5th Workshop Science and Values in Radiological Protection Decision-making
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Parallel Breakout Session

Topic B
Medical screening: RP ethics and uncertainties in justification and implementation

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Workshop Objectives

medical screening

The workshop aims at understanding how the science and values aspects of Topic B – medical screening might influence the evolution of the system of radiological protection, and how these aspects should be included and transparently articulated in radiological protection decision-making.

focus more on the “values” aspects of radiological protection decision-making than on the “science” aspects.
Case Study
A German billionaire, who made his fortune in southern Germany buying and selling companies, is starting a new football team and naming it after himself, Buyer Munich. He would like to hire top players, and for insurance reasons, each potential player must have a full-body CT scan.
Breakout Questions

What are the ethical values and scientific rational for radiological screening:
- of football players as a prerequisite to employment?
- of women over a given age to detect breast cancer?
- of workers to detect pre-existing conditions, e.g. lung cancer
Discussed aspects
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Discussion of examples:
Distinguishing between medical and non medical exposures

Only case “breast cancer” is medical exposure
Related examination can be for individual health assessment (IHA) OR as part of a screening programme

Decision in group: Examination prior to employment regarded as important ethical questions but to be discussed in another context
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Two relevant levels of justification for radiological application in medicine (ICRP level 2 and 3):

- **Generic justification**: A specific radiological procedure is to be justified
- **Individual justification**: Application of procedure to an individual should be justified

→ screening programmes have to be justified on a generic level; IHA has to be individually justified

Both EURATOM and International BSS: requires justification of exposure of asymptomatic people,

- Within screening programmes and
- On an individual level ( = individual health assessment, IHA)
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Looking at ethical aspects
Beneficence, non-maleficence: what is the goal?
Dignity:
Prudence: From which point of view?
Justice:
Transparency
Autonomy:
Empathy:
Solidarity:
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Ethical judgement in decision-making:

(All) Different perspectives on ethical values and the resulting challenges should be considered

Judgement by those who receive the action and by those who decide or conduct the action (taking into account policy and protocol)

Screening programmes primarily have societal benefit, not individual → Ethical considerations?
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Independence, interaction, influence?
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Who defines the frame within which “values” are discussed and ethical aspects considered?

Who influences the decision making process?

Are societal views considered appropriately, at all levels of discussions?
How are risks and uncertainties of screening programmes managed with the individuals participating in screening operations?

Risks:
False positive
False negative
Overdiagnosis
Radiation risk

+ inherent uncertainties (despite of high quality standards)
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Further points were discussed:

Screening implies a whole chain of action

Considering ethical aspects of screening programmes and IHA means considering ethical aspects of outcomes of both

Dealing with Risks and uncertainties in the screening operation:

Ensure a demanding quality system; ensure sound communication and try to be transparent; avoid failures in communication
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Prerequisites for a screening program to be justified are: scientific evidence is sufficient, quality standards are demanding

But: Challenge to ethical judgement:

Scientific knowledge is limited

Scientific evidence is questionable, challenged by uncertainties

Several types of uncertainties have to be taken into account and be weighed (among others: interpretation of images→ fp, fn, overdiagnosis, overtreatment etc.).
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Summarizing: aspects for discussion

• General problem of screening:
  ▪ To what extend do screening programmes have an positive effect?
  ▪ To what extend does IHA have an positive effect?

• Relevance of prevailing circumstances
  ▪ Allocation of resources in healthcare
  ▪ Structure of health care system
  ▪ incentives resulting from reimbursement system

• Solidarity as part of personal decision?
What ethical principles would be relevant in deciding whether it is just, or not, to use personal data from patients for scientific studies of little direct value to patients?
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Some food for discussion

Personal data:

- ok if you ask
- Big problem, concerns outcome of screening programmes
- Big data management
- Solidarity?
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Breakout Questions for further discussion

What are the ethical considerations associated with individual rights:
  o Addressing individual risks?
  o Informed consent?
  o Providing dosimetry information: how to?
  o Scientific research: balancing research and individual needs?
Thank you for your attention