UPDATE OF THE EUROPEAN CODE AGAINST CANCER

Dr Carolina Espina

International Agency for Research on Cancer
Lyon, France

Open Forum – European Partnership Action Against Cancer
Ljubljana, Slovenia. November 26-27
Leading cause of death worldwide – 12.7 millions new cases and 7.6 millions of deaths in 2008

At least 1/3 of all cancers are preventable
(tobacco = 71% of global lung cancer deaths)

In 2010 new cases estimated to cost US$ 154 billion in medical expenses

2.5 million people were diagnosed with cancer in the EU27 in 2008

Cancer mortality accounts for nearly 20% of all deaths

Second most common cause of death in the EU after cardiovascular diseases

Mostly breast (women), colorectal, prostate and lung (men) cancers
WHAT?
- Key prevention tool to reduce cancer risk and to improve health in general
- Concrete, science-based guidelines
- 2 clear messages:
  (1) healthier lifestyles and environments;
  (2) effective screening programmes

WHY?
- Prevention: the most cost-effective, long-term strategy for reducing the burden of cancer
- Science is dynamic
- Improvement in communication
- 12 new Member States in the EU since 3rd revision, in 2003 (Croatia in 2013)

HOW?
- Update of the Code (recent scientific data)
  (1) Confirm existing recommendations
  (2) Potential additional recommendations
  (3) Interventions proven to be successful, assessed by scientific evidence
- Clear communication:
  * focus on European citizens (target audience)
  * 3 levels of information

WHO?
- Supported by the European Commission
- Led by the IARC
- Actors:
  (1) Scientific Secretariat (IARC)
  (2) Scientific Committee (external experts from the EU)
  (3) Expert working groups
**A) Certain cancers may be avoided – and health in general can be improved – by adopting healthier lifestyle:**

1) Do not smoke; if you smoke, stop doing so. If you fail to stop, do not smoke in the presence of non-smokers;

2) Avoid obesity;

3) Undertake some brisk, physical activity every day;

4) Increase your daily intake and variety of vegetables and fruits: eat at least five servings daily. Limit your intake of foods containing fats from animal sources;

5) If you drink alcohol, whether beer, wine or spirits, moderate your consumption to two drinks per day if you are a man and one drink per day if you are a woman;

6) Care must be taken to avoid excessive sun exposure. It is specifically important to protect children and adolescents. For individuals who have a tendency to burn in the sun active protective measures must be taken throughout life;

7) Apply strictly regulations aimed at preventing any exposure to known carcinogenic substances. Follow all health and safety instructions on substances which may cause cancer. Follow advice of national radiation protection offices.

**B) Cancers may be cured, or the prospects of cure greatly increased, if they are detected early:**

8) Women from 25 years of age should participate in cervical screening. This should be within programmes with quality control procedures in compliance with European Guidelines for Quality Assurance in Cervical Screening;

9) Women from 50 years of age should participate in breast screening. This should be within programmes with quality control procedures in compliance with European Union Guidelines for Quality Assurance in Mammography Screening;

10) Men and women from 50 years of age should participate in colorectal screening. This should be within programmes with built-in quality assurance procedures;

11) Participate in vaccination programmes against Hepatitis B Virus infection.
UPDATE - Principles

1. Update of scientific evidence
2. Relevant cancer burden
3. Possible to communicate to the layman - target group: European citizen

- Explanations and additional guidance as public health messages ("Questions and Answers")
- Recommendations on how to implement individual interventions
"I want to do something to reduce my cancer risk, what can I do myself?"
## Evidence base

- **Causality:**
  - IARC Monographs / WCRF Reports and Continuous Update Project.
  - Update: systematic search (SRs) up to 31/01/2013

- **Interventions:**
  - SRs, WHO position papers or EU guidelines (harmonization)
  - systematic search up to 31/01/2013

### I. CODE

<table>
<thead>
<tr>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td># 1</td>
</tr>
<tr>
<td># 2</td>
</tr>
<tr>
<td>...</td>
</tr>
<tr>
<td>...</td>
</tr>
<tr>
<td>...</td>
</tr>
</tbody>
</table>

### II. Public Health Messages (FAQ style)

- Specifications
  - definitions
  - synergies between risk factors, etc.
- Target groups
  - young & elderly
  - men & women
  - parents, etc.
- Interventions targeted at the individual and their effectiveness

### III. Scientific justification and evidence base

- Evidence base
  - ECAC (2003)
  - IARC Monographs
  - WCRF reports and databases
  - Additional systematic reviews
  - Summary of evidence
WG Tobacco

- Major single cause of cancer
- Passive smoking – how to point out?
- Other forms of tobacco use?
- Which interventions to stop smoking work?

WG UV & Radiation

- Natural and man-made exposure to UVR
- Emphasis protection of children?
- Define what too much exposure means
- Radon exposure at home and at work?
- Impact of diagnostic radiation?
- Perceived risks related to radiation
WG Physical activity, Obesity, Nutrition & Alcohol

Alcohol – is there any safe amount?

Physical activity – definition

Healthy body weight compared to obesity?

Diet: encouragement of fruits and vegetables, discouragement of red meat and salt
Sugary drinks? „Fast Food“?
WG Environment and Occupation

Environmental and occupational chemicals
How much protection can the individual do?
Perceived environmental risks

WG Infections and Vaccinations

Vaccinations against hepatitis B
Vaccination against HPV?
Other infections: other forms of hepatitis, HIV, heliobactor pylori?
Target groups for vaccinations and testing?
WG Screening

- Cervical screening
- Breast screening – age group?
- Colorectal screening
- Prostate cancer screening?
- Lung cancer screening?
Update of scientific evidence
• Sources and types of radiation (non-ionizing and ionizing)

Communication of the recommendation
• Feedback from ECL: very unclear
• Regulations not always homogeneous across Europe
• Factors not specified – radiation implicitly mentioned
• Factors that “may” cause cancer - unclear

Perceived as being addressed to employers or regulators rather than individual
Scientific Justification new recommendation

- IARC Monograph 100 D (2012)
  - Radon 222 and decay products class I
  - X and γ radiation class I
  - Radionuclides class I

- Cancer burden ~1% (Radon only; UK)
Modifiable by individual

- Find out -> country maps -> measurement devices
- Take action -> ventilation -> professional renovation

Challenge: Identify the target group

Test panel:

- hardly anyone knew what radon was
- overwhelmingly positive reaction as new message
3 month test for € 60:

Reporting back if action level of > 400 Bq/m³ is exceeded

Map of South England by PHE
Risk communication new recommendation

Public Health
- UV
- Radon
- X-rays
- Nuclear power
- EMF

Public Concern
- EMF
- Nuclear power
- X-rays
- Radon
- UV

Adapted from WHO PHE (E van Deventer)
Questions and Answers for lay people

Clarifications:
• What is radiation? What is radon?
• How do I find out about radon exposure in my home?
• How do I find out about radon exposure at work?
• What is the cancer risk from ionizing radiation?
• Should I worry about X rays? About EMF?

Interventions:
• How do I reduce high radon levels?
• When is protection against ionizing radiation necessary?
Cancer

Every year 3.2 million Europeans are diagnosed with cancer, mostly breast, colorectal or lung cancers. Advances continue to be made in research and treatment. Cancer remains a key health concern. The EU is taking action on various fronts to save life and improve the quality of life.

Trustworthy websites on "Cancer"

- **European Code Against Cancer**
  The Europe Code Against Cancer initiative sets out eleven concrete, sustainable guidelines for citizens to avoid certain cancers and to improve their health.
- **European cancer partnership**
  Commission efforts to help fight cancer.
- **Early detection of cancer through screening**
  EU policy and activities within the field of cancer screening.

European Code Against Cancer (third version)

Many aspects of general health can be improved and many cancer deaths prevented, if we adopt healthier lifestyles:

1. Do not smoke: if you smoke, stop doing so. If you fail to stop, do not smoke in the presence of non-smokers.
2. Avoid Obesity.
3. Undertake some brisk, physical activity every day.
4. Increase your daily intake and variety of vegetables and fruits: eat at least five servings daily. Limit your intake of foods containing fats from animal sources.
5. If you drink alcohol, whether beer, wine or spirits, moderate your consumption to two drinks per day if you are a man or one drink per day if you are a woman.
6. Care must be taken to avoid excessive sun exposure. It is specifically important to protect children and adolescents. For individuals who have a tendency to burn in the sun, active protective measures must be taken throughout life.
7. Apply strict regulations aimed at preventing any exposure to known cancer-causing substances. Follow all health and safety instructions on substances which may cause cancer. Follow advice of national radiation protection offices.

There are Public Health programmes which could prevent cancers developing or increase the probability that a cancer may be cured:

8. Women from 25 years of age should participate in cervical screening. This should be within programmes with quality control procedures in compliance with "European Guidelines for Quality Assurance in Cervical Screening".
9. Women from 50 years of age should participate in breast screening. This should be within programmes with quality control procedures in compliance with "European Guidelines for Quality Assurance in Mammography Screening".
10. Men and women from 50 years of age should participate in colorectal screening. This should be within programmes with built-in quality assurance procedures.
11. Participate in vaccination programmes against hepatitis B virus infection.
European Code Against Cancer – 4th Edition

12 ways you can reduce your cancer risk

1. Do not smoke……
2. ....
3. ....
4. Be physically active …..
5. .....  
6. ..... 
......


The International Agency for Research on Cancer (IARC) was commissioned by the European Union to provide the scientific basis and formulation for the European Code Against Cancer. IARC also provides more information in support of this Code in the form of Questions and Answers. Click here for a direct link [http://www.xxxxx.iarc.fr/](http://www.xxxxx.iarc.fr/).
Preamble:

• **Is cancer avoidable?**

• **What causes cancer?**

• **How does the European Code against Cancer help me to reduce my risk of cancer?**

Questions and Answers (Q&A):

**Questions & Answers - TOBACCO**

**Questions & Answers – OBESITY**
Questions & Answers – TOBACCO:

Introduction
Tobacco is the leading global cause of preventable illness and death. Tobacco is the major cause of cancer.

Q&A 1: What types of tobacco products are used in Europe?
Q&A 2: Does tobacco cause cancer? How much cancer is caused by smoking?
Q&A 3: Is exposure to second-hand smoke or passive smoking harmful to health?
Q&A 4: What are the cancer causing substances in tobacco?
Q&A 5: Does nicotine cause cancer?
Q&A 6: Can other factors modify smoking-related cancer risks? What if I drink alcohol and smoke tobacco?

.....

Q&A 9: What can a smoker do to quit?
Q&A 10: Can I reduce my risk of cancer if I reduce the number of cigarettes I smoke?

.....
Q&A 2: Does tobacco cause cancer? How much cancer is caused by smoking?

Yes.
Tobacco is the largest cause of cancer – and it is avoidable.
There is no safe way to use tobacco. Tobacco causes Many different types of cancer regardless of whether it is smoked in cigarettes, cigars, pipes, chewed, sucked or sniffed. Tobacco also causes cancer in non-smokers who inhale tobacco smoke from smokers and in the children of parents who smoke.
In Europe, smoking causes an estimated 82% of lung cancers. The percentage of different cancers that could be prevented by avoiding smoking is shown in parentheses below (Figure 2).

Figure 2. Cancer caused by tobacco smoking, unless otherwise indicated.
Questions & Answers – UV:

Introduction

Radiation from the sun contains the light we can see and the infra-red radiation we can feel as heat, as well as the invisible ultraviolet (UV) radiation. The ozone layer in the upper atmosphere absorbs UV radiation but some of the short-wavelength UV (UVB) and long-wavelength UV (UVA) radiation reaches the Earth’s surface, causing damage to the skin which, in the long term, can lead to skin cancers. Only very short wavelength UV (UVC) radiation is completely absorbed.

Q&A 5: What is the UV Index?

The Global Solar UV Index or UV Index expresses the measured or predicted amount/intensity of the UV radiation from the sun at a particular place on a particular day. In many countries, it is reported in daily weather forecasts, particularly in summer, to inform the general public on the intensity of the sun and levels of sun protective measures needed.....
Scientific Evaluation:

**Cancer Epidemiology Special Issue**

1. Introduction
   a. Cancer burden in EU
   b. Cancer control

2. Methodology

3. Recommendation on tobacco

4. Recommendation on obesity

5. Recommendation on healthy diet

6. Recommendation on physical activity

......

14. Additional items to consider and future directions
VALUES

1. To support **evidence-based strategies for cancer control**
   - bridge between science and public health

2. To **translate the knowledge** to the people
   - to understand which cancers threaten them most
   - how to reduce their risk
   - to demand healthy environments to encourage healthy lifestyles

3. **Consistency** with public health policies and national programmes
   - capacity to influence the behaviour of large numbers of people

4. **Scientific leaders** of major European cancer research institutions committed to the ECAC

5. **High European added value** to the “Prevention of major and chronic diseases and rare diseases” programme

6. Key component of the **European Partnership Action Against Cancer**
   - to engage the EU Member States in efforts to lower the burden of cancer
   - to work towards the sustainability of health systems serving the aging
1. To **influence lifestyles and behaviours**, without interfering with individual freedom and cultural values

   ✓ Communication strategy is key:
     - public risk perception
     - translating knowledge to the individual for making informed decisions

2. **Implementation** of ECAC in the different EU countries:

   ✓ Monitoring (follow-up)
   ✓ Evaluation: measure of impact (effectiveness of ECAC)
AN UPDATE OF THE EUROPEAN CODE AGAINST CANCER

Thank you

Acknowledgements:

Dr Joachim Schüz and Dr Lawrence von Karsa (PIs)
Dr Carolina Espina (Coordinator)

WG Chairs & IARC Project Management:
Dr Rolando Herrero
Dr Maria Leon Roux
Tracy Lignini
Dr Silvia Minozzi
Dr Isabelle Romieu
Dr Nereo Segnan
Dr Patricia Villain
Dr Jane Wardle