American Society of Clinical Oncology

Ten Things Physicians and Patients Should Question

The American Society of Clinical Oncology (ASCO) is a medical professional oncology society committed to conquering cancer through research, education, prevention and delivery of high-quality patient care. ASCO recognizes the importance of evidence-based cancer care and making wise choices in the diagnosis and management of patients with cancer.

After careful consideration by experienced oncologists, ASCO highlights ten categories of tests, procedures and/or treatments whose common use and clinical value are not supported by available evidence. These test and treatment options should not be administered unless the physician and patient have carefully considered if their use is appropriate in the individual case. As an example, when a patient is enrolled in a clinical trial, these tests, treatments and procedures may be part of the trial protocol and therefore deemed necessary for the patient’s participation in the trial.

These items are provided solely for informational purposes and are not intended to replace a medical professional’s independent judgment or as a substitute for consultation with a medical professional. Patients with any specific questions about the items on this list or their individual situation should consult their health care provider. New evidence may emerge following the development of these items. ASCO is not responsible for any injury or damage arising out of or related to any use of these items or to any errors or omissions.

1. Don’t use cancer-directed therapy for solid tumor patients with the following characteristics: low performance status (3 or 4), no benefit from prior evidence-based interventions, and no strong evidence supporting the clinical value of further anti-cancer treatment.
   - Cancer directed treatments are likely to be ineffective and more toxic for solid tumor patients who meet the above stated criteria.
   - Exceptions may include when disease characteristics (e.g., an extremely chemosensitive tumor, or a sensitive and targetable alteration in the tumor) suggest a high likelihood of a response to therapy that may reverse functional limitations related to the cancer.
   - While this Choosing Wisely statement originally referred to cytotoxic chemotherapy, it also applies to novel, purportedly less-toxic treatments such as immunotherapy and off-label targeted therapy in patients who meet the above stated criteria.

2. Don’t perform PET, CT, and radionuclide bone scans, or newer imaging scans in the staging of early prostate cancer at low risk for metastasis.
   - This Choosing Wisely statement was originally published with a focus on PET, CT, and radionuclide bone scans. These scans have often been used in the staging evaluation of low-risk prostate cancer, despite a lack of evidence suggesting they improve outcomes.
   - Since the publication of the original Choosing Wisely statements, newer imaging modalities such as fluciclovine F 18-PET and Gallium 68 prostate-specific membrane antigen (PSMA)-11 PET have emerged. However, current evidence does not support the use of these imaging modalities for staging newly diagnosed prostate cancer with low risk of distant metastasis based on clinicopathologic features (grade 1 disease, T1c/T2a disease, prostate-specific antigen (PSA) <10 ng/ml, Gleason score less than or equal to 6).
   - Unnecessary imaging can lead to harm through unnecessary radiation exposure, misdiagnosis, unnecessary invasive procedures, over-treatment, unnecessary anxiety and cost for patients, and treatment-related complications.

3. Don’t perform PET, CT, and radionuclide bone scans in the staging of early breast cancer at low risk for metastasis.
   - Imaging with PET, CT, or radionuclide bone scans can be useful in the staging of specific cancer types. However, these tests are often used in the staging evaluation of low-risk cancers, despite a lack of evidence suggesting they improve detection of metastatic disease or survival.
   - In breast cancer, for example, there is a lack of evidence demonstrating a benefit for the use of PET, CT, or radionuclide bone scans in asymptomatic individuals with newly identified ductal carcinoma in situ (DCIS), or clinical stage I or II disease.
   - Unnecessary imaging can lead to harm through unnecessary radiation exposure, misdiagnosis, unnecessary invasive procedures, over-treatment, and treatment-related complications.

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Don’t perform surveillance testing (biomarkers) or imaging (PET, CT, and radionuclide bone scans) for asymptomatic individuals who have been treated for breast cancer with curative intent.

- Surveillance testing with serum tumor markers or imaging has been shown to have clinical value for certain cancers (e.g., colorectal). However, for breast cancer that has been treated with curative intent, several studies have shown there is no benefit from routine imaging or serial measurement of serum tumor markers in asymptomatic patients.
- False-positive tests can lead to harm through unnecessary radiation exposure, misdiagnosis, unnecessary invasive procedures, over-treatment, and treatment-related complications.

Don’t use white cell stimulating factors unless the expected risk of febrile neutropenia associated with a chemotherapy agent or regimen is equal to or greater than 20%.

- ASCO guidelines recommend using prophylactic white cell stimulating factors when the risk of febrile neutropenia, secondary to a chemotherapy regimen, is equal to or greater than approximately 20%, and equally effective, alternative chemotherapy options that do not require white cell stimulating factors are unavailable.
- Exceptions should be made when using chemotherapy regimens that are typically associated with lower risk of febrile neutropenia, if it is determined that the patient is at high risk for this complication (due to age, comorbidities, or disease characteristics).

Don’t give patients starting on a chemotherapy regimen that has a low or moderate risk of causing nausea and vomiting antiemetic drugs intended for use with a regimen that has a high risk of causing nausea and vomiting.

- The issue of antiemetics has received significant scrutiny since this Choosing Wisely statement was originally published. Newer antiemetics have had a positive impact on patients’ tolerance of highly emetogenic chemotherapy. This progress brings with it the high costs of these novel agents, an effect that amplifies the financial impact of delivering chemotherapy.
- When used in patients treated with highly emetogenic agents, these medications can reduce morbidity and healthcare utilization, and help patients stay on their prescribed treatment schedule; they are thus strongly preferred.
- However, when using chemotherapy that is less likely to cause nausea or vomiting, more expensive agents recommended for use with highly emetogenic chemotherapy should be avoided if equally effective drugs are available at lower cost.

Don’t use combination cytotoxic chemotherapy (multiple drugs) instead of chemotherapy with one drug when treating an individual for metastatic breast cancer unless the patient needs a rapid response to relieve tumor-related symptoms.

- This Choosing Wisely statement was originally, and is still, published keeping cytotoxic chemotherapy in mind. Although therapy with multiple cytotoxic drugs (i.e., combination chemotherapy) for metastatic breast cancer may control tumor growth for a somewhat longer time than occurs when treating with a single agent, use of combination chemotherapy has not been shown to increase overall survival. In fact, the trade-offs of more frequent and severe side effects may have a net effect of worsening a patient’s quality of life.
- Combination cytotoxic chemotherapy may be useful and worth the risk of more side effects in situations in which the cancer burden must be reduced quickly because it is causing significant symptoms or is life threatening.
- Non-cytotoxic chemotherapy combination treatments with endocrine therapies and/or targeted therapies may be appropriate for patients with hormone receptor and/ or HER2-positive metastatic breast cancer.

Avoid using PET or PET-CT scanning as part of routine follow-up care to monitor for a cancer recurrence in asymptomatic patients who have finished initial treatment to eliminate the cancer unless there is high-level evidence that such imaging will change the outcome.

- PET and PET-CT are used to diagnose, stage and monitor how well treatment is working. Available evidence from clinical studies suggests that using these tests to monitor for recurrence does not improve outcomes and therefore generally is not recommended for this purpose.
- False positive tests can lead to unnecessary radiation exposure, misdiagnosis, unnecessary invasive procedures, over-treatment, and treatment-related complications.
Don’t routinely perform PSA testing for prostate cancer screening in men with no symptoms of the disease.

• Since PSA levels in the blood have been linked with prostate cancer, many doctors have used repeated PSA tests in the hope of finding “early” prostate cancer in men with no symptoms of the disease. Unfortunately, research including randomized clinical trials, does not suggest that screening for prostate cancer with PSA testing leads to improves overall survival of these patients, compared to those who did not undergo PSA testing. Unfortunately, randomized trials did not include sufficient African American males, nor men with a positive family history of prostate cancer, so no statement can be made about these groups.

• Most men are unlikely to benefit from PSA screening as their probability of dying from other medical conditions is greater than the chance of dying from asymptomatic prostate cancer. This is especially applicable to men who already have underlying medical conditions and men who are 70 years of age or older.

• Harms associated with PSA screening include false-positive results, the need for further testing including invasive biopsies, and overdiagnosis of prostate cancer that would otherwise never have caused symptoms or complications.

The original Choosing Wisely Statement #10 recommended against using a targeted therapy intended for use against a specific genetic aberration unless a patient’s tumor cells have a specific biomarker that predicts an effective response to the targeted therapy. While this statement continues to hold true, it is also currently being incorporated into a forthcoming ASCO Choosing Wisely 2021, which will update the currency and provide further context for this recommendation.

• Unlike chemotherapy, targeted therapy can significantly benefit people with cancer because it can target specific gene products, i.e., proteins that cancer cells use to grow and spread, while causing little or no harm to healthy cells. Patients who are most likely to benefit from targeted therapy are those who have a specific biomarker in their tumor cells that indicates the presence or absence of a specific gene alteration that makes the tumor cells susceptible to the targeted agent.

• Compared to chemotherapy, the cost of targeted therapy is generally higher, as these treatments are newer, more expensive to produce and under patent protection. In addition, like all anti-cancer therapies, there are risks to using targeted agents when there is no evidence to support their use because of the potential for serious side effects or reduced efficacy compared with other treatment options.
How This List Was Created (1–5)

In response to the 2010 New England Journal of Medicine article by Howard Brody, MD, “Medicine’s Ethical Responsibility for Health Care Reform – the Top Five List,” a subcommittee of ASCO’s Cost of Cancer Care Task Force began work to identify practices in oncology that were common and lacked sufficient evidence to support widespread use. Upon joining the Choosing Wisely campaign, the members of the subcommittee conducted a literature search to ensure the proposed list of items was supported by available evidence in oncology; ultimately the proposed Top Five list was approved by the full Task Force. The initial draft list was then presented to the ASCO Clinical Practice Committee, a group composed of community-based oncologists as well as the presidents of the 48 state/regional oncology societies in the United States. Advocacy groups were also asked to weigh in to ensure the recommendations would achieve the dual purpose of increasing physician-patient communication and changing practice patterns. A plurality of more than 200 clinical oncologists reviewed, provided input and supported the list. The final Top Five list in oncology was then presented to, discussed and approved by the Executive Committee of the ASCO Board of Directors and published in the Journal of Clinical Oncology. ASCO’s disclosure and conflict of interest policies can be found at www.asco.org.

How This List Was Created (6–10)

To guide ASCO in developing this list, suggestions were elicited from current ASCO committee members (approximately 700 individuals); 115 suggestions were received. After removing duplicates, researching the literature and discussing practice patterns, the Value in Cancer Care Task Force culled the list to 11 items, which comprised an ASCO Top Five voting slate that was sent back to the membership of all standing committees. Approximately 140 oncologists from its leadership cadre voted, providing ASCO with an adequate sample size and perspective on what oncologists find to be of little value. The list was reviewed and finalized by the Value in Cancer Care Task Force and ultimately reviewed and approved by the ASCO Board of Directors and published in the Journal of Clinical Oncology. ASCO’s disclosure and conflict of interest policies can be found at www.asco.org.

How This List Was Updated (1–10)

A survey was distributed to gather the opinions of the original authors of ASCO’s Choosing Wisely on the ongoing relevance of the 2012–2013 statements. For the most part, responses indicated that the statements continue to be relevant. The exception was ASCO’s statement #10, which the group agreed continues to hold true, but would benefit from additional updating and context. Thus, it was decided that a new version of this statement will be included in a forthcoming ASCO Choosing Wisely Five Things. In addition, some modifications were made to the original wording of the recommendations and accompanying bullet points in order to reflect current context.

Sources


Abbreviations:
CT, computed tomography; DCIS, ductal carcinoma in situ; PET, positron emission tomography; PSA, prostate-specific antigen.


For more information or to see other lists of Five Things Physicians and Patients Should Question, visit www.choosingwisely.org.