



RESPONSE OF THE EUROPEAN CANCER ORGANISATION TO THE WHO BEST BUYS CONSULTATION

The European Cancer Organisation thanks the WHO for the opportunity to comment on the proposed update to the WHO Best Buys on the prevention and detection of non-communicable diseases. We congratulate the WHO on the success of the Best Buys initiative, providing countries with a helpful condensed guide across this crucial area of health service investment. We recommend the descriptive term 'Best Buys' be retained, noting the recognition that has been gained within public health for the initiative.

With the support of several of our Focused Topic Networks, including on [Prevention, Early Detection and Screening Network](#) and [HPV Action](#), we have had opportunity to consider the proposals and offer the below 8 areas of feedback for consideration:

1. Introduce further prioritisation and ranking to the recommendations
2. Encourage region-specific iterations of the Best Buys to ensure strongest reflection of regional specificities
3. Put in place implementation and measurement processes to drive continuous improvement of the initiative
4. Promote gender neutral HPV vaccination as a 'best buy' policy on cancer
5. Embrace the major new opportunities in cancer screening and early detection
6. Achieve the full potential of prevention policies
7. Address cancer co-morbidities as a whole
8. Consider a 'Best Buys' or similar exercise to help guide countries in NCD management in scenarios of warfare

1. Introduce further prioritisation and ranking to the recommendations

All of the 80 plus recommendations to governments appear on reading to have been well considered and refer to a wealth of evidence in their support. However, we urge that this moment of refresh be taken as an opportunity to consider adding some prioritisation/ranking scale to the recommendations in order to give further clarity to all countries, especially those with resource constraint, on the highest value recommendations among the 80 plus.



2. Encourage region-specific iterations of the Best Buys to ensure strongest reflection of regional specificities

A key means by which ECO envisage the success of the WHO Best Buys initiative might be built upon would be the further encouragement of WHO Regional Offices to assist in the formation of region-specific articulation of the recommendations. In the case of cancer, as an example, this might have specific resonance for areas of policy such as cancer screening and early detection strategies, in which the development and nature of health systems, as well as lifestyle behavioural characteristics in the region, could point to additional best buys for the region in question e.g. lung cancer screening and health literacy interventions. In the European case, there may also be opportunity to more explicitly refer to key cross-border cooperation initiatives that can be built upon or joined, including those of the European Union e.g. EU Cancer Screening Scheme, EU goals on achieving a tobacco free generation and HPV cancer elimination etc.

3. Put in place implementation and measurement processes to drive continuous improvement of the initiative

ECO believes the Best Buys document would benefit from the inclusion of a concluding section more explicitly remarking upon the intended implementation, monitoring and measurement strategy proposed to underline the achievement and success of the Best Buys strategy. This might include reflection within the document on the key fields of information and data that national health systems could usefully collect and report upon to fuel a continuous improvement cycle in NCD prevention policy.

4. Promote gender neutral HPV vaccination as a 'best buy' policy on cancer

Overall, significant developments have occurred since the publication of the WHO 'Best Buys' in 2017 in many areas of NCD prevention policy. These include an understanding that there is now an opportunity to eliminate all the cancers caused by HPV. To accelerate the achievement of this goal, and in line with a growing body of scientific and practice evidence, an increasing number of countries are adopting gender-neutral **HPV vaccination**. In 2019, almost a third of global HPV vaccination programmes (33 out of 107) were gender-neutral¹ and in 2022, it is now

¹ Bruni L, Saura-Lázaro A, Montoliu A, Brotons M, Alemany L, Diallo MS, Afsar OZ, LaMontagne DS, Mosina L, Contreras M, Velandia-González M. HPV vaccination introduction



estimated that over 40 countries now provide gender-neutral HPV vaccination. This goes beyond high income countries alone including Argentina, Brazil, the Dominican Republic, Guyana, Saint Lucia and Turkmenistan. Furthermore, in 2021, the European Commission, in Europe's Beating Cancer Plan, recommended that all **EU Member States adopt gender-neutral HPV vaccination**. HPV vaccination prevents a wide range of cancers, not just cervical cancer, and that these cancers affect all sexes with up to 40% of all HPV-associated cancers occurring in men². Cervical cancer elimination can be more effectively and more quickly achieved through gender-neutral vaccination. Men who have sex with men (MSM) derive little or no benefit from a female-only HPV vaccination programme, but instead gender-neutral programmes would reduce infection rates in this group³.

Three more points in respect to HPV vaccination should be taken into account:

- 1) Repeated studies have shown that gender-neutral vaccination is cost-effective. The box below provides a range of key recent articles including evidence from Denmark, Belgium, France and the UK.

RECENT COST-EFFECTIVENESS STUDIES FOR GENDER NEUTRAL HPV VACCINATION

August 2022

1. Simons JJ, Vida N, Westra TA, Postma MJ. Cost-effectiveness analysis of a gender-neutral human papillomavirus vaccination program in the Netherlands. *Vaccine*. 2020 Jun 19;38(30):4687-94.
<https://www.sciencedirect.com/science/article/pii/S0264410X20306617?via%3Dihub>

worldwide and WHO and UNICEF estimates of national HPV immunization coverage 2010–2019. *Preventive medicine*. 2021 Mar 1;144:106399.

<https://www.sciencedirect.com/science/article/pii/S0091743520304308?via%3Dihub>

² Liao CI, Francoeur AA, Kapp DS, Caesar MA, Huh WK, Chan JK. Trends in Human Papillomavirus–Associated Cancers, Demographic Characteristics, and Vaccinations in the US, 2001–2017. *JAMA network open*. 2022 Mar 1;5(3):e222530–.

<https://pubmed.ncbi.nlm.nih.gov/35294540/>

³ Lehtinen, M., Söderlund-Strand, A., Vänskä, S., Luostarinen, T., Eriksson, T., Natunen, K., Apter, D., Baussano, I., Harjula, K., Hokkanen, M. and Kuortti, M., 2018. Impact of gender-neutral or girls-only vaccination against human papillomavirus—Results of a community-randomized clinical trial (I). *International Journal of Cancer*, 142(5), pp.949–958.

<https://onlinelibrary.wiley.com/doi/full/10.1002/ijc.31119>

2. Qendri V, Bogaards JA, Baussano I, Lazzarato F, Vänskä S, Berkhof J. The cost-effectiveness profile of sex-neutral HPV immunisation in European tender-based settings: a model-based assessment. *The Lancet Public Health*. 2020 Nov 1;5(11):e592-603. [https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667\(20\)30209-7/fulltext](https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(20)30209-7/fulltext)
3. Majed L, Bresse X, El Mouaddin N, Schmidt A, Daniels VJ, Pavelyev A, Levy-Bachelot L, Elbasha E. Public health impact and cost-effectiveness of a nine-valent gender-neutral HPV vaccination program in France. *Vaccine*. 2021 Jan 8;39(2):438-46. <https://pubmed.ncbi.nlm.nih.gov/33261895/>
4. Simoens S, Bento-Abreu A, Merckx B, Joubert S, Vermeersch S, Pavelyev A, Varga S, Morais E. Health Impact and Cost-Effectiveness of Implementing Gender-Neutral Vaccination With the 9-Valent Human Papillomavirus Vaccine in Belgium. *Frontiers in pharmacology*. 2021 Apr 12;12:628434. <https://www.frontiersin.org/articles/10.3389/fphar.2021.628434/full>
5. Olsen J, le Fevre T, Blaakaer J. PIN50-Cost-effectiveness of Gender-Neutral Nine-Valent HPV Vaccination in Denmark. *Value in Health*. 2018 Oct 1;21:S229. [https://www.valueinhealthjournal.com/article/S1098-3015\(18\)34671-0/fulltext](https://www.valueinhealthjournal.com/article/S1098-3015(18)34671-0/fulltext)
6. Mahumud RA, Alam K, Keramat SA, Ormsby GM, Dunn J, Gow J. Cost-effectiveness evaluations of the 9-Valent human papillomavirus (HPV) vaccine: Evidence from a systematic review. *PloS one*. 2020 Jun 2;15(6):e0233499. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0233499>

- 2) **Following the [2022 WHO Strategic Advisory Group of Experts on Immunization \(SAGE\)](#), we suggest** that boys can be added to what were previously two-dose female programmes without significant additional costs;
- 3) **Major effort must be pursued to tackle vaccine hesitancy** – taking lessons learned from the Covid-19 vaccination campaign. An important part of the explanation for sub-optimal vaccination rates [can be attributed to a lack of confidence in vaccines](#). This can



be caused by **insufficient - or incorrect - information**, lack of trust in health authorities and vaccine manufacturers, and concerns about vaccine safety;

Finally, we recommend that the WHO Best Buys more explicitly link to the key goals of the WHO Cervical Elimination Strategy, including its 70-90-70 goals⁴:

- 90% of girls fully vaccinated with HPV vaccine by age 15 years.
- 70% of women screened with a high-performance test by 35 years of age and again by 45 years of age.
- 90% of women identified with cervical disease receiving treatment (90% of women with precancer treated, and 90% of women with invasive cancer managed)

5. Embrace the major new opportunities in cancer screening and early detection

The Covid-19 pandemic have dramatically affected cancer screening programmes and early detection globally. The European Cancer Organisation, in the context of its Time To Act campaign on the impact of Covid-19 on cancer⁵ estimated that 100 million cancer screening tests were not performed in Europe due to the pandemic, while urgent admissions of patients with suspected cancer were reduced by up to half. Because of this backlog, **1 million cancer patients may not have been diagnosed with cancer**. At the national level, as shown by the European Cancer Organisation's Cancer & Covid-19 Data Navigator report,⁶ the measured impact of the pandemic on cancer screening programmes has exceeded 70 per cent in several European countries, and as a result, these disruptions are expected to **lead to significant excess cancer mortality**⁷. Moreover, awareness of cancer warning signs is still at worryingly low levels among the general

⁴ <https://www.who.int/initiatives/cervical-cancer-elimination-initiative>

⁵ Lai AG, Pasea L, Banerjee A, et al. Estimated impact of the COVID-19 pandemic on cancer services and excess 1-year mortality in people with cancer and multimorbidity: near real-time data on cancer care, cancer deaths and a population-based cohort study. *BMJ Open*. 2020 Nov 17;10(11):e043828. doi: 10.1136/bmjopen-2020-043828. PMID: 33203640; PMCID: PMC7674020

⁶ Lai AG, Pasea L, Banerjee A, et al. Estimated impact of the COVID-19 pandemic on cancer services and excess 1-year mortality in people with cancer and multimorbidity: near real-time data on cancer care, cancer deaths and a population-based cohort study. *BMJ Open*. 2020 Nov 17;10(11):e043828. doi: 10.1136/bmjopen-2020-043828. PMID: 33203640; PMCID: PMC7674020

⁷ Time To Act. Don't let Covid-19 stop you from tackling Cancer, European Cancer Organisation. <https://www.europeancancer.org/timetoact> (accessed Nov. 12 2021)



population⁸ and the role of primary care providers in the early detection of cancer still remains largely unrecognised^{9,10}.

In the '[Earlier is Better: Advancing Cancer Screening and Early Detection](#)' paper, the European Cancer organisation, in collaboration with its network dedicated to [prevention, early detection and screening](#), set out a number of pressing needs in the field of early detection, including the need to bring about greater uptake of new technologies and practices such as risk stratified screening policies, liquid biopsy¹¹ and AI. The European Cancer Organisation therefore:

1. Supports the proposed inclusion within the Best Buys of screening programmes linked to early diagnostic work-up and comprehensive oncological treatment for head and neck cancers, including oral cavity and prostate cancers;
2. Suggests to the WHO consistent and clear terminology in the cancer section of the Best Buys document. We note an interchange of the terms “cancer screening” and “early detection programmes” without a reference to whether a distinction between the two should be made by the reader.
3. Promotes the adaptation of **breast cancer** screening programmes (i.e. age range and screening intervals) according to individual breast cancer risk, and incorporating breast cancer risk prediction based on family history, in order to achieve improved cost-effectiveness. In addition, **women with dense breasts** should be discussed with additional imaging in addition to mammography, such as magnetic resonance imaging (MRI), as this results in earlier detection of breast cancer in this particular group of women¹². We suggest that WHO recommendations in this area link closely to the

⁸] <https://www.ipaac.eu/news-detail/en/24-lack-of-awareness-is-a-major-barrier-to-early-cancer-detection/>

⁹ <https://www.europeancancer.org/resources/50:news-ecco-essential-requirements-for-quality-cancercare-primary-care.html>

¹⁰ <https://www.europeancancer.org/resources/57:integrated-cancer-care-bringing-primary-care-and-secondary-care-together.html>

¹¹ <https://www.cancer.gov/publications/dictionaries/cancer-terms/def/liquid-biopsy>

¹² <https://www.nejm.org/doi/full/10.1056/NEJMoa1903986>



European Commission Initiative on Breast Cancer (ECIBC).¹³

4. Suggest prioritising patients with suspected **colorectal cancer** on the basis of high rates of faecal haemoglobin detected by faecal immunochemical testing (FIT) for access to colonoscopy¹⁴¹⁵.
5. Suggest the adoption of a risk stratification approach for early detection of **prostate cancer**, using PSA testing, age-adjusted risk groups, risk calculators and imaging through MRI to select patients for prostate biopsy, thus minimising and active surveillance to minimise overtreatment¹⁶¹⁷¹⁸.
6. Suggest the identification of **former and current high-risk smokers for the early detection of lung cancer**, or other patients identified as high-risk through risk models, using low-dose computed tomography (LDCT) with evidence on its performance in detecting lung cancer [16] and promising cost-effectiveness, especially when combined with smoking cessation interventions smoking cessation interventions¹⁹²⁰²¹.

Whilst it is understood that Appendix 3 cannot be an exhaustive list, in view of the high mortality of lung cancer - 1.80 million deaths in 2020²² – early detection strategies should be seriously considered for inclusion in the update of the 'Best Buys'.

In addition to the above, there have been campaigns by numerous eminent scientific organisations and patient organisations to promote stronger national policies on risk-based

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https://www.eusoma.org/C_Common/CookieTester/CoookieTester.asp?xid=B91EA9E527BE4AC2A22E74C35DBB592B&checkSessionID=1065968902

¹⁴ <https://www.europeancancer.org/timetoact/impact/build-back-better>

¹⁵ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7447105/pdf/gutjnl-2020-321650.pdf>

¹⁶ [https://www.europeanurology.com/article/S0302-2838\(20\)30958-1/fulltext](https://www.europeanurology.com/article/S0302-2838(20)30958-1/fulltext)

¹⁷ <https://www.probase.de/>

¹⁸ <https://www.urotoday.com/conference-highlights/eau-2021/eau-2021-prostate-cancer/130654-eau-2021-risk-adapted-screening-with-age-and-baseline-psa-probase-trial.html>

¹⁹ <https://pubmed.ncbi.nlm.nih.gov/29440588/>

²⁰ <https://pubmed.ncbi.nlm.nih.gov/23940744/>

²¹ <https://pubmed.ncbi.nlm.nih.gov/26645413/>

²² <https://www.who.int/news-room/fact-sheets/detail/cancer>



early detection of other specific cancers, such as **liver cancer, gastric cancer and skin cancer**²³
²⁴ ²⁵. For gastric cancer, as an example, it would be helpful to recommend to countries that screening for *Helicobacter pylori*²⁶ be conducted in those countries or regions inside countries with the highest gastric cancer incidence and death rates.

Another particularly relevant area is the development and growing use of **cancer screening self-tests**. In particular, the European Cancer Organisation suggests that the WHO Best Buys document should provide advice to governments on the use of:

- **primary HPV-based screening (as a transition from cytology-based screening)**²⁷.

In addition, following the increasing body of evidence supporting the **validity of the self-sampling** approach as an alternative to clinician collection for HPV screening, and its **potential to reach under-screened women and to scale up screening coverage**, the Best Buys document might go further in recommending their use.

- **Faecal immunochemical testing (FIT) for colorectal cancer screening.**

6. Achieve the full potential of prevention policies

Tobacco use

There is ample evidence to show not only that **tobacco is a leading cause of more than ten types of cancer** but also that healthcare policies aimed at smoking cessation are effective at reducing the incidence of the disease. Yet there remain many areas in Europe where much work needs to be done to bring down smoking rates, and where citizens are still exposed to **second-hand smoke**. Efforts are being undermined by the tactics of the **tobacco industry**, which is trying to sow confusion around the idea of harm reduction, rather than reducing tobacco use. The European Cancer Organisation therefore:

- Support the strengthening of the WHO FCTC and its guidelines, as well as the Protocol to Eliminate Illicit Trade in Tobacco Products and support the establishment of national mechanisms for coordination of the WHO FCTC implementation as part of national strategy with specific mandate, responsibilities and resources For the Member States that are not Parties to the WHO FCTC:

²³ <https://pubmed.ncbi.nlm.nih.gov/30527175/>

²⁴ <https://www.ncbi.nlm.nih.gov/pubmed/30970190>

²⁵ <https://www.ncbi.nlm.nih.gov/pubmed/28404202>

²⁶ Burra P, Bretthauer M, Buti Ferret M, Dugic A, Fracasso P, Leja M, Matysiak Budnik T, Michl P, Ricciardiello L, Seufferlein T, van Leerdam M, Botos A. Digestive cancer screening across Europe. *United European Gastroenterol J*. 2022 May;10(4):435-437. doi: 10.1002/ueg2.12230

²⁷ <https://www.ncbi.nlm.nih.gov/pubmed/29877316>

- Suggests a coordinated multi-sectorial, multi-stakeholder approach needed between smokers, the public and countries to evidence-based and effective regulatory measures to reduce smoking and support to smoking cessation efforts over tobacco harm reduction, which can have detrimental impacts on public health and the youth in particular;
- Suggests to amend T2 intervention to 'Implement plain/standardized packaging and large graphic **health warnings on all tobacco packages**'. Plain packaging is a complementary intervention to graphic health warnings and so should be **implemented together with large graphic health warnings**. The implementation guidelines for article 11 of the WHO FCTC recommend implementing both measures, and plain packaging is also recommended in the article 13 guidelines;
- Suggests to amend the T3 on the "obligation to comprehensively ban tobacco advertising, promotion, and sponsorship in article 13(2) of the WHO FCTC and its implementation guidelines" as follows: 'Enact and **enforce comprehensive bans on tobacco advertising**, promotion and sponsorship, **including cross-border tobacco advertising**, promotion and sponsorship and tobacco advertising, promotion and sponsorship through modern means of communication'.

Harmful use of alcohol

Alcohol consumption is associated with **seven major cancers**, including breast, liver, colorectal, and laryngeal cancers. Research has shown that drinking is associated with risk, and increased consumption increases the risk. Consequently, there appears to be **no safe level of alcohol consumption**, and effective policies should be introduced to **increase taxes on alcohol** products, ban or at least restrict alcohol marketing, **introduce health warning labels** and restrict its availability, among other measures. The European Cancer Organisation therefore:

- Supports the implementation of the WHO action plan on alcohol to support and complement policy measures and interventions implemented at the national level. We recommend **increased political commitment** to implement known evidence based and effective strategies, such as increasing **taxation, marketing and minimum unit price policies**, and additional interventions on **alcohol labelling**;
- Recommend that the WHO's goal for a 10% relative reduction in the harmful use of alcohol can be achieved with a special effort in increasing **public recognition of the association between alcohol consumption and cancer development and death**, and in particular of **the lack of a safe level of drinking**. This could be made possible through concerted action at a national and international level, including investing in public and



primary care education campaigns, **combating the influence of vested interests opposed to alcohol control policies**, and involving civil society groups in this effort

Unhealthy diet

There are a range of known dietary carcinogens but also **obesity is a major contributor to cancer risk** via patterns of chronic inflammation. Moreover, **obesity is itself associated with 13 types of cancer**. Controlling dietary habits could help reduce the risk of both cancer and cardiovascular disease, with the healthiest lifestyles associated with an approximate 30% reduction in cancer incidence. The role of better treatment of obesity as a means of improving cancer prevention should be more emphasised. The European Cancer Organisation therefore:

- suggest an increased attention needs to be given to the inclusion of the **prevention and the treatment of obesity in cancer and other non-communicable diseases** primary prevention strategies;
- suggest changing the intervention 'implement the WHO set of recommendations on the marketing of food and non-alcoholic beverages to children' to '**restrict the marketing of food and non-alcoholic beverages to children**';

7. Address cancer co-morbidities as a whole

We noted with interest that the update to the Best Buys document intends to include some recommendations to countries on the management of cancer patients who are also HIV positive. We are pleased to see this needed attention to the matter of cancer co-morbidities but do wonder if only HIV co-morbidity should be covered in the document, or if other prevalent and impactful co-morbidities should also feature for attention e.g cardio-vascular, diabetes etc. In addition, we recommend the 'Best Buys' include advice and mention about the benefits of therapeutic patient education (TPE), an area of health system development and NCD management that WHO has been previously active in promoting and supporting at both the international and national level²⁸.

8. Consider a 'Best Buys' or similar exercise to help guide countries in NCD management in scenarios of warfare

In the course of compiling our reply to the Best Buys consultation ECO received contributions and advice from a great diversity of organisations and individuals, including oncology professionals in Ukraine. The World Against Cancer Foundation raised the especially difficult

²⁸ <https://eurohealthobservatory.who.int/publications/i/health-systems-in-action-ukraine>



conditions in which health systems, such as those in Ukraine, must operate within during a period of war. Screening, vaccination and prevention programmes become particularly impacted and difficult to operate. In addition “wartime carcinogens” including oncogenic viruses and bacteria - HPV, EBV, hepatitis B and C viruses, and *Helicobacter pylori*, which infect people during mass migration – become a heightened matter for management and response. Increases in the incidence of cervical and other HPV-associated cancers, as well as primary liver and stomach cancers may be expected as a result.

Colleagues in Ukraine also anticipate increases in respiratory and lung cancer incidence , both among the military and civilians. This is due not only to lifestyle changes and bad habits (tobacco smoke) but also to air pollution from fire smoke and asbestos dust, which appears in large quantities in the air when buildings are destroyed.

Given the accessibility of the Best Buys initiative across the globe, and in view of the unfortunate reality of scenarios of war presenting in almost all WHO regions, and taking account of the highly valid contributions and experiences related by our colleagues at the World Against Cancer Foundation, we would recommend that WHO consider the creation of a Best Buys, or similar exercise, to help guide countries in NCD management in scenarios of warfare. Such a guidance document could contain advice on matters such as the deployment of self sampling screening models and the use of refugee centres as points of delivery for cancer services.

We also recommend WHO and EU cooperation in researching the impact of the current war on the incidence of cancer in Ukraine.