Editorial

The Singapore Cancer Network (SCAN) Guidelines: A New Beginning

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The Singapore Cancer Network (SCAN) guidelines on systemic therapy published in this special issue represent the first effort by Singapore oncologists to develop a national consensus on cancer care. Nine specialist workgroups, involving over 70 subspecialists from both the public and private sectors, have written 15 guidelines, defining a framework for systemic treatments of nearly all common solid tumours in Singapore. The guidelines have been internationally peer-reviewed and endorsed by the Chapter of Medical Oncologists of the Academy of Medicine, Singapore (AMS) as well as the Singapore Society of Oncology (SSO).

The audience envisioned for these guidelines would include professionals, patients and policymakers. For clinicians, including medical oncologists, radiation oncologists, surgeons, oncology pharmacists and other disciplines, the SCAN guidelines serve as a framework of quality care for systemic therapy in Singapore as defined by subspecialists. For patients, a national consensus on cancer care developed within Singapore will provide both education and reassurance. Finally, for policymakers, the guidelines serve as an independent professional national reference useful for understanding a complex and challenging field of medicine.

In terms of membership, each SCAN guideline workgroup was composed of a panel of clinicians with relevant advanced subspecialist training and experience derived from both public and private sectors. Each autonomous workgroup was chaired by an internally elected member.

A major goal during guideline development was to limit complexity in the creation and subsequent updating of the SCAN guidelines. Since 2000, the Ministry of Health has regularly released Singapore clinical practice guidelines (CPGs) in many fields of medicine based on best available evidence. While useful in establishing local clinical practice recommendations in many areas, utilisation of these CPGs has been more limited in oncology, because of the rapidity of developments in the field. To address the concern of administrative complexity, the ADAPTE methodology[1] was used to allow rapid calibration of international guidelines to the Singapore setting, as opposed to *de novo* creation. The ADAPTE method essentially reviews available international oncology guidelines, with consensus selection of appropriate recommendations, with additional calibration as needed. It was anticipated that this approach would allow for annual updating of the SCAN guidelines, which would reflect the frequency of practice-changing research developments. Such an approach would also be well aligned with the archetypal Singapore style of identifying best practices all around the world for local deployment. During guideline development, workgroup members holding minority opinions were also explicitly invited to submit comments alongside the majority view in order to reflect diversity of opinion and minimise groupthink.

Best practices in Singapore do not always mirror recommendations in USA or Europe due to differences in local cancer epidemiology and adverse drug reaction profiles. For example, standard first-line treatment options for epidermal growth factor receptor (*EGFR*)-mutant metastatic lung cancer in Singapore have differed from those in the USA for many years, and some chemotherapy drugs are commonly prescribed at lower doses in Singapore.[2] Singapore has the highest national rate of adverse drug reaction reporting in the world, and it may be possible that drug dosing in Singapore represents more calibrated real-world use.

One key feature of the SCAN guidelines was that no funding from pharmaceutical companies was received in the course of guideline development. Instead, the publication of the SCAN guidelines was funded by grants from AMS and SSO. Industry is a valued partner in cancer care, and conducts the commercial development of innovations to bring compounds to market to improve patient outcomes. However, involvement of industry would almost certainly have complicated the process of guideline writing. One major guideline organisation in the USA, the National Comprehensive Cancer Network (NCCN), accepts industry funding, but only for guideline distribution and

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not for guideline development. For individual workgroup members involved, a self-declaration process aligned with the International Committee of Medical Journal Editors (ICMJE) has been used. It is helpful to recognise that some professional interactions with industry are crucial to advancing patient interests and safety, for example, when physicians conduct trials or advise on clinical trial design. At the same time, full and transparent disclosure of interactions between physician and industry would certainly be in the common interest.

It is often said that guidelines are not tramlines. Clinical judgment remains paramount in patient management. There are certainly times when it would be medically inappropriate to follow guidelines, such as in the setting of multiple patient comorbidities or when interactions with existing medications are anticipated. Additionally, oncology drug costs are a real dimension to patient care. While these guidelines were developed with an explicit remit to focus on clinical benefit, it would be remiss to divorce treatment costs, also known as "financial toxicity",[3] from real-world practice and individualised patient counseling. To maximise clarity, each workgroup was tasked to report absolute benefits as far as possible[4] (for example, a drug improving survival at 3 years from 80% to 85% would be most appropriately reported as a 5% absolute benefit at 3 years, and not as 25% relative benefit). Corresponding results of international state-driven cost-effectiveness studies were requested as adjunct information, but not used to guide recommendations. Such background, while secondary to the key recommendations, provide helpful context.

In the Singapore context, healthcare (and by proxy cancer care) have been traditionally supported by the 3Ms —Medisave, Medishield and Medifund. Medishield Life, replacing Medishield, is the most important transformation of Singapore healthcare since the introduction of Medisave in 1984. It should be noted that the coincidence in the introduction dates for Medishield Life and the SCAN guidelines (both in November 2015) is just that–a coincidence. Nonetheless, with the increase in chemotherapy claim limit from S$1240 (per 21/28-day cycle) to S$3000/month, Medishield Life is expected to have a major impact on shaping cancer care over the next few years.

There are certainly limitations to the first edition of SCAN. With the exception of sarcoma management, treatment recommendations are restricted primarily to systemic therapies, with limited consideration of surgery or radiotherapy, both crucial elements of multimodality care. In its effort to define quality care in Singapore, it does not consider treatment cost-effectiveness. Like all consensus guidelines, it suffers from common limitations: recommendations are limited by available literature, in which there is a paucity of randomised controlled trials. For example, in an independent analysis of 10 NCCN guidelines conducted in 2010, only 8% of therapeutic recommendations were supported by >1 randomised controlled trial.[5] When available data is weak or conflicting, recommendations may represent more expert opinion than science, but it may be argued that consensus expert opinion provides better guidance than having no views at all.

In conclusion, the SCAN guidelines published here represent the first systematically developed national practice framework in Singapore. These were developed through evaluation and selection of best practices worldwide, followed by calibration for the Singapore setting. It is anticipated that future editions of the SCAN guidelines will expand to other disciplines involved in cancer care, to best provide a holistic framework for our practice and patients.

Conflicts of Interest

Dr Tan is a named inventor of methods for cancer diagnostics, with patents filed and owned by his employers. He is receiving current research funding from Pfizer for translational research. No other conflict of interest is reported.

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