

EDITORIAL



It is not just about molecules! Optimal cancer care for the future needs more research on external factors

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Although there has been tremendous progress in the research and clinical management of cancer at all levels, from prevention, diagnosis and treatment to end-of-life care, over the past several decades, addressing unjustified variation between populations and regions is an area in which progress has not kept pace. Inequalities are seen among tumour diseases, the place of residence and position in society. In addition to the variations seen between rich and poor countries, health disparities are also evident in the Nordic countries [1–6], which are seen as welfare countries. In Sweden, it has been calculated that the death rate from inequalities surpass that for breast cancer or prostate cancer.

This paradox may seem strange, because the consensus on fair and equitable care seems to be high among decision-makers and health care professionals [7]. Authorities in many countries and international organisations such as the ASCO and ESMO have today stated that they are open to meet these great challenges in both clinical management and research aiming to overcome health disparities. In Nordic countries, we see efforts to improve care, including standardised patient pathways, waiting time guarantees and provider competition [7,8].

These challenges are even more evident today, when we see large populations of immigrants with other cultural contexts, and studies have implicated that immigrants interact differently with health care systems, raising concerns about appropriate management [9,10]. In a European context, knowledge about these issues is rather limited. Therefore, it is of great value to see the important study by Thøgersen et al. [11] in the present issue of *Acta Oncologica*.

In this nationwide population-based study, the authors evaluated waiting times, the start of cancer treatment, and treatment patterns in the growing population of immigrants in Norway and compared the findings with those of a native population. The study included 213,320 native Norwegians and 8324 immigrants diagnosed with breast, colorectal, lung or prostate cancer from 1990 to 2014.

Although no direct systematic differences in cancer treatment were detected, longer waiting times to treatment were observed for patients diagnosed with lung and breast cancer among non-Western immigrants and were especially evident in female immigrants older than 59 years diagnosed with

lung cancer. For breast cancer, the difference was small, while for lung cancer, the delays were more pronounced. As breast cancer patients overall have short waiting times, it is unlikely that the observed difference has implications for survival, but the longer waiting time in lung cancer in terms of prognosis is of more concern since patient delay is most likely also too long and lung tumours in general show a high early metastatic probability.

Treatment patterns were in many ways similar between the groups; however, in breast cancer, women from East and South Asia received fewer breast-conserving surgeries. This finding may be explained by larger tumour size due to the lower attendance of mammography screenings seen among immigrants in Nordic countries [9,10]. Moreover, robot-assisted prostatectomy seems to be used less frequently in non-Western immigrants, which is in line with our findings from an evaluation in Stockholm County in Sweden showing that men with lower income received significantly fewer curative surgeries and robot-assisted surgeries than the group with a high income. Some other indications were also discussed in the study regarding differences between the populations analysed, but due to the relatively low number of individuals, no assured differences could be stated.

As also discussed by the authors, there are some weaknesses with the study that may complicate stringent conclusions. A lack of information exists on whether immigrants from different countries may receive treatment in their home countries. There is also a limited level of clinical details provided by the registers, e.g., regarding treatments initiated outside the specialised health care system, including oral therapy. Moreover, unadjusted local variation in waiting times within regions, differences in medical complexity, or a mixture of cancer subtypes are also possible explanations for the observed findings [5,12]. Variations in the mean age at diagnosis, comorbidities, income and education level were observed, which may hamper the comparison between the various populations. Although this observation study was well performed and the registries used was the most valid, the relatively low number of individuals in some subgroups with insufficient power to detect relevant differences in treatment must be considered [13].

Aspects around disparities are complex and multifactorial, which is also discussed by Thøgersen et al. [11]. When discussing disparity, many potential interacting factors must be considered, such as patient preferences and the cultural context that patients come from with potential mistrust of the health care system, higher rates of tobacco use, tumour characteristics, food interactions, comorbidities and access to health care. As discussed by the authors [11] and in line with our own experience from Stockholm County, patient navigation programmes could have the potential to reduce disparities, increase cancer screening rates and support the patients. The positive impact of the Affordable Care Act (ACA) in the USA to reduce the inequalities in cancer care shows that it is possible to make a difference [14].

The perception of the health care providers cannot be overestimated. Most physicians have the expected aim to follow clinical guidelines when available, but in other cases, faced with vague guidelines or multiple options, the physician's subjective assessment and the patient's influence become increasingly significant [9,11,15–17]. Whether a more diverse work force both in care and in research could be of value for the development of our understanding of cancer disparities as well as of benefit for the whole cancer field is a topic that could be discussed.

Research about cancer disparities is challenging and must involve the interplay of a multitude of factors, such as socioeconomic factors, culture, diet, the environment and potential biology behind disparities. Increased knowledge about biological factors as an explanation for variation between ethnicities must be more extensively studied. Today, we know that the variations in molecular patterns and their correlation to outcome in tumour diseases such as lung cancer, breast cancer and prostate cancer differ between some populations [18]. Well-performed studies using population-based registries, such as the study by Thøgersen et al., help to document the extent of the problem and highlight areas for further examination of factors that contribute to the overcoming of barriers to optimal cancer care for all. It is necessary to understand why some groups of people are more or less likely to develop cancer, experience cancer-related health problems, or die from cancer than other groups of people. The studies must embrace the whole spectrum of primary health care, from prevention to cure and end-of-life care. In this context, it is important to emphasise that the same population groups that experience cancer health disparities are also significantly underrepresented in cancer clinical trials. Therefore, it is of utmost importance that the existing research bodies and/or research councils are open to new views on the value of this research to have the possibilities to improve cancer care for all in need of it.

In summary, the important study by Thøgersen et al. [11] pointed out some unjustified differences in waiting times for treatment and treatment patterns among populations living in Norway. The study also demonstrates the impressive possibilities of using population-based registries in Nordic countries to increase our knowledge about health disparities to understand variation in treatment preferences, access to new treatments, and adherence to clinical guidelines.

According to the WHO, 100 million people around the world are pushed into extreme poverty each year due to health expenses. This challenge is of utmost importance for developing countries, but it is also an important issue for all countries to consider more deeply. Even the most promising advances in the management of a cancer disease are only as good as our ability to deliver them to those patients who need them. Precision medicine is about not just the targeting of biological mechanisms but also the targeting of the disease and is most important in the targeting of the right patients at the right time. It is thus just not about molecules!

Disclosure statement

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