

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Contents lists available at ScienceDirect

European Journal of Surgical Oncology

journal homepage: www.ejso.com



Cessation of cancer screening: An unseen cost of the COVID-19 pandemic?



Keywords:
COVID-19
Cancer screening

The world continues to struggle with COVID-19. Based on figures from countries such as Korea, Australia and New Zealand that do extensive testing, the mortality rate of COVID-19 is nonetheless less than 2%, and this is likely to be lower due to the many more undiagnosed COVID-19 cases worldwide. Cancer, on the other hand, remains one of the leading causes of death, and a number of recent publications with the European Journal of Surgical Oncology have rightly highlighted the impact of COVID-19 on cancer care and treatment (e.g. Restivo and colleagues) [1].

An angle that has nonetheless been overlooked is how the pandemic is affecting those who are yet to be diagnosed. Screening for colorectal, breast and cervical cancers is widely advocated in many countries. Shockingly, countries such as the United Kingdom (UK) and Australia have literally shut down their cancer screening programs during this pandemic [2]. With the UK having one of the most successful cancer screening programs worldwide with high rates of the eligible population undergoing bowel, cervical and breast cancer screening, it has been reported that over 2200 new cancer cases in the UK could be missed each week [2]. Apart from people in UK, millions worldwide would also have been asked to defer or have deferred undergoing screening. Moreover, normalcy is unlikely to return in the next three to six months, and people will likely remain hesitant to undergo cancer screening even after the pandemic.

Short-term gains for healthcare systems by cutting cancer screening programs now may turn out to be longer-term misery later, as significant reductions in mortality have been attributed to the implementation of screening programs. The Australian National Bowel Cancer Screening Program, for example, is estimated to prevent 2519 colorectal cancer deaths annually, while the WHO Cervical Cancer Elimination Modelling Consortium reported that significant reduction in mortality can be achieved with increased adoption of cervical cancer screening [3,4].

Apart from mortality, the unseen economical and psychological

may be immense. Lifetime costs of managing colon cancer increase exponentially with later staging on presentation. Likewise, earlier detection of cervical cancer avoids premature mortality, saves cost and also improves quality of life scores, including sexual life. Patients with screen-detected and resultant smaller breast cancers are more likely to undergo breast conserving surgery with better outcomes in body image and quality of life.

Moreover, by the time this pandemic is deemed over, the fatigue and morale of healthcare workers will be major concerns. The impact of the backlog of screening will put a considerable health and economic burden on the system. We urge healthcare systems and authorities to be cognizant of these "unseen" issues that could have far-reaching, longer-term impacts than COVID-19.

Role of the funding source

This study was supported by the Singapore Population Health Improvement Centre (SPHERiC) [NMRC/CG/C026/2017_NUHS].

Declaration of competing interest

We declare no competing interests.

CRediT authorship contribution statement

Ker-Kan Tan: Writing - original draft, Writing - review & editing. **Jerrald Lau:** Writing - review & editing.

References

- [1] Restivo A, De Luca R, Spolverato G, Delrio P, Lorenzon L, D'Ugo D, et al. The need of COVID19 free hospitals to maintain cancer care. Eur J Surg Oncol 2020. https://doi.org/10.1016/j.ejso.2020.04.003.
- [2] Cancer Research Uk. How coronavirus is impacting cancer services in the UK. Available from: https://scienceblog.cancerresearchuk.org/2020/04/21/how-coronavirus-is-impacting-cancer-services-in-the-uk/; 2020.
- [3] Canfell K, Kim JJ, Brisson M, Keane A, Simms KT, Caruana M, et al. Mortality impact of achieving WHO cervical cancer elimination targets: a comparative modelling analysis in 78 low-income and lower-middle-income countries. Lancet 2020;395(10224):591–603.
- [4] Lew JB, Feletto E, Wade S, Caruana M, Kang YJ, Nickson C, et al. Benefits, harms and cost-effectiveness of cancer screening in Australia: an overview of modelling estimates. Publ. Health Res. Practice 2019;29(2).

burdKer-Kan Tan*

Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore, C/O NUHS Tower Block, Level 8.1E Kent Ridge Road, 119228, Singapore

Jerrald Lau

Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore, C/O NUHS Tower Block, Level 8.1E Kent Ridge Road, 119228, Singapore * Corresponding author. Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore, C/O NUHS Tower Block, Level 8 1E Kent Ridge Road, 119228, Singapore. E-mail address: surtkk@nus.edu.sg (K.-K. Tan).

> 6 May 2020 Available online 11 May 2020