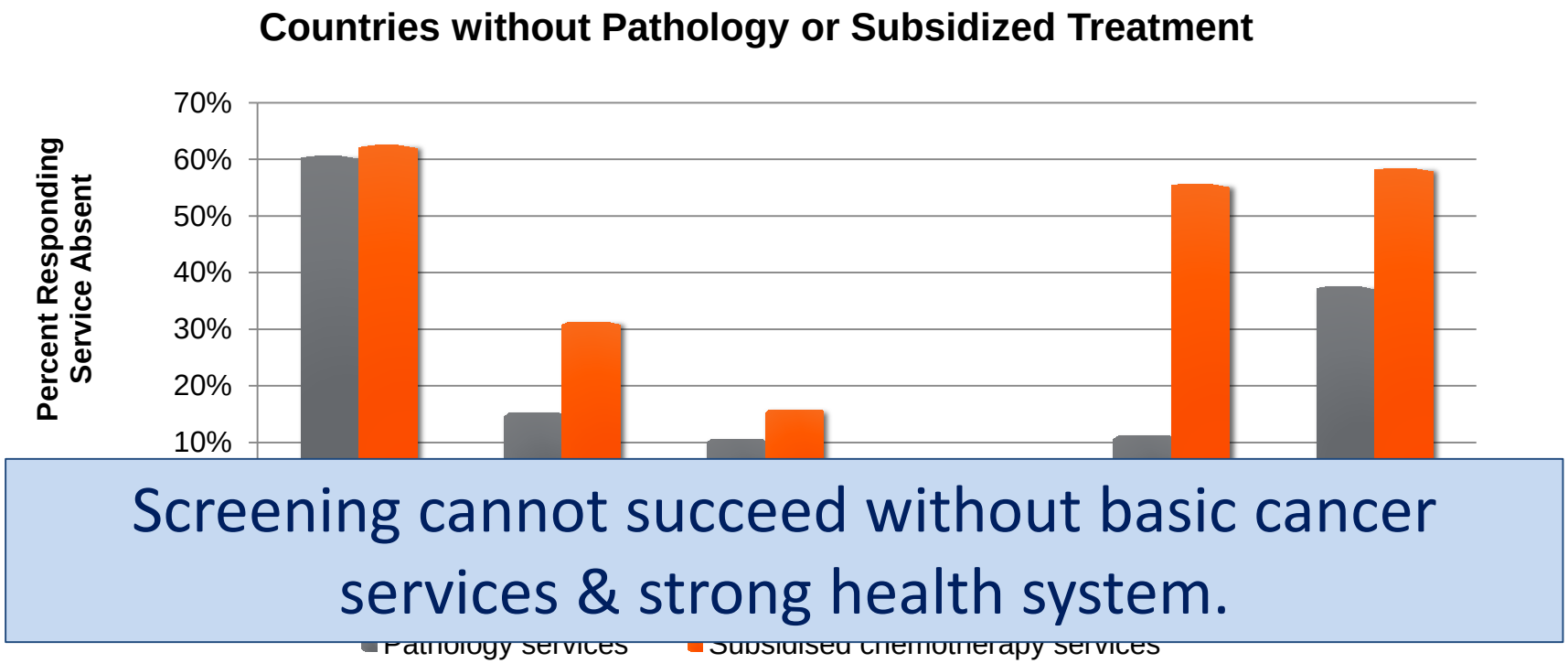
- WHO 2015 NCD Country Capacity Survey
  - Participation rates greater than 5





Understanding the Building Blocks

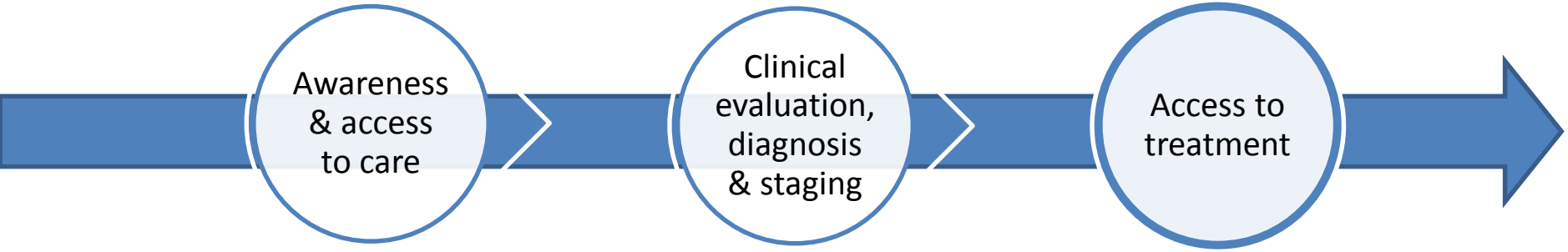
- Preparedness for cancer control globally
  - No early diagnosis strategy: 60 / 173 (35%)
  - No referral mechanism: 51 / 171 (30%)
  - Cancer diagnosis & treatment



Screening cannot succeed without basic cancer services & strong health system.

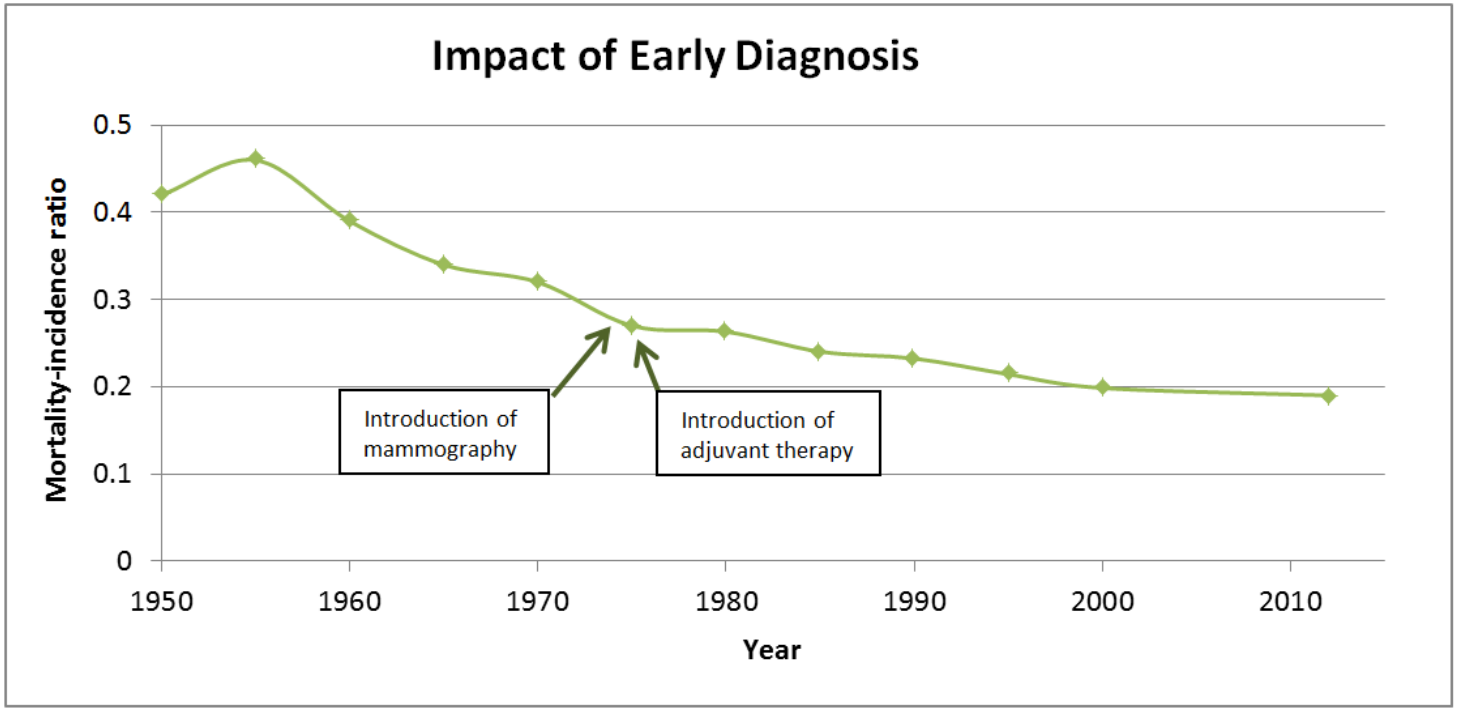
Early Diagnosis

- Building health system for cancer control



  - Public not informed / empowered
  - System does not accurately detect and diagnose
  - Lack referral mechn
  - Care not accessible to high % of population
  - Does not assure accessible, appropriate treatment

Early Diagnosis



Up to 50% of all premature NCD deaths are linked to weak health systems that don't respond effectively and equitably to the needs of the people with NCDs"

CANCER EARLY DIAGNOSIS

Awareness & access to care

Clinical evaluation, diagnosis & staging

Access to treatment

>80%

of patients aware of symptoms

>80%

of patients receive timely diagnosis

>80%

of patients initiate treatment

<90 days from symptom onset to initiating treatment

Awareness of symptoms

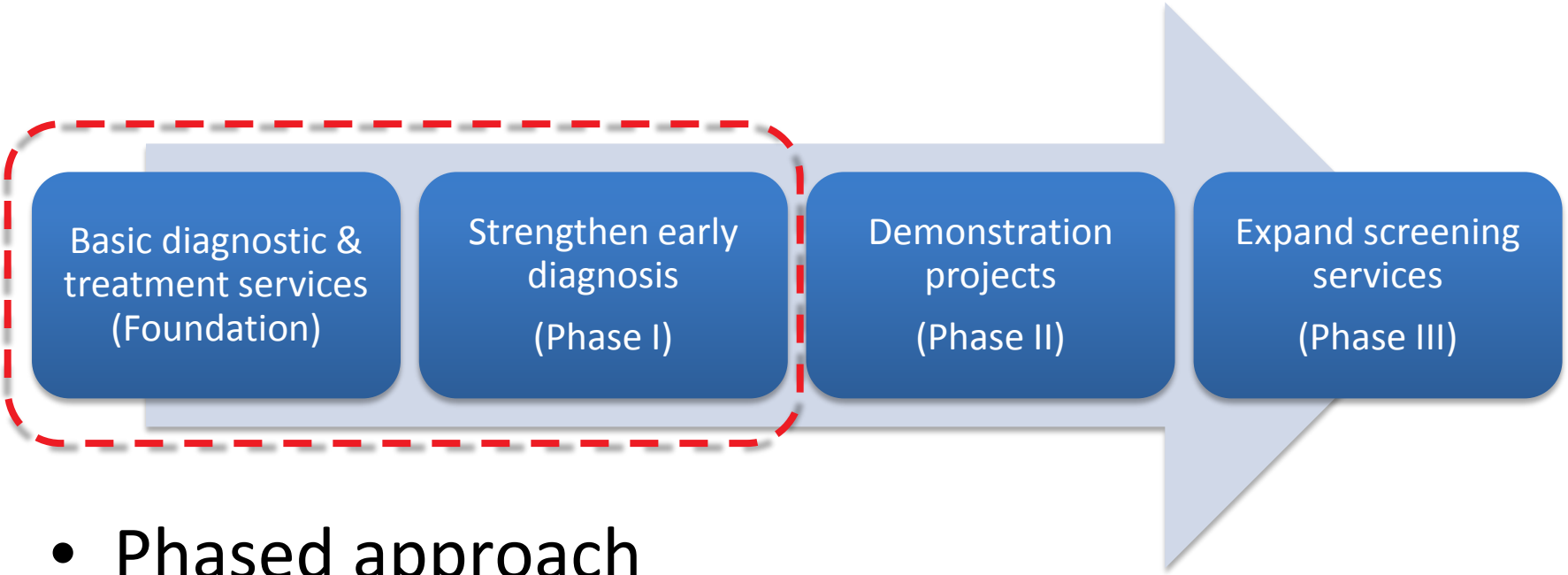
Accurate clinical diagnosis

Confirmatory pathologic diagnosis & staging

Referral for definitive treatment

Accessible, equitable, quality treatment

Building the Health System



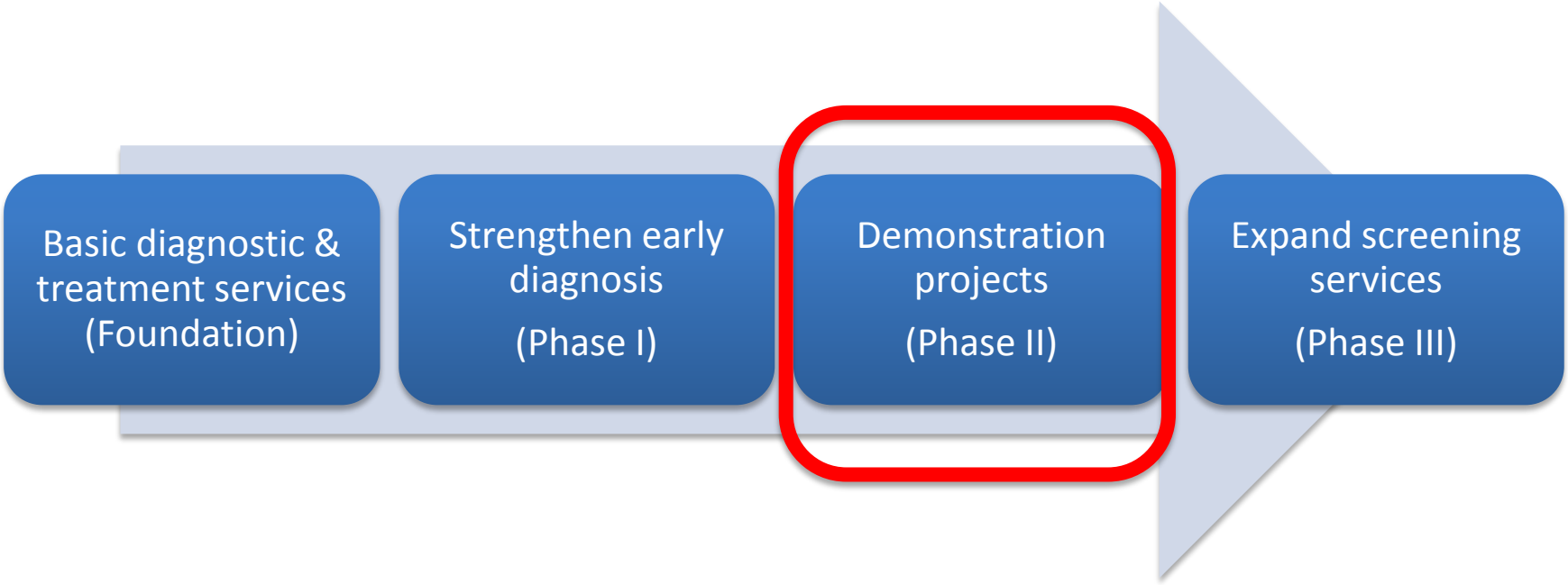
- Phased approach
- Utilize building blocks of health systems
- Prioritize demonstration projects before population level screening

Building the Health System

Example of colorectal cancer (CRC) screening

Requirement	Early diagnosis	Screening
Human resources	Endoscopists - 2 Pathologist - 0.1	Endoscopists - 20 Pathologist - 1 Programme staff - 100
Basic devices & medicines	Endoscopy units - 1	Endoscopy - 10
Service delivery	Awareness about CRC symptoms Strong referral mechn	Awareness about CRC symptoms & screening Strong referral mechn +++
Adequate funding	Central funding	Central funding +++
Monitor programme function	Monitoring & evaluation framework	M&E framework +++

Building the Health System



Assessing Readiness & Priorities

- Perform Situational Analysis Tool (SAT) of early diagnosis & screening

Early diagnosis limited

Screening absent

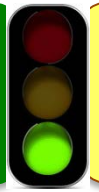
1. Focus on early diagnosis
2. Provide basic diagnostic tests & treatment

Early diagnosis limited

Screening ineffective

1. Focus on improving coordination of services
2. Consider limiting screening activities to one **demonstration project**

Early diagnosis



Screening ineffective

1. Identify deficits in screening services
2. Devise programme to strengthen screening, focus on regional **demonstration projects**

Taking the Next Steps

- *Perform Situational Analysis Tool (SAT) of early diagnosis & screening*

- What to do next?
  - Data input: SAT, surveys, registry
  - Programmatic design
    - Multi-disciplinary/multi-stakeholder team
    - Prioritizing cancers
    - Prioritizing regions
  - Integrate into National Cancer Control Plan
  - **Implementation**

THANK YOU

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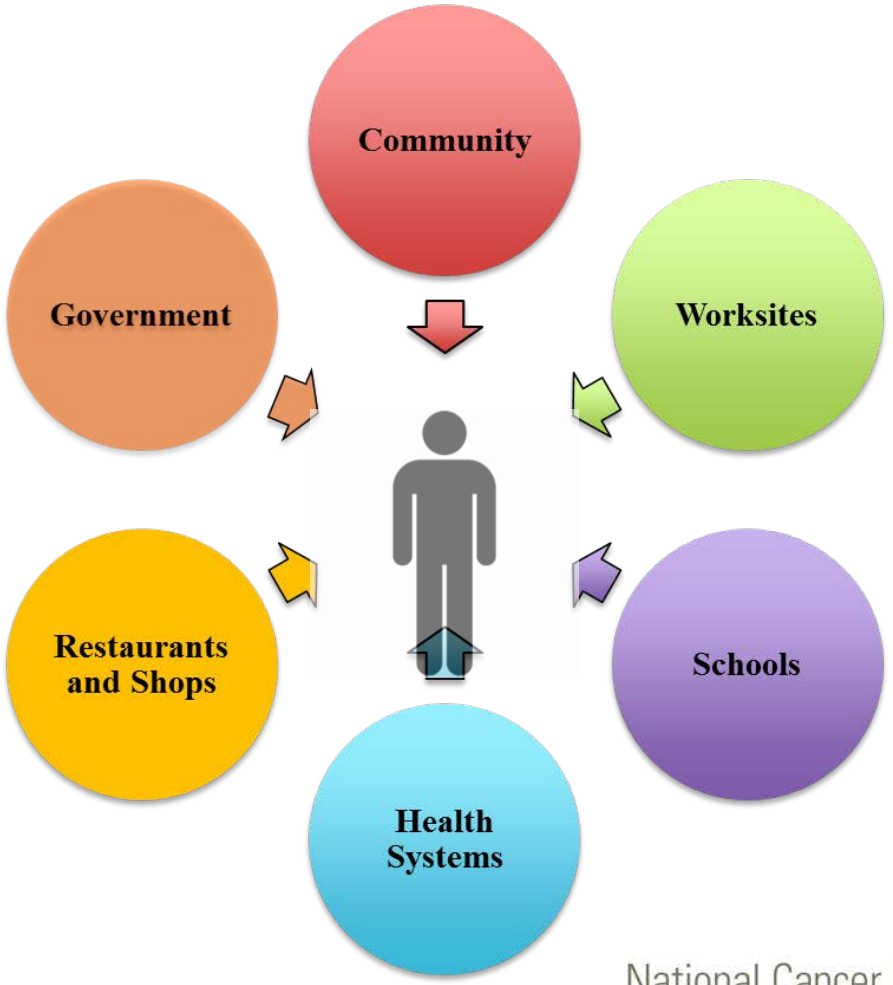
Addressing Cancer Control through Partnerships, Policy, Systems and the Environmental Change

Addressing Cancer Control through Partnerships, Policy, Systems and the Environmental Change

- **Policies** - rules that encourage or discourage certain behavior
- **System changes** – changes in how things are done in an organization or setting
- **Environmental changes** – changes in places we work, play, shop, go to school

The most effective approach is a comprehensive approach

Make policy, system and environmental changes in…



National Cancer Institute

Addressing Cancer Control through Partnerships, Policy, Systems, and Environmental Change

- Working toward the vision of a world free of avoidable burden of cancer requires partners

Who are your current cancer control partners?

Who is missing?

Coordinated Multi-sectoral Engagement

Hospitals, Laboratories, Media, Advocates, Education, Housing, Security, Transportation
Social and Economic Development, Urban Planning, People and Communities

Linking cancer and tobacco control plans and programs

- 6 US states seeking to integrate chronic disease efforts (Chronic Disease and Tobacco)
- Benefits
  - Avoided duplication
  - Collaborated on important programs
    - Developing strategies to influence policy
    - Sharing health communications materials
  - Trust building

Source: Momin et al., Prev Chronic Dis. 2015 May 28;12:E83

Linking cancer and tobacco control plans and programs (cont.)

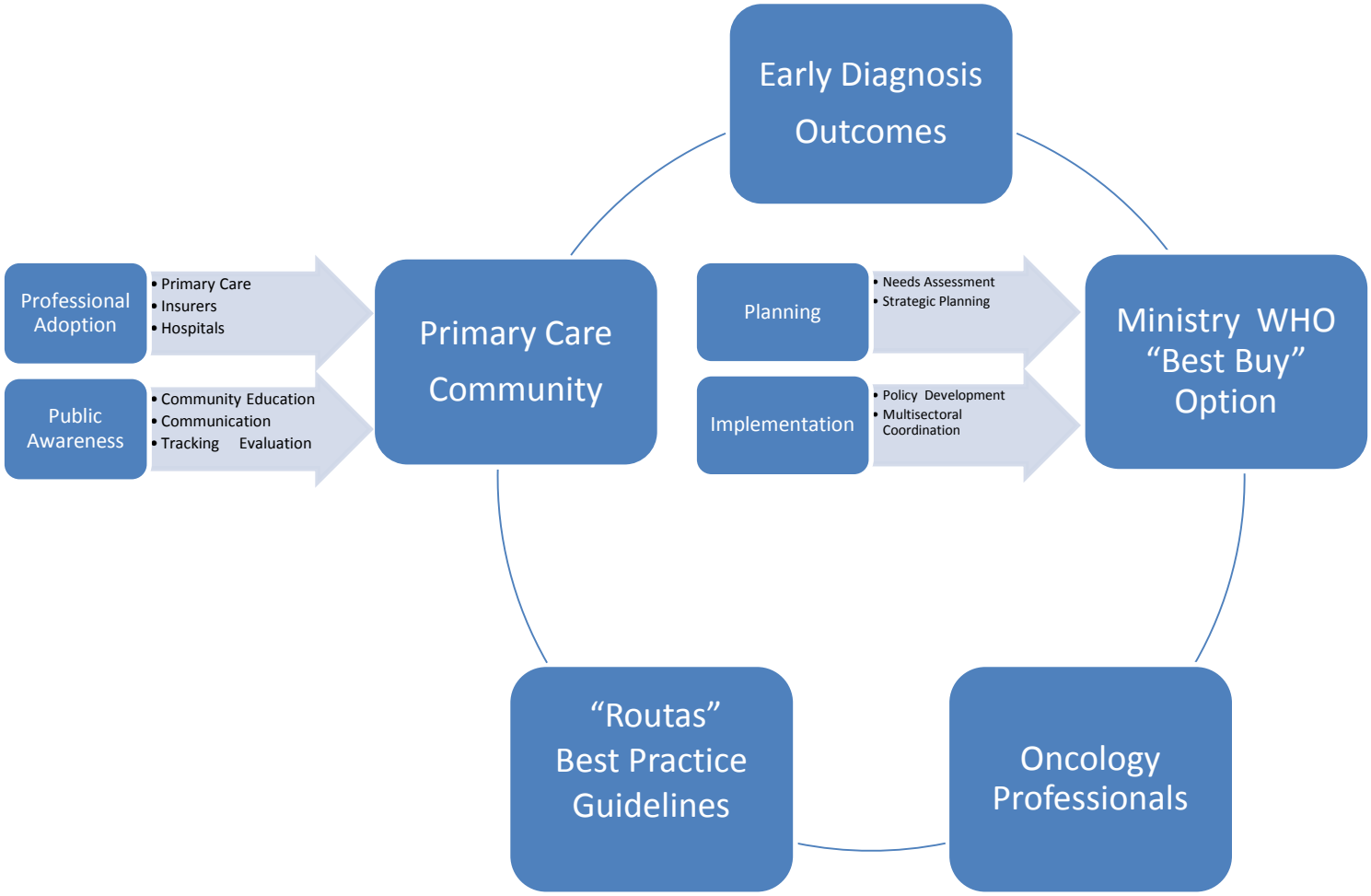
- Success factors
  - Formal and informal communication
  - Collaboration during the strategic planning process
  - Incorporation of one another's priorities into strategic plans
  - Co-location
  - Leadership support for collaboration

Source: Momin et al., Prev Chronic Dis. 2015 May 28;12:E83

Goal of Prevention, Screening and Early Diagnosis

- Reduce avoidable burden of morbidity, premature mortality and disability
- Allow populations to reach highest attainable standards of health, quality of life and productivity to promote well being and socioeconomic development
- NCD/Cancer prevention and control needs, leadership, cooperation and collaboration across a wide range of stakeholders

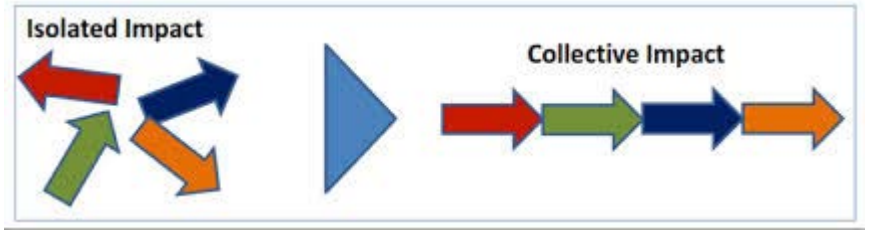
Cancer Control Example



Addressing Challenges

Policy Options for States and Partnerships

- Enhance Governance
  - Integrate prevention and control into overall health planning process and development planning (Health in All Policies)
- Mobilize Sustained Resources with Relevant Organizations and Ministries (including Finance)
  - Who is working in cancer control space
  - Where are they deployed
  - What roles do they have
  - What partnerships exist
  - How are they integrated/organized/funded
  - How do they assess effectiveness/accountability
  - How do they communicate and cooperate
- Strengthen Multi-sectoral Action
  - Engagement
  - Needs assessment
  - Policy coherence/alignment
  - Joint planning/working groups
  - Mutual accountability



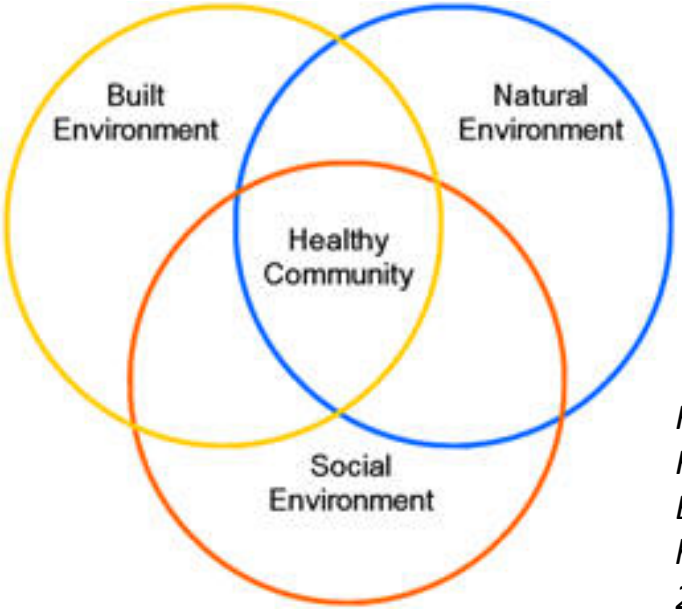
Building Cancer Control Partnerships

Strengthen Institutional Capacity and Workforce

- Educational institutions
  - Social workers
  - Community health workers
  - Professional training, primary care, nursing
  - Academics
- Other sectors
  - Communication, media
  - Behavioral science, phycology
  - Economics, food/agricultural
  - Law, business management
  - Trade, technology
- Empower People and Communities
  - Social, Environmental and Economic determinates and Health Equity
  - Human rights organization, Faith based organization, labor organizations, women and children organizations

Environmental Change

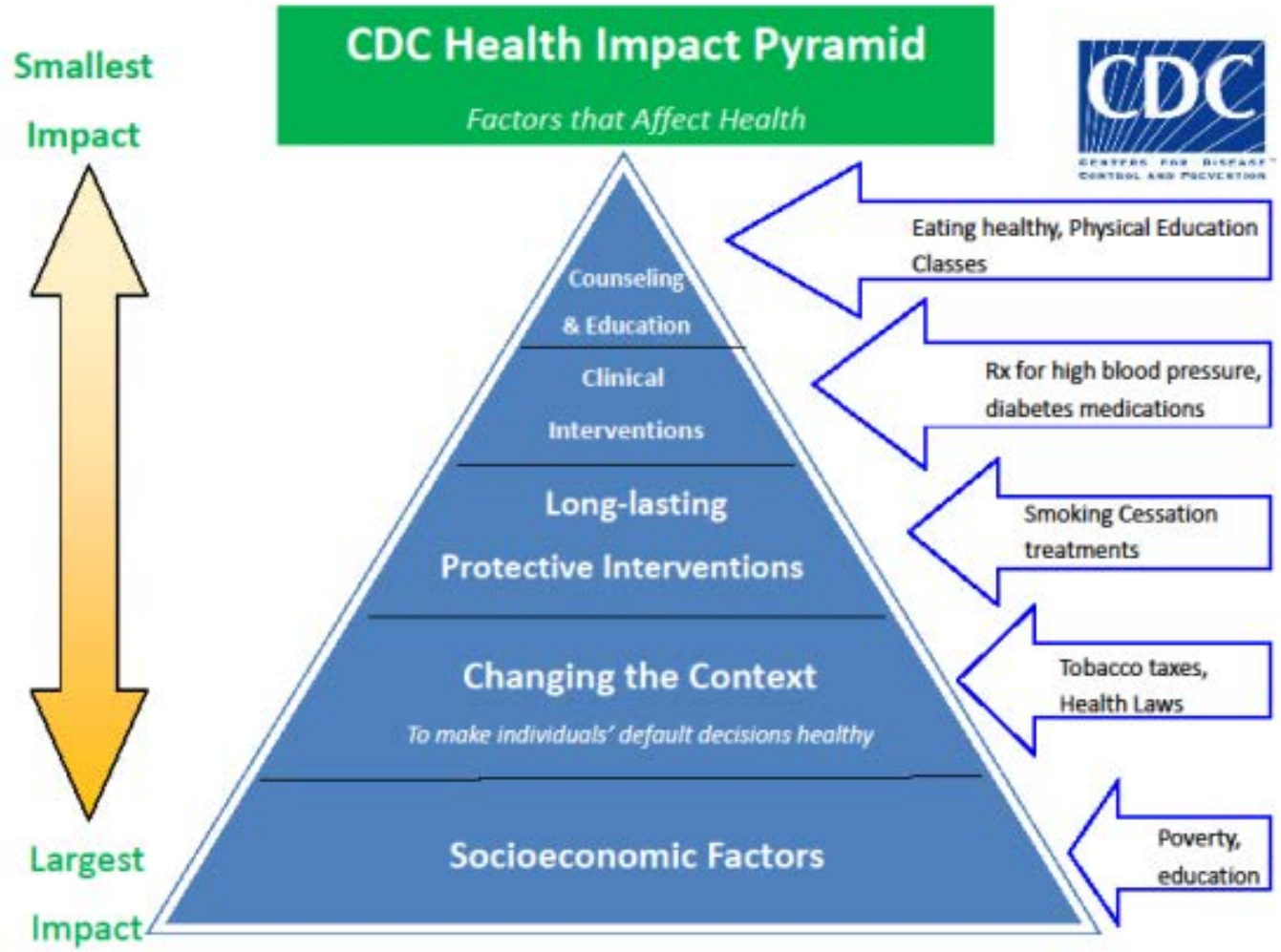
- Tobacco Control
- Healthy Diet
- Physical Activity
- Alcohol



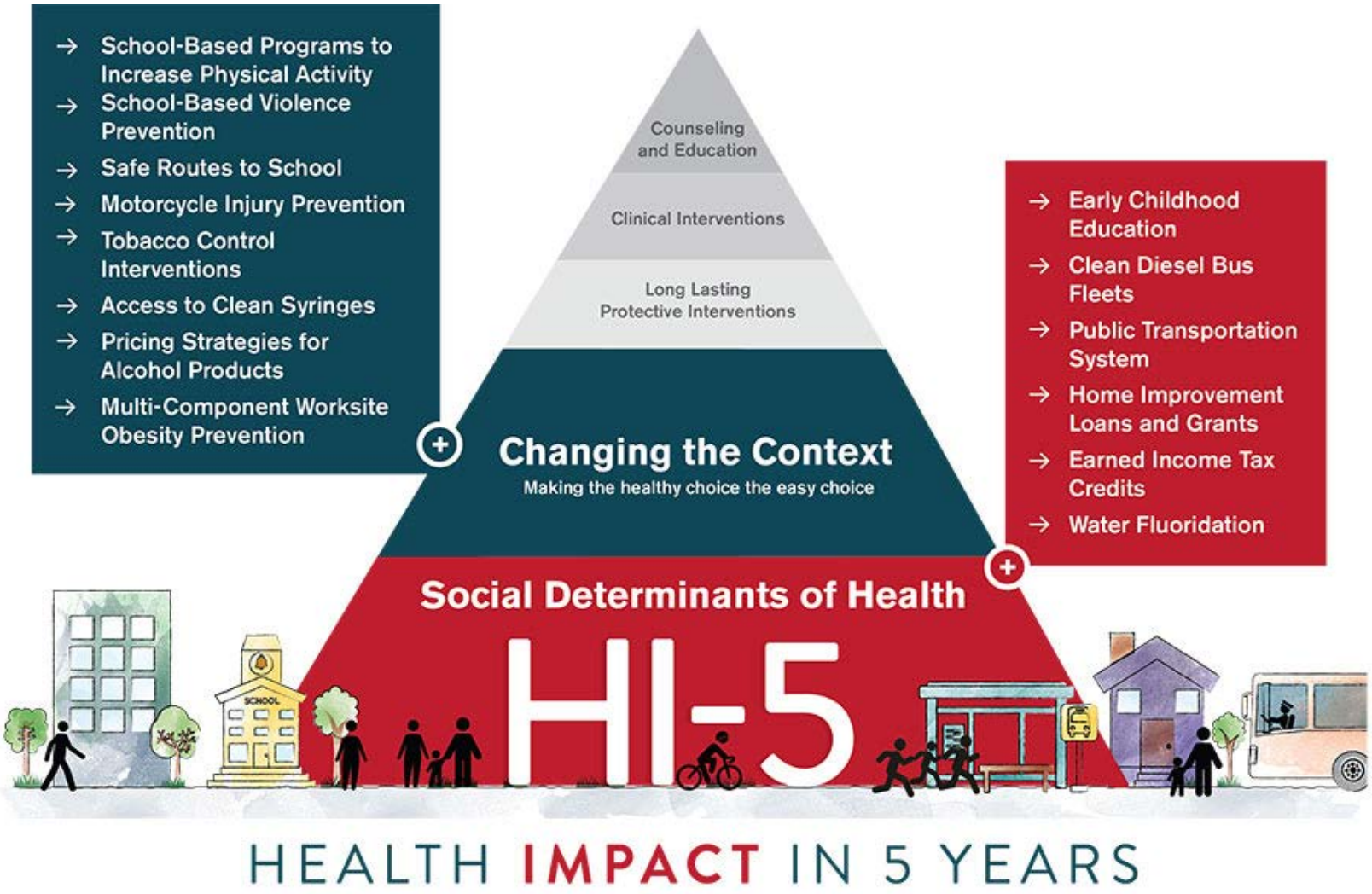
- Leading Convening
- Technical Cooperation
- Policy Advice and Dialog
- Norms and Standards
- Knowledge Generation

Resource:
Robert Wood Johnson Foundation
Building a Culture of Health
http://www.rwjf.org/en/library/annual-reports/presidents-message-2014.html

Environmental Change



Environmental Change



Resource: US Centers for Disease Control and Prevention http://www.cdc.gov/policy/hst/hi5/

The **Power** of PSE

- Supports a **population** behavior change
- Can be lower in cost with a **high impact**
- Effort is **ongoing**
- Change is built to last– **it sticks**

Systems and Policy Challenges

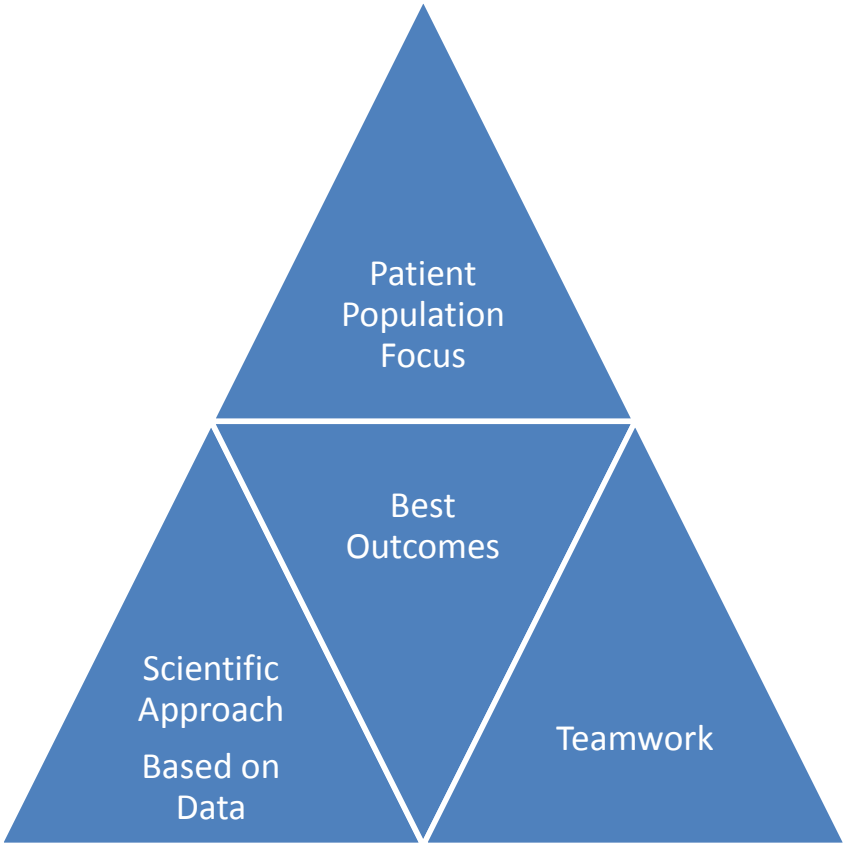
- Build Leadership
  - Establishing Cancer Control as a National Priority
- Financing
  - Health Coverage
    - Insurance, tax funding, coverage of prevention and screening
- Expand and Improve Coverage
  - Quality of services, organization “people centered” primary care integration with secondary and tertiary care, rehabilitation palliative care specialized care facilities
  - Quality assurance and contiguous quality improvement
  - Empower people to take action for prevention and seed early detection through education
  - Evidence based guidelines, Team based management
  - Integrate with existing programs, HIV, nutrition, TB, reproductive health

Resource: Global Action Plan for the prevention and control of NCD’s 2013-2020

Addressing a Policy Challenge

- Policy change implementations banning public use of chewing tobacco in sporting events
- Use of combustible tobacco among youth in US has declined steadily
- Use of oral/chewing tobacco continues
- Youth in athletics use at 2-3x rates of others
- Sports figures use chewing tobacco publicly maintaining poor role model
  - Partner with cancer control organizations, Campaign for Tobacco Free Kids, American Cancer Society to educate policy makers in municipal governments
    - City council, Mayor, Public Health Agencies, Professional organizations, business leaders, community advocates
    - Prepare for labor discussions nationally

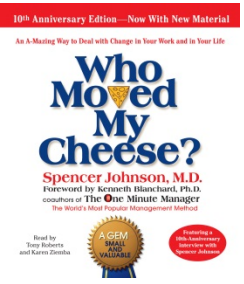
Power of Teamwork



- Task is complex
- Creativity is needed
- Path forward is unclear
- Resources limited
- Rapid learning needed
- High commitment desired
- Cooperation is essential to implementation
- Partners have stake in outcome
- Task is cross-functional
- No single individual has knowledge to solve problem

“Laws” of Organizational/System Change

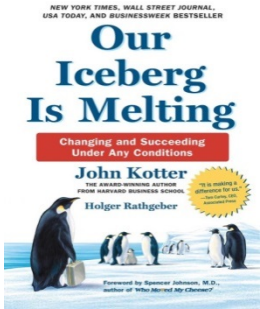
- People don’t resist change, they resist being changed
  - Address hopes, fears, engage and seek input, communicate
- Things are the way they are simply because they got that way
  - “The system is perfectly designed to deliver the results it does.” Try to understand why things are the way they are.
- Unless things change, they are likely to remain the same
  - No matter how bad it is, it can get worse. Seek to improve not tamper. Understand the causes of problem
- Change would be easy if it weren't for all the people
  - People are the organization and it is there for the patients/community



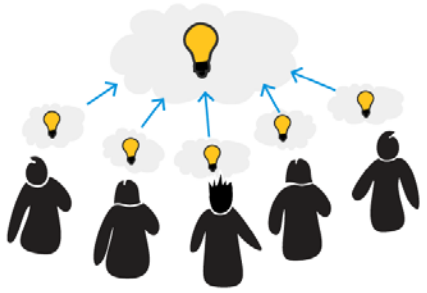
Resources:

Our Iceberg is Melting, John Kotter

Who Moved My Cheese, Spencer Johnson, MD



Changing Policies and Systems



- Create Shared vision
  - Communicate vividly and regularly why things must change
  - Clearly and concretely describe the vision for change
  - Clearly describe first steps taken by team/partners and how they link to vision
- Understand Stakeholders
  - Identify extent to which stakeholders/organization are affected by change
  - Understand stakeholders attitudes toward change and where they need to be
    - Enthusiastic, helpful, hesitant, indifferent, uncooperative, opposed, hostile

Understand Attitudes Toward Change

Enthusiastic

Helpful

Hesitant

Indifferent

Uncooperative

Opposed

Hostile

Develop action plan

Engaging people/organizations in planning and decision making:

- More likely to support change by feeling in control
- More likely to understand reasons for change
- Greater commitment ownership

Building Successful Coalitions

Stages of Coalition Growth

- Forming
- Storming
- Norming
- Performing

Markers of Success

- Clarity of goals
- Plan for improvement
- Clearly defined roles
- Clear communication
- Well defined decision process
- Balanced participation
- Established ground rules
- Use of scientific approach
- Focus on patient/population

Resource: The TEAM Handbook, Scholtes, Joiner, Streibel: Oriel Inc.