

In cancer screening, often less is MORE

EUROPREV Statement about European Commission announcement of a new EU approach on cancer detection

To the European Commission – Health and Food Safety

To Directorate-General Health & Food Safety

To European Union Health Authorities

To European Family Medicine and Public Health professionals

Last September 20th, the European Commission announced: "A new EU approach on cancer detection – screening more and screening better".(1)

Among others, the new recommendations include:

- The extension of the target group for breast cancer screening to include women between 45 and 74 years of age (as compared to the current age bracket of 50 to 69);
- Lung cancer testing for current heavy and ex-smokers aged 50-75.
- Prostate cancer testing in men up to 70 on the basis of prostate specific antigen testing, and magnetic resonance imaging (MRI) scanning as follow-up.

Considering the best available scientific evidence, we call your attention to the following facts:

Breast cancer screening

- For every 2000 women screened with annual mammography for ten years, one death of breast cancer will be prevented. But, at the same time, 200 women will suffer the long-lasting consequences of having a false positive result, and ten women will be overdiagnosed and overtreated including all the harms from being labelled as a cancer patient to side-effects and late effects of cancer treatment. Therefore, the balance between benefits and harms is unclear, and every woman should be given this information.(2)

- The extension of the target group will relatively increase the harm and diminish the benefits associated with this screening. Increased harm: younger women have denser breast tissue, and this increases the rate of false positives and elderly women have a higher competing risk of dying from other reasons than breast cancer and thereby the risk of overdiagnosis will increase. Diminished benefits: the incidence of breast cancer is much lower among women aged 45-49 and thereby the reduction in mortality is in

absolute numbers much smaller and in elderly women the expected benefit from a mortality reduction is much less likely due to their shorter expected lifespan.

Prostate cancer screening

- If best available evidence is used from two independent institutes: the Cochrane Collaboration and the USPSTF, then there is robust evidence of no mortality reduction from PSA screening. If cherry picking the evidence, than in best case scenario it has been shown that for every 1000 men screened with PSA, two avoid death from prostate cancer. But, at the same time, 155 men will experience a false alarm. Usually, this is associated with unnecessary tissue removal. And 51 men will be overdiagnosed and unnecessarily treated, with significant deterioration of the quality of life (urinary incontinence, erectile dysfunction).(3)
- The potential harm associated with this screen is of great concern, and this is why, until now, no population-based prostate cancer screening programs have been implemented in Europe.

Lung, gastric and other cancer screenings

- The available evidence about the benefits and harms of this screening is still scarce. There are also concerns about false positives and overdiagnosis with these screening programs. No population-based cancer screening program should be implemented without adequately designed randomized controlled trials in European populations assessing the balance of benefits and harms related to each screening.(4)

The myth of early diagnosis

According to the European Commission, these new recommendations aim "*to increase the number of screenings, covering more target groups and more cancers*".

Although well intended, this will, in practice, translate into more healthy people unnecessarily transformed into patients - overdiagnosis.

In addition, and again although well intended, this will, in practice, translate into more suffering, cancer, and costs to health systems that are already overloaded and with scarce resources.

Finally, and again, although well intended, in a perspective of the climate crisis, carbon emissions of such low-value care interventions, as the suggested screening programs, are not sustainable. Moreover, these programs will increase social inequity in health and promote the inverse care law.

The EU Commission's proposal is based on a medical myth. According to the EU Commission statement, "*The sooner cancer is detected, it can make a real difference by increasing treatment options and saving lives*". In screening, this is a myth. We now have data from population-based screening programs showing that the critical factor in

reducing mortality of cancer is not related to early diagnosis but to good access to healthcare and new cancer treatments.(5–7)
In cancer, very often, early diagnosis means only more burden of disease, with more suffering.

OUR RECOMMENDATION

The current EU Commission proposal needs to be revised.

If we really want to improve the way cancer is handled in Europe, then the focus should be:

- Primary prevention: on a population level improve diet, increase physical activity, diminish smoking and lower the consumption of alcohol. Structural societal interventions has with robust evidence of high quality been shown to be effective, while primary preventive intervention on an individual level has been shown to have no – or only short-term effect.
- Good access to Primary Healthcare Care. Every European citizen should have the right to have their Family Doctor, and this means having the right to be cared for by doctors with a specialty in Family Medicine in a trustful relationship with continuity and where the general practitioner is trained in evidence-based medicine.
- Tertiary prevention: when diagnosed with cancer, good and quick access to specialized oncological centres (or other relevant specialists) is key to improving the outcome. This also includes good access to novel evidence-based cancer therapies.
- Quaternary prevention: new screening programs should only be implemented when the benefits outweigh the harms.

1. European Health Union: cancer screening [Internet]. European Commission - European Commission. [cited 2022 Nov 8]. Available from: https://ec.europa.eu/commission/presscorner/detail/en/ip_22_5562
2. Gøtzsche PC, Jørgensen KJ. Screening for breast cancer with mammography. Cochrane Database Syst Rev. 2013 Jun 4;(6):CD001877.
3. Harding Center for Risk Literacy. Early detection of prostate cancer with PSA testing [Internet]. Available from: <https://www.hardingcenter.de/en/transfer-and-impact/fact-boxes/early-detection-of-cancer/early-detection-of-prostate-cancer-with-psa-testing>
4. Heleno B, Thomsen MF, Rodrigues DS, Jørgensen KJ, Brodersen J. Quantification of harms in cancer screening trials: literature review. BMJ. 2013 Sep 16;347(sep16 1):f5334–f5334.
5. Miller AB, Wall C, Baines CJ, Sun P, To T, Narod SA. Twenty five year follow-up for breast cancer

incidence and mortality of the Canadian National Breast Screening Study: randomised screening trial. *BMJ*. 2014 Feb 11;348:g366.

6. Bleyer A, Welch HG. Effect of three decades of screening mammography on breast-cancer incidence. *N Engl J Med*. 2012 Nov 22;367(21):1998–2005.

7. Autier P, Boniol M, Gavin A, Vatten LJ. Breast cancer mortality in neighbouring European countries with different levels of screening but similar access to treatment: trend analysis of WHO mortality database. *BMJ*. 2011 Jul 28;343:d4411.

For further information, please contact:

EUROPREV Chair

Dr. Carlos Martins (carlosmartins20@gmail.com)

Or you may contact one of the following National Delegates

Austria - Dr. Thomas Dorner (thomas.dorner@meduniwien.ac.at)

Belgium - Dr. Veerle Piessens (Veerle.Piessens@ugent.be)

Croatia - Dr. Jasna Vucak (jasna.vucak@yahoo.com)

Danemark - Dr. John Brodersen (jobr@sund.ku.dk)

Finland - Dr. Sirkka Keinänen-Kiukaanniemi (sirkka.keinanen-kiukaanniemi@oulu.fi)

France - Dr. Emmanuel Allory (emmanuel.allory@univ-rennes1.fr)

Germany - Dr. Uwe Popert (uwe.popert@web.de)

Ireland - Dr. John Cox (john.cox@drjohncox.ie)

Ireland - Dr. Ahmeda Ali (ahmeda_n_ali@live.co.uk)

Poland - Dr. Maciej Godycki-Cwirko (maciej.godycki-cwirko@umed.lodz.pl)

Portugal - Dr. Carlos Martins (carlosmartins20@gmail.com)

Slovenia - Dr. Mateja Kokalj Kokot (mateja@kokalj-kokot.si)

Slovenia - Dr. Mateja Bulc (bulc.mateja@gmail.com)

Spain - Dr. Carlos Brotons (cbrotons@eapsardenya.cat)

Turkey - Dr. Serdar Öztora (droztora@yahoo.com)

Ukraine - Dr. Pavlo Kolesnik (dr.kolesnyk@gmail.com)

Ukraine - Dr. Ivanna Shushman (ivshushman@gmail.com)