



Choosing Wisely India: ten low-value or harmful practices that should be avoided in cancer care

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The Choosing Wisely India campaign was an initiative that was established to identify low-value or potentially harmful practices that are relevant to the Indian cancer health-care system. We undertook a multidisciplinary framework-driven consensus process to identify a list of low-value or harmful cancer practices that are frequently undertaken in India. A task force convened by the National Cancer Grid of India included Indian representatives from surgical, medical, and radiation oncology. Each specialty had representation from the private and public sectors. The task force included two representatives from national patient and patient advocacy groups. Of the ten practices that were identified, four are completely new recommendations, and six are revisions or adaptations from previous Choosing Wisely USA and Canada lists. Recommendations in the final list pertain to diagnosis and treatment (five practices), palliative care (two practices), imaging (two practices), and system-level delivery of care (two practices). Implementation of this list and reporting of concordance with its recommendations will facilitate the delivery of high-quality, value-based cancer care in India.

Introduction

Choosing Wisely India is an initiative modelled after Choosing Wisely in the USA and Canada,^{1,3} which aim to identify low-value, unnecessary, or harmful cancer services that are frequently used in national health-care systems. These society-driven initiatives also intended to start the conversation between physicians, patients, their families, policy makers, and patient advocates on ensuring high-quality and affordable cancer care while avoiding the use of unnecessary tests, procedures, and treatments. Identification of low-value or harmful practices can facilitate subsequent quality improvement initiatives through measurement and performance reporting.

The National Cancer Grid aims to facilitate efforts in cancer control, research, and education. A particular emphasis is the development of uniform standards of cancer care across India.^{4,6} Over the past 6 years, it has grown to a large network of 164 cancer centres, research institutes, patient advocacy groups, charitable organisations, and professional societies. Incorporating almost all stakeholders of cancer care in India, the National Cancer Grid has become a strong, unified, and powerful voice within the Indian health system. The organisational mission statement states that “The National Cancer Grid will create a network of cancer centres across India with the mandate of establishing uniform standards of patient care for prevention, diagnosis, and treatment of cancer, creating adequate trained human resources, and facilitating collaborative basic, translational and clinical research in cancer”. The National Cancer Grid has developed evidence-based and context-appropriate guidelines for the management of cancer in India.⁷ However, as with any health system, it is well recognised that outside of practice guidelines, there are many common medical practices that do not offer benefit to patients. This tenet has particular relevance in India where low government investments in health and high out of pocket expenditure necessitate careful consideration of how to best deliver high-value cancer

care. This problem is compounded by the fact that the health-care delivery framework in India is highly variable, fragmented, and largely unregulated.⁸ One successful approach in avoiding unnecessary (often expensive) interventions has been the Choosing Wisely initiative, which has been embraced globally in more than 20 countries.⁹ In the USA and Canada, there are now over 800 Choosing Wisely recommendations from more than 120 national clinician societies.^{10,11} Although there have been some attempts made to create a Choosing Wisely list in India,¹² there has not been a deliberate effort to develop these lists through systematic processes described by international Choosing Wisely groups.¹³ Also, there are no published Choosing Wisely lists from other low-income to middle-income countries, and existing lists have not formally involved collaboration of patient groups at the task force level. In this Personal View, we describe the methods followed and results of identifying the final list of cancer practices that are frequently used in the India health-care system that are considered of low-value, unnecessary, or harmful to patients. We also provide a list of recommendations to combat these set of practices, to avoid ways in which this leads to harm.

Choosing Wisely India task force

In 2017, a Choosing Wisely India task force, comprising nine members, was convened by the National Cancer Grid of India. Two members (MP and KVG) were representatives from national patient and patient advocacy organisations (both with extensive experience in representing patients in stakeholder meetings); the remaining seven members came from the three primary oncology specialties of medical, surgical, and radiation oncology (CSP, HC, VAR, TS, SG, KGB, and DS). These specialties were chosen because most patient care decisions in cancer are taken by specialists from these fields in addition to community general physicians and surgeons. It also included executive office bearers from

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the four oncology specialist associations of India (Association of Radiation Oncologists of India, Indian Association of Surgical Oncology, Indian Society of Medical and Pediatric Oncology, and the Indian Society of Oncology), in addition to the convener of the National Cancer Grid (CSP). Each specialty had at least two representatives on the task force, one from the private and one from the public health sector. These members had all had extensive experience in treating patients in various health-care settings and were well versed with common practices in cancer care in India. The task force was supported with methodological expertise from three non-voting advisers from Canada and the UK who had experience in Choosing Wisely Canada and global cancer policy (GM, RS, and CMB). Two of the international members (RS and CMB) had worked closely with several Indian cancer groups, including the National Cancer Grid and were aware of the realities of delivering cancer care in India.

Consensus process

The cancer list was developed based on the following parameters: evidence of low value or harm, frequent use in India, cost (including opportunity cost defined as the value of the next highest alternative use of a particular resource, for example, if a PET/CT scan is avoided in a patient who does not require it, it allows a PET/CT scan to be done for another patient who truly requires it), and relevance to the Indian cancer context. The initial list of cancer practices to be considered (appendix) was identified through submissions from physicians, members of the Choosing Wisely India task force, and participating professional societies, and included a review of existing Choosing Wisely USA and Canada lists that were relevant to cancer.

A modified Delphi process was adopted to achieve consensus during the process.¹⁴ Six major guiding principles were used to identify the final list. These included that the practice must have published evidence of low value or harm; be frequently used in India; have potential for reduction; be unambiguous and understandable; be practically feasible and measurable; and be relevant to the Indian context. The task force did not consider cancer screening practices because they are very sporadic in India, and not a big enough problem to recommend on a Choosing Wisely list. The task force and the four professional societies' and the National Cancer Grid's memberships were given the opportunity to vote on the inclusion and exclusion of practices using an electronic survey, and members also had the opportunity to suggest additional items. The list was circulated to the Executive Committees of the associations represented in the task force who then forwarded it to approximately 4000 members by email.

The long list was reduced to a short list (appendix) using the same electronic voting process. For each practice, task force members were asked to consider

frequency of use, cost, degree of harm, and supporting evidence. A voting threshold of 50% or more was used to include an individual recommendation on the short list. After this round of voting was completed, the task force further discussed each point on the short list (a yes or no decision was made by each member of the task force for each recommendation on the basis of its importance) and a consensus-based final list was created. Clinical evidence to support the new recommendations was identified through focused literature searches on PubMed (appendix). The final list was circulated to each cancer centre represented by the National Cancer Grid and to the Executive Committees of the associations who forwarded the list to all their members for input before receiving final endorsement from the Executive Boards of the four professional societies and the National Cancer Grid itself.

Top ten list

A preliminary long list of 40 cancer-related items was developed using the USA and Canadian Choosing Wisely lists and task force members' and society submissions. This long list was reduced to a short list of 26 practices (appendix). The final list consisted of ten recommendations that have been endorsed by each of the organisations that were represented in the task force, as well as the National Cancer Grid of India. Of the ten practices, four practices were new suggestions and six practices were adapted with modifications from Choosing Wisely USA and Canada lists (table). The final cancer list includes recommendations that pertain to diagnosis/treatment (five practices), palliative care (two practices), imaging (two practices), and system-level delivery of care (one practice). Additionally, in this final list, nine of the ten points involve multiple disease sites, and one is disease-site specific. The initial teleconference meeting was held on October, 2017, and consensus on the final list was obtained in February, 2018.

Do not delay or avoid palliative care for a patient with metastatic cancer because they are pursuing disease-directed treatment

Several studies, including randomised clinical trials, have shown that institution of early palliative care improves pain and better controls symptoms, improves family satisfaction with care, and reduces costs.¹⁵⁻²⁰ Recent studies have shown that palliative care not only improves quality of life, but also increases survival in selected populations.²¹ The benefits of cancer-directed treatment (eg, chemotherapy or radiotherapy) can be enhanced by early consideration of palliative care.

Avoid chemotherapy and instead focus on symptom relief and palliative care for patients with advanced cancer unlikely to benefit from chemotherapy

Studies have shown that cancer-directed therapies are not likely to be effective for patients with solid organ

See Online for appendix

	Origin of recommendation	Revisions made to original recommendation
Do not delay or avoid palliative care for a patient with metastatic cancer because they are pursuing disease-directed treatment	Choosing Wisely Canada ³	No
Avoid chemotherapy and instead focus on symptom relief and palliative care in patients with advanced cancer that are unlikely to benefit from chemotherapy*	Choosing Wisely USA ^{1,2}	Yes
Do not order tests to detect recurrent cancer in asymptomatic patients if there is not a realistic expectation that early detection of recurrence can improve survival or quality of life†	Choosing Wisely Canada ³	Yes
Do not order PET/CT scans to monitor response to palliative chemotherapy	New suggestion	Not applicable
Do not decide treatment for potentially curable cancers without inputs from a multidisciplinary oncology team	New suggestion	Not applicable
Do not treat patients with advanced metastatic cancer in the intensive care unit unless there is an acutely reversible event	New suggestion	Not applicable
Do not use advanced radiation techniques where conventional radiation can be just as effective	New suggestion	Not applicable
Do not deliver care in a high-cost setting when it could be delivered just as effectively in a lower-cost setting	Choosing Wisely Canada ³	Yes
Do not initiate whole breast radiotherapy in 25 fractions as a part of breast conservation therapy in women age ≥50 years with early-stage invasive breast cancer without considering shorter treatment schedules	Choosing Wisely Canada ³	No
Do not use white-cell stimulating factors for primary prevention of febrile neutropenia for patients with less than 20% risk for this complication	Choosing Wisely USA ^{1,2}	Yes

This list is meant to augment on the Choosing Wisely USA and Choosing Wisely Canada lists with specific Indian context. Therefore, the absence of any Choosing Wisely USA or Choosing Wisely Canada practices does not imply non-support of those practices as low-value or harmful. *Including one or more of the above: performance status 3 or 4, no benefit from previous evidence-based interventions, not suitable for a clinical trial, and no evidence supporting the clinical value of further anticancer treatment. †Including biomarkers, PET/CT and CT scans, and endoscopy and radionuclide scans.

Table: Choosing Wisely India final list of low-value or harmful practices that should be avoided in cancer care*

tumours who are markedly debilitated by their cancer (ie, those patients with a performance status of three or four).^{22,23} Exceptions to this recommendation can include patients with functional limitations secondary to unrelated conditions or selected patients with specific disease types (eg, lymphomas and germ-cell tumours) or disease characteristics (eg, targetable mutations) that suggest a high likelihood of response to therapy. Findings from a randomised trial show that appropriate symptom control and palliative care can substantially improve quality of life.²¹

Do not order tests to identify recurrent cancer in asymptomatic patients on follow-up if there is not a realistic expectation that early detection of recurrence can improve survival or quality of life

In some situations (eg, patients with germ-cell tumours or colorectal cancer), early detection of local or distant cancer recurrence can increase the possibility of subsequent curative treatment.^{24,25} However, in many other circumstances (mostly solid tumours), there is no evidence that earlier detection of recurrence improves outcomes.^{26–30} Physicians should balance the information obtained from advanced testing with what is best for the individual patient. Specifically, when there is not a realistic expectation that the early identification of recurrence can improve survival or quality of life, including the use of biomarkers, PET/CT scans, endoscopy, and radionuclide scans, the need for patient

reassurance should be balanced against the anxiety resulting from extensive follow-up testing.²⁵

Do not order PET/CT scans to monitor response to palliative chemotherapy

Whilst imaging with PET/CT has a valuable role in the staging of some forms of cancer, existing evidence does not support its use in monitoring response to palliative chemotherapy. Although small cohort studies suggest that PET/CT can provide insights into the response into palliative chemotherapy for some solid tumours, no reliable evidence exists to show that it improves patient survival or quality of life.^{31–33} The weight of evidence suggests that PET/CT in this context has no benefit and therefore should not be used outside of a clinical trial.

Do not decide treatment for potentially curable cancers without inputs from a multidisciplinary oncology team

In India, cancer treatment is not always delivered at a designated cancer centre. The most common cancers in India (ie, oral cavity, cervix, and lung) require multimodality therapy and therefore need input from a multidisciplinary team. Evidence shows that multidisciplinary team care improves staging accuracy, processes of care, and guideline concordance.^{34–36} The stakes are especially high among patients whose disease is potentially curable if there is no interdisciplinary involvement. Ideally, the management of these cases should be determined in a multidisciplinary clinic or

tumour board. In centres without access to these services, patients should be presented for input regarding optimal management.

Do not treat patients with advanced metastatic cancer in the intensive care units unless there is an acutely reversible event

Prognosis of patients with advanced metastatic cancers is poor and medical interventions are unlikely to lead to cure. Admission to an intensive care unit can be futile unless the cause of admission is likely to be reversible. Several ethical, moral, and legal problems can be anticipated when withdrawal of life-supportive measures are to be considered. Since the patient might not be in a fit condition to give advanced directives or informed consent, it would be wise to assess the likely prognosis before admitting such patients to the intensive care unit. International groups recommend that patients with advanced metastatic cancer and have a life expectancy of less than 1 year should not be admitted to an intensive care unit.^{37–39}

Do not use advanced radiotherapy techniques when conventional radiotherapy can be just as effective

Many centres in India do not have facilities for advanced conformal radiotherapy and treat patients with conventional techniques instead. The cost of treatment by conventional techniques is only a fraction of the costs incurred for advanced therapy; this is especially true for out-of-pocket expenses. Although some advanced radiotherapy techniques can reduce toxicity and improve quality of life in a small proportion of specific cancer sites, no level 1 evidence-based medicine shows that these techniques improve overall survival.^{40–42} Radiotherapy techniques should be judiciously chosen to give the best possible cost-effectiveness ratio. Advanced techniques should be reserved for scenarios in which there is clear evidence to support their superiority over conventional radiotherapy.

Do not deliver care in a high-cost setting when it could be delivered just as effectively in a lower-cost setting

It is not uncommon for patients in the Indian system to travel vast distances to receive routine cancer care and follow-up that could potentially be delivered closer to home. An aspirational goal of the Indian cancer system should be to establish a hub-and-spoke model of cancer care in which routine and low-risk cancer therapy is delivered closer to home at local and regional hospitals while more complex cases are referred to tertiary and quaternary institutions. Studies have shown that in high-income countries surveillance after definitive cancer treatment can be undertaken equally well in a local setting and would be more patient centered.^{43–46} Efforts are needed to build capacity towards a similar system of survivorship care in the Indian context. As these alternative models of care are developed, evidence should

be collected to understand outcomes, feasibility, and acceptability to patients and providers.

Do not initiate whole breast radiotherapy in 25 fractions as part of breast conservation therapy in women age 50 years and older with early-stage invasive breast cancer without considering shorter treatment schedules

Whole breast radiotherapy is indicated in most women with invasive breast cancer treated with breast conservation surgery. Many studies have utilised radiation schedules that deliver therapy over 5–6 weeks, usually followed by 1–2 weeks of boost therapy. Evidence has shown equivalent tumour control and cosmetic outcome in specific patient populations with shorter courses of therapy (approximately 3–4 weeks).^{47–49} Patients and their physicians should consider these treatment schedules before determining the most appropriate course of therapy.

Do not use white-cell stimulating factors for primary prevention of febrile neutropenia for patients with less than 20% risk for this complication

International guidelines recommend the use of white-cell stimulating factors when the risk of febrile neutropenia, probably after a planned chemotherapy regimen, is approximately 20% and alternative, effective treatment regimens that do not require white-cell stimulating factors are unavailable.⁵⁰ Exceptions to this recommendation include when it is expected that the patient would be at high risk for febrile neutropenia (due to age, medical history, or disease characteristics) even when using regimens that have a lower chance of causing febrile neutropenia.

Discussion

The National Cancer Grid initiated the Choosing Wisely India project to engage physicians and patients to collaboratively discuss treatment options that are evidence-based, which contribute to reducing the overuse of investigations and treatments that can be unnecessary or potentially harmful to patients. The cancer list was uniquely developed through a multidisciplinary collaboration between the National Cancer Grid of India, the major cancer specialist organisations of India, and patient advocacy groups. All suggested practices in the long list were considered and reviewed by the entire Task Force regardless of an individual member's specific areas of expertise. Although many practices were considered, including cancer-related practices previously identified in the Choosing Wisely USA and Canada campaigns, the task force primarily sought to augment on existing lists and provide specific Indian context to its recommendations. As such, the absence of any Choosing Wisely USA or Canada practices does not imply disagreement about those practices being low value or harmful; it merely

shows that more common practices that were particularly relevant in the Indian context exist. We would like to reiterate that our Choosing Wisely list is not intended to replace discussions between physicians and patients or independent medical judgment; rather, the list is intended to promote a patient-centred approach by shared decision making. It is possible that new evidence might emerge in the future, and regular review of these practices and supporting evidence is recommended.

The creation of the Choosing Wisely list is only the first step in a multipronged, multistep process to promote the delivery of high-quality care.⁹ The National Cancer Grid of India plans to collect data from its over 160 member organisations, which collectively see more than 600 000 new patients with cancer annually, for several practices that have been identified. This will enable reporting of baseline metrics to guide future quality improvement initiatives. Similar reports from Canada^{51–53} and the USA⁵⁴ have quantified the extent of the problem and stimulated efforts to improve health-system performance and delivery of high-quality cancer care for their countries. Although the primary purpose of the global Choosing Wisely programme is to promote high-quality cancer care, this exercise in the Indian context (in which government funding of cancer services is very low) can also offer insight into how to optimally deploy the available resources to ensure the maximum public health benefit for the country. As the first systematically developed and published Choosing Wisely list (in any discipline) from a country of low to middle income, the Choosing Wisely India cancer campaign can also serve as an exemplar for parallel efforts both within India and beyond and for other disciplines other than cancer.

Notable strengths of the current initiative are the involvement of all cancer specialty associations in India and the direct engagement of patient advocacy groups from the inception of this project. The initiative also followed the rigorous processes described by international Choosing Wisely groups.¹³ This campaign also benefits from being under the National Cancer Grid of India, which will facilitate broad dissemination and subsequent reporting and quality improvement efforts. Important limitations of the list is that several important practices were not included (eg, do not use antibiotic prophylaxis perioperatively beyond the day of surgery); however, we needed to limit the final number of recommendations to ensure that the message did not get diluted. We understand that among those practices that did make the final list, some will be more difficult to measure (eg, do not deliver care [eg, follow-up] in a high-cost setting [eg, inpatient, cancer centre] that could be delivered just as effectively in a lower-cost setting [eg, primary care]). The task force was also explicit in its inclusion of some recommendations that are considered aspirational within the Indian cancer system in the next 3–5 years (ie, multidisciplinary input for all patients with

curable cancer and delivery of care closer to home) than those that can be potentially implemented in the very short term (ie, do not order PET/CT scans to monitor response to palliative chemotherapy). We acknowledge that other stakeholders (pathologists, imaging specialists, palliative-care experts, government, hospital administrators, and policy makers) also contribute to patient care in India. However, the diversity of specialties, health-care delivery systems, and the inclusion of patient groups and the main professional societies represented in the task force make these recommendations largely representative of the cancer community in the country. The fact that the National Cancer Grid—of which its member centres treat approximately 60% of all newly diagnosed patients with cancer in India—endorsed these recommendations makes them generalisable and acceptable to most cancer care providers in the country.

Conclusion

Through broad input of physician and patient stakeholders, and a systematic development process, the Choosing Wisely India campaign has identified ten low-value and potentially harmful practices in the Indian cancer system. These recommendations are expected to promote a patient-centred approach by shared decision making and have been endorsed by all major cancer societies and the National Cancer Grid of India. Creation of the final set of recommendations is the first step in a multistep process of avoiding wasteful practices used for cancer management in India. Future initiatives will measure baseline performance for these indicators in routine practice, with an ultimate goal of designing interventions to improve the quality of cancer care for patients across India.

Contributors

CSP, RS, and CMB were responsible for the concept. CSP, RS, CMB, and GM were responsible for the literature search and study design. CSP, RS, CMB, GM, HC, VAR, TS, SG, MP, KGB, KVG, and DS were responsible for the data collection, data analysis, data interpretation, and writing.

Declaration of interests

We declare no competing interests.

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