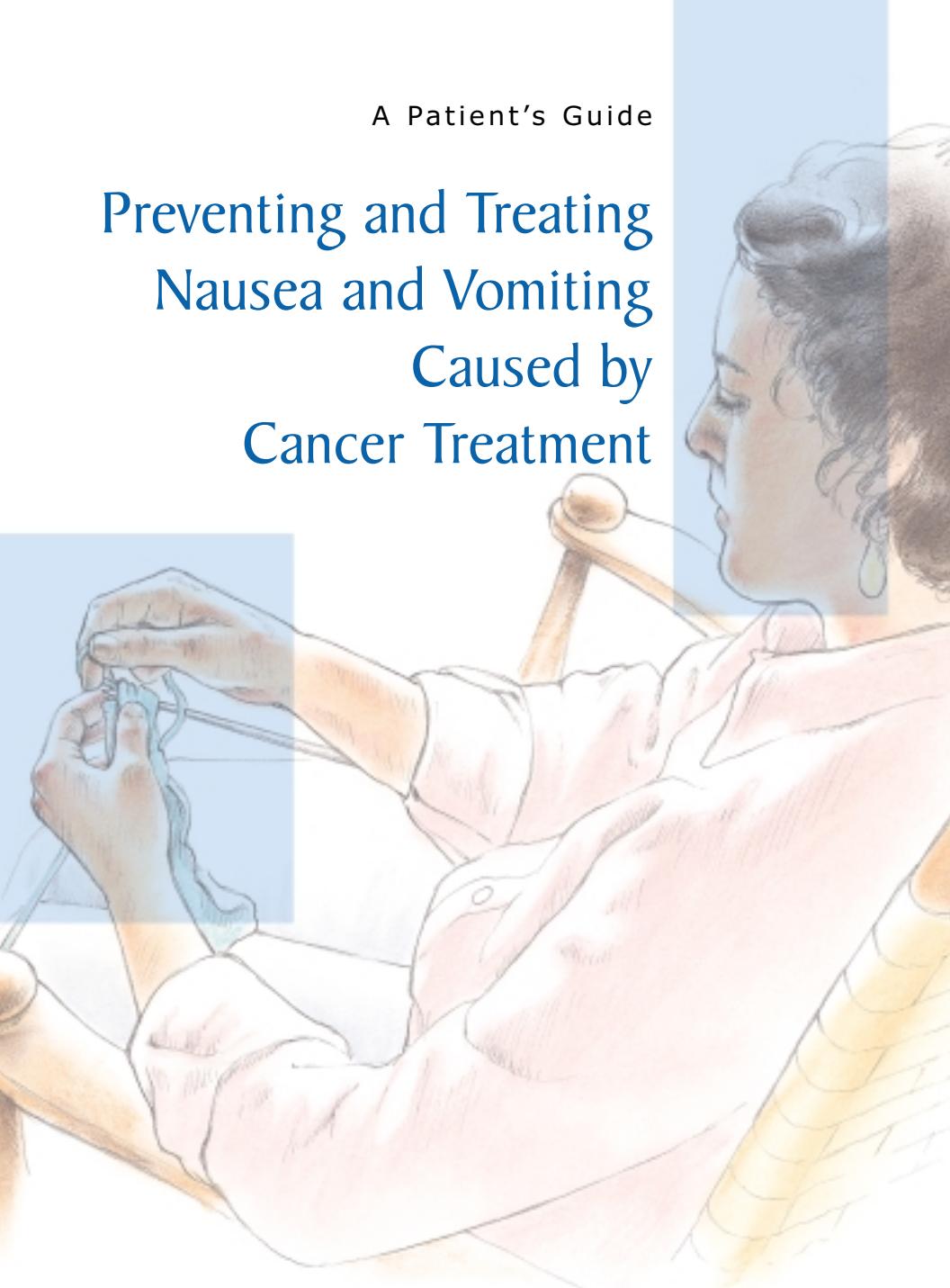
A Patient's Guide

Preventing and Treating Nausea and Vomiting Caused by Cancer Treatment



ASCO

Recommendations of the American Society of Clinical Oncology

The American Society of Clinical Oncology (ASCO) is a nonprofit organization representing more than 16,000 cancer professionals worldwide. ASCO offers scientific and educational programs along with many other initiatives intended to foster the exchange of information about cancer. The central purpose of the Society is to improve cancer care and prevention, and its primary goal is to ensure that all patients with cancer have access to the highest quality care.

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Preventing and Treating Nausea and Vomiting Caused by Cancer Treatment

Recommendations of the American Society of Clinical Oncology

The American Society of Clinical Oncology (ASCO) established a panel of specialists to develop guidelines for preventing and treating nausea and vomiting caused by cancer treatment. These specialists determined what medications have worked best and made recommendations to help you and your doctors make decisions about your continuing health care. It's important to remember, however, that every person who is treated for cancer is different, and these guidelines 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.

The information in this booklet will help you to understand what **antiemetic drugs** are and how they may be used as part of your cancer treatment. Antiemetic drugs are used to help prevent **emesis**, otherwise known as vomiting (throwing up), and to relieve nausea (the feeling of being sick to your stomach). Nausea and vomiting is a common side effect of **chemotherapy** and, sometimes, **radiation therapy (radiotherapy)**. Many patients fear these side effects, which, up until now, have been difficult to control. There are now newer drugs that help patients feel better while they are being treated for cancer.

Words that appear in **bold** throughout the text are defined in the Glossary that begins on page 10.

Nausea and Vomiting Caused by Chemotherapy

Not every patient who has chemotherapy will have **nausea and vomiting**. Some patients are more likely than others to have this symptom. For example, it is more common in women, young patients, patients with a history of excessive alcohol use, and in patients who have had chemotherapy before and had nausea and vomiting that was not treated.

Chemotherapy Drugs that Cause Nausea and Vomiting

Usually, your doctor will prescribe an antiemetic drug before your chemotherapy if you will be treated with a chemotherapy drug that sometimes or often causes nausea and vomiting. If you will receive a chemotherapy drug that rarely causes nausea and vomiting, your doctor will probably prescribe an antiemetic drug to be taken only if you become sick while you are being treated.

Some chemotherapy drugs often cause nausea and vomiting, while others cause it less frequently or rarely, as outlined in the table below.

Often Cause Nausea and Vomiting	*Sometimes Cause Nausea and Vomiting*	*Rarely Cause Nausea and Vomiting*
actinomycin-D (Cosmegen)	docetaxel (Taxotere)	1-asparaginase (Elspar)
carboplatin (Paraplatin)	etoposide (Vepesid)	2-chlorodeoxyadenosine (Leustatin)
carmustine (BiCNU)	gemcitabine (Gemzar)	bleomycin (Blenoxane)
cisplatin (Platinol)	irinotecan (Camptosar)	busulphan (Myleran)
cyclophosphamide (Cytoxan)	mitomycin (Mutamycin)	chlorambucil (Leukeran)
cytarabine (Cytosar)	mitoxantrone (Novantrone)	fludarabine (Fludara)
dacarbazine (DTIC-Dome)	paclitaxel (Taxol)	fluorouracil (Efudex)
daunorubicin (DaunoXome)	teniposide (Vumon)	hydroxyurea (Hydrea)
doxorubicin (Adriamycin)	topotecan (Hycamtin)	melphalan (Alkeran)
epirubicin (Pharmorubicin)		mercaptopurine (Purinethol)
hexamethylmelamine (Hexalen)		methotrexate (Rheumatrex)
idarubicin (Idamycin)		tamoxifen (Nolvadex)
ifosfamide (Ifex)		thioguanine (Lanvis)
lomustine (CeeNU)		vinblastine (Velban)
mechlorethamine (Mustargen)		vincristine (Oncovin)
streptozotocin (Zanosar)		vindesine (Eldisine)
		vinorelbine (Navelbine)

Prevention and Treatment of Nausea and Vomiting Caused by Chemotherapy

The following antiemetic drugs are recommended to prevent vomiting after treatment with chemotherapy drugs.

dolasetron (Anzemet)

granisetron (Kytril)

dexamethasone (Decadron)

methylprednisolone (Medrol)

metoclopramide (Reglan)

ondansetron (Zofran)

tropisetron (Navoban)

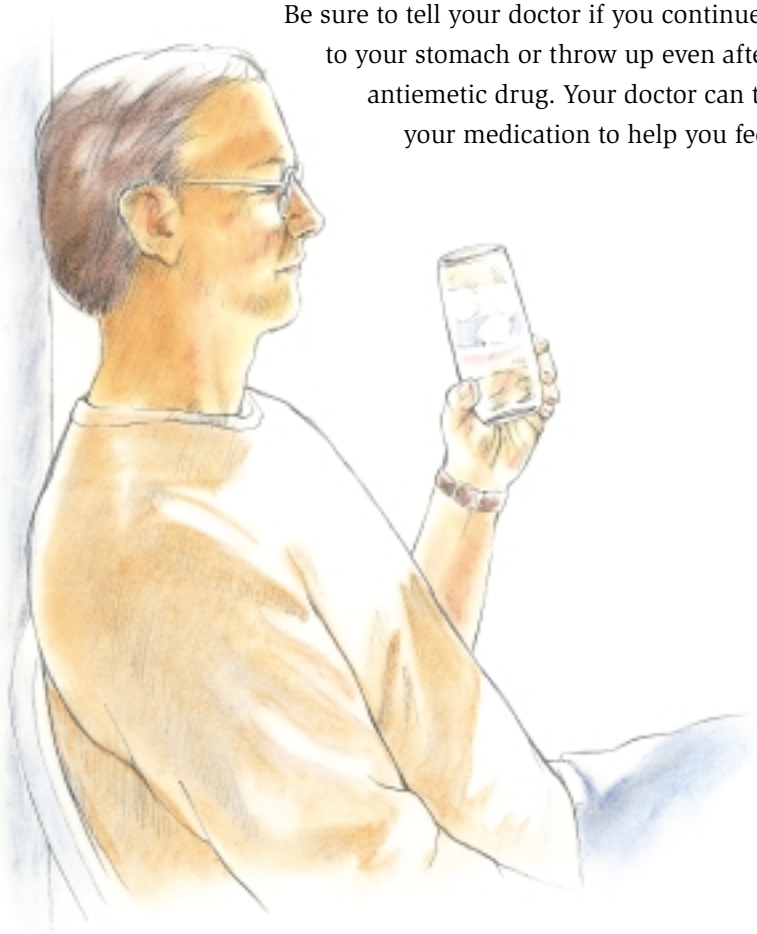
These drugs can be given orally (by mouth) or intravenously (through a vein in your arm), and your doctor will decide which is best for you. Your doctor will probably suggest that you have a **dose** of one or more of these drugs before your scheduled treatment with chemotherapy. He or she may give you a combination of different antiemetic drugs, but also may give you just one. If you will be given **high-dose chemotherapy**, your nausea and vomiting may be more difficult to control, and your doctor will probably give you a higher dose of an antiemetic drug to help you feel better.

If your doctor thinks you may have vomiting for more than a day, he or she will probably suggest that you take a dose of one or more of these drugs several times a day for 2 to 4 days after chemotherapy.

Some patients may have **anticipatory emesis** or vomiting that begins before a chemotherapy treatment. This type of vomiting occurs in patients who have felt sick during chemotherapy in the past. Also, people who have motion sickness are more likely to have anticipatory emesis.

If your doctor thinks you may have developed anticipatory emesis, he or she might try to prevent it by prescribing an antiemetic drug to be taken a few days before your scheduled treatment with chemotherapy. If you still have anticipatory emesis, your doctor may suggest alternative ways to overcome this symptom.

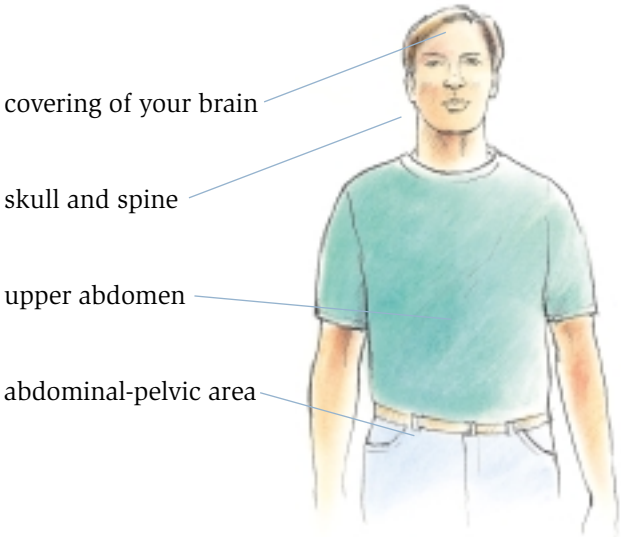
Be sure to tell your doctor if you continue to feel sick to your stomach or throw up even after taking an antiemetic drug. Your doctor can then adjust your medication to help you feel better.



Prevention and Treatment of Nausea and Vomiting Caused by Radiation Therapy

With radiation treatment for cancer, your body is exposed to only a small dose of radiation for a very short time. Because of this, nausea and vomiting does not occur as often after radiation therapy as it does after chemotherapy. However, nausea and vomiting can be more likely after radiation treatment to certain areas on your body.

Your doctor will probably prescribe an antiemetic drug if you will have **total-body irradiation** (radiation treatment of your entire body), **hemibody irradiation** (radiation treatment of half your body), or **cranial radiosurgery** (an operation in which radiation is used to destroy a tumor within the brain). You also may be given an antiemetic drug if you will have radiation treatment of the following parts of your body:



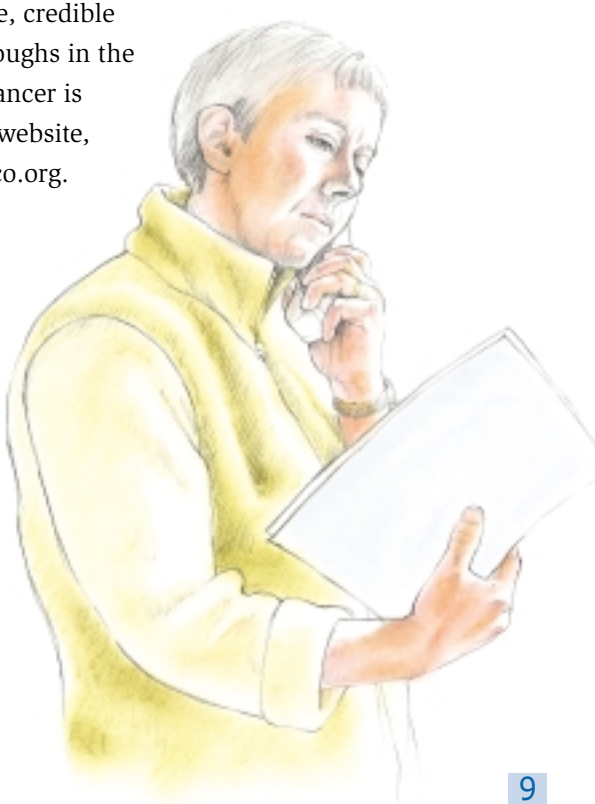
Nausea and vomiting is not usually caused by radiation treatment of your skull (only), head and neck, breast, chest, arms or legs, or pelvis. Your doctor will probably prescribe an antiemetic drug to be taken only if you become sick after receiving radiation treatment to one of these areas of your body.

Side Effects of Antiemetic Drugs

The doses of antiemetic drugs given during chemotherapy or radiation therapy sometimes cause side effects. Symptoms that have been associated with some of these drugs are slight headache, **constipation**, trouble sleeping, restlessness, involuntary movements of the muscles and tongue, and **sedation**. Be sure to tell your doctor if you have any of these symptoms or if you are at risk for **hyperglycemia** (high level of blood sugar).

Keeping Your Information Current

ASCO evaluates new treatments as they are developed. To be sure that the information you have is current, please call ASCO at (888) 651-3038 or (703) 299-0150. Reliable, credible news on clinical breakthroughs in the treatment of all types of cancer is available on the Society's website, *ASCO OnLine*, at www.asco.org. In addition, this patient guide, as well as others, are available on *ASCO OnLine*, in the People Living with Cancer section.



anticipatory emesis: vomiting that occurs before a chemotherapy treatment; usually occurs in patients who have felt sick during chemotherapy in the past

antiemetic drug: a drug that prevents or relieves nausea and vomiting (emesis)

chemotherapy: treatment with chemicals (drugs) to kill cancer cells by stopping them from growing or multiplying

constipation: inability to have a bowel movement

cranial radiosurgery: the use of radiation to destroy tumors in the brain that are not reachable by a conventional operation

dose: a specified amount of a drug (medication)

emesis: vomiting (throwing up)

hemibody irradiation: treatment of half of the body with radiation

high-dose chemotherapy: treatment with high doses of a chemotherapy drug, or combination of drugs, usually given to patients who are having bone marrow or stem-cell transplantation

hyperglycemia: excess of glucose (a sugar formed by the body) in the blood

nausea and vomiting: a sick feeling in the stomach (nausea) and the need to throw up (vomiting)

radiation therapy (radiotherapy): treatment with radiation to kill tumors or cancer cells or damage them so that they cannot grow or spread; the radiation waves are targeted to the specific area of the body where the tumor is located

sedation: a state of feeling sleepy or at rest

total-body irradiation: treatment of the whole body with radiation

Resources

Just as important as your physical health is your emotional health. There are many organizations that offer support to patients with cancer and their families. Ask your doctor or call your local hospital to find out about such groups in your community. In addition, the following organizations can provide you with more information or educational materials about cancer.

American Cancer Society (ACS)
National Office
1599 Clifton Road, NE
Atlanta, GA 30329
(800) ACS-2345
www.cancer.org

American Society of Clinical Oncology (ASCO)
1900 Duke Street, Suite 200
Alexandria, VA 22314
(888) 651-3038 or (703) 299-0150
www.asco.org

Cancer Care, Inc.
275 Seventh Avenue
New York, NY 10001
(800) 813-HOPE
www.cancercare.org

National Cancer Institute (NCI)
National Institutes of Health
Office of Cancer Communication
Building 31, Room 10A24
9000 Rockville Pike
Bethesda, MD 20892
(800) 4-CANCER
www.nci.nih.gov

National Coalition for Cancer Survivorship
1010 Wayne Avenue, Suite 595
Silver Spring, MD 20910
(301) 650-8868
www.cansearch.org

The ASCO Foundation

Supporting Clinical Cancer Research and Education Around the World

The ASCO Foundation is a nonprofit corporation based in Alexandria, Virginia, dedicated to furthering clinical cancer research and education. The Foundation provides an added mechanism for private fund-raising in support of the broad range of ASCO programs, with special emphasis on the advancement of careers in clinical cancer research through the Society's Fellowship Grants Program. The Foundation's ultimate goal is to support the development of the next generation's leaders in the field of clinical oncology.

The ASCO Foundation has received a generous contribution from its charter sponsor, Ortho Biotech Inc., but it still needs your help to fund these important research and education programs.

For more information, or to make a contribution to the ASCO Foundation, please contact

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