



# P A T I E N T G U I D E

## CLINICAL PRACTICE GUIDELINES

May 2006

# Preventing Nausea and Vomiting Caused by Cancer Treatment

To help doctors give their patients the best possible care, ASCO asks its medical experts to develop recommendations for specific areas of cancer care. ASCO recently updated a clinical practice guideline about preventing nausea and vomiting. This patient guide is based on ASCO's recommendations.

As you read this guide, please keep in mind that every person treated for cancer is different. These recommendations are not meant to replace your or your doctors' judgment. The final decisions you and your doctors make will be based on your individual circumstances.

In 1999, ASCO published clinical practice guidelines for the use of antiemetics (drugs that prevent nausea and vomiting). These guidelines were updated in 2006 to reflect the addition of

new medications. The recommendations in this patient guide were created by a panel of experts and describe the best care for preventing nausea and vomiting.

## Nausea and Vomiting

Emesis (vomiting or throwing up) is the act of expelling the contents of the stomach through the mouth. Nausea is the urge to vomit. Radiation therapy and some types of chemotherapy cause nausea and vomiting, although not all patients who receive these treatments will have these side effects.

The best way to manage nausea and vomiting caused by cancer therapy is to prevent it. Fortunately, many medications are available that can prevent nausea and vomiting.

Anticipatory emesis is vomiting that occurs before treatment in patients who have previously

vomited after chemotherapy. The prevention and treatment of anticipatory vomiting depends on the patient. For example, patients who often have motion sickness or have vomited after previous chemotherapy treatment are more likely to experience anticipatory vomiting. Tell your doctor if you have experienced vomiting with previous chemotherapy treatment. The doctor may be able to recommend medication or behavioral therapy to help reduce vomiting.

## Recommendations for Preventing Nausea and Vomiting Caused by Chemotherapy

Some types of chemotherapy are more likely to cause nausea and vomiting than other types. Table 1 lists the likelihood of each cancer drug to cause nausea and vomiting.

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**Table 1. The Risk of Nausea and Vomiting From Intravenous (IV) Chemotherapy**

Nearly Always Causes Nausea and Vomiting (High Risk)	Usually Causes Nausea and Vomiting (Moderate Risk)	Sometimes Causes Nausea and Vomiting (Low Risk)	Rarely Causes Nausea and Vomiting (Minimal Risk)
AC chemotherapy (doxorubicin [Adriamycin] and cyclophosphamide [Cytoxan, Neosar])	Carboplatin (Paraplatin)	Bortezomib (Velcade)	Bevacizumab (Avastin)
Carmustine (BiCNU, BCNU)	Cyclophosphamide (Cytoxan, Neosar) at lower doses	Cetuximab (Erbitux)	Bleomycin (Blenoxane)
Cisplatin (Platinol)	Cytarabine (Cytosar-U) at higher doses	Cytarabine (Cytosar-U) at lower doses	Busulfan (Busulfex)
Cyclophosphamide (Cytoxan, Neosar) at higher doses	Daunorubicin (Daunomycin, Cerubidine)	Docetaxel (Taxotere)	Cladribine (Leustatin)
Dacarbazine (DTIC)	Doxorubicin (Adriamycin, Rubex)	Etoposide (Etopophus, Toposar, VePesid)	Fludarabine (Fludara)
Dactinomycin (Cosmegen, actinomycin-D)	Epirubicin (Ellence)	Fluorouracil (5-FU, Efudex)	Rituximab (Rituxan)
Mechlorethamine (Mustargen)	Idarubicin (Idamycin)	Gemcitabine (Gemzar)	Vinblastine (Velban)
Streptozotocin (Zanosar)	Ifosfamide (Ifex)	Methotrexate (Amethopterin)	Vincristine (Oncovin)
	Irinotecan (Camptosar)	Mitomycin (Mutamycin)	Vinorelbine (Navelbine)
	Oxaliplatin (Eloxatin)	Mitoxantrone (Novantrone)	
		Paclitaxel (Taxol)	
		Pemetrexed (Alimta)	
		Topotecan (Hycamtin)	
		Trastuzumab (Herceptin)	

The recommended treatments for preventing nausea and vomiting are listed in Table 2.

**Table 2. Recommendations for Preventing Nausea and Vomiting**

Likelihood of Chemotherapy to Cause Nausea and Vomiting	Nearly Always Causes Nausea and Vomiting (High Risk and AC Chemotherapy)	Usually Causes Nausea and Vomiting (Moderate Risk)	Sometimes Causes Nausea and Vomiting (Low Risk)	Rarely Causes Nausea and Vomiting (Minimal Risk)
<b>Recommended Treatment</b>	A three-drug combination of the following: 1. Dolasetron (Anzemet), granisetron (Kytril), ondansetron (Zofran), or palonosetron (Aloxi) 2. Dexamethasone for one to three days 3. Aprepitant (Emend) for three days	A two-drug combination of the following: 1. Dolasetron (Anzemet), granisetron (Kytril), ondansetron (Zofran), or palonosetron (Aloxi) 2. Dexamethasone, for one to three days	Dexamethasone	No treatment required unless the patient has previously experienced vomiting with this treatment.

## Recommendations for Preventing Nausea and Vomiting Caused by Radiation Therapy

The risks and recommended treatments of nausea and vomiting caused by radiation therapy are summarized in Table 3.

**Table 3. Recommendations for Preventing Nausea and Vomiting Caused by Radiation Therapy**

Risk of Nausea and Vomiting From Radiation Therapy	Area of the Body Being Treated	Recommended Treatment
High	Total body irradiation (entire body)	One of these drugs: dolasetron (Anzemet), granisetron (Kytril), ondansetron (Zofran), or palonosetron (Aloxi) <b>with or without</b> dexamethasone before each treatment
Moderate	Upper abdomen (trunk or stomach)	One of these drugs: dolasetron (Anzemet), granisetron (Kytril), ondansetron (Zofran), or palonosetron (Aloxi) before each treatment
Low	Lower thorax (chest) Pelvis (lower abdomen) Brain (through radiosurgery) Spinal cord (back)	One of these drugs: dolasetron (Anzemet), granisetron (Kytril), ondansetron (Zofran), or palonosetron (Aloxi) before each treatment
Minimal	Head and neck Arms and legs Brain Breast	One of these drugs: metoclopramide (Reglan), dolasetron (Anzemet), granisetron (Kytril), ondansetron (Zofran), palonosetron (Aloxi), as needed

### What This Means for Patients

Nausea and vomiting can be prevented with the appropriate medications in nearly all patients undergoing cancer treatment. These medications should be taken as prescribed before treatment and continued after treatment as directed by your doctor because the risk of vomiting may continue for several days after treatment.

## Questions to Ask the Doctor

It is important to prevent nausea and vomiting. Consider asking the following questions of your doctor:

- Does my treatment carry a high risk of nausea and vomiting?
- What can be done to prevent nausea and vomiting?
- What are the instructions for taking these medications?
- Do these medications have side effects that I should know about?
- Where can I find more information?

## Helpful Links

Read the entire clinical practice guideline published in the June 20, 2006 *Journal of Clinical Oncology (JCO)*.

Download a slide presentation about the guideline created for oncologists and other health-care professionals.

PLWC: Managing Side Effects: Nausea and Vomiting

## Resources

People Living With Cancer ([www.plwc.org](http://www.plwc.org)) is the comprehensive, oncologist-approved cancer information website from ASCO. Visit PLWC to find guides on more than 90 types of cancer, clinical trials information, coping resources, information on managing side effects, a live online chat series, medical illustrations, cancer information in Spanish, the latest cancer news, and much more. For more information about ASCO's patient information resources, call toll free 888-651-3038.

### American Cancer Society

1599 Clifton Rd., NE  
Atlanta, GA 30329-4251  
Toll Free: 800-ACS-2345  
(800-227-2345)  
TTY: 866-288-4327  
Tel: 404-320-3333  
[www.cancer.org](http://www.cancer.org)

### National Cancer Institute

Public Inquiries Office  
Building 31, Rm. 10A31  
31 Center Dr., MSC 2580  
Bethesda, MD 20892-2580  
Toll Free: 800-4-CANCER  
(800-422-6237)  
TTY: 800-332-8615  
Tel: 301-435-3848  
Fax: 301-402-0894  
[www.cancer.gov](http://www.cancer.gov)



### American Society of Clinical Oncology

1900 Duke St., Ste. 200  
Alexandria, VA 22314  
Phone: 703-299-0150  
Fax: 703-299-1044

[www.asco.org](http://www.asco.org)  
[www.plwc.org](http://www.plwc.org)  
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