'Choosing Wisely' Campaigns from ASCO and ASH: A Review for Clinicians in Haematology and Oncology

Ilana Kopolovic, MD; Henry Jacob Conter, MD, MSF, MSc, FRCPC; and Lisa Kristine Hicks MD, MSc, FRCPC

Abstract

The "Choosing Wisely" campaign is a national initiative whose aim is to optimize the safety and efficiency of health care by encouraging evidence-based applications of medical investigations and interventions. In recent years, the American Society of Clinical Oncology (ASCO) and the American Society of Hematology (ASH) and have contributed to the Choosing Wisely campaign, each publishing ten recommendations for practicing hematologists and oncologists. These recommendations can be considered in the categories of screening, diagnostic testing, disease-specific therapies, supportive care, and cancer staging and surveillance. We review the recommendations of ASH and ASCO, highlighting their rationale and anticipated benefits.

Keywords: screening, diagnostic testing, ASH, ASCO, investigations, interventions, staging, surveillance

Introduction

The Choosing Wisely campaign is an ongoing quality improvement initiative that aims to minimize medical testing and interventions for which little evidence exists to support a benefit, and that are associated with unnecessary costs, burdens, or risks to patients and the healthcare system.[1] The campaign is led by the American Board of Internal Medicine Foundation in collaboration with medical professional societies across the United States. Choosing Wisely has also inspired similar initiatives around the world.[2]

The American Society of Hematology (ASH) and the American Society of Clinical Oncology (ASCO) have each produced ten Choosing Wisely recommendations in the fields of benign and malignant oncology.[3-6] These recommendations have been proposed by practicing hematologists and oncologists, inspired by common practices with questionable value, and ultimately selected by a task force, after having undergone literature reviews to examine the evidence to support each recommendation.

Herein, we discuss the 20 recommendations in the realms of clinical care to which they apply.

Screening

Screening is an integral part of cancer care, requiring a balance of optimizing benefits to as many people as possible, while minimizing risks associated with procedures and incidental findings. While most cancer screening falls within the scope of primary care providers, hematologists and oncologists have critical roles in their communities in educating general practitioners and other healthcare providers and advocating for programs that use screening tests appropriately. Among their recommendations, ASCO discouraged the routine use of prostate- specific antigen (PSA) testing to detect asymptomatic prostate cancer in men expected to live less than 10 years. In such cases, PSA testing is highly unlikely to yield results that will prolong life, and may result in unnecessary invasive testing or anxiety. Routine use of PSA screening in an unselected population has been shown to decrease prostate cancer-related mortality, but not overall mortality,[7,8] or at the expense of quality of life.[9] Furthermore, given the slow growth rate of many prostate cancers, PSA screening is very unlikely to be beneficial when life expectancy is limited.

Diagnostic Testing

The ASH Choosing Wisely campaign includes two examples of recommendations focused on diagnostic testing, both in the realm of non-malignant hematology. For instance, in 2013 the ASH Choosing Wisely campaign recommended that thrombophilia testing not be undertaken in patients with venous thromboembolism (VTE) provoked by a transient risk factor, such as postoperative VTE. Testing for thrombophilia has become a common practice, but it is clear that in certain settings, such testing should not influence clinical decision making. In unselected populations, hereditary thrombophilias do not appear to portend a higher risk of recurrence.[10] Furthermore, in the absence of routine thrombophilia testing, patients with provoked VTE have a very low risk of recurrent thrombosis.[11] Thus, thrombophilia work-ups in this setting serve only to potentially confer clinically inconsequential genetic diagnoses, which may have both negative psychological and practical implications (eg, denial of insurance).

In its 2014 Campaign, ASH offered another recommenda-

tion on diagnostic testing, cautioning against testing for heparin- induced thrombocytopenia (HIT) in patients with a low pretest probability (PTP). In this setting, the probability of a false positive result far outweighs the probability of a true positive; thus, HIT testing is more likely to be misleading than helpful and should not be performed.[12] The consequences of testing for HIT in low-risk patients include exposing patients to risk from full-dose anticoagulation with a non-heparin anticoagulant and its attendant bleeding risks, and risks from withholding heparin when indicated.[13]

Disease-Targeted Treatment

With a rapidly expanding armamentarium, an emerging challenge facing oncologists and hematologists is to resist the urge to offer intervention in the absence of strong supportive evidence and where the potential for harm outweighs the realistic estimation of benefit. The theme of avoiding overtreatment underlies several of the ASH and ASCO recommendations. A particularly high-impact recommendation from ASCO in this category is one that reminds clinicians not to recommend cancer-directed treatment to a patient with poor performance status who has not benefited from evidence-based anti-cancer treatment who is not eligible for clinical trials, and where there is no strong evidence supporting further anti-cancer treatment. Instead, in this scenario, palliation should be the focus of care.

A second ASCO recommendation in this category is to avoid using combination chemotherapy for metastatic breast cancer in the absence of compelling evidence. Instead, ASCO advises that single-agent regimens be used. Multi-agent chemotherapy is often more costly with the potential for more adverse effects than single-agent regimens; thus, in the absence of strong clinical data, single-agent regimens are preferred.

In a similar vein, ASCO recommends that targeted therapies should only be used where a biomarker predicting a response to the therapy is demonstrable in the patient's tumor. Targeted therapies have shown exciting promise, often with impressive efficacy and sometimes less toxicity than conventional cytotoxic chemotherapies; however, their costs and the boundaries of their efficacy must be appreciated.[14] For example, the success of BRAF inhibition in BRAF mutant metastatic melanoma has not translated to similar success in BRAF mutant metastatic colon cancer,[15] nor has the success of HER2/neu- targeted therapy in HER2/neu amplified breast and gastric cancer translated into similar advances in other solid tumors to date.[16] Ultimately, the potential to expand the roles of targeted agents should be explored in clinical trials, where safety and efficacy can be definitively established, prior to incorporation into clinical practice.

ASH has also made recommendations in over treatment. For example, ASH recommends that patients who experience a VTE in the setting of a major transient risk factor be anticoagulated for three months, rather than longer durations. In this setting, the risk of recurrence declines dramatically after a three-month course of treatment, for example, to less than 1% in the case of postoperative VTE.[11] Thus, ongoing therapy with an anticoagulant exposes patients to the risk of anticoagulant-associated hemorrhage without clinical benefit.[17]

A second recommendation by ASH in this category, also about VTE, relates to the routine use of vena cava filters (VCF); anticoagulation for acute DVT affords excellent outcomes, and the introduction of VCFs as an adjunct is associated with little or no added benefit. The only randomized controlled trial of this intervention showed no reduction in symptomatic pulmonary embolism (PE).[18] Furthermore, VCFs impose substantial risks, among them, increased rates of leg DVT and the potential for filter fracture, migration, or embolization.[19] Despite minimal evidence to support a benefit of VCF and growing concerns surrounding safety, its use is becoming increasingly common in the United States.[19]

The ASH Choosing Wisely task force also identified immune thrombocytopenia (ITP) as a disease whose subjects may be overtreated to their detriment. ASH recommended against treatment of ITP in the absence of bleeding or a very low platelet count. Despite moderate or even severe thrombocytopenia, most patients with ITP have bleeding rates that are low[20] in absolute terms and also when compared to those with similar degrees of thrombocytopenia from other etiologies. All therapies for ITP confer risks; steroids, the most common treatment for ITP, are associated with substantial morbidity. Several studies have found that ITP patients are more likely to die of infection than hemorrhage; since steroids, splenectomy, and other ITP-directed therapies heighten infectious risk, these data have inspired reevaluation of the treatment paradigm in this disease.

Finally, the ASH Choosing Wisely campaign advised against the use of prothrombin complex concentrates (PCCs) for vitamin K antagonist (VKA) reversal in a non-bleeding patient in whom an urgent procedure is not planned. PCCs are costly and introduce risks of uncommon but serious advere events including thromboembolism,[21] so their use should be limited to urgent clinical circumstances.

With our therapeutic toolbox enriched with a growing array of novel and exciting agents and interventions, the Choosing Wisely campaign underscores an important message: More treatment does not always translate into better care.

Supportive Therapies

Managing complex diseases involves not only disease-directed treatments, but also supportive care to prevent complications and manage symptom burden. As with disease-directed therapies, the oncologist and hematologist do a great service to patients and the system within which care is delivered by embracing a stewardship role in using supportive care measures.

ASCO has two important recommendations in this category.

First, ASCO recommends against the use of granulocyte colony stimulating factor (gCSF) in patients at low risk of febrile neutropenia (FN). In patients at moderate to high risk of FN, gCSF decreases the incidence of FN,[22] decreases hospitalizations,[23] and may reduce infectious mortality in both solid and lymphoid cancers. Most major cancer societies recommend its routine use in patients with a risk of FN >20%.[24-26] However, when the risk of FN is low, a benefit has not been established. Thus, using gCSF in this setting exposes patients to side effects such as bone pain and financial burdens without expectation of benefit.

ASCO's second recommendation in this category is against the routine use of highly effective but expenscive anti-emetogenic drugs in patients receiving low or moderately emetogenic chemotherapy. Highly effective prophylactic antiemetic regimens have been established, and their use endorsed for primary prevention with specific regimens. However, these drugs have side effects such as constipation, and they are expensive. Liberal use of highly effective antiemetic drugs is likely to yield marginal benefit in most patients and may not outweigh associated costs and risks.[27]

ASH's two recommendations in the category of supportive care both involve transfusion, which is a common supportive practice whose application extends into the management of benign and malignant disease. Dramatic strides have been made to mitigate the risks of transfusion associated infection — most notably viral hepatitis and the human immunodeficiency virus — and have contributed to the perception of the safety of blood transfusion. However, transfusion is not risk free. It is associated with important complications including transfusion-associated volume overload, transfusion-associated lung injury (TRALI), ABO reactions, and allo-immunization. A large body of literature suggests that patient outcomes are the same or better when restrictive transfusion strategies are employed rather than liberal strategies.[28-32] Thus, ASH recommends judicious red cell transfusion, such that the minimum number of units required to restore a safe and asymptomatic degree of anemia are prescribed.

In patients with sickle cell disease (SCD), ASH recommends against the routine use of red cell transfusions for chronic anemia or uncomplicated pain episodes where no improvements in clinical outcome have been demonstrated with transfusion. Transfusion-associated cardiac overload, acute lung injury, allergic or febrile reactions, iron overload, and acute or delayed immune-mediated hemolytic transfusion reactions are of special concern in patients with SCD due to their high lifetime need for transfusion and to the fact that they frequently express minor red cell antigens that are less common in the donation pool.[33,34] It should be appreciated that transfusion medicine is an area where practice can be uniquely impactful. As a therapeutic realm relevant to generalists and other specialists, transfusion poses an opportunity, and possibly a responsibility, to educate colleagues and lead by example.

Cancer Staging and Posttreatment Surveillance

A number of ASCO and ASH Choosing Wisely recommendations deal with staging tests and posttreatment surveillance with imaging. For example, ASH recommends that patients with early-stage chronic lymphocytic leukemia (CLL) without an indication for treatment should not routinely undergo staging computed tomography (CT) scans. Unlike in lymphoma, CLL can be staged and prognosticated with a clinical exam and lab work. Thus, in early-stage disease, scans do not guide or alter management, are not necessary for prognostication, and have never demonstrated the ability to improve outcomes.

Similarly, ASCO recommends that patients with early-stage prostate or breast cancers should not undergo positron emission tomography (PET), CT, or radionuclide bone scans as part of staging assessments.[35] As with CLL, such additional testing does not aid with either prognostication or management of most patients with early-stage breast and prostate cancer.

Imaging investigations are also often overutilized in the posttreatment setting where they can trigger many additional tests due to incidental findings and expose patients to a substantial cumulative dose of radiation. Surveillance CT and PET scans are also costly — which can burden individual patients and the healthcare system. ASH and ASCO chose to highlight the importance of limiting surveillance CT and/or CT/PET scans in patients who have been treated for cancer with curative intent, and specifically for aggressive lymphomas or breast cancers, where a minority of relapses will present initially with isolated radiographic findings in the absence of clinically apparent relapse.[36] Importantly, surveillance imaging has not been associated with improved survival in either setting.

Practical Considerations and Future Directions

Despite widespread presentation and expanding awareness of the Choosing Wisely campaign, uptake of the guidance presented therein remains a challenge. Several reviews of institutional practices have demonstrated suboptimal adherence to Choosing Wisely recommendations, and in some instances, practices do not appear to have changed at all following their presentation.[37-40] This is consistent with evidence that education alone is rarely sufficient to trigger practice change. Thus, the Choosing Wisely campaigns ought to be viewed as critical first steps in changing dialogue around overuse, but not an end in themselves. Programs that integrate information on current practices and patient outcomes, such as the CancerLINQ system,[41] allow clinicians to actively assess and revise the quality of care they provide, while also contributing to knowledge generation. Such initiatives will continue to iteratively shape both guidelines and individual practices.

Conclusion

ASH and ASCO have made important recommendations to the Choosing Wisely campaign, which can be considered in 5

categories: screening, diagnostic testing, disease-targeted therapy, supportive care, and cancer staging or surveillance. None of the recommendations are intended to replace clinical judgment, which by necessity should be nuanced and patient centered. All Choosing Wisely lists are intended to spur conversations and to encourage thoughtful, evidence-based practice. Next time you are in a clinical situation relevant to one of the ASH or ASCO Choosing Wisely items, we encourage you to consider the item, discuss it with your patients, students, and colleagues, and make the best recommendation you can for the patient in front of you.

Affliations: Ilana Kopolovic, MD, is from Lakeridge Health, Durham Regional Cancer Centre , Oshawa, Ontario, Canada. Henry J Conter, MD, MSF, MSc, FRCPC, is from University of Western Ontario, London, Ontario, Canada, and Division of Hematology and Oncology, William Osler Health System, Brampton, Ontario, Canada. Lisa Kristine Hicks, MD, MSc, FRCPC, is from St. Michael's Hospital, Division of Hematology/Oncology, Toronto, Ontario, Canada, and from the University of Toronto, Toronto, Ontario, Canada.
Address correspondence to: Lisa K. Hicks, St Michael's Hospital, Room 2 084 Donnelly Wing, 30 Bond St., Toronto, ON M5B 1W8. Phone: 416-864-5632, Fax: 416-864-3055, email: HicksL@smh.ca

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