

## Cancer and COVID-19

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In this issue, we would like to draw readers' attention to two articles relating to the current situation connected with the COVID-19 pandemic.

From the turn of the 19<sup>th</sup> and 20<sup>th</sup> centuries, infectious diseases became less and less common among the human population, with a few very turbulent exceptions, such as the Spanish flu pandemic from around 1918 [1], or the Asian flu in 1957 [2]. The attention of medicine and health care managers was focused rather on chronic diseases, and one of the most important challenges described by Abdel Omran in *The Epidemiologic Transition: A Theory of the Epidemiology of Population Change* (1971) [3] was the struggle for a healthy and decent old age. In his model, A. Omran also took into account another factor that significantly determines the health of the population – infectious diseases. The current epidemiological situation confirms this theory, however, due to many decades of stable situation, this factor seemed to be less and less relevant. In 2020, for the first time in the post-war history of Europe, a virus with a very high virulence – SARS-CoV-2 – appeared. The articles which we would like to recommend to read are devoted to the disease of COVID-19 which is caused by this virus. The effects it has had in the area of cancer prevention are already noticeable.

Professor Krzysztof Simon and colleagues in the article *SARS-CoV-2 infection: etiopathogenesis, clinical picture, current therapeutic options – the author's observations (Zakażenie SARS-CoV-2: etiopatogeneza, obraz kliniczny, aktualne możliwości postępowania terapeutycznego – doświadczenia własne)* introduce the history of the COVID-19 pandemic and organize knowledge about pathogenic coronaviruses for humans, re-

calling the SARS epidemic (2002–2003) and MERS (since 2012 mainly found on the Arabian Peninsula). The authors indicate that at present a sudden end to the pandemic is impossible, but rather it is expected that SARS-CoV-2 will become part of the virus landscape of humanity like the influenza virus, constantly creating new strains. In the description of the etiopathogenesis, the authors describe the ways the infection spreads, as well as the mechanism and routes of virus entry, emphasizing that the use of personal protective equipment reduces the number of severe COVID-19 cases by about 60%. Particularly interesting is the presentation of those groups at increased risk of infection and who endure a severe course of the disease. The authors point to cancer patients, especially those with hematological cancers, as a particularly vulnerable group; this should encourage both the increased protection of these patients, but also very careful monitoring of their health status, taking into account four stages of COVID-19 described in this paper.

The second article (Koczkodaj et al. *SARS-CoV-2 as a new possible long-lasting determining factor impacting cancer death numbers. Based on the example of breast, colorectal and cervical cancer in Poland*), which we would like to also recommend, concerns the impact of the pandemic on secondary cancer prevention. We investigated changes in screening percentages as well as the numbers of patients referred to fast-track cancer treatment programs (number of issued *oncology diagnosis and treatment cards* – ODaTCs). Mentioned percentages and numbers decreased rapidly during the pandemic, especially in the lockdown period. It can be assumed that the long-term consequences of this occurrence will result in a higher number

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of patients presenting more advanced stages of the disease, and may also be associated with an increased number of cancer deaths.

It is also worth highlighting that the situation of people undergoing cancer treatment is all the more difficult since these patients are at a much higher risk of having a severe course of COVID-19. According to the latest recommendations of the European Society for Clinical Oncology (ESMO) cancer patients should be vaccinated against COVID-19 (before starting treatment, if possible). Moreover, ESMO experts also point to the priority of vaccinations of staff taking care of cancer patients, which is of course related to their own health and safety, but also to the safety of the patients, who remain at very high risk of infection and severe disease [4].

A long-lasting pandemic can also have disastrous economic consequences. Forecasts for Great Britain allow for a double-digit decline in Gross Domestic Product (GDP). As shown by the history of the economic crises of 1709 (The Great Frost in Europe), 1920 (The Great Depression), or the banking crisis (2008–2013), has always translated into unfavorable changes for public health (for example by a reduction of available funds for health care). The coming decade will be difficult, and decisions taken now in order to deal with the unprecedented events of 2020 will have long-term consequences – both economic and social. An excessive number of deaths due to cancer is probably inevitable, therefore current efforts should be focused on more innovative and efficient solutions in order to strengthen primary and secondary prevention, as well as to improve access to fast treatment paths. Ferrara and Albano, in their work entitled *COVID-19 and health care systems: What should we do next?* which was published in the journal *Public Health* [5] even indicate the need for a complete redefinition of the functioning of the health care systems, in particular in terms of services, personnel, and therefore also in terms of budget. On the other hand, the work of Iyengar K. et al. [6] states that the pandemic may also be an opportunity for the sector to rationalize the efficiency of available resource use and to revise health strategies. Moreover, the authors point to the sharp development in the field of telemedicine, as well as the growing popularity of scientific publications.

The area of oncology seems particularly vulnerable to the effects of the pandemic, the sudden appearance of which has highlighted the many deficiencies and imperfections of the health care systems in Poland and around the world. Currently, we need decisive actions that should be taken, regardless of economic and political pressure, because only decisions based on empathy and compassion will be a measure of our humanity and will ultimately decide on the fate of health care in the future. Taking this fact into consideration, the ESMO statement on vaccination against COVID-19 is extremely important, indicating, as it does, that the vaccination of cancer patients should be one of the current priorities with regards to the care of these patients.

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