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Cervical, breast and colorectal cancer screening in Europe

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New openings of cancer screening in Europe, Helsinki, December 5, 2019

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Task on cancer screening: Scope

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- The work of the task group is largely built upon the EU Council recommendation on population-based cancer screening programmes (2003) and European quality assurance guidelines defining the concepts, elements and implementation criteria for cancer screening
- Recommendations for policy-making and governance for cancer screening programmes and how to reduce health inequalities have been laid down in the previous Joint Action on cancer, CANCON (Lönnberg et al., 2017; Peiro et al. 2017)
- In addition there are needs to develop criteria for implementing risk-stratified screening, i.e., selective screening by individuals in a population-based approach; and assess potential of new programmes from the policy-making perspectives

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Implementation of cancer screening in the EU

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- Out of the 28 Member States population-based screening in its implementation, roll-out, piloting or planning phase on-going for
  - Breast cancer in 25,
  - Cervical cancer in 22, and
  - Colorectal cancer 20 Member States

Ref: Ponti et al, 2017 and subsequent EUSR reports
Further details mapped in Partha Basu's presentation

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Implementation of cancer screening in the EU (Ponti et al., 2017)

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- **Breast cancer screening:** In age group 50-69 years, coverage by invitation 79% and by examination 49%. Among the invited women *on average 60% participated (range 6 – 84%).* The mean treatment referral rate was 7/1000 women screened (range 2 – 12) and the mean detection rate of any malignancies was 6 (range 2 - 10) per 1000 women
- **Cervical cancer screening:** 59% (range 7 – 100%) of women aged 30-59 years invited and the *mean participation rate 51% (range 12 – 68%).* Mean colposcopy referral rate was 2% (range 0.9 – 4%) and overall detection of CIN 2 or worse lesions was 4/1000 (range 2 - 10)
- **Colorectal cancer screening:** Coverage by invitation and by examination of the EU population aged 50 to 74 years were *33% (range 1 – 112%) and as low as 14% (range 0.5 – 65%)*. The values of the other performance indicators differed with the target age, screening tests used and the threshold of positivity used by the programmes

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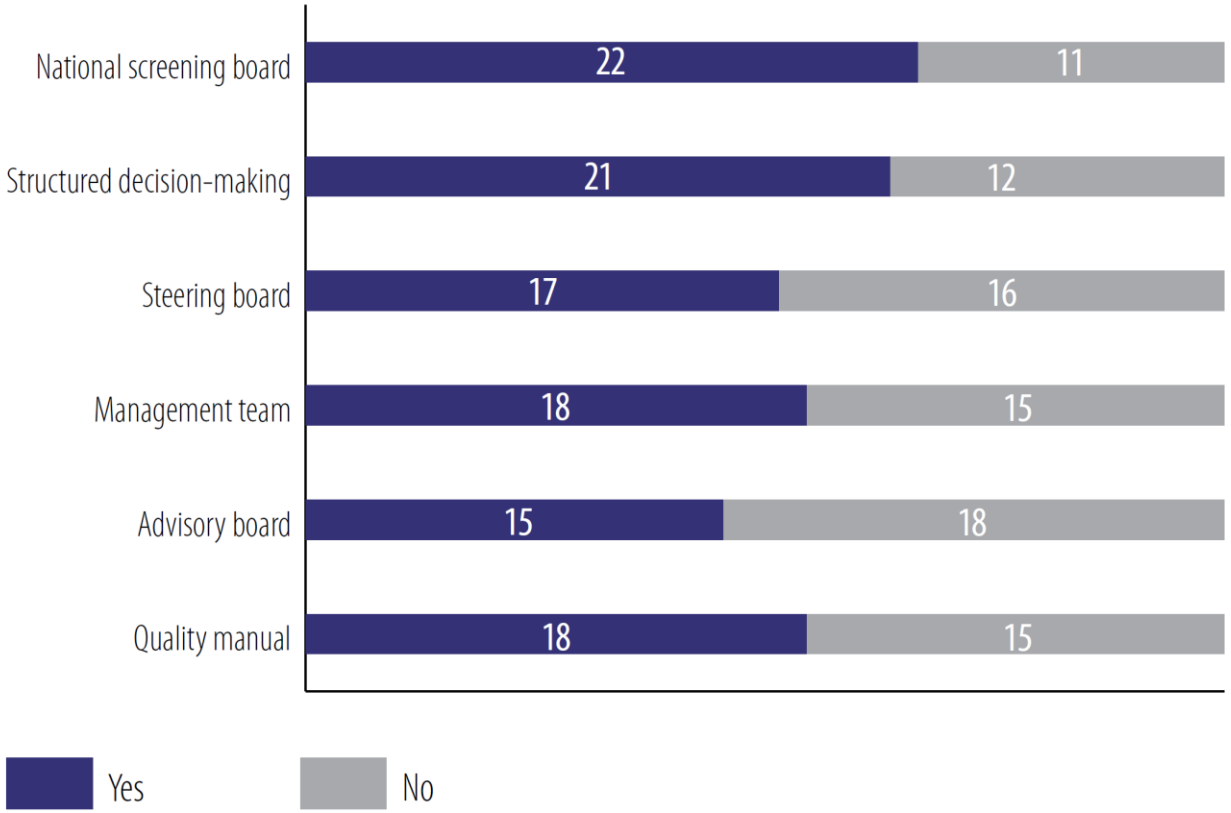
Shortcomings in governance structures for cervical cancer screening in EU and EFTA countries (Lönnberg et al., 2017)



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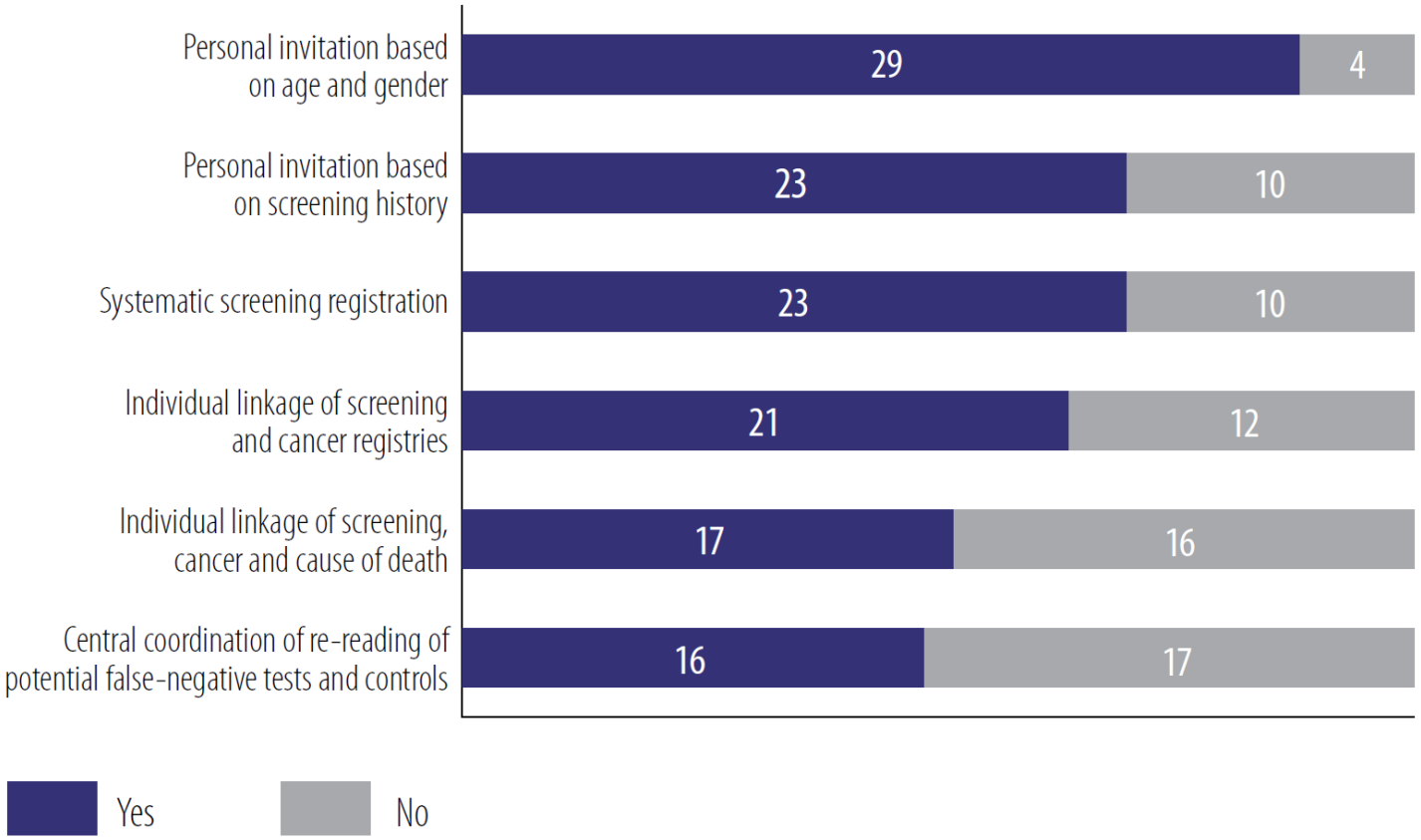
Legal frameworks for cervical cancer screening for 33 EU or EFTA countries (Lönnberg et al., 2017; Majek et al., 2018)



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Key recommendations for governance & organization

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- A competent, multidisciplinary and transparent governance structure
- The legal code should provide a specific framework for population-based cancer screening, enabling personal invitation, mandatory notification and central registration of complete screening and outcome data, and individual linkage to cancer and cause of death (and other) registries for appropriate quality assurance and audits
- Significant resources required for quality assurance and quality improvement
  - Including investigation and implementation of new technologies
- Implementation should be a carefully managed multistep process through the phases of coordinated planning, piloting, roll-out and continuous improvement. There should also be criteria to modify or stop screening, if indicated

Lönnberg et al. 2017 (Cancon Guide)

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Keys to reduce inequalities in cancer screening

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- Improve equitable access and compliance with cancer screening programmes (Peiro et al., 2017)
  - Provide screening processes that address the whole population with additional emphasis among socially vulnerable groups
  - Ensure the development and implementation of guidelines for quality assurance in cancer screening, which must include equity as a quality criterion
- Whenever relevant, evaluation and regular monitoring of cancer screening should also detect social inequalities and trigger research and interventions **on improved equity in health**. Research collaboration has an added value to develop interventions and solutions in the local settings where social barriers and social inequalities in cancer have prevailed (Lönnberg et al., 2017)
  - Research required in the local conditions, 'on spot' in the low or middle income settings where e.g. low attendance or serious barriers or inequalities have been identified

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On the definitions and criteria for cancer screening

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- In population-based cancer screening there is a particular concern of *evidence on an acceptable balance between benefit and harm* prior and during routine implementation, because death caused by the screened disease is presumably a rare condition in the whole of the target population, compared with clinical high-risk patient groups; screening can turn an apparently healthy individual to a cancer patient
- "Unselected target population" includes population groups with higher or lower disease risk than the average. Risk-stratified screening (selective screening in a population-based approach, Wilson & Jungner, 1968) aims to improve the screening programme by modifying screening policies within a population-based programme based on individual-level disease risk

  → It is of a particular interest for the task to develop these concepts for policy-making purposes

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Cancer screening: Potential of new programmes (1)

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- Three main criteria for potential new cancer screening programmes (Lönnberg et al., 2017)
  - Efficacy and effectiveness from RCTs
  - Balances of benefit outweigh harms
  - Cost-effectiveness

Additional aspects relate e.g. to ethics, respect for autonomy, informed choice and tackling social inequalities

- Information on screening for prostate and lung cancers from randomized trials and available implementation studies used in the background materials of the conference

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Cancer screening: Potential of new programmes (2)

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- "WHO recommendations support screening for cervical, colorectal and breast cancer. However WHO does not recommend screening for other types of cancer such as prostate, …, or lung, …" (WHO European Technical Consultation on Screening, February 2019)
  - Many authorities discourage screening for prostate cancer
  - Lung cancer screening is controversial, advocated by some and discouraged by others
- New trials launched on prostate cancer screening, looking possibilities to improve the balance of benefit and harm – what is their value for policy-making?
- In governmental tobacco control policy the priority is in primary prevention of tobacco and nicotine products (iPAAC task 5.3.)

→ Whether lung cancer screening can be integrated in the future into optimal tobacco control policies?

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Let us discuss these challenges with an open, constructive manner

Thank you for your attention!

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