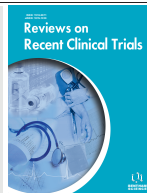


COVID-19 Vaccinations: Summary Guidance for Cancer Patients in 28 Languages: Breaking Barriers to Cancer Patient Information



Davide Mauri^{1*}, Konstantinos Kamposioras², Lampriani Tsali³, Mario Dambrosio⁴, Bernardino De Bari⁵, Nadia Hindi⁶, Carl Salembier⁷, Joanna Nixon⁸, Tzachanis Dimitrios⁹, Flippo Alongi¹⁰, Hassan Hameed¹¹, Antonios Valachis¹², Konstantinos Papadimitriou¹³, Stefanie Corradini¹⁴, Lazar Popovic¹⁵, Jindrich Kopecky¹⁶, Andres Rodriguez¹⁷, Katarina Antunac¹⁸, Junlin Yi¹⁹, Jozsef Lovey²⁰, Primoz Strojjan²¹, Haytham Saraireh²², Ranveig Røtterud²³, Marzanna Chojnacka²⁴, Santa Cruz Olalla²⁵, Natalia Chilingirova²⁶, Ramon Andrade De Mello²⁷, Giovanna Araujo Amaral²⁸, Farsid Arbabi²⁹, Radu Vidra³⁰, Erjeta Rapushi³¹, Dan Takeuchi³², Chirstos Christopoulos³³, Irina Ivanova³⁴, Igor Djan³⁵, Branka Petricevic³⁶, Francesco Cellini³⁷, Igljka Mihaylova³⁸, Natalija Dedic Plavetic³⁹, Cvetka Grašič Kuhar⁴⁰, Elena Takeuchi⁴¹, Pantelis Kountourakis⁴², Panagiotis Ntellas¹, Ioanna Gazouli¹, Stefania Gkoura¹, Salih Yuce⁴³, Özlem ER⁴⁴, Chait Yasmina⁴⁵, Gireesh Kumaran⁴⁶, Orges Spahiu⁴⁷, Aasim Yusuf⁴⁸, Paulina Gono⁴⁹, Kathi Apostolidis⁵⁰ and Maria Tolia⁵¹

¹Department Medical Oncology, University Hospital of Ioannina, Ioannina, Greece; ²Department. Medical Oncology, The Christie NHS Foundation Trust, Manchester, UK; ³PACMeR Evidence Based Medicine, Athens, Greece; ⁴Department. Medical Oncology, Clinica San Carlo, Paderno Dugnano, Milano Italy; ⁵Service Radio-Oncologie Neuchâtel Hôpital Network, La Chaux-de-Fonds, Switzerland; ⁶Department. Medical Oncology, Fundación Jimenez Díaz University Hospital, Madrid, Spain; ⁷Radiation Oncology Department, Europe Hospitals, Brussels, Belgium; ⁸Beatson West of Scotland Cancer Center, Strathclyde University, Glasgow, UK; ⁹UCSD Blood and Marrow Transplant Program, UCSD/Moore's Cancer Center, La Jolla, CA, USA; ¹⁰Advanced Radiation Oncology Department, IRCCS Sacro Cuore Don Calabria, Negrar-Verona, University of Brescia, Verona, Italy; ¹¹The Christie NHS Foundation Trust, Manchester UK, The Christie's Hospital, Manchester, UK; ¹²Department Medical Oncology, Faculty of Medicine and Health, Örebro University, Örebro, Antonios, Sweden; ¹³Department of Medical Oncology, University Hospital of Antwerp, Antwerp, Belgium; ¹⁴Department Radiation Oncology, University Hospital, LMU Munich, Germany; ¹⁵Department Medical Oncology, Oncology Institute of Vojvodina, University of Novi Sad, Serbia; ¹⁶Department Oncology and Radiotherapy, Charles University, Hradec Králové, Prague, Czech Republic; ¹⁷Medical Oncology, Instituto Alexander Fleming in Buenos Aires, Buenos Aires, Argentina; ¹⁸University Hospital for Tumors, Sestre Milosrdnice University Hospital Center, Zagreb, Croatia; ¹⁹Department Radiation Oncology, National Cancer Center/Cancer Hospital, Chinese Academy of Medical Sciences, Peking Union Medical College, Beijing, China; ²⁰National Institute of Oncology, Semmelweis University, Budapest, Hungary; ²¹Department Radiation Oncology, Institute of Oncology, Ljubljana, Slovenia; ²²Department Radiation Oncology, Royal Medical Service, Amman, Jordan; ²³Cell Biologist, CEO Bladder Cancer, Oslo, Norway; ²⁴Department of Oncology and Radiotherapy, Maria Skłodowska-Curie National Research Institute of Oncology, Warsaw, Poland; ²⁵Service de Radio-Oncologie, Neuchâtel Hôpital Network, La Chaux-de-Fonds, Switzerland; ²⁶Department Medical Oncology, Center of Excellence, Heart and Brain Hospital Pleven, Medical University Pleven, Bulgaria; ²⁷Department Medical Oncology Escola Paulista de Medicina, Federal University of São Paulo, Brazil, Department Biomedical Sciences, and Medicine, University of Algarve, Faro, Portugal; ²⁸Department Medical Oncology, Escola Paulista de Medicina, Federal University of São Paulo, Brazil; ²⁹Department Medical Oncology, Rooshana Cancer Center, Tehran, Iran; ³⁰Medical Oncology, Regional Institute of Gastroenterology and Hepatology "Prof. Dr. O. Fodor", Cluj-Napoca, Romania; ³¹Department Medical Oncology, Berat Regional Hospital, Berat, Albania; ³²Matsudo City General Hospital, Chiba, Japan; ³³Service de Radiothérapie Oncologique, GHT Grand Paris Nord-Est. G.H.I Le Raincy –Montfermeil, France; ³⁴Murmansk Branch of All-Russian Association of Cancer Patients "Zdravstvuy", NGO Center of Initiatives Support, Murmansk, Russia; ³⁵Department for Radiosurgery and SBRT, Clinical center of Serbia, Belgrade, Serbia; ³⁶Department of Medical Oncology and Hematology, Wilhelminenspital, Vienna, Austria; ³⁷Radioterapia Oncologica-Fondazione Policlinico A. Gemelli, IRCCS –Rome, Italy; ³⁸Department of Radiotherapy, Specialized Hospital for Active Treatment in Oncology "Plovdivsko pole", Sofia, Bulgaria; ³⁹Department of Oncology, University Hospital Centre Zagreb, School of Medicine University of Zagreb, Zagreb, Croatia; ⁴⁰Department Medical Oncology, Institute of Oncology, Ljubljana, Slovenia; ⁴¹The Christie NHS Foundation Trust, Manchester, UK; ⁴²Department Medical Oncology, Bank of Cyprus Oncology Centre, Nicosia, Cyprus; ⁴³Chairmen of the Board-Young Saving Association, Turkey; ⁴⁴Acıbadem University, Faculty of Medicine, Turkey; ⁴⁵Service de Haematologie, GHT Grand Paris Nord-Est. G.H.I Le Raincy –Montfermeil, France; ⁴⁶Medical Oncology, Auckland Regional Cancer and Blood Service, Auckland, New Zealand; ⁴⁷Radiation Therapy Unit, University Hospital Center "Mother Teresa", Tirana, Albania; ⁴⁸Gastroenterology, Acting CEO Shaukat Khanum Memorial Cancer Hospital & Research Centre, Lahore and Peshawar Pakistan; ⁴⁹ECPC Partnerships and Communication Officer; ⁵⁰ECPC President; ⁵¹Department. Radiation Oncology, University Hospital of Heraklion, Crete, Greece

ARTICLE HISTORY

Received: May 27, 2021
 Revised: August 16, 2021
 Accepted: August 26, 2021

DOI:
 10.2174/1574887116666211028145848



This is an Open Access article published under CC BY 4.0
<https://creativecommons.org/licenses/by/4.0/legalcode>

Abstract: Background: Covid-19 vaccination has started in the majority of the countries at the global level. Cancer patients are at high risk for infection, serious illness, and death from COVID-19 and need vaccination guidance and support.

Guidance availability in the English language only is a major limit for recommendations' delivery and their application in the world's population and generates information inequalities across the different populations.

Methods: Most of the available COVID-19 vaccination guidance for cancer patients was screened and scrutinized by the European Cancer Patients Coalition (ECPC) and an international oncology panel of 52 physicians from 33 countries.

Results: A summary guidance was developed and provided in 28 languages in order to reach more than 70 percent of the global population.

Conclusion: Language barrier and e-guidance availability in the native language are the most important barriers when communicating with patients. E-guidance availability in various native languages should be considered a major priority by international medical and health organizations that are communicating with patients at the global level.

Keywords: Population, vaccination, cancer patients, languages, global, guidance.

1. BACKGROUND

Covid-19 vaccination has started in the majority of the countries. Nonetheless, the type of vaccine used and the vaccination protocols vary across the different countries. Since cancer patients are at higher risk of Covid-19 infection and sequels, they experience anxiety and need vaccination guidance and support.

In response to this need, we plan to summarize in plain terms and 28 languages the guidance for vaccination for cancer patients.

2. METHODS

The international oncology panel of 52 physicians from 33 countries, with the cooperation of the European Cancer Patients Coalition (ECPC), which had already published the summary of international recommendations for patients with cancer during the COVID-19 pandemic in 23 languages in *Lancet Oncology* (June 2020) [1], collected and summarized the COVID-19 vaccination guidance for cancer patients. Each nation's representative from 33 different countries was asked to answer the status of the COVID-19 vaccination national guidance for cancer patients by the end of January 2021. The answers given were last updated at the end of March 2021. The main Oncology societies, namely ASCO, ESMO, ASTRO, and ESTRO, were also screened for guidance vaccination delivery.

3. RESULTS

Summary vaccination guidance for cancer patients was developed by guidance from 33 countries and 5 international institutions/organizations. [Table 1. Appendix -page 81].

Guidance was then translated into 28 languages by each nation's representative of the group and thereafter was delivered to the global cancer patients through the European Cancer Patients Coalition (ECPC) website. All working group participants cooperated on a voluntary basis. No financial contribution was required, and there is no conflict of interest. Covid-19 vaccination has been launched in all participating countries. [Supplementary Material Table 1. Appendix -page 81].

4. DISCUSSION

Guidance availability in the English language only is a major limit for recommendations' delivery and their application in the world's population [1, 2].

Indeed, in the world today, there are 7.2 billion people who speak more than 7,102 languages. Only 23 languages are spoken by at least 50 million people. More than half of the world's population is native speakers of at least one of these 23 languages. English native speakers represent only 8% of the populations that speak the 23 most spoken languages [2] (Fig. 1).

We thereafter provided our summary guidance in 28 languages in order to reach more than 70% of the global population. (Albanian, Arabic, Bulgarian, Catalan, Chinese, Croatian, Czech, Nederlands, English, French, German, Greek, Hungarian, Italian, Japanese, Latam, Norwegian, Persian-Farsi, Polish, Portuguese, Romanian, Russian, Serbian, Slovenian, Spanish, Swedish, Turkish, Urdu) (Fig. 1).

Nonetheless, for a non-English speaking cancer patient, it is particularly difficult to surf a website in the English language in order to find guidance in his own native language. This generates information inequalities across the different populations.

Since the internet is a global phenomenon available in all languages, the only way to avoid disparities in information at the global level is to create easy access to multilang-

*Address correspondence to this author at the Department Medical Oncology, EMEKEN, University Hospital of Ioannina, Ioannina, Greece;
 Tel: +302651099394; E-mail: dvd.mauri@gmail.com

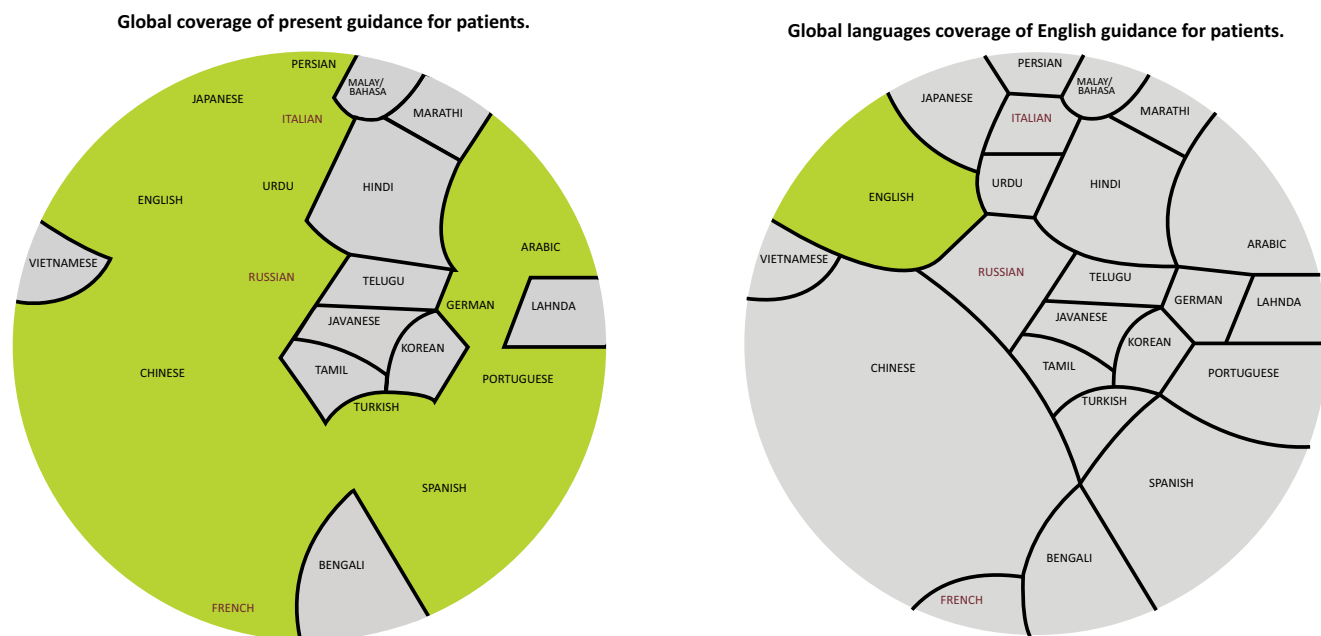


Fig. (1). Demographics of the 23 most spoken languages as a native tongue (with at least fifty million first language speakers). (A higher resolution / colour version of this figure is available in the electronic copy of the article).

uage information. This can be reached by enabling patients to search guidance through google and internet searches with the use of keywords directly in their own native language.

We thereafter aim to provide searchable translations directly by titles and keywords in any language and a free-access setting.

CONCLUSION

If the information is easily searchable on the web, delivered in plain terms, and available in a variety of native languages around the world, it can be made accessible to the global patient population without causing inequalities. Our initiative will hopefully assist cancer patients from different countries to have equal and easy access to information on covid immunization.

CONSENT FOR PUBLICATION

Not applicable.

FUNDING

None.

CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

ACKNOWLEDGEMENTS

Declared none.

SUMMARY GUIDANCE IN 28 LANGUAGES (APPENDIX)

- Summary guidance for Covid-19 vaccination for cancer patients with references (English) (appendix, page 2).
- Udhëzime përmbledhëse për vaksinimin kundër COVID-19 për pacientët me kancer (SHQIP) (Shtojca, faqe 6).
- إرشادات موجزة لتطعيم مرضى السرطان(العربية)(الناطقين بهـا (عربي) . (الملحق ، الصفحة 9)
- Обобщени препоръки за ваксинация при онкологични пациенти-Covid-19 (Български език) (приложение, страница 11)
- Guia resumida de vacunació Covid-19 dels pacients amb càncer (en llengua catalana) (apèndix, pàgina 14)
- 癌症病人新冠疫苗接种指南 (中文版) (附录, 第 17 页)
- Sažetak smjernica za cijepljenje protiv COVID-19 za bolesnike oboljele od zloćudnih bolesti (Hrvatski) (dodatak, stranica 19)
- Souhrnné pokyny pro očkování pacientů s nádorovým onemocněním COVID 19 (čeština) (příloha, strana 22)

- Beknopte richtlijnen voor Covid-19 vaccinatie van kankerpatiënten (Nederlands) (bijlage, pagina 25)

- Summary guidance for Covid-19 vaccination for cancer patients. (English, without references) (appendix, page 28)

- COVID 19: Zusammenfassender Leitfadens zur Impfung für Krebspatienten (in Deutscher sprache) (Anhang, Seite 31)

- Οδηγίες για τον εμβολιασμό Covid-19 για ογκολογικούς ασθενείς (Ελληνικά) (παράρτημα, σελίδα 33)

- Összefoglaló útmutatás daganatos betegek számára a COVID-19 elleni oltásról (Magyar) (melléklet, 36. oldal)

- Indicazioni per la vaccinazione Covid-19 per i pazienti oncologici (Italiano) (appendice, pagina 38)

- Podsumowanie zaleceń dotyczących szczepień przeciw COVID-19 dla pacjentów onkologicznych. (Polski) (załącznik, strona 41)

- Uputstvo za vakcinaciju protiv Covid19 za pacijente obolele od malignih bolesti (Srpski) (dodatak, strana 43)

- Povzetek navodil za cepljenje bolnikov z rakom (Slovenščina)-Covid 19 (priloga, stran 45)

- Recomendaciones de vacunación Covid-19 para pacientes oncológicos (Español) (apêndice, pág. 48)

- Vägledning kring vaccination mot COVID-19 hos cancerpatienter (Svenska) (bilaga, sida 51)

- Ghid de vaccinare Covid-19 a pacienților oncologici. (Română) (Anexă, pagina 54)

- Veiledning for Covid-19-vaksinering av kreftpasienter. (Norsk) (vedlegg, side 57)

- Orientações resumidas para a vacinação de Covid-19 para pacientes com câncer (Portugues) (apêndice, página 60)

- Guía de vacunación COVID-19 para pacientes oncológicos (Latam) (apêndice, página 63)

- راهنمای خلاصه برای واکسیناسیون کووید 19 در بیماران مبتلا به سرطان (نسخه فارسی) (پیوست صفحه 66)

- کینسر کے جریضوں کے لئے کوویڈ 19 ویکسینیشن کے لئے خلاصہ رہنمائی۔ (اردو) (ضمیمہ ، صفحہ 68)

- Synthèse de recommandations concernant la vaccination COVID-19, chez les patients cancéreux (Français) (annexe, page 70)

- Краткое руководство по вакцинации Covid-19 для онкологических больных, коренных носителей русского языка. (приложение, стр. 72)

がん患者における、新型コロナウイルス (Covid-19)ワクチン接種について(日

本語) (付録、75 ページ)

- Kanser hastalarının Covid-19'a karşı aşılınmaları için özet kılavuz. (Türkçe) (ek, sayfa 78)

- Global coverage of present guidance for patients.

- Global languages coverage of English guidance for patients.

REFERENCES

- [1] Mauri D, Kamposioras K, Tolia M, Alongi F, Tzachanis D. Summary of international recommendations in 23 languages for patients with cancer during the COVID-19 pandemic. *Lancet Oncol* 2020; 21(6): 759-60. [http://dx.doi.org/10.1016/S1470-2045\(20\)30278-3](http://dx.doi.org/10.1016/S1470-2045(20)30278-3) PMID: 32410877
- [2] "A world of languages" Modified with permission from Alberto Lucas Lopez. Available from: <https://www.scmp.com/infographic-s/article/1810040/infographic-world-languages>