The impact of the Russian Invasion of **Ukraine on Cancer**

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European Groundshot-addressing Europe's cancer research challenges: a Lancet Oncology Commission. Lawler M, Davies L, Oberst S, Oliver K, Eggermont A, Schmutz A, La Vecchia C, Allemani C, Lievens Y, Naredi P, Cufer T, Aggarwal A, Aapro M, Apostolidis K, Baird AM, Cardoso F, Charalambous A, Coleman MP, Costa A, Crul M, Dégi CL, Di Nicolantonio F, Erdem S, Geanta M, Geissler J, Jassem J, Jagielska B, Jonsson B, Kelly D, Kelm O, Kolarova T, Kutluk T, Lewison G, Meunier F, Pelouchova J, Philip T, Price R, Rau B, Rubio IT, Selby P, Južnič Sotlar M, Spurrier-Bernard G, van Hoeve JC, Vrdoljak E, Westerhuis W, Wojciechowska U, Sullivan R.

Lancet Oncol. 2023 Jan;24(1):e11-e56. doi: 10.1016/S1470-2045(22)00540-X. Epub 2022 Nov 16.PMID: 36400101

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Beating Cancer: The Need for Action

- Europe is facing a **cancer crisis**
 - COVID-19 pandemic and subsequent national lockdowns
 - the Russian Invasion of Ukraine
 - The global **economic downturn**
- We need to Act Now
- Critically challenge today's efforts and how we might do better in the future.
- Data into intelligence informing 12 Recommendations.
- Call for Action: Reimagine cancer research and its implementation across Europe
- Addressing the realities "on the ground"

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Clinical Cancer Research and the Russian invasion of Ukraine

- Impact of Ukrainian refugees in Europe is creating new challenges for cancer health systems capacity, especially for CEE countries.
- BUT what has gone relatively unnoticed is the profound impact on cancer clinical research.
- Both Russia (upper middle-income) and Ukraine (lower middle-income) are unusual in their global cancer research activities.
- Both are two of the largest contributors to clinical cancer research, especially to industry-sponsored randomised clinical trials (RCTs).

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- Ukraine
- Between 2014 and 2017 a total of 636 cancer RCTs were published.
- Ukraine contributed to **39** of these, one of the **highest lower middle-income contributors,** only just behind India, a country over 30 times its size.
- **Quality of RCTs high**; top 20 leading countries of the world with highly cited publications in clinical oncology ("Clarivate Analytics["], 2022)

Russia

For upper middle income countries Russia was by far the largest contributor (**115 cancer RCTs** over the same period)

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Total cancer Percentage of RCTs research total research published* output[†] output‡ Lower-middle-income countries India 42 27 601 67% 39 Ukraine 801 2% Philippines 23 384 1% 6262 Egypt 12 15% 6 78 Georgia <1% Total 84 35 Upper-middle-income countries 115 Russia 4835 2% Brazil 15272 94 7% 62 Romania 3457 2% China 56 154373 69% Mexico 56 4126 2% 182 182063 Total

Number of

RCT=randomised controlled trial. *One RCT could involve one or more countries. [†]Total number of cancer research papers published. [‡]Percentage of total research output that are RCTs; percentages do not add up to 100% because data are exclusive to countries

Table 7: Top five country-level participation in global RCTs published between 2014 and 2017 by World Bank income category compared with their total cancer research outputs between 2014 and 2017

Active Cancer Clinical Trials in Ukraine and Russia

Ukraine

- At the start of the war, an analysis of ClinicalTrials.Gov (Feb 24th 2022) indicated that Ukraine had n=245 active pharmaceutical cancer clinical trials, of which 127 were actively recruiting.
- Russia
- Corresponding figures for Russia were **n=667** active pharmaceutical cancer clinical trials and 352 actively recruiting.

Far-reaching impact of the Russian invasion of Ukraine on global cancer research. Bondarenko I, Agarwal A, Van Hemelrijck M, Lawler M, Zubaryev M, Sullivan R. Eur J Cancer. 2023 Feb 2;183:95-97. doi: 10.1016/j.ejca.2023.01.020.

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Multidisciplinary survey on the impact of the war in Ukraine

- Survey on the impact of the war in Ukraine on cancer care in countries around Ukraine
- Survey open between 6 June and 10 July 2022
- Intelligence gathered between 24 February 2022 and 31 May 2022 lacksquare
- Four arms: \bullet
 - Medical oncology & oncology pharmacy specialists and allied professionals,
 - Surgical oncology specialists and allied professionals,
 - **Radiation oncology** specialists and allied professionals,
 - **Patient organisations**



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Shortages

Capacity issues and resource limitations:

- **55%** reported at least one kind of capacity issue (dearth of specialists)
- Specialists most in need: 33% of organisations reported oncology nurses as the specialists most in need

Medicines, treatment and equipment shortages:

- **32%** of organisations reported shortages in either treatment, equipment or medicine
- **36%** of organisations reported shortages in at least one medication 45% reported shortages specifically of anti-cancer medicines



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Barriers and support provided by cancer community

Barriers:

- More than half of respondents reported lack of access to medical records (53% of respondents)
- Language barriers with patients and caregivers (38% of respondents)

Support provided:

- Providing information to patients and caregivers in Ukrainian (34%)
- One-to-one support to Ukrainian patients (25%)



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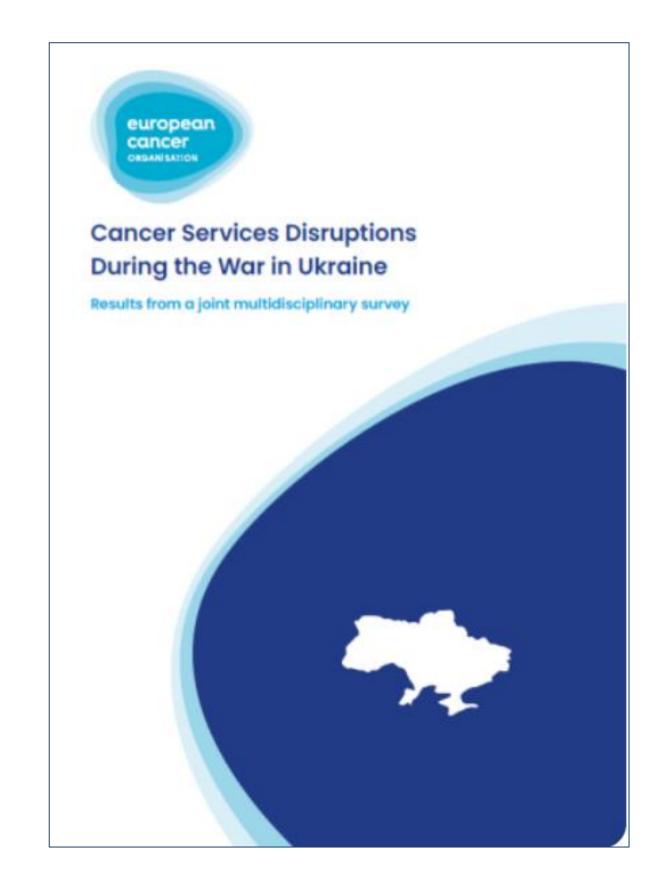
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Report

The report with extensive overview of the findings can be found:

https://www.europeancancer.org/resources/ **289:cancer-services-disruptions-during-the**war-in-ukraine-results-from-a-jointmultidisciplinary-survey.html













Patient ADVOCACY GROUP OF EUROPEAN CANCER ORGANISATION

lives

Urgent need to mitigate this risk

- We find ourselves in **unchartered territory**.
- Loss of centres which are such major recruiters to global RCTs will have significant impact worldwide.
- Taken many years for Ukraine to develop it's strong cancer clinical trials ecosytem
- Cancer clinical trials **put at grave risk** by the ongoing conflict.
- Removing the opportunity to participate in RCTs is a significant loss for Ukrainian **patients** who thereby lose access to innovative cancer treatment.
- In addition since the start of the war Ukraine has lost a large number of clinical research specialists.
- Human capital will **need to be rebuilt** in the post conflict era

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