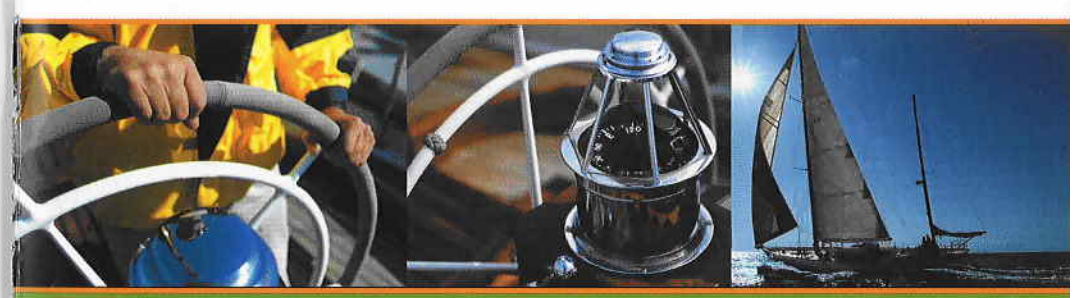
Your Treatment With ALIMTA

ALIMTA®
pemetrexed
for injection



Lilly

Notes

Table of Contents

What is ALIMTA?

ALIMTA is a **chemotherapy** drug used to treat certain kinds of cancer. The scientific (or **generic**) name for ALIMTA is pemetrexed.

Chemotherapy consists of treatment with one or more anticancer drugs that kill cancer cells. ALIMTA works by interfering with a crucial process that allows cancer cells to reproduce and spread. Specifically, ALIMTA works by stopping the production of three enzymes that are required to feed the cancer cell.

How will my treatment be planned?

Doctors develop cancer treatment plans to meet individual patient needs and may use chemotherapy alone or with other cancer treatments, such as surgery or radiation therapy. Your doctor's and your decision to use a certain chemotherapy is based on several factors, including the type of cancer, its location, your age, your lifestyle, and your medical history.

Your **goal of therapy** is what you and your doctor expect from treatment. You will need to consider how aggressively you want to treat your cancer and what side effects you can tolerate. You and your doctor can work together to decide which treatment works best for your kind of cancer and what side effects you are willing and able to live with.

How can I help with my treatment?

Before you begin your treatment with ALIMTA, it is important for you to do some things to help manage your treatment. If your doctor or nurse does not mention these to you, please do not hesitate to ask him or her.

- For at least 5 of the 7 days before you start taking ALIMTA, you will need to take a folic acid (a type of B vitamin) pill once per day. Your doctor will tell you exactly what to take, but make sure that you are taking between 350 and 1000 micrograms each day. (This is the amount that usually is found in a standard multivitamin tablet.) You will continue to take a folic acid vitamin pill every day until 21 days after your last cycle of ALIMTA. (See the following explanation regarding treatment cycles.)

- Your doctor or nurse will give you a shot (into a muscle) of vitamin B_{12} during the week before you start ALIMTA. Your doctor or nurse will then give you a shot approximately every 9 weeks, most likely on the same day as you receive your ALIMTA chemotherapy for the rest of your cycles.

- You also will be given an oral steroid medication called dexamethasone, or a similar drug, to minimize the risk of a skin rash or certain other side effects that can occur with the use of this treatment. Be sure to take this drug twice daily on the day before, the day of, and the day after treatment unless your doctor gives you different instructions.

- If you are taking a non-steroidal anti-inflammatory drug (like ibuprofen, or other drugs used to treat pain and arthritis conditions), you should make sure to tell your doctor. Depending on your situation, you may be asked to stop taking these for a period of time.

- Your dose may have to be changed, or ALIMTA may not be right for you if you have kidney problems. If you do have kidney problems, be sure to mention this to your doctor.

- Please use the therapy calendar at the back of this booklet to help keep track of your treatment plan. These are also available on www.ALIMTA.com or by calling 1-800-545-5979 and asking for several copies. Use the calendar to mark when you have taken your daily folic acid tablet. You may also want to use it to keep track of your appointments, side effects, or information you may want to communicate to your healthcare team.

How is ALIMTA given?

You can receive ALIMTA therapy at your doctor's office. You can also receive the therapy at a clinic or hospital, but it is usually not necessary to stay in the hospital overnight. ALIMTA is a liquid and is given through a needle into a vein (intravenous infusion) and infused over a period of approximately 10 minutes.

You will receive ALIMTA on the first day of your treatment (day 1), followed by a 20-day period when you will receive no further ALIMTA. This period of rest allows normal cells, which may have been injured by the ALIMTA, time to recover. This 21-day period is considered one cycle of treatment. The number of treatment cycles you will receive will depend on many things. You and your doctor usually will decide before each treatment whether or not you should continue treatments or change your dose, based on what benefit you have received from previous treatments and what side effects you may have experienced.

Your doctor may ask you to return for follow-up visits after you stop receiving ALIMTA therapy, so he or she can monitor how you are doing. If you have questions about any of the drugs included in your therapy, please be sure to discuss them with your healthcare team.

As mentioned earlier, to lower your chances of side effects from ALIMTA, you will also take folic acid and vitamin B_{12} prior to and during your treatment with ALIMTA.

In this booklet, we let you know what side effects people usually experienced with ALIMTA alone (as a single agent). If you receive ALIMTA alone, you can expect to have side effects that are different than if you receive ALIMTA with another chemotherapy drug. This booklet highlights side effects that were experienced only by greater than 20% of patients in the trials even if the side effects weren't severe. For complete information about all side effects related to ALIMTA, please refer to the Prescribing Information attached to this booklet (call 1-800-545-5979 for a copy if it is missing), visit www.ALIMTA.com, or talk with your healthcare team.

What side effects should I expect?

CHEMOTHERAPY

There are two broad categories of chemotherapy side effects. The first category consists of side effects that you are aware of if they occur (often called **patient-felt toxicities**). Some examples of these are fatigue, nausea, and vomiting. There is another group of side effects, such as changes in your blood cells, which you may not be aware of if they occur (often called **paper toxicities**). This second category of side effects will be monitored through laboratory tests and managed by your physician. Both types of side effects could be serious if not treated. Though a few side effects can be permanent, many are temporary. Most side effects go away after treatment is stopped.

ALIMTA

Most patients taking ALIMTA will have side effects. Sometimes it is not always possible to tell whether ALIMTA, another medicine, or the cancer itself is causing these side effects.

ALIMTA AS A SINGLE AGENT*

In clinical studies of ALIMTA used as a single agent, side effects were generally manageable. Most side effects were reversible, and most patients did not need to stop treatment. Some patients had their doses delayed or reduced, however. Here are some side effects your doctor may monitor you for:

- **Low White Blood Cell Count**
  White blood cells help you fight infection. About 1 in 10 patients on ALIMTA had a lowered white blood cell count. As with most chemotherapy drugs, you likely will have a drop in your white blood cell count about 8–10 days after you receive ALIMTA. Your white blood cell count will usually go back up in a few days. During this time, you are more likely to develop an infection. During this time, you should avoid crowds and those with colds. You should call your doctor right away if you have any signs of infection, such as a temperature over 100.4 degrees Fahrenheit, chills, or mouth sores. There are medications to help with low white blood cell counts. About 1 in 4 patients on ALIMTA did experience some kind of infection while on therapy, but this was not because of a lower white blood cell count.

*For more information about the side effects of ALIMTA as a single agent, please see the complete Prescribing Information attached to this booklet or visit www.ALIMTA.com.

- **Low Red Blood Cell Count**

  Red blood cells help transport oxygen from your lungs to the other parts of your body. A low red blood cell count is called anemia. If your red blood cell count is low, you may feel tired, get tired easily, appear pale, and become short of breath. About 1 in 3 patients experienced anemia in clinical trials of ALIMTA as a single agent. In most patients, this anemia was mild. There are medications available to help with anemia.

- **Platelets**

  A low platelet count is called **thrombocytopenia**. Platelets help your blood clot. A lowered platelet count puts you at more risk for bleeding. If your doctor or nurse tells you that you have a low platelet count, you will be asked to take some precautions, including avoiding injury, using stool softeners, using soft-bristle toothbrushes, etc. It is important that you call your healthcare team if you see any signs of bleeding, such as bruising or blood in your stool. About 1 in 10 patients who received ALIMTA as a single agent had a low platelet count.

- **Fatigue**

  About 9 in 10 patients receiving ALIMTA had some degree of fatigue. If you experience fatigue, some ideas to counteract it include balancing your periods of activity with rest; increasing your fluid intake; and following a well-balanced diet with several small meals, rather than 3 large meals.

- **Fever**

  Fever can be the first symptom of infection, but it may also be a result of the chemotherapy without infection. About 1 in 4 patients who received ALIMTA had some level of fever. None of these was rated as severe. There are medications that may reduce a fever that can be given along with chemotherapy.

- **Gastrointestinal Upset**

  Be sure to talk with your doctor if you notice one of the following or anything different about the way you feel.

  Anorexia (loss of appetite)

  Anorexia occurred in slightly more than half of the patients receiving ALIMTA. Again, this was rated as mild to moderate. If you experience a loss of appetite, please be sure to tell your healthcare team. Also, the National Cancer Institute (NCI) has a helpful booklet called "Eating Hints," which you can obtain by calling 1-800-4-CANCER (1-800-422-6237) or visiting the NCI Web site at www.cancer.gov.

  Nausea and/or Vomiting

  About 1 in 3 patients in the clinical trial with ALIMTA as a single agent experienced some degree of nausea and/or vomiting. Most of these patients reported their symptoms to be mild to moderate. It is important that you tell your healthcare team if you have nausea and vomiting. There are now many medications that can help prevent and/or treat nausea and/or vomiting.

Constipation

About 1 in 3 patients treated with ALIMTA had constipation. None of this was rated as severe. Your healthcare team can help you treat your constipation. It is important that you talk with them before you take any over-the-counter laxatives or stool softeners.

Diarrhea

About 1 in 5 patients on ALIMTA experienced diarrhea. None of this was considered severe. Again, it is important that you tell your healthcare team if you have diarrhea. They will tell you what to do to help manage it, including increasing your fluid intake and avoiding high-fiber foods. It is very important that you talk with your healthcare team before you take any over-the-counter diarrhea medicines.

- **Mouth, Throat, or Lip Sores (Stomatitis, Pharyngitis)**

About 1 in 5 patients on ALIMTA experienced redness or sores in their mouth, throat, or on their lips. Only 1 out of 100 considered this to be moderately severe. These symptoms may happen a few days after ALIMTA treatment. Talk with your doctor about proper mouth and throat care.

- **Rash**
  About 1 in every 5 patients who received ALIMTA developed a rash. The rash was usually mild to moderate, appeared on the body, arms, or legs, and sometimes itched. You will be instructed to take medication (a steroid) to reduce the incidence and/or severity of this side effect.

Side effects may or may not be caused by the drug treatment itself; some effects may be due to the disease or to other reasons. If you are receiving ALIMTA, be sure to tell your healthcare team about any side effects you think you may be experiencing.

Frequently Asked Questions

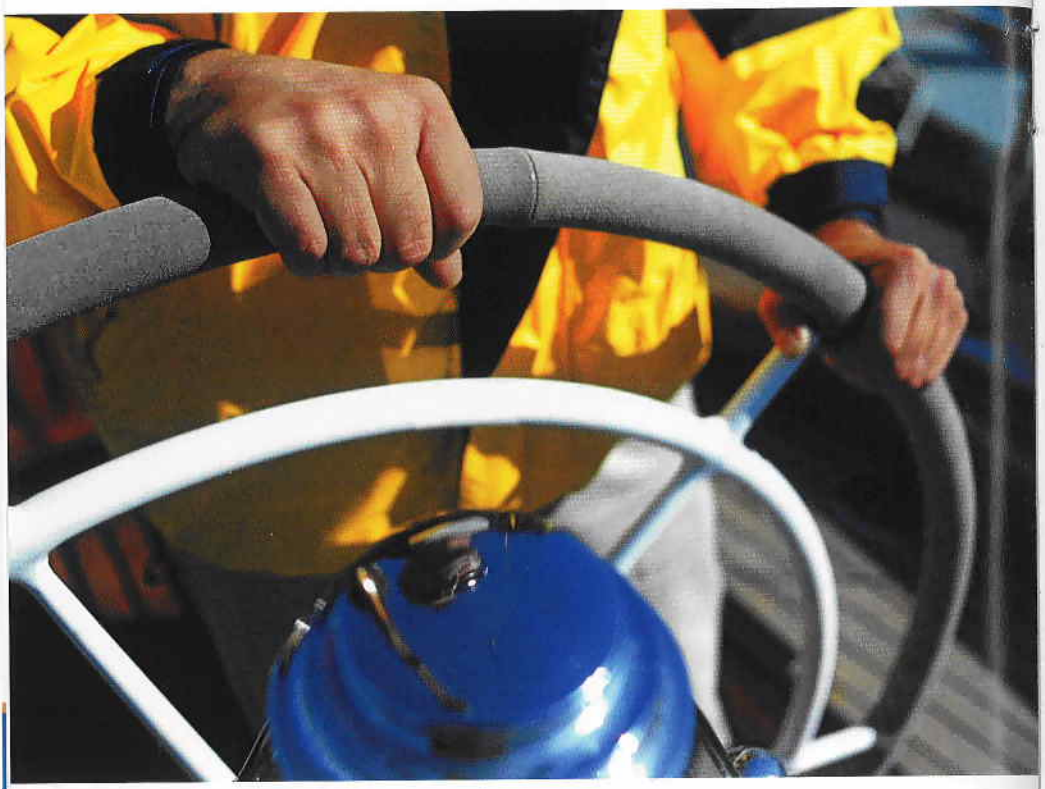
What if I miss a dose of folic acid?

If you miss a dose of folic acid, just be sure to resume taking it at the next scheduled dose and remember to mention the missed dose to your healthcare team.

Can I drink alcohol while taking ALIMTA?

Avoid drinking alcohol.

Your body's ability to use folic acid and vitamin B_{12} may be affected by alcohol. You should always discuss the use of alcohol or any drugs (including both over-the-counter and prescription drugs) with your doctor during the course of your treatment.



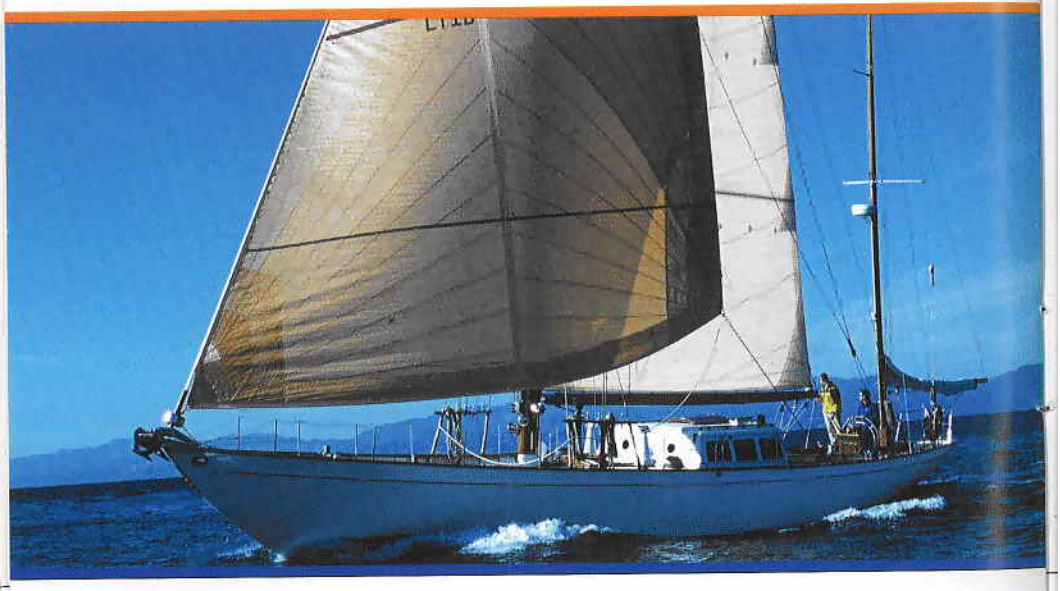
How can I take control of my situation?

It is important for you to participate in your treatment. Choosing a healthcare team, knowing which questions to ask, talking with your healthcare team, and understanding how to live with and beyond cancer will help you learn to take control of your situation. Always remember that understanding your disease and treatment choices is one of the strongest weapons you have in fighting your illness.

One of the most important things you can do to take control of your cancer experience is to understand what you expect from treatment. As mentioned earlier in this booklet, you should have a clear goal of your therapy. Talk with your doctor about your goal and work together to choose the therapy that will most closely work toward that goal.

How can I find my "new normal"?

As your treatment nears its end, you may experience many different feelings, just as you did when you first learned of your cancer diagnosis. Remember that you are not alone. There are nearly 8.9 million cancer survivors in the United States. After your last treatment is completed, you might expect that you will resume your daily routine and that you will go back to your life as you knew it. However, you may discover, as many cancer survivors do, that you want or need to establish a "new normal." This new normal will include new interests, new priorities, and new thoughts.



Tips for cancer survivors from the American Cancer Society®

- Be kind to yourself. Focus on what you can do.
- Reach out to others. Reaching out to someone else can reduce stress.
- Don't be afraid to say no. Polite but firm refusals help you stay in control of your life.
- Talk about your concerns.
- Learn to pace yourself. Stop before you get tired.
- Give in sometimes. Not every argument is worth winning.
- Get enough exercise. It's a great way to get rid of tension in a positive way.
- Take time for activities you enjoy.
- Set priorities. You can't do everything at once.
- Take one thing at a time. If you're feeling overwhelmed, divide your list into manageable pieces.
- Have a plan. This can reduce the stress of a problem.
- Eat properly.
- Get enough sleep.

Additional cancer therapy booklets

Information booklets are available from Lilly Oncology to help you understand the cancer you have, to talk with your healthcare professional about your goal of therapy, and to help you make a treatment decision. These booklets can be obtained free of charge by calling 1-800-545-5979 or by visiting www.ALIMTA.com:

"A GUIDE TO MAKING DECISIONS ABOUT YOUR CANCER THERAPY"—for anyone newly diagnosed with cancer to provide a road map of how to learn the basics of cancer care.

"BEFORE YOU BEGIN CHEMOTHERAPY"

Some Things You Should Know About Side Effects—for anyone considering chemotherapy. If your goal of therapy is to consider treatment side effects, you may want to read this booklet.

"BEFORE YOU BEGIN THERAPY"

A Guide to Researching the Best Therapy for Your Treatment Goal—for the newly diagnosed or newly rediagnosed person. This booklet provides information about how to research how well a treatment has worked or how effective it has proven to be. If your goal of therapy is to be aggressive with your treatment, this is a booklet for you.

"IF ADDITIONAL TREATMENT IS NEEDED"

A Guide to Deciding Your Next Steps—for anyone who may require additional or different therapy. Helps you explore options such as enrolling in a clinical trial, pursuing different types or combinations of treatment, or deciding whether or not you want to undergo further treatment.

Where can I find additional information and support?

You are not alone in your efforts to manage your disease as well as you can. Many special organizations are dedicated to helping people who are living with cancer. A wealth of resources exists, and you probably will benefit from learning more about them. Social support can be an important part of your medical treatment.

It is important that you discuss any information you are interested in with your healthcare team. If you do not have access to the Internet, contact your local library for help. You can also call these organizations at the toll-free numbers on the next page.

This list of resources is intended to provide you with additional education and support resources and is not necessarily intended to suggest that ALIMTA is approved for those cancers listed. For complete information regarding the approval of ALIMTA, please see the attached package insert, visit www.ALIMTA.com, or call 1-800-545-5979 to request a copy.

Resources

These resources are independent from Eli Lilly and Company, and Lilly does not control the content.

ALL CANCERS

AMERICAN CANCER SOCIETY
1.800.ACS.2345 (1.800.227.2345)
www.cancer.org

CANCER CARE
1.800.813.HOPE (1.800.813.4673)
www.cancercare.org

CANCER RESEARCH
PREVENTION FOUNDATION
1.800.227.CRFA (1.800.227.2732)
www.preventcancer.org

NATIONAL CANCER INSTITUTE
1.800.4CANCER (1.800.422.6237)
www.cancer.gov

NATIONAL COALITION FOR
CANCER SURVIVORSHIP
1.877.NCCS.YES (1.877.622.7937)
www.canceradvocacy.org

PATIENT ADVOCATE
FOUNDATION
1.800.532.5274
www.patientadvocate.org

PEOPLE LIVING WITH CANCER
www.plwc.org

VITAL OPTIONS
INTERNATIONAL
1.800.477.7666
www.vitaloptions.org

THE WELLNESS COMMUNITY
NATIONAL HEADQUARTERS
1.888.793.WELL (1.888.793.9355)
www.thewellnesscommunity.org

BREAST CANCER

NATIONAL BREAST
CANCER COALITION
1.800.622.2838
www.stopbreastcancer.org

SISTERS NETWORK
1.866.781.1808
www.sistersnetworkinc.org

SUSAN G. KOMEN BREAST
CANCER FOUNDATION
1.800.I'M AWARE (1.800.462.9273)
www.komen.org

Y-ME NATIONAL BREAST
CANCER ORGANIZATION
1.800.221.2141
www.y-me.org

BRAIN CANCER

NATIONAL BRAIN
TUMOR FOUNDATION
1.800.934.CURE (1.800.934.2873)
www.braintumor.org

COLON CANCER

COLON CANCER ALLIANCE
1.877.422.2030
www.ccalliance.org

NATIONAL COLORECTAL
CANCER
RESEARCH ALLIANCE
1.800.872.3000
www.nccra.org

LEUKEMIA AND LYMPHOMA

THE LEUKEMIA AND
LYMPHOMA SOCIETY
1.800.955.4572
www.leukemia-lymphoma.org

LYMPHOMA
RESEARCH FOUNDATION
1.800.235.6848 or 1.800.500.9976
www.lymphoma.org

LUNG CANCER

THE LUNG CANCER ALLIANCE
1.800.298.2436
www.lungcanceralliance.org

MESOTHELIOMA

MESOTHELIOMA APPLIED
RESEARCH FOUNDATION
1.805.560.8942
www.marf.org

OVARIAN CANCER

NATIONAL OVARIAN
CANCER COALITION
1.888.OVARIAN (1.888.682.7426)
www.ovarian.org

OVARIAN CANCER
NATIONAL ALLIANCE
1.202.331.1332
www.ovariancancer.org

PANCREAS CANCER

PANCREATIC CANCER
ACTION NETWORK
1.877.2PANCAN (1.877.272.6226)
www.pancan.org

PROSTATE CANCER

US TOO!
INTERNATIONAL, INC.
1.800.808.7866
www.ustoo.com

THERAPY CALENDAR Please use this calendar to mark

S	M	T	V
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ALIMTA®
pemetrexed
for injection

THERAPY CALENDAR

Please use this calendar to mark off your daily medication.

Month: August

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7 ✔ Folic Acid	8 ✔ Morning steroid ✔ Evening steroid ✔ Folic Acid	9 ✔ Chemo appointment ✔ Morning steroid ✔ Evening steroid ✔ Folic Acid	10 ✔ Morning steroid ✔ Evening steroid ✔ Folic Acid	11 ✔ Folic Acid	12 ____ Folic Acid	13 ____ Folic Acid
14 ____ Folic Acid	15 ____ Folic Acid	16 ____ Folic Acid	17 ____ Folic Acid	18 ____ Folic Acid	19 ____ Folic Acid	20 ____ Folic Acid
21 ____ Folic Acid	22 ____ Folic Acid	23 ____ Folic Acid	24 ____ Folic Acid	25 ____ Folic Acid	26 ____ Folic Acid	27 ____ Folic Acid
28 ____ Folic Acid	29 Morning steroid Evening steroid ____ Folic Acid	30 Chemo Morning steroid Evening steroid ____ Folic Acid	31 Morning steroid Evening steroid ____ Folic Acid	____ Folic Acid	____ Folic Acid	____ Folic Acid

Notes: Things I need to talk about with my healthcare team. Ask Dr. Jones if I should stop taking any medications (ibuprofen, etc.) Ask Nurse Smith about patient education materials.

Doctor's phone number: Dr. Jones 123-4576 Nurse Smith 123-4576

ALIMTA® pemetrexed for injection

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THERAPY CALENDAR

Please use this calendar to mark off your daily medication.

Month ____________

S	M	T	W	Th	F	S
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Notes: Things I need to talk about with my healthcare team. ____________________

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Doctor's phone number: ____________________

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Your Treatment With ALIMTA

www.ALIMTA.com | 1-800-545-5979

- Know what to expect during therapy
- Find answers to your treatment questions
- Locate resources for information and support

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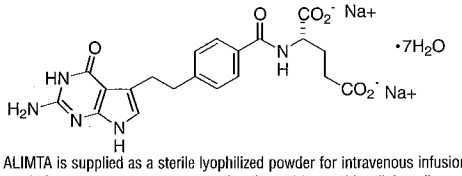
ALIMTA®
pemetrexed for injection

DESCRIPTION: ALIMTA®, pemetrexed for injection, is an antifolate antineoplastic agent that exerts its action by disrupting folate-dependent metabolic processes essential for cell replication. Pemetrexed disodium heptahydrate has the chemical name L-Glutamic acid, *N*-[4-[2-(2-amino-4,7-dihydro-4-oxo-1*H*-pyrrolo[2,3-*d*]pyrimidin-5-yl)ethyl]benzoyl]-, disodium salt, heptahydrate. It is a white to almost-white solid with a molecular formula of $C_{20}H_{19}N_5Na_2O_6 \cdot 7H_2O$ and a molecular weight of 597.49. The structural formula is as follows:



ALIMTA is supplied as a sterile lyophilized powder for intravenous infusion available in single-dose vials. The product is a white to either light yellow or green-yellow lyophilized solid. Each 500-mg vial of ALIMTA contains pemetrexed disodium equivalent to 500 mg pemetrexed and 500 mg of mannitol. Hydrochloric acid and/or sodium hydroxide may have been added to adjust pH.

CLINICAL PHARMACOLOGY: Pharmacodynamics—Pemetrexed is an antifolate containing the pyrrolopyrimidine-based nucleus that exerts its antineoplastic activity by disrupting folate-dependent metabolic processes essential for cell replication. In vitro studies have shown that pemetrexed inhibits thymidylate synthase (TS), dihydrofolate reductase (DHFR), and glycinamide ribonucleotide formyltransferase (GARFT), all folate-dependent enzymes involved in the de novo biosynthesis of thymidine and purine nucleotides. Pemetrexed is transported into cells by both the reduced folate carrier and membrane folate binding protein transport systems. Once in the cell, pemetrexed is converted to polyglutamate forms by the enzyme folylpolyglutamate synthetase. The polyglutamate forms are retained in cells and are inhibitors of TS and GARFT. Polyglutamation is a time- and concentration-dependent process that occurs in tumor cells and, to a lesser extent, in normal tissues. Polyglutamated metabolites have an increased intracellular half-life resulting in prolonged drug action in malignant cells.

Preclinical studies have shown that pemetrexed inhibits the in vitro growth of mesothelioma cell lines (MSTO-211H, NCI-H2052). Studies with the MSTO-211H mesothelioma cell line showed synergistic effects when pemetrexed was combined concurrently with cisplatin.

Absolute neutrophil counts (ANC) following single-agent administration of pemetrexed to patients not receiving folic acid and vitamin B_{12} supplementation were characterized using population pharmacodynamic analyses. Severity of hematologic toxicity, as measured by the depth of the ANC nadir, is inversely proportional to the systemic exposure of ALIMTA. It was also observed that lower ANC nadirs occurred in patients with elevated baseline cystathionine or homocysteine concentrations. The levels of these substances can be reduced by folic acid and vitamin B_{12} supplementation. There is no cumulative effect of pemetrexed exposure on ANC nadir over multiple treatment cycles.

Time to ANC nadir with pemetrexed systemic exposure (AUC), varied between 8 to 9.6 days over a range of exposures from 38.3 to 316.8 μg•hr/mL. Return to baseline ANC occurred 4.2 to 7.5 days after the nadir over the same range of exposures.

Pharmacokinetics—The pharmacokinetics of pemetrexed administered as a single agent in doses ranging from 0.2 to 838 mg/m² infused over a 10-minute period have been evaluated in 426 cancer patients with a variety of solid tumors. Pemetrexed is not metabolized to an appreciable extent and is primarily eliminated in the urine, with 70% to 90% of the dose recovered unchanged within the first 24 hours following administration. The total systemic clearance of pemetrexed is 91.8 mL/min and the elimination half-life of pemetrexed is 3.5 hours in patients with normal renal function (creatinine clearance of 90 mL/min). The clearance decreases, and exposure (AUC) increases, as renal function decreases. Pemetrexed total systemic exposure (AUC) and maximum plasma concentration (C_{max}) increase proportionally with dose. The pharmacokinetics of pemetrexed do not change over multiple treatment cycles. Pemetrexed has a steady-state volume of distribution of 16.1 liters. In vitro studies indicate that pemetrexed is approximately 81% bound to plasma proteins. Binding is not affected by degree of renal impairment.

Drug Interactions—*Chemotherapeutic Agents*—Cisplatin does not affect the pharmacokinetics of pemetrexed and the pharmacokinetics of total platinum are unaltered by pemetrexed.

Vitamins—Coadministration of oral folic acid or intramuscular vitamin B_{12} does not affect the pharmacokinetics of pemetrexed.

Drugs Metabolized by Cytochrome P450 Enzymes—Results from in vitro studies with human liver microsomes predict that pemetrexed would not cause clinically significant inhibition of metabolic clearance of drugs metabolized by CYP3A, CYP2D6, CYP2C9, and CYP1A2. No studies were conducted to determine the cytochrome P450 isozyme induction potential of pemetrexed, because ALIMTA used as recommended (once every 21 days) would not be expected to cause any significant enzyme induction.

Aspirin—Aspirin, administered in low to moderate doses (325 mg every 6 hours), does not affect the pharmacokinetics of pemetrexed. The effect of greater doses of aspirin on pemetrexed pharmacokinetics is unknown.

Ibuprofen—Daily ibuprofen doses of 400 mg qid reduce pemetrexed's clearance by about 20% (and increase AUC by 20%) in patients with normal renal function. The effect of greater doses of ibuprofen on pemetrexed pharmacokinetics is unknown (*see* **Drug Interactions** *under* **PRECAUTIONS**).

Special Populations—The pharmacokinetics of pemetrexed in special populations were examined in about 400 patients in controlled and single arm studies.

Geriatric—No effect of age on the pharmacokinetics of pemetrexed was observed over a range of 26 to 80 years.

Pediatric—Pediatric patients were not included in clinical trials.

Gender—The pharmacokinetics of pemetrexed were not different in male and female patients.

Race—The pharmacokinetics of pemetrexed were similar in Caucasians and patients of African descent. Insufficient data are available to compare pharmacokinetics for other ethnic groups.

Hepatic Insufficiency—There was no effect of elevated AST (SGOT), ALT (SGPT), or total bilirubin on the pharmacokinetics of pemetrexed. However, studies of hepatically impaired patients have not been conducted (*see* **PRECAUTIONS**).

Renal Insufficiency—Pharmacokinetic analyses of pemetrexed included 127 patients with reduced renal function. Plasma clearance of pemetrexed in the presence of cisplatin decreases as renal function decreases, with increase in systemic exposure. Patients with creatinine clearances of 45, 50, and 80 mL/min had 65%, 54%, and 13% increases, respectively in pemetrexed total systemic exposure (AUC) compared to patients with creatinine clearance of 100 mL/min (*see* **WARNINGS** *and* **DOSAGE AND ADMINISTRATION**).

CLINICAL STUDIES: Malignant Pleural Mesothelioma—The safety and efficacy of ALIMTA have been evaluated in chemonaive patients with malignant pleural mesothelioma (MPM) in combination with cisplatin.

Randomized Trial— A multi-center, randomized, single-blind study in 448 chemonaive patients with MPM compared survival in patients treated with ALIMTA in combination with cisplatin to survival in patients receiving cisplatin alone. ALIMTA was administered intravenously over 10 minutes at a dose of 500 mg/m² and cisplatin was administered intravenously over 2 hours at a dose of 75 mg/m² beginning approximately 30 minutes after the end of administration of ALIMTA. Both drugs were given on Day 1 of each 21-day cycle. After 117 patients were treated, white cell and GI toxicity led to a change in protocol whereby all patients were given folic acid and vitamin B_{12} supplementation.

The primary analysis of this study was performed on the population of all patients randomly assigned to treatment who received study drug (randomized and treated). An analysis was also performed on patients who received folic acid and vitamin B_{12} supplementation during the entire course of study therapy (fully supplemented), as supplementation is recommended (*see* **DOSAGE AND ADMINISTRATION**). Results in all patients and those fully supplemented were similar. Patient demographics are shown in Table 1.

Table 1: Summary of Patient Characteristics in MPM Study

	Randomized and Treated Patients		Fully Supplemented Patients	
Patient characteristic	ALIMTA/cis (N=226)	Cisplatin (N=222)	ALIMTA/cis (N=168)	Cisplatin (N=163)
Age (yrs) Median (range)	61 (29-85)	60 (19-84)	60 (29-85)	60 (19-82)
Gender (%)				
Male	184 (81.4)	181 (81.5)	136 (81.0)	134 (82.2)
Female	42 (18.6)	41 (18.5)	32 (19.0)	29 (17.8)
Origin (%)				
Caucasian	204 (90.3)	206 (92.8)	150 (89.3)	153 (93.9)
Hispanic	11 (4.9)	12 (5.4)	10 (6.0)	7 (4.3)
Asian	10 (4.4)	4 (1.9)	7 (4.2)	3 (1.8)
African descent	1 (0.4)	0	1 (0.6)	0
Stage at Entry (%)				
I	16 (7.1)	14 (6.3)	15 (8.9)	12 (7.4)
II	35 (15.6)	33 (15.0)	27 (16.2)	27 (16.8)
III	73 (32.4)	68 (30.6)	51 (30.5)	49 (30.4)
IV	101 (44.9)	105 (47.2)	74 (44.3)	73 (45.3)
Unspecified	1 (0.4)	2 (0.9)	1 (0.6)	2 (1.2)
Diagnosis/Histology[a] (%)				
Epithelial	154 (68.1)	152 (68.5)	117 (69.6)	113 (69.3)
Mixed	37 (16.4)	36 (16.2)	25 (14.9)	25 (15.3)
Sarcomatoid	18 (8.0)	25 (11.3)	14 (8.3)	17 (10.4)
Other	17 (7.5)	9 (4.1)	12 (7.1)	8 (4.9)
Baseline KPS[b] (%)				
70-80	109 (48.2)	97 (43.7)	83 (49.4)	69 (42.3)
90-100	117 (51.8)	125 (56.3)	85 (50.6)	94 (57.7)

[a] Only 67% of the patients had the histologic diagnosis of malignant mesothelioma confirmed by independent review.
[b] Karnofsky Performance Scale.

Table 2 summarizes the survival results for all randomized and treated patients regardless of vitamin supplementation status and those patients receiving vitamin supplementation from the time of enrollment in the trial.

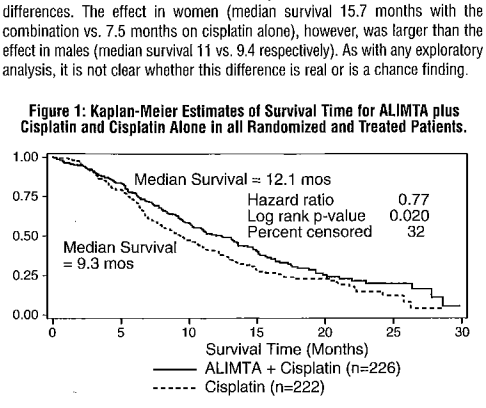
Table 2: Efficacy of ALIMTA plus Cisplatin vs. Cisplatin in Malignant Pleural Mesothelioma

	Randomized and Treated Patients		Fully Supplemented Patients	
Efficacy Parameter	ALIMTA/cis (N=226)	Cisplatin (N=222)	ALIMTA/cis (N=168)	Cisplatin (N=163)
Median overall survival (95% CI)	12.1 mos (10.0-14.4)	9.3 mos (7.8-10.7)	13.3 mos (11.4-14.9)	10.0 mos (8.4-11.9)
Hazard ratio	0.77		0.75	
Log rank p-value*	0.020		0.051	

* p-value refers to comparison between arms.

Similar results were seen in the analysis of patients (N=303) with confirmed histologic diagnosis of malignant pleural mesothelioma. Exploratory demographic analyses showed no apparent differences in patients over or under 65. There were too few non-white patients to assess possible ethnic differences. The effect in women (median survival 15.7 months with the combination vs. 7.5 months on cisplatin alone), however, was larger than the effect in males (median survival 11 vs. 9.4 respectively). As with any exploratory analysis, it is not clear whether this difference is real or is a chance finding.

Figure 1: Kaplan-Meier Estimates of Survival Time for ALIMTA plus Cisplatin and Cisplatin Alone in all Randomized and Treated Patients.



Objective tumor response for malignant pleural mesothelioma is difficult to measure and response criteria are not universally agreed upon. However, based upon prospectively defined criteria, the objective tumor response rate for ALIMTA plus cisplatin was greater than the objective tumor response rate for cisplatin alone. There was also improvement in lung function (forced vital capacity) in the ALIMTA plus cisplatin arm compared to the control arm.

Patients who received full supplementation with folic acid and vitamin B_{12} during study therapy received a median of 6 and 4 cycles in the ALIMTA/cisplatin (N=168) and cisplatin (N=163) arms, respectively. Patients who never received folic acid and vitamin B_{12} during study therapy received a median of 2 cycles in both treatment arms (N=32 and N=38 for the ALIMTA/cisplatin and cisplatin arm, respectively). Patients receiving ALIMTA in the fully supplemented group received a relative dose intensity of 93% of the protocol specified ALIMTA dose intensity; patients treated with cisplatin in the same group received 94% of the projected dose intensity. Patients treated with cisplatin alone had a dose intensity of 96%.

Non-Small Cell Lung Cancer (NSCLC)—The safety and efficacy of ALIMTA as a single-agent have been evaluated in patients with locally advanced or metastatic (Stage III or IV) non-small cell lung cancer after prior chemotherapy.

Randomized Trial—A multi-center, randomized, open label Phase 3 study was conducted to compare the overall survival following treatment with ALIMTA versus docetaxel. ALIMTA was administered intravenously over 10 minutes at a dose of 500 mg/m² and docetaxel was administered at 75 mg/m² as a 1-hour intravenous infusion. Both drugs were given on Day 1 of each 21-day cycle. All patients treated with ALIMTA received vitamin supplementation with folic acid and vitamin B_{12}. The study was intended to show either an overall survival superiority or non-inferiority of ALIMTA to docetaxel. Patient demographics of the intent to treat (ITT) population are shown in Table 3.

Table 3: Summary of Patient Characteristics in NSCLC Study

Patient characteristic	ALIMTA (N=283)	Docetaxel (N=288)
Age (yrs) Median (range)	59 (22-81)	57 (28-87)
Gender (%) Male/Female	68.6/31.4	75.3/24.7
Stage at Entry (%) III/IV	25.1/74.9	25.3/74.7
Diagnosis/Histology (%)		
Adenocarcinoma	154 (54.4)	142 (49.3)
Squamous	78 (27.6)	93 (32.3)
Bronchoalveolar	4 (1.4)	1 (0.3)
Other	51 (18.1)	53 (18.5)
Performance Status (%)		
0-1	234 (88.6)	240 (87.6)
2	30 (11.4)	34 (12.4)

The primary endpoint in this study was overall survival. The median survival time was 8.3 months in the ALIMTA treatment arm and 7.9 months in the docetaxel arm, with a hazard ratio of 0.99 (*see* Table 4). The study did not show an overall survival superiority of ALIMTA. Non-inferiority of ALIMTA to docetaxel could not be demonstrated, because a reliable and consistent survival effect of docetaxel required for a non-inferiority analysis could not be estimated from historical trials. In addition, significant treatment crossover at the time of disease progression may have confounded the survival interpretation. The demonstrated surrogate endpoint, response rate allowed the conclusion that an effect of ALIMTA on survival is reasonably likely.

Exploratory demographic analyses on survival showed no significant differences between ALIMTA and docetaxel in patients over or under 65 years of age. There were too few non-white patients to assess possible ethnic differences. Regarding gender, females lived longer than males in both treatment groups. There was no difference in survival between ALIMTA and docetaxel with respect to gender after adjusting for prognostic factors.

Secondary endpoints evaluated in the trial include objective response rate, progression free survival (PFS) and time to progressive disease (TTPD). There was no statistically significant difference between ALIMTA and docetaxel with respect to objective response rate, progression free survival (PFS) and time to progressive disease (TTPD).

Table 4: Efficacy of ALIMTA vs. Docetaxel in Non-Small Cell Lung Cancer – ITT Population

	ALIMTA (N=283)	Docetaxel (N=288)
Median overall survival (95% CI)	8.3 mos (7.0-9.4)	7.9 mos (6.3-9.2)
Hazard ratio (HR) (95% CI)	0.99[a] (0.82-1.20)	
Log rank p-value	0.93	
1-year survival (95% CI)	29.7% (23.7-35.6)	29.7% (23.9-35.5)
Median progression free survival	2.9 mos	2.9 mos
Hazard ratio (HR) (95% CI)	0.97[a] (0.82-1.16)	
Time to Progressive Disease	3.4 mos	3.5 mos
Hazard ratio (HR) (95% CI)	0.97[a] (0.80-1.17)	
Overall response rate[a,b] (95% CI)	9.1% (5.9-13.2)	8.8% (5.7-12.8)

[a] Not statistically significant.
[b] Number of qualified patients on the ALIMTA arm (N=264) and docetaxel arm (N=274).

INDICATIONS AND USAGE: Mesothelioma—ALIMTA in combination with cisplatin is indicated for the treatment of patients with malignant pleural mesothelioma whose disease is unresectable or who are otherwise not candidates for curative surgery.

Non-Small Cell Lung Cancer—ALIMTA as a single-agent is indicated for the treatment of patients with locally advanced or metastatic non-small cell lung cancer after prior chemotherapy.

The effectiveness of ALIMTA in second-line NSCLC was based on the surrogate endpoint, response rate. There are no controlled trials demonstrating a clinical benefit, such as a favorable survival effect or improvement of disease-related symptoms.

CONTRAINDICATIONS: ALIMTA is contraindicated in patients who have a history of severe hypersensitivity reaction to pemetrexed or to any other ingredient used in the formulation.

WARNINGS: Decreased Renal Function—ALIMTA is primarily eliminated unchanged by renal excretion. No dosage adjustment is needed in patients with creatinine clearance ≥45 mL/min. Insufficient numbers of patients have been studied with creatinine clearance <45 mL/min to give a dose recommendation. Therefore, ALIMTA should not be administered to patients whose creatinine clearance is <45 mL/min (*see* **Dose Reduction Recommendations** *under* **DOSAGE AND ADMINISTRATION**).

One patient with severe renal impairment (creatinine clearance 19 mL/min) who did not receive folic acid and vitamin B_{12} died of drug-related toxicity following administration of ALIMTA alone.

Bone Marrow Suppression—ALIMTA can suppress bone marrow function, manifested by neutropenia, thrombocytopenia, and anemia (*see* **ADVERSE REACTIONS**); myelosuppression is usually the dose-limiting toxicity. Dose reductions for subsequent cycles are based on nadir ANC, platelet count, and maximum nonhematologic toxicity seen in the previous cycle (*see* **Dose Reduction Recommendations** *under* **DOSAGE AND ADMINISTRATION**).

Need for Folate and Vitamin B_{12} Supplementation—Patients treated with ALIMTA must be instructed to take folic acid and vitamin B_{12} as a prophylactic measure to reduce treatment-related hematologic and GI toxicity (*see* **DOSAGE AND ADMINISTRATION**). In clinical studies, less overall toxicity and reductions in Grade 3/4 hematologic and nonhematologic toxicities such as neutropenia, febrile neutropenia, and infection with Grade 3/4 neutropenia were reported when pretreatment with folic acid and vitamin B_{12} was administered.

Pregnancy Category D—ALIMTA may cause fetal harm when administered to a pregnant woman. Pemetrexed was fetotoxic and teratogenic in mice at i.p. doses of 0.2 mg/kg (0.6 mg/m²) or 5 mg/kg (15 mg/m²) when given on gestation days 6 through 15. Pemetrexed caused fetal malformations (incomplete ossification of talus and skull bone) at 0.2 mg/kg (about 1/833 the recommended i.v. human dose on a mg/m² basis), and cleft palate at 5 mg/kg (about 1/33 the recommended i.v. human dose on a mg/m² basis). Embryotoxicity was characterized by increased embryo-fetal deaths and reduced litter sizes. There are no studies of ALIMTA in pregnant women. Patients should be advised to avoid becoming pregnant. If ALIMTA is used during pregnancy, or if the patient becomes pregnant while taking ALIMTA, the patient should be apprised of the potential hazard to the fetus.

PRECAUTIONS: General—ALIMTA should be administered under the supervision of a qualified physician experienced in the use of antineoplastic agents. Appropriate management of complications is possible only when adequate diagnostic and treatment facilities are readily available. Treatment-related adverse events of ALIMTA seen in clinical trials have been reversible. Skin rash has been reported more frequently in patients not pretreated with a corticosteroid in clinical trials. Pretreatment with dexamethasone (or equivalent) reduces the incidence and severity of cutaneous reaction (*see* **DOSAGE AND ADMINISTRATION**).

The effect of third space fluid, such as pleural effusion and ascites, on ALIMTA is unknown. In patients with clinically significant third space fluid, consideration should be given to draining the effusion prior to ALIMTA administration.

Laboratory Tests—Complete blood cell counts, including platelet counts and periodic chemistry tests, should be performed on all patients receiving ALIMTA. Patients should be monitored for nadir and recovery, which were tested in the clinical study before each dose and on days 8 and 15 of each cycle. Patients should not begin a new cycle of treatment unless the ANC is ≥1500 cells/mm³, the platelet count is ≥100,000 cells/mm³, and creatinine clearance is ≥45 mL/min.

Drug Interactions—ALIMTA is primarily eliminated unchanged renally as a result of glomerular filtration and tubular secretion. Concomitant administration of nephrotoxic drugs could result in delayed clearance of ALIMTA. Concomitant administration of substances that are also tubularly secreted (e.g., probenecid) could potentially result in delayed clearance of ALIMTA.

Although ibuprofen (400 mg qid) can be administered with ALIMTA in patients with normal renal function (creatinine clearance ≥80 mL/min), caution should be used when administering ibuprofen concurrently with ALIMTA to patients with mild to moderate renal insufficiency (creatinine clearance from 45 to 79 mL/min). Patients with mild to moderate renal insufficiency should avoid taking NSAIDs with short elimination half-lives for a period of 2 days before, the day of, and 2 days following administration of ALIMTA.

In the absence of data regarding potential interaction between ALIMTA and NSAIDs with longer half-lives, all patients taking these NSAIDs should interrupt dosing for at least 5 days before, the day of, and 2 days following ALIMTA administration. If concomitant administration of an NSAID is necessary, patients should be monitored closely for toxicity, especially myelosuppression, renal, and gastrointestinal toxicity.

Drug/Laboratory Test Interactions—None known.

Carcinogenesis, Mutagenesis, Impairment of Fertility—No carcinogenicity studies have been conducted with pemetrexed. Pemetrexed was clastogenic in the in vivo micronucleus assay in mouse bone marrow but was not mutagenic in multiple in vitro tests (Ames assay, CHO cell assay). Pemetrexed administered at i.v. doses of 0.1 mg/kg/day or greater to male mice (about 1/1666 the recommended human dose on a mg/m² basis) resulted in reduced fertility, hypospermia, and testicular atrophy.

Pregnancy—Pregnancy Category D (*see* **WARNINGS**).

Nursing Mothers—It is not known whether ALIMTA or its metabolites are excreted in human milk. Because many drugs are excreted in human milk, and because of the potential for serious adverse reactions in nursing infants from ALIMTA, it is recommended that nursing be discontinued if the mother is treated with ALIMTA.

Pediatric Use—The safety and effectiveness of ALIMTA in pediatric patients have not been established.

Geriatric Use—Dose adjustments based on age other than those recommended for all patients have not been necessary (*see* **Special Populations** *under* **CLINICAL PHARMACOLOGY** *and* **DOSAGE AND ADMINISTRATION**).

Gender—Dose adjustments based on gender other than those recommended for all patients have not been necessary (*see* **Special Populations** *under* **CLINICAL PHARMACOLOGY** *and* **DOSAGE AND ADMINISTRATION**).

Patients with Hepatic Impairment—Patients with bilirubin >1.5 times the upper limit of normal were excluded from clinical trials of ALIMTA. Patients with transaminase >3.0 times the upper limit of normal were routinely excluded from clinical trials if they had no evidence of hepatic metastases. Patients with transaminase from 3 to 5 times the upper limit of normal were included in the clinical trial of ALIMTA if they had hepatic metastases.

Dose adjustments based on hepatic impairment experienced during treatment with ALIMTA are provided in Table 9 (*see* Special Populations *under* **CLINICAL PHARMACOLOGY** *and* **DOSAGE AND ADMINISTRATION**).

Patients with Renal Impairment—ALIMTA is known to be primarily excreted by the kidney. Decreased renal function will result in reduced clearance and greater exposure (AUC) to ALIMTA compared with patients with normal renal function. Cisplatin coadministration with ALIMTA has not been studied in patients with moderate renal impairment (*see* **Special Populations** *under* **CLINICAL PHARMACOLOGY**).

ADVERSE REACTIONS: *Malignant Pleural Mesothelioma*—In Table 5 adverse events occurring in at least 5% of patients are shown along with important effects (renal failure, infection) occurring at lower rates. Adverse events equally or more common in the cisplatin group are not included. The adverse effects more common in the ALIMTA group were primarily hematologic effects, fever and infection, stomatitis/pharyngitis, and rash/desquamation.

Table 5: Adverse Events* in Fully Supplemented Patients Receiving ALIMTA plus Cisplatin in MPM

	CTC Grades (% incidence) All Reported Adverse Events Regardless of Causality					
	ALIMTA/cis (N=168)			Cisplatin (N=163)		
	All Grades	Grade 3	Grade 4	All Grades	Grade 3	Grade 4
Laboratory						
Hematologic						
Neutropenia	58	19	5	16	3	1
Leukopenia	55	14	2	20	1	0
Anemia	33	5	1	14	0	0
Thrombocytopenia	27	4	1	10	0	0
Renal						
Creatinine elevation	16	1	0	12	1	0
Renal failure	2	0	1	1	0	0
Clinical						
Constitutional Symptoms						
Fatigue	80	17	0	74	12	1
Fever	17	0	0	9	0	0
Other constitutional symptoms	11	2	1	8	1	1
Cardiovascular General						
Thrombosis/embolism	7	4	2	4	3	1
Gastrointestinal						
Nausea	84	11	1	79	6	0
Vomiting	58	10	1	52	4	1
Constipation	44	2	1	39	1	0
Anorexia	35	2	0	25	1	0
Stomatitis/pharyngitis	28	2	1	9	0	0
Diarrhea without colostomy	26	4	0	16	1	0
Dehydration	7	3	1	1	1	0
Dysphagia/esophagitis/ odynophagia	6	1	0	6	0	0
Pulmonary						
Dyspnea	66	10	1	62	5	2
Pain						
Chest pain	40	8	1	30	5	1
Neurology						
Neuropathy/sensory	17	0	0	15	1	0
Mood alteration/ depression	14	1	0	9	1	0
Infection/Febrile Neutropenia						
Infection without neutropenia	11	1	1	4	0	0
Infection with Grade 3 or Grade 4 neutropenia	6	1	0	4	0	0
Infection/febrile neutropenia-other	3	1	0	2	0	0
Febrile neutropenia	1	1	0	1	0	0
Immune						
Allergic reaction/ hypersensitivity	2	0	0	1	0	0
Dermatology/Skin						
Rash/desquamation	22	1	0	9	0	0

*Refer to NCI CTC Version 2.0.

Table 6 compares the incidence (percentage of patients) of CTC Grade 3/4 toxicities in patients who received vitamin supplementation with daily folic acid and vitamin B_{12} from the time of enrollment in the study (fully supplemented) with the incidence in patients who never received vitamin supplementation (never supplemented) during the study in the ALIMTA plus cisplatin arm.

Table 6: Selected Grade 3/4 Adverse Events Comparing Fully Supplemented versus Never Supplemented Patients in the ALIMTA plus Cisplatin arm in MPM (% incidence)

Adverse Event Regardless of Causality[a] (%)	Fully Supplemented Patients (N=168)	Never Supplemented Patients (N=32)
Neutropenia	24	38
Thrombocytopenia	5	9
Nausea	12	31
Vomiting	11	34
Anorexia	2	9
Diarrhea without colostomy	4	9
Dehydration	4	9
Fever	0	6
Febrile neutropenia	1	9
Infection with Grade 3/4 neutropenia	1	6
Fatigue	17	25

[a] Refer to NCI CTC criteria for lab and non-laboratory values for each grade of toxicity (Version 2.0).

The following adverse events were greater in the fully supplemented group compared to the never supplemented group: hypertension (11%, 3%), chest pain (8%, 6%), and thrombosis/embolism (6%, 3%).

For fully supplemented patients treated with ALIMTA plus cisplatin, the incidence of CTC Grade 3/4 fatigue, leukopenia, neutropenia, and thrombocytopenia were greater in patients 65 years or older as compared to patients younger than 65. No relevant effect for ALIMTA safety due to gender or race was identified, except an increased incidence of rash in men (24%) compared to women (16%).

Non-Small Cell Lung Cancer (NSCLC)—Table 7 provides the clinically relevant undesirable effects that have been reported in 265 patients randomly assigned to receive single-agent ALIMTA with folic acid and vitamin B_{12} supplementation and 276 patients randomly assigned to receive single-agent docetaxel. All patients were diagnosed with locally advanced or metastatic NSCLC and had received prior chemotherapy.

Table 7: Adverse Events* in Patients Receiving ALIMTA vs. Docetaxel in NSCLC

	CTC Grades (% incidence) All Reported Adverse Events Regardless of Causality					
	ALIMTA (N=265)			Docetaxel (N=276)		
	All Grades	Grade 3	Grade 4	All Grades	Grade 3	Grade 4
Laboratory						
Hematologic						
Anemia	33	6	2	33	6	<1
Leukopenia	13	4	<1	34	17	11
Neutropenia	11	3	2	45	8	32
Thrombocytopenia	9	2	0	1	1	0
Hepatic/Renal						
ALT elevation	10	2	1	2	<1	0
AST elevation	8	<1	1	1	<1	0
Decreased creatinine clearance	5	1	0	1	0	0
Creatinine elevation	3	0	0	1	0	0
Renal failure	<1	0	0	<1	0	0
Clinical						
Constitutional Symptoms						
Fatigue	87	14	2	81	16	1
Fever	26	1	<1	19	<1	0
Edema	19	<1	0	24	<1	0
Myalgia	13	2	0	20	3	0
Alopecia	11	NA	NA	42	NA	NA
Arthralgia	8	<1	0	13	3	0
Other constitutional symptoms	8	1	1	6	1	<1
Cardiovascular General						
Thrombosis/embolism	4	2	1	3	2	1
Cardiac ischemia	3	2	1	2	<1	0
Gastrointestinal						
Anorexia	62	4	1	58	7	<1
Nausea	39	4	0	25	3	0
Constipation	30	0	0	23	1	0
Vomiting	25	2	0	19	1	0
Diarrhea without colostomy	21	<1	0	34	4	0
Stomatitis/pharyngitis	20	1	0	23	1	0
Dysphagia/esophagitis/ odynophagia	5	1	<1	7	1	0
Dehydration	3	1	0	4	1	0
Pulmonary						
Dyspnea	72	14	4	74	17	9
Pain						
Chest pain	38	6	<1	32	7	<1
Neurology						
Neuropathy/sensory	29	2	0	32	1	0
Mood alteration/ depression	11	0	<1	10	1	0
Infection/Febrile Neutropenia						
Infection without neutropenia	23	5	<1	17	3	1
Infection/febrile neutropenia-other	6	2	0	2	<1	0
Febrile neutropenia	2	1	1	14	10	3
Infection with Grade 3 or Grade 4 neutropenia	<1	0	0	6	4	1
Immune						
Allergic reaction/ hypersensitivity	8	0	0	8	1	<1
Dermatology/Skin						
Rash/desquamation	17	0	0	9	0	0

*Refer to NCI CTC Criteria for lab values for each Grade of toxicity (version 2.0).

Clinically relevant Grade 3 and Grade 4 laboratory toxicities were similar between integrated Phase 2 results from three single-agent ALIMTA studies (N=164) and the Phase 3 single-agent ALIMTA study described above, with the exception of neutropenia (12.8% versus 5.3%, respectively) and alanine transaminase elevation (15.2% versus 1.9%, respectively). These differences were likely due to differences in the patient population, since the Phase 2 studies included chemonaive and heavily pretreated breast cancer patients with pre-existing liver metastases and/or abnormal baseline liver function tests.

The incidence of CTC Grade 3/4 hypertension was the only finding demonstrating an age difference in patients treated with ALIMTA and was greater in patients 65 years or older as compared to younger patients. There are insufficient numbers of non-white patients to assess ethnic differences. The incidence of CTC Grade 3/4 dyspnea was higher in males for both treatment arms.

OVERDOSAGE: There have been few cases of ALIMTA overdose. Reported toxicities included neutropenia, anemia, thrombocytopenia, mucositis, and rash. Anticipated complications of overdose include bone marrow suppression as manifested by neutropenia, thrombocytopenia, and anemia. In addition, infection with or without fever, diarrhea, and mucositis may be seen. If an overdose occurs, general supportive measures should be instituted as deemed necessary by the treating physician.

In clinical trials, leucovorin was permitted for CTC Grade 4 leukopenia lasting ≥3 days, CTC Grade 4 neutropenia lasting ≥3 days, and immediately for CTC Grade 4 thrombocytopenia, bleeding associated with Grade 3 thrombocytopenia,

or Grade 3 or 4 mucositis. The following intravenous doses and schedules of leucovorin were recommended for intravenous use: 100 mg/m², intravenously once, followed by leucovorin, 50 mg/m², intravenously every 6 hours for 8 days.

The ability of ALIMTA to be dialyzed is unknown.

DOSAGE AND ADMINISTRATION: ALIMTA is for Intravenous Infusion Only

Combination Use With Cisplatin—*Malignant Pleural Mesothelioma*—The recommended dose of ALIMTA is 500 mg/m² administered as an intravenous infusion over 10 minutes on Day 1 of each 21-day cycle. The recommended dose of cisplatin is 75 mg/m² infused over 2 hours beginning approximately 30 minutes after the end of ALIMTA administration. Patients should receive hydration consistent with local practice prior to and/or after receiving cisplatin. See cisplatin package insert for more information.

Single-Agent Use—*Non-Small Cell Lung Cancer*—The recommended dose of ALIMTA is 500 mg/m² administered as an intravenous infusion over 10 minutes on Day 1 of each 21-day cycle.

Premedication Regimen—*Corticosteroid*—Skin rash has been reported more frequently in patients not pretreated with a corticosteroid. Pretreatment with dexamethasone (or equivalent) reduces the incidence and severity of cutaneous reaction. In clinical trials, dexamethasone 4 mg was given by mouth twice daily the day before, the day of, and the day after ALIMTA administration.

Vitamin Supplementation—To reduce toxicity, patients treated with ALIMTA must be instructed to take a low-dose oral folic acid preparation or multivitamin with folic acid on a daily basis. At least 5 daily doses of folic acid must be taken during the 7-day period preceding the first dose of ALIMTA; and dosing should continue during the full course of therapy and for 21 days after the last dose of ALIMTA. Patients must also receive one (1) intramuscular injection of vitamin B_{12} during the week preceding the first dose of ALIMTA and every 3 cycles thereafter. Subsequent vitamin B_{12} injections may be given the same day as ALIMTA. In clinical trials, the dose of folic acid studied ranged from 350 to 1000 μg, and the dose of vitamin B_{12} was 1000 μg. The most commonly used dose of oral folic acid in clinical trials was 400 μg (*see* **WARNINGS**).

Laboratory Monitoring and Dose Reduction Recommendations—*Monitoring*—Complete blood cell counts, including platelet counts, should be performed on all patients receiving ALIMTA. Patients should be monitored for nadir and recovery, which were tested in the clinical study before each dose and on days 8 and 15 of each cycle. Patients should not begin a new cycle of treatment unless the ANC is ≥1500 cells/mm³, the platelet count is ≥100,000 cells/mm³, and creatinine clearance is ≥45 mL/min. Periodic chemistry tests should be performed to evaluate renal and hepatic function.

Dose Reduction Recommendations—Dose adjustments at the start of a subsequent cycle should be based on nadir hematologic counts or maximum nonhematologic toxicity from the preceding cycle of therapy. Treatment may be delayed to allow sufficient time for recovery. Upon recovery, patients should be retreated using the guidelines in Tables 8-10, which are suitable for using ALIMTA as a single agent or in combination with cisplatin.

Table 8: Dose Reduction for ALIMTA (single-agent or in combination) and Cisplatin - Hematologic Toxicities

Nadir ANC <500/mm³ and nadir platelets ≥50,000/mm³.	75% of previous dose (both drugs).
Nadir platelets <50,000/mm³ regardless of nadir ANC.	50% of previous dose (both drugs).

If patients develop nonhematologic toxicities (excluding neurotoxicity) ≥Grade 3 (except Grade 3 transaminase elevations), ALIMTA should be withheld until resolution to less than or equal to the patient's pre-therapy value. Treatment should be resumed according to guidelines in Table 9.

Table 9: Dose Reduction for ALIMTA (single-agent or in combination) and Cisplatin - Nonhematologic Toxicities[a,b]

	Dose of ALIMTA (mg/m²)	Dose of Cisplatin (mg/m²)
Any Grade 3[c] or 4 toxicities except mucositis	75% of previous dose	75% of previous dose
Any diarrhea requiring hospitalization (irrespective of Grade) or Grade 3 or 4 diarrhea	75% of previous dose	75% of previous dose
Grade 3 or 4 mucositis	50% of previous dose	100% of previous dose

[a] NCI Common Toxicity Criteria (CTC).
[b] Excluding neurotoxicity.
[c] Except Grade 3 transaminase elevation.

In the event of neurotoxicity, the recommended dose adjustments for ALIMTA and cisplatin are described in Table 10. Patients should discontinue therapy if Grade 3 or 4 neurotoxicity is experienced.

Table 10: Dose Reduction for ALIMTA (single-agent or in combination) and Cisplatin – Neurotoxicity

CTC Grade	Dose of ALIMTA (mg/m²)	Dose of Cisplatin (mg/m²)
0-1	100% of previous dose	100% of previous dose
2	100% of previous dose	50% of previous dose

ALIMTA therapy should be discontinued if a patient experiences any hematologic or nonhematologic Grade 3 or 4 toxicity after 2 dose reductions (except Grade 3 transaminase elevations) or immediately if Grade 3 or 4 neurotoxicity is observed.

Elderly Patients—No dose reductions other than those recommended for all patients are necessary for patients ≥65 years of age.

Children—ALIMTA is not recommended for use in children, as safety and efficacy have not been established in children.

Renally Impaired Patients—In clinical studies, patients with creatinine clearance ≥45 mL/min required no dose adjustments other than those recommended for all patients. Insufficient numbers of patients with creatinine clearance below 45 mL/min have been treated to make dosage recommendations for this group of patients. Therefore, ALIMTA should not be administered to patients whose creatinine clearance is <45 mL/min using the standard Cockcroft and Gault formula (below) or GFR measured by Tc99m-DPTA serum clearance method:

$$\text{Males: } \frac{[140 - \text{Age in years}] \times \text{Actual Body Weight (kg)}}{72 \times \text{Serum Creatinine (mg/dL)}} = \text{mL/min}$$

Females: Estimated creatinine clearance for males x 0.85

Caution should be exercised when administering ALIMTA concurrently with NSAIDs to patients whose creatinine clearance is <80 mL/min (*see* **Drug Interactions** *under* **PRECAUTIONS**).

Hepatically Impaired Patients—ALIMTA is not extensively metabolized by the liver. Dose adjustments based on hepatic impairment experienced during treatment with ALIMTA are provided in Table 9 (*see* **Patients with Hepatic Impairment** *under* **PRECAUTIONS**).

Preparation and Administration Precautions—As with other potentially toxic anticancer agents, care should be exercised in the handling and preparation of infusion solutions of ALIMTA. The use of gloves is recommended. If a solution of ALIMTA contacts the skin, wash the skin immediately and thoroughly with soap and water. If ALIMTA contacts the mucous membranes, flush thoroughly with water. Several published guidelines for handling and disposal of anticancer agents are available.[1-8] There is no general agreement that all of the procedures recommended in the guidelines are necessary or appropriate.

ALIMTA is not a vesicant. There is no specific antidote for extravasation of ALIMTA. To date, there have been few reported cases of ALIMTA extravasation, which were not assessed as serious by the investigator. ALIMTA extravasation should be managed with local standard practice for extravasation as with other non-vesicants.

Preparation for Intravenous Infusion Administration

1. Use aseptic technique during the reconstitution and further dilution of ALIMTA for intravenous infusion administration.
2. Calculate the dose and the number of ALIMTA vials needed. Each vial contains 500 mg of ALIMTA. The vial contains an excess of ALIMTA to facilitate delivery of label amount.
3. Reconstitute 500-mg vials with 20 mL of 0.9% Sodium Chloride Injection (preservative free) to give a solution containing 25 mg/mL ALIMTA. Gently swirl each vial until the powder is completely dissolved. The resulting solution is clear and ranges in color from colorless to yellow or green-yellow without adversely affecting product quality. The pH of the reconstituted ALIMTA solution is between 6.6 and 7.8. FURTHER DILUTION IS REQUIRED.
4. Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration. If particulate matter is observed, do not administer.
5. The appropriate volume of reconstituted ALIMTA solution should be further diluted to 100 mL with 0.9% Sodium Chloride Injection (preservative free) and administered as an intravenous infusion over 10 minutes.
6. Chemical and physical stability of reconstituted and infusion solutions of ALIMTA were demonstrated for up to 24 hours following initial reconstitution, when stored at refrigerated or ambient room temperature [see USP Controlled Room Temperature] and lighting. When prepared as directed, reconstitution and infusion solutions of ALIMTA contain no antimicrobial preservatives. Discard any unused portion.

Reconstitution and further dilution prior to intravenous infusion is only recommended with 0.9% Sodium Chloride Injection (preservative free). ALIMTA is physically incompatible with diluents containing calcium, including Lactated Ringer's Injection, USP and Ringer's Injection, USP and therefore these should not be used. Coadministration of ALIMTA with other drugs and diluents has not been studied, and therefore is not recommended.

HOW SUPPLIED: ALIMTA®, pemetrexed for injection is available in sterile single-use vials containing 500 mg pemetrexed.

NDC 0002-7623-01 (VL7623): single-use vial with flip-off cap individually packaged in a carton.

Storage—ALIMTA, pemetrexed for injection, should be stored at 25°C (77°F); excursions permitted to 15-30°C (59-86°F) [see USP Controlled Room Temperature].

Chemical and physical stability of reconstituted and infusion solutions of ALIMTA were demonstrated for up to 24 hours following initial reconstitution, when stored refrigerated, 2-8°C (36-46°F), or at 25°C (77°F), excursions permitted to 15-30°C (59-86°F) [see USP Controlled Room Temperature]. When prepared as directed, reconstituted and infusion solutions of ALIMTA contain no antimicrobial preservatives. Discard unused portion.

ALIMTA is not light sensitive.

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Manufactured by Lilly France S.A.S.
F-67640 Fegersheim, France
for Eli Lilly and Company
Indianapolis, IN 46285, USA

www.ALIMTA.com

ALIMTA® (pemetrexed for injection)

INFORMATION FOR PATIENTS AND CAREGIVERS

ALIMTA® (uh-LIM-tuh)
(pemetrexed for injection)

Read the Patient Information that comes with ALIMTA before you start treatment and each time you get treated with ALIMTA. There may be new information. This leaflet does not take the place of talking to your doctor about your medical condition or treatment. Talk to your doctor if you have any questions about ALIMTA.

What is ALIMTA?

ALIMTA is a treatment for:

- **Malignant pleural mesothelioma.** This cancer affects the inside lining of the chest cavity. ALIMTA is given with cisplatin, another anti-cancer medicine (chemotherapy).
- **Non-small cell lung cancer.** This cancer is a disease in which malignant (cancer) cells form in the tissues of the lung.

To lower your chances of side effects of ALIMTA, you must also take folic acid and vitamin B_{12} prior to and during your treatment with ALIMTA. Your doctor will prescribe a medicine called a "corticosteroid" to take for 3 days during your treatment with ALIMTA. Corticosteroid medicines lower your chances of getting skin reactions with ALIMTA.

ALIMTA has not been studied in children.

What should I tell my doctor before taking ALIMTA?

Tell your doctor about all of your medical conditions, including if you:

- **are pregnant or planning to become pregnant.** ALIMTA may harm your unborn baby.
- **are breastfeeding.** It is not known if ALIMTA passes into breast milk. You should stop breastfeeding once you start treatment with ALIMTA.
- **are taking other medicines,** including prescription and nonprescription medicines, vitamins, and herbal supplements. ALIMTA and other medicines may affect each other causing serious side effects. Especially, tell your doctor if you are taking medicines called "nonsteroidal anti-inflammatory drugs" (NSAIDs) for pain or swelling. There are many NSAID medicines. If you are not sure, ask your doctor or pharmacist if any of your medicines are NSAIDs.

How is ALIMTA given?

- ALIMTA is slowly infused (injected) into a vein. The injection or infusion will last about 10 minutes. You will usually receive ALIMTA once every 21 days (3 weeks).

- If you are being treated for malignant pleural mesothelioma, ALIMTA is given in combination with cisplatin (another anti-cancer drug). Cisplatin is infused in your vein for about 2 hours starting about 30 minutes after your treatment with ALIMTA.
- Your doctor will prescribe a medicine called a "corticosteroid" to take for 3 days during your treatment with ALIMTA. Corticosteroid medicines lower your chances for getting skin reactions with ALIMTA.
- **It is very important to take folic acid and vitamin B_{12} during your treatment with ALIMTA to lower your chances of harmful side effects.** You must start taking 350-1000 micrograms of folic acid every day for at least 5 days out of the 7 days before your first dose of ALIMTA. You must keep taking folic acid every day during the time you are getting treatment with ALIMTA, and for 21 days after your last treatment. You can get folic acid vitamins over-the-counter. Folic acid is also found in many multivitamin pills. Ask your doctor or pharmacist for help if you are not sure how to choose a folic acid product. Your doctor will give you vitamin B_{12} injections while you are getting treatment with ALIMTA. You will get your first vitamin B_{12} injection during the week before your first dose of ALIMTA, and then about every 9 weeks during treatment.
- You will have regular blood tests before and during your treatment with ALIMTA. Your doctor may adjust your dose of ALIMTA or delay treatment based on the results of your blood tests and on your general condition.

What should I avoid while taking ALIMTA?

- **Women who can become pregnant should not become pregnant during treatment with ALIMTA.** ALIMTA may harm the unborn baby.
- **Ask your doctor before taking medicines called NSAIDs.** There are many NSAID medicines. If you are not sure, ask your doctor or pharmacist if any of your medicines are NSAIDs.

What are the possible side effects of ALIMTA?

Most patients taking ALIMTA will have side effects. Sometimes it is not always possible to tell whether ALIMTA, another medicine, or the cancer itself is causing these side effects. **Call your doctor right away if you have a fever, chills, diarrhea, or mouth sores.** These symptoms could mean you have an infection.

The most common side effects of ALIMTA when given alone or in combination with cisplatin are:

- **Stomach upset, including nausea, vomiting, and diarrhea.** You can obtain medicines to help control some of these symptoms. Call your doctor if you get any of these symptoms.

- **Low blood cell counts:**
  - **Low red blood cells.** Low red blood cells may make you feel tired, get tired easily, appear pale, and become short of breath.
  - **Low white blood cells.** Low white blood cells may give you a greater chance for infection. If you have a fever (temperature above 100.4°F) or other signs of infection, call your doctor right away.
  - **Low platelets.** Low platelets give you a greater chance for bleeding. Your doctor will do blood tests to check your blood counts before and during treatment with ALIMTA.
- **Tiredness.** You may feel tired or weak for a few days after your ALIMTA treatments. If you have severe weakness or tiredness, call your doctor.
- **Mouth, throat, or lip sores** (stomatitis, pharyngitis). You may get redness or sores in your mouth, throat, or on your lips. These symptoms may happen a few days after ALIMTA treatment. Talk with your doctor about proper mouth and throat care.
- **Loss of appetite.** You may lose your appetite and lose weight during your treatment. Talk to your doctor if this is a problem for you.
- **Rash.** You may get a rash or itching during treatment. These usually appear between treatments with ALIMTA and usually go away before the next treatment. Call your doctor if you get a severe rash or itching.

Talk with your doctor, nurse or pharmacist about any side effect that bothers you or that doesn't go away.

These are not all the side effects of ALIMTA. For more information, ask your doctor, nurse or pharmacist.

General information about ALIMTA

Medicines are sometimes prescribed for conditions other than those listed in patient information leaflets. ALIMTA was prescribed for your medical condition.

This leaflet summarizes the most important information about ALIMTA. If you would like more information, talk with your doctor. You can ask your doctor or pharmacist for information about ALIMTA that is written for health professionals. You can also call 1-800-LILLY-RX (1-800-545-5979) or visit www.ALIMTA.com.

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