CCBIO Opinion
Text: Eirik Tranvåg and Ole Frithjof Norheim

Prioritization

An increasingly older population, new and expensive treatments and higher public expectations will make fair priority setting essential to maintain a sustainable and just health care system. Through the work of CCBIO, functional cancer biomarkers can evolve to play an important role in this process.

Precision medicines that target specific immune responses or signaling pathways give new hope and treatment options for a range of advanced cancers. However, the price is literally high. Costs per quality adjusted life year (QALY) gained is pushing towards 1 000 000 NOK and beyond, and the demand from patients, physicians and the general public for implementing new drugs is strong. But despite talks of a paradigm shift in cancer treatment, documented treatment benefits remain marginal for some.

Tailoring treatment so that the appropriate medicine is given to the appropriate patient, can increase treatment benefits, reduce side effects and unnecessary treatment, and also potentially reduce treatment costs. It is not controversial to assign biomarkers a central role in this scenario of clinical priority setting, but exactly how biomarkers best can be used is still to be explored. How will biomarker test results influence the physician's decision making? How will average-based calculations of cost and effect be affected by the more detailed and individualized stratification of cancer disease using biomarkers? How will society accept that seemingly identical cancer patients are given different priority and therefore completely different treatments?

The 2016 White Paper on priority setting, "Values in patient health care", and the subsequent political discourse, demonstrated a broad support for the overall goal of the health care system: the greatest number of healthy life years for all, fairly distributed. This will be achieved through three criteria for priority setting: the priority of an intervention increases with the expected utility from the intervention; the priority of an intervention increases the less resources it requires; and the priority of an intervention increases with the severity of disease in the absence of such an intervention.

Cancer biomarkers have the potential to influence all priority decisions: they can help predict the benefit of a selected treatment, save resources through better selection of patients, and give prognostic guidance to evaluate disease severity. Therefore, cancer biomarkers have the potential to influence health care priority setting at all levels.

There are hundreds of new drugs in the pipeline, not only for cancer, but also for common and often chronic diseases like cardiovascular diseases, diabetes, autoimmune and rheumatic diseases. Vaccines, antibodies, stem cell treatment and gene therapy will provide a range of new treatment options that certainly will generate more health. However, without guidance and reliable tools for priority setting, our health care system will not be able to maximize health and distribute it fairly.

CCBIO's work on developing better biomarkers can not only contribute to better treatment for each individual cancer patient, but also inform and facilitate the priority setting processes. This may benefit both individual patients and society as a whole. ••