

Using patients' health preferences to develop a local scoring algorithm for a cancer-specific utility instrument

Cancer treatments are expensive. Novel cancer therapies such as targeted therapies are even more costly. Moreover, treatments costs for cancers are increasing. Therefore, cost-effectiveness, or value for money, has become an important criterion for adopting new anticancer drugs worldwide as well as in Singapore. Among the inaugural drug guidance published by Agency for Care Effectiveness in May 2017, one out of three anticancer drugs evaluated is not recommended because of poor cost-effectiveness evidence. Currently, utility values are generated mainly using generic utility instruments, which may not be sensitive enough to pick up small but important treatment benefit experienced by cancer patients. There is a need to better assess the cost–benefit of existing and new cancer treatments using a localized cancer-specific utility instrument.

In this interview, **Dr Luo Nan**, Associate Professor from National University of Singapore, shares about his recent research on using patients' health preferences to develop a local scoring algorithm for a cancer-specific utility instrument.

Q1: How did you get interested in conducting this study?

A: I have been focusing on developing tools that can be used to measure the value of health interventions. Such tools are widely used to generate evidence for policymakers to decide whether new treatment options should be subsidized or reimbursed. Currently, such tools value health benefits based on the preferences of the general public. While this is supported by most health economists, it can be argued that the preferences of patients may be more relevant in determining the value of a treatment under some circumstances. For instance, new anticancer treatments are hardly subsidized in many health systems due to their high costs. Since the costs are mainly borne by patients themselves, it makes sense to value the treatment benefits using the patients' preferences. Therefore, this study aims to evaluate the feasibility of developing a new tool that uses cancer patients' opinions to value anticancer treatments.

Q2: Could you briefly introduce the cancer-specific utility instrument QLU-C10D? Why is it necessary to produce country-specific utility values?

A: The QLU-C10D instrument is a new tool developed by an international research consortium. It classifies a person's health in terms of his or her functioning and well-being in 10 dimensions which include physical functioning, role functioning, social functioning, emotional functioning, pain, fatigue, sleep, appetite, nausea, and bowel problems. The classification is based on a person's responses to the EORTC QLQ-C30 questionnaire, a tool for measuring the health-

related quality of life of cancer patients. Country-specific values are preferred because the health preferences of people from any two different countries may differ in some way, which means the value of a treatment to people in one country may be different from its value to the people of another country. Therefore, there is a risk of accepting cost-ineffective health technologies or rejecting cost-effective health technologies if utility values derived from other countries are used.

Q3. What are the major findings in your study?

A: There are two important findings. Firstly, we found that the approach we tested works very well. The preference elicitation technique we chose to use is well accepted by local cancer patients. In the study, almost all patients managed to complete a survey form that includes questions asking them to state preferences for two hypothetical scenarios, one relatively longer life in poorer health versus one shorter life in better health. More importantly, we found that the quality of the preference data is rather good and better than that collected from the local general public. Secondly, we found some similarities between the health preferences of cancer patients and the general public. For example, physical functioning and pain are considered as the two more important dimensions by both groups.

Q4: What are the research and clinical implications of this study?

A: The study suggests that the current practice of using the general public's health preferences to value treatment effects can at least partially reflect the value of cancer patients. If the level of similarity is high, the current practice is sufficient as it is also for the best interest of cancer patients as far as the QLU-C10D instrument is considered. This might mean that the utility values generated by current available preference-based instruments can also be used to guide clinical decision-making, although those instruments are developed mainly for the economic evaluation of health interventions. This would be good news for clinical researchers because it means that their toolkits and data warehouses are enriched. However, if the level of similarity is only moderate, cancer patient's preferences-based utility values, like those estimated in this present project, would be more valuable for assessing the cost-effectiveness of new anticancer treatments from the patient's perspective and for informing clinical decision-making.

Q5: Do you have any future research plan based on this study?

A: For future research, we will try to figure out whether there is an important difference between cancer patients and the general public in their preferences for health outcomes defined by QLU-C10D as well as other dimensions. We are also interested to explore how disease experience affects the way in which cancer patients trade between quality of life and

survival time. We hope that this and future work can contribute to a better understanding of cancer patient's preferences which we believe is pivotal to patient-centered care and better health outcomes.

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Researcher portfolio

This study was completed by the team led by Dr Luo Nan, Associate Professor from the National University of Singapore. His research interest includes measurement and valuation of health outcomes and the development of new techniques and instruments for use in both economic and clinical evaluations of health interventions and policies.

The team members included Dr Ravindran Kanesvaran, Dr Mohamad Farid Bin Harunal Rashid, Dr Chong Qingqing, and Dr Chay Wen Yee from National Cancer Centre Singapore, Dr Mihir Gandhi (Duke-NUS Medical School), Associate Professor Richard Norman (Curtin University), and Professor Madeleine King (University of Sydney).