

# Modifiable risk factors and prevention: overview of current knowledge and main challenges

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International Agency for Research on Cancer (IARC/WHO)

Presentation for the ENVI Committee / Health Working Group

# The need for cancer prevention in Europe facing the projected cancer burden 2018-2040

Europe

New cases  
every year

2018: 4.1 million

To

2040: 5.1 million

Cancer deaths  
every year

2018: 1.5 million

To

2040: 2.57 million

More than 100 million new cases  
of cancer in Europe  
over the next 22 years

*(Not a worst case scenario but a projection)*

Number of new cases / deaths (Thousands)



Incidence



Mortality

Including non-melanoma skin cancer

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*No country can afford to treat its way out of the cancer problem*

A balanced, integrated approach to prevention, early detection and treatment is required

*More than 40% of all cancers today are preventable with rigorous cancer prevention*

# Why cancer prevention?

- Cancer burden too big to rely only on advances in treatment
- Most cancers only curable in early stages
- Several cancers come with severe suffering of people before they die
- Synergies: Cancer control = NCD control

# Talking about cancer...

- Cancer encompasses over 100 types of disease, occurring at different sites and in different cell types
- Common feature is cells that have lost their normal cell function, divide and grow uncontrollably invading neighbouring tissue, and spreading to other parts of the body
- Hence, cancer types differ in terms of:
  - aetiology / their causes
  - symptoms and when detectable
  - treatments
  - prognosis and after-care



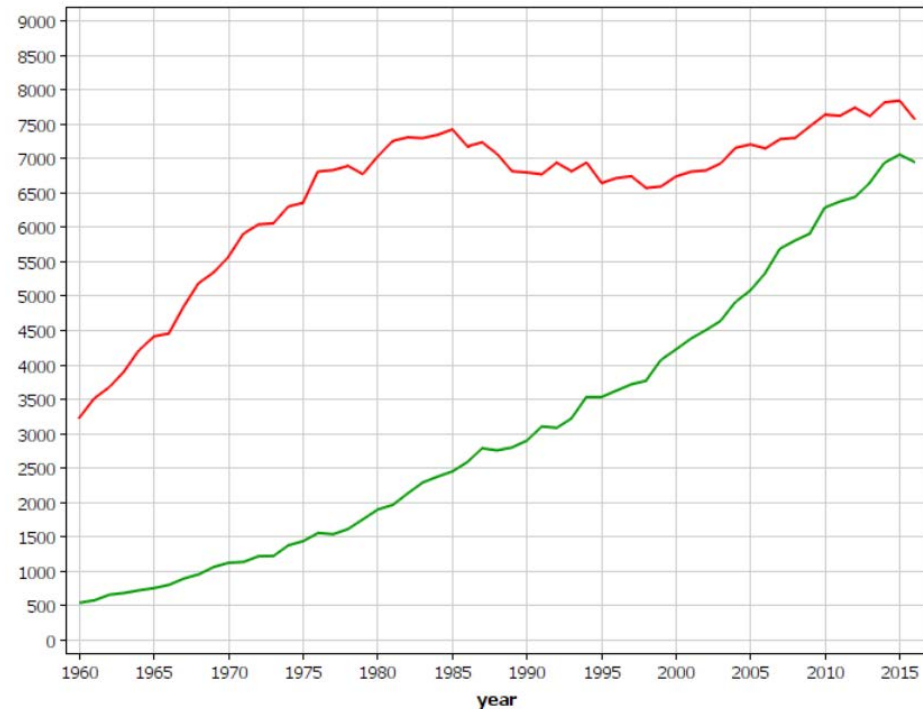
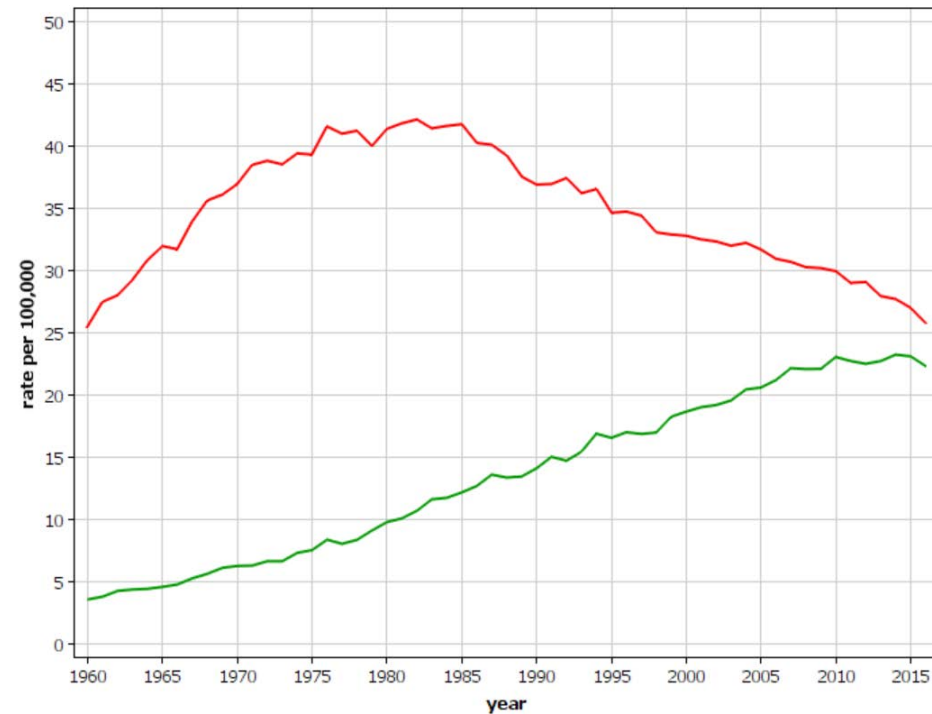
*Cancer of the tongue*

# Time trends in cancer incidence:

## Lung cancer in the Nordic countries, 1960-2015

Age-adjusted incidence rate (W)

Numbers of incident cases



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Male

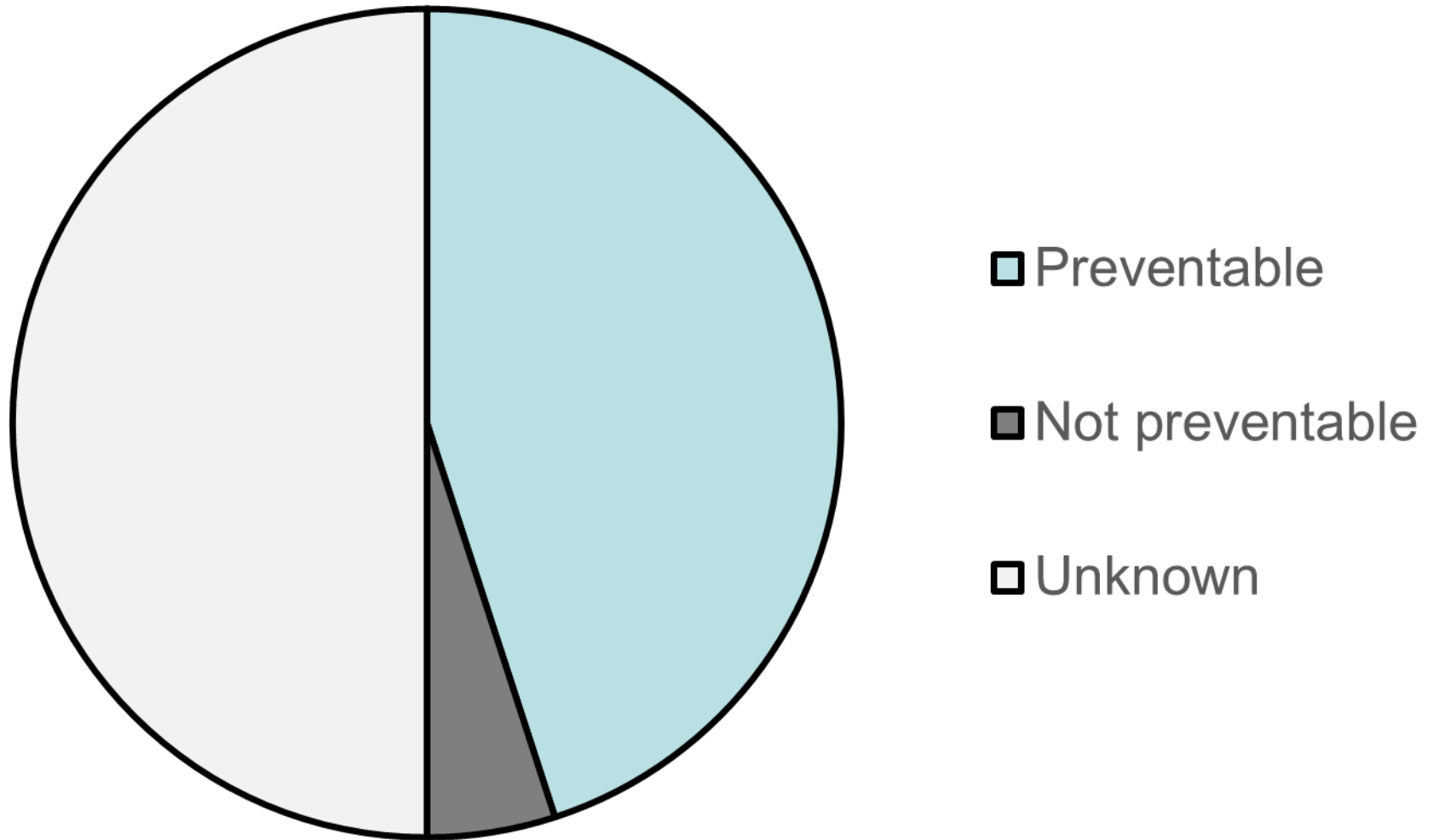
Female

NORDCAN © Association of the Nordic Cancer Registries (17.2.2020)

# Prostate Cancer Mortality: Spain/Denmark in 1995 and 2015

	Number of deaths	Age-standardized Mortality Rate
1995	5278	13.7
2015	5757	8.2
Change %	<b>+9%</b>	<b>-40%</b>
1995	1050	20.1
2015	1170	15.3
Change %	<b>+11%</b>	<b>-24%</b>

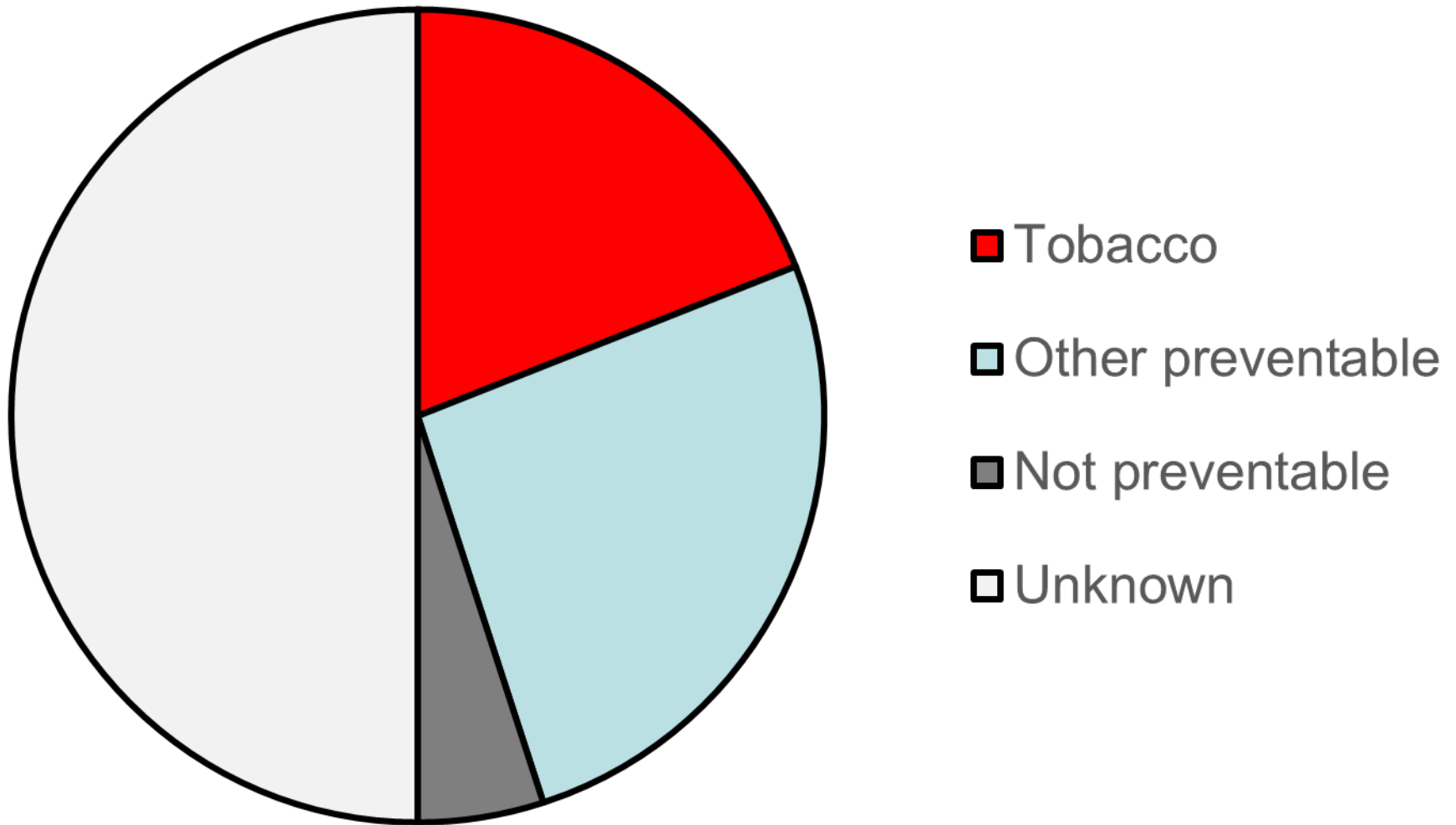
# Potential for primary prevention in Europe



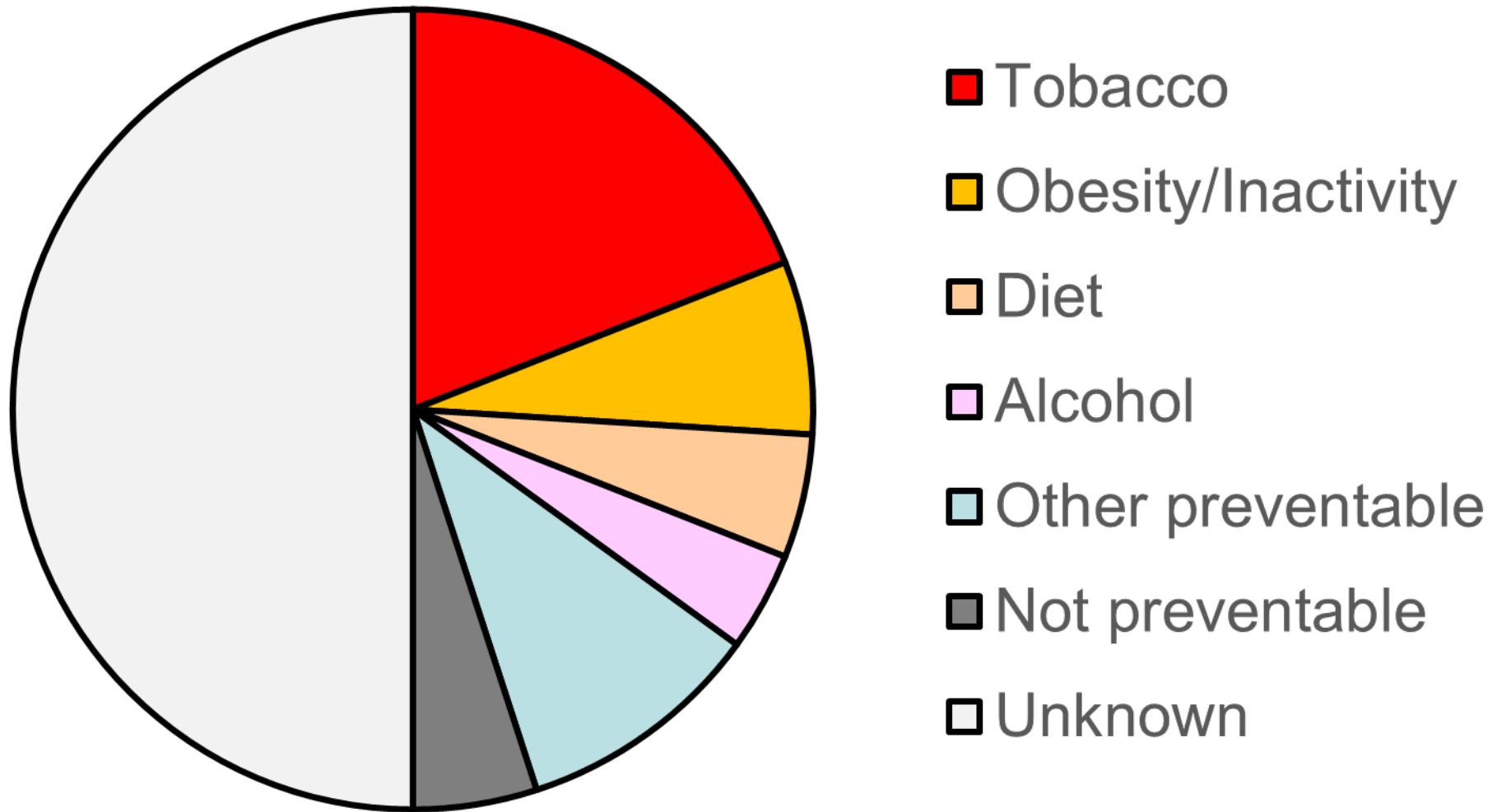
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# Potential for primary prevention in Europe

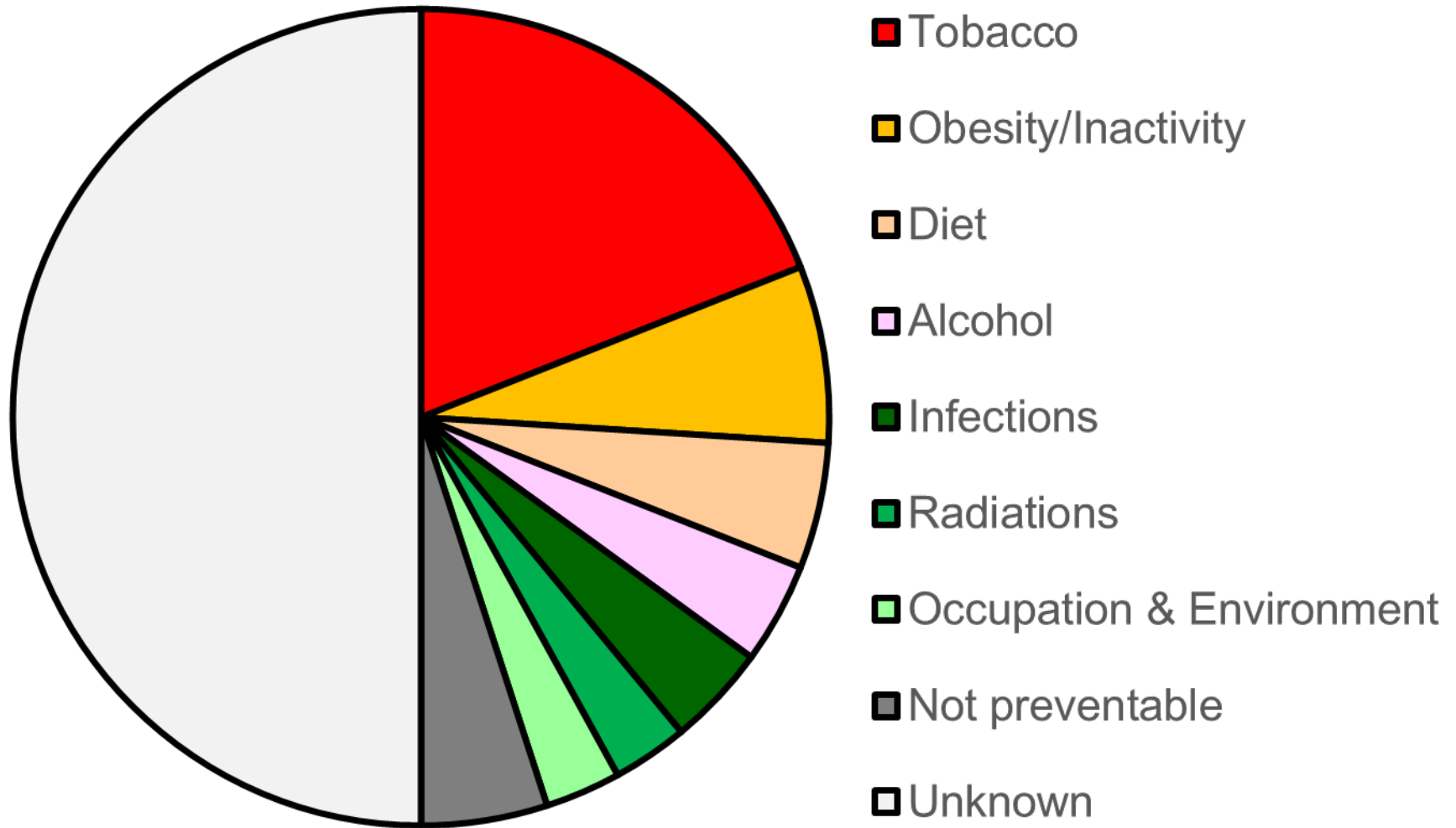


# Potential for primary prevention in Europe



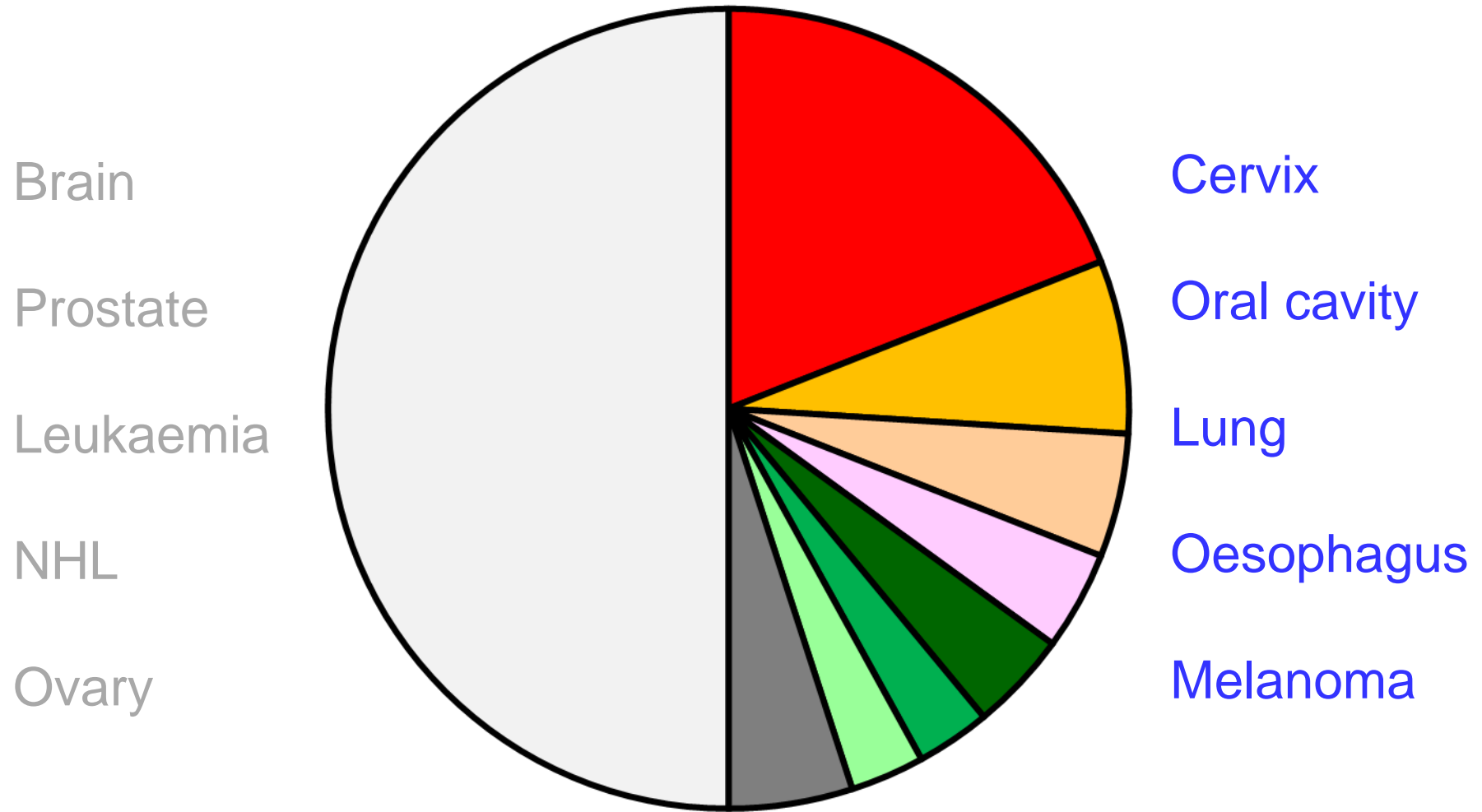
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# Potential for primary prevention in Europe



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# Potential for primary prevention in Europe



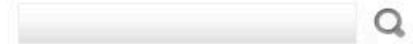
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# 4<sup>th</sup> Edition European Code Against Cancer

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European Code Against Cancer



HOME

12 WAYS

ABOUT CANCER

SCIENTIFIC JUSTIFICATION

ABOUT THE CODE

## European Code Against Cancer

12 WAYS TO REDUCE YOUR CANCER RISK

You are here: 12 ways



FIND OUT MORE ABOUT THE 12 RECOMMENDATIONS:



TOBACCO



SUN/UV EXPOSURE



SECOND-HAND SMOKE



POLLUTANTS



HEALTHY BODY WEIGHT



RADIATION



PHYSICAL ACTIVITY



BREASTFEEDING



DIET



HORMONAL THERAPY



ALCOHOL



VACCINATION AND INFECTIONS



SCREENING

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<http://cancer-code-europe.iarc.fr/index.php/en/>

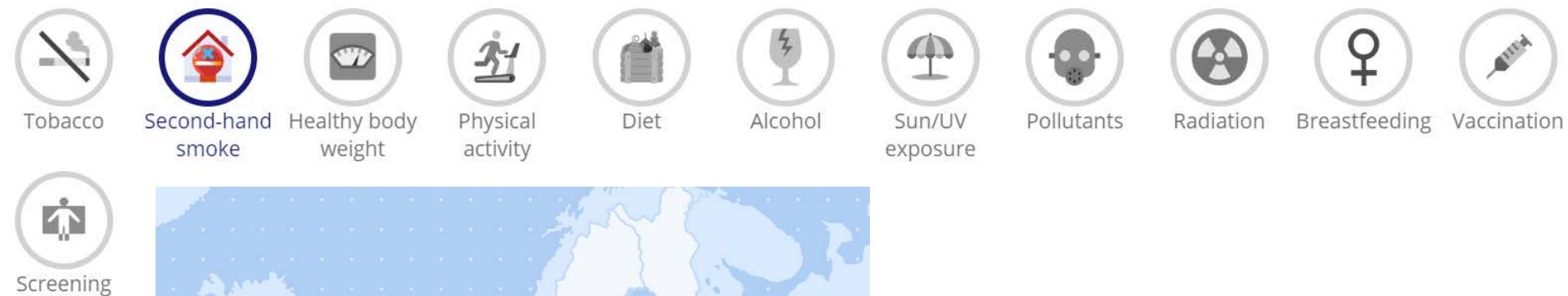
# ECL Interactive Maps



## European Code Against Cancer

### 12 Ways to reduce your cancer risk

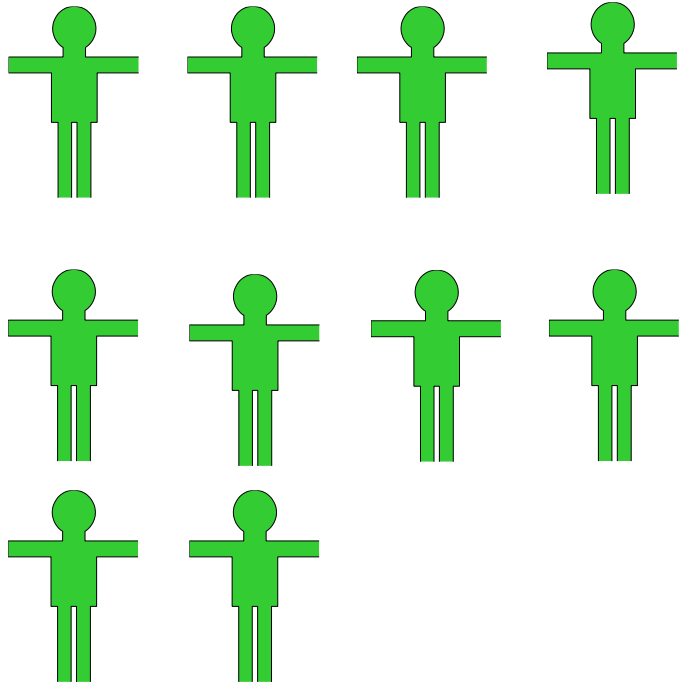
The European Code Against Cancer includes 12 ways to reduce your cancer risk. Use the interactive map below to explore national efforts of all European Union member states against each message.



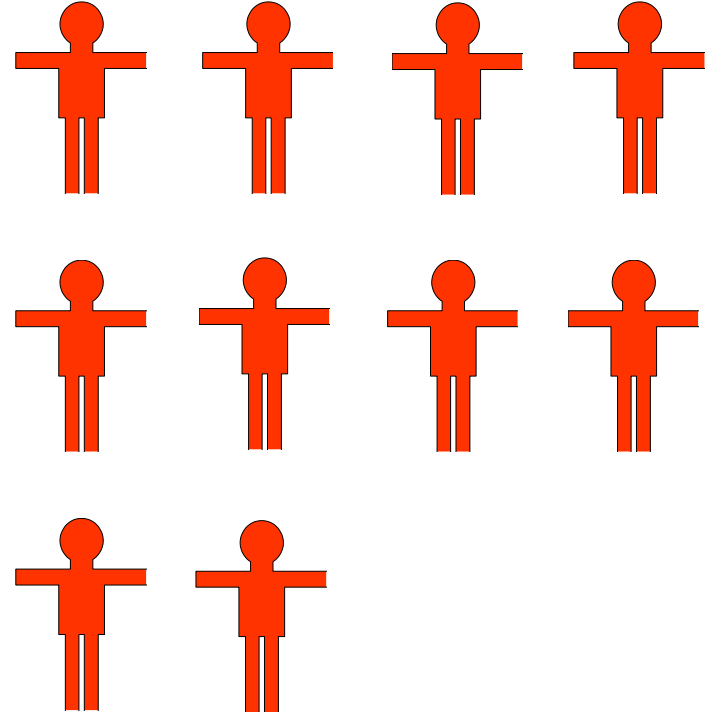
#### SMOKE-FREE PUBLIC PLACES

- Completely smoke-free according to WHO definitions
- Not completely smoke-free according to WHO definitions

# Lung Cancer Dilemma

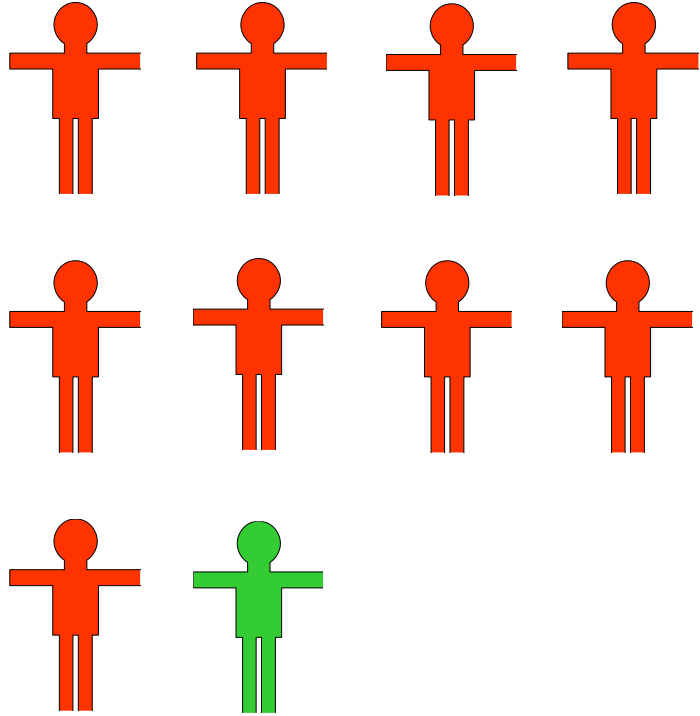


10 having lung cancer

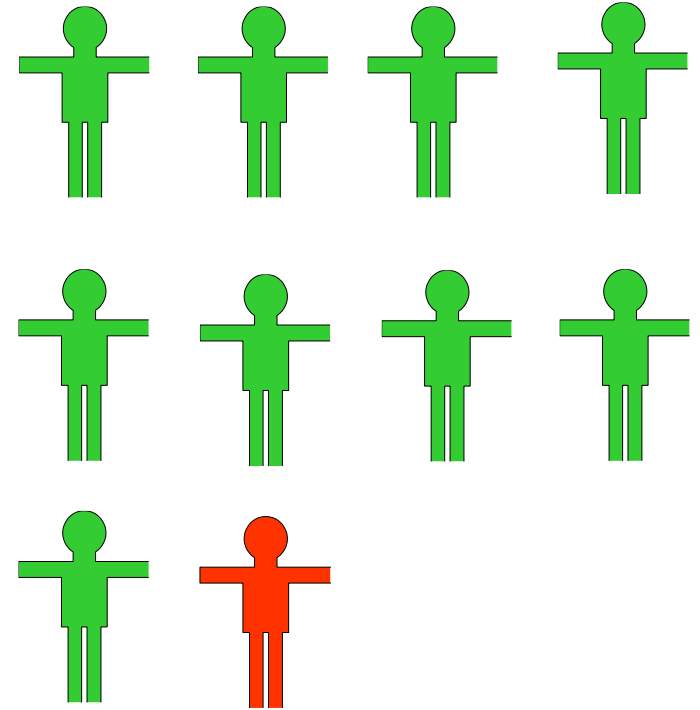


10 at risk of  
getting lung cancer

# Lung Cancer Dilemma



9 out of 10 die  
within five years



9 out of 10  
can be prevented



# Smoking

is the new smoking

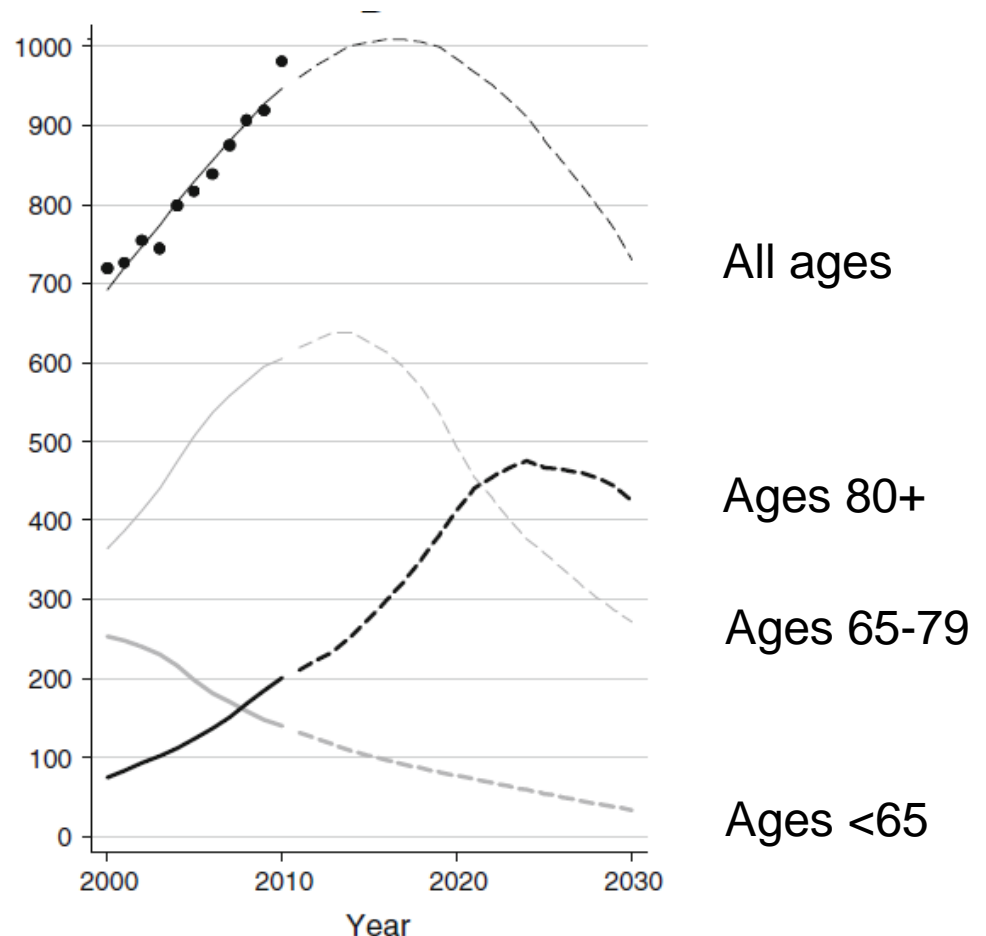
*Stop Cancer!*

# Primary prevention needs time to show effect

Long duration between exposure and detection of cancer

Reversing trends may take decades

Success of primary prevention to be measured in reduction of exposure and changes in the projection of future cancers



Mesothelioma mortality in former West Germany

# Take-home messages

- In *Europe* as many as *100 million new cases of cancer* will be diagnosed *in the next 20-25 years*
- *Prevention* can reduce the burden by *more than 40%*
- Primary prevention is an *urgent long term investment* as it takes long time to show effects
- Prevention through *organized screening* and *vaccination programs* to be fully implemented
- *Tobacco* causes about half of preventable cancers
- *Research* to identify *causes* remains essential

# Surf & Read

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European Code Against Cancer



HOME

12 WAYS

ABOUT CANCER

SCIENTIFIC JUSTIFICATION

ABOUT THE CODE

## European Code Against Cancer

12 WAYS TO REDUCE YOUR CANCER RISK

<http://cancer-code-europe.iarc.fr>

<https://www.europeancancerleagues.org/cancer-prevention-ecac-map/#1>

Cancer  
prevention  
Europe

<http://cancerprevention europe.iarc.fr>

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**GLOBAL CANCER  
OBSERVATORY**

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ABOUT

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CANCER REGISTRY RESOURCES

<http://gco.iarc.fr>

**POLICY DEPARTMENT FOR ECONOMIC,  
SCIENTIFIC AND QUALITY OF LIFE POLICIES**



**ECON • EMPL • ENVI • ITRE • IMCO**

**Thank you for your  
attention!**

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**International Agency for Research on Cancer**

