AN IMPORTANT MESSAGE
TREATING CANCER

Clinical studies indicate that Ativan® (lorazepam) Injection can play a significant role in enhancing patient tolerance for and acceptance of chemotherapy.1-4 In studies comparing Ativan Injection to other adjunctive agents, patients expressed a strong preference for the regimen including Ativan Injection because of its anxiolytic, amnesic and sedative effects.2-4

NEW ADJUNCTIVE AGENTS NEEDED
A study of 52 mastectomy patients on regimens of cyclophosphamide, methotrexate and 5-FU (CMF) revealed that over one fourth of patients failed to even complete a treatment course of 12 to 18 months, mostly because of the side effects associated with these agents.9 A recent survey of 56 oncology centers found up to 10% of patients refused further chemotherapy because of actual or feared side effects.7 Statistics such as these have spurred researchers to seek new adjunctive agents or combinations of existing agents that would increase the tolerability of chemotherapy.

ATIVAN® INJECTION:
A SUPPORTIVE ADJUNCT
In a study involving 18 patients receiving 36 courses of cis-platinum therapy, Ativan Injection was administered prior to therapy. Lack of recall for the chemotherapy infusion, and for the subsequent 8 hours, was reported in 33 of 36 courses of therapy studied. Furthermore, amnesia for the day of chemotherapy was reported in 29 courses. All 18 patients believed the lack of recall was highly desirable.5

Dr. John Laszlo and colleagues from Duke Comprehensive Cancer Center, Durham, NC, and Memorial Sloan-Kettering Institute, New York, reported a pilot study involving 32 patients receiving cisplatin with or without other cytotoxic chemotherapy and adjunctive use of Ativan Injection.3 Thirty patients were evaluated over 45 courses of treatment (two were eliminated for protocol violations).

Dr. Laszlo observed that following lorazepam, recall of the day’s events was reduced for most patients. Post-treatment anxiety was also reduced. Almost all of the patients in the study requested lorazepam (Ativan Injection) pretreatment again for subsequent chemotherapy courses, regardless of incidence or intensity of emetic episodes. From this study, Dr. Laszlo concluded that lorazepam can be an effective agent for these patients.
FOR PHYSICIANS

A SIGNIFICANT ROLE IN ENHANCING COMPLIANCE IN CHEMOTHERAPY

Clearly, Ativan® (lorazepam) Injection represents an important supportive adjunct in chemotherapy. Patients’ ability to tolerate the experience is usually enhanced. Their acceptance of a regimen incorporating Ativan Injection has been excellent. Thus, it is felt that many patients who might otherwise abandon treatment may now be more willing to proceed with Ativan Injection as an adjunct in their chemotherapy regimen.

If outpatients are treated with lorazepam injection, care must be taken on the day of treatment to prevent their undertaking any activity requiring full awareness or coordination.

REFERENCES:

Please see important information on the following page.
Ativan® (Lorazepam) Injection, 1 mg or IV

DESCRIPTION: Ativan® (lorazepam) injection, a benzodiazepine with anxiolytic and sedative effects, is intended for the short-term treatment of anxiety as defined in the chemical formula 7-chloro-5-ethyl-1,3-dimethyl-1,4-dihydropyridine-2-one. 1 Lorazepam is a nearly white powder almost insoluble in water. Each 1 mL of sterile injection contains either 2.0 or 4.0 mg lorazepam. 0.08% polysorbate 40 glycol glycerol in 2% benzyl alcohol as preservative.

CLINICAL PHARMACOLOGY: IV or IM administration of recommended dose of 2-4 mg lorazepam injection to adults will produce some of the following: (a) a reduction in anxiety; (b) an increase in the degree of sleepiness (in children, less than 5 years of age) and (c) a delay in the time to awakening. The relative magnitude of these effects may vary. These reactions are more pronounced in elderly patients, in those with severe brain injury; or in those with reduced liver and renal function. Lorazepam injection may produce more rapid and pronounced effects of CNS depression in patients with renal insufficiency. Lorazepam injection, 4 mg IV or IM, will produce loss of 3 or 4 reflexes within 15 minutes.

As with other benzodiazepine injections,lorazepam injection and no other drugs revealed that visual (the ability to keep a moving line centered) was impaired for a mean of 8.0 (2.0) hours following 4 mg IV lorazepam and 4 hours following 2 mg IM with considerable subject variation. Similar findings were noted with placebo. Lorazepam injection, 4 mg IV or IM, will produce some of the following: (a) an increase in the degree of sleepiness (in children, less than 5 years of age) and (c) a delay in the time to awakening. In elderly patients, in those with severe brain injury; or in those with reduced liver and renal function. Lorazepam injection may produce more rapid and pronounced effects of CNS depression in patients with renal insufficiency. Lorazepam injection, 4 mg IV or IM, will produce loss of 3 or 4 reflexes within 15 minutes. The magnitude of these effects may vary. These reactions are more pronounced in patients with renal insufficiency. Lorazepam injection, 4 mg IV or IM, will produce loss of 3 or 4 reflexes within 15 minutes. 1

INDICATIONS AND USAGE: In adults—for anxiolytic medication, producing sedation (sleepiness or drowsiness), relief of anxiety, and control of aggression. The drug is indicated for the short-term treatment of anxiety and for the management of state-of-the-mind disorders. Lorazepam injection is contraindicated in patients with known hypersensitivity to benzodiazepines. Lorazepam injection should not be used in patients with acute narrow-angle glaucoma.
The University of Southern California (USC) Comprehensive Cancer Center is one of 20 comprehensive cancer centers in a national network mandated by the National Cancer Act of 1971. More than 200 physicians and researchers at USC are studying or treating cancer on two University campuses. Their headquarters is the $40 million Kenneth Norris Jr. Cancer Hospital and Research Institute, which opened in April 1983 on USC’s Health Sciences Campus in East Los Angeles. The Norris Hospital-Institute is a 9-story, 158,000-square foot structure that includes a 60-bed inpatient unit, an outpatient clinic and day hospital that can accommodate up to 100 outpatients a day, 2 linear accelerators (4 million and 25 million electron volts, respectively) for radiation therapy, clinical and pathology laboratories, a suite of 4 operating rooms, 3 floors dedicated to laboratory research, and the administrative offices of the USC Cancer Center.

Founding director (1971–1981) of the USC Cancer Center was Denman Hammond, M.D. (pictured left upper), who continues to direct the national cooperative Childrens Cancer Study Group (CCSG) he has headed since 1969. The members of the CCSG are situated at 29 of the major pediatric centers in the United States.

CCSG members annually register approximately one-half of the new cases of cancer among infants and children in the United States. Over 8000 infants and children with cancer are currently managed in accordance with the Group’s clinical research protocols.

Studies of the CCSG have led to many significant advances in the treatment and cure of childhood cancers. The results of their treatments for acute lymphoblastic leukemia are accepted as the world’s best. They have also pioneered in developing new treatments for several of the principal solid tumors of children.

Current director of the USC Comprehensive Cancer Center is Brian E. Henderson, M.D. (pictured right upper), who also oversees the USC Cancer Epidemiology and Biostatistics Program, founded in 1970 and gradually built into a program that now includes 20 faculty members and 80 staff. The Epidemiology Program has as its central resource the Cancer Surveillance Program, a population-based cancer registry which covers the 7.9 million residents of Los Angeles County. This epidemiologically oriented cancer registry provides important clues for generation of hypotheses about the causes of cancer and is a resource of patients for case-control and other types of analytical studies. The USC epidemiology group is particularly well known for its studies on the relationships between exogenous and endogenous hormones and cancers of the breast, endometrium, ovary, prostate, and testis, as well as for etiological studies of cancers of the pancreas, esophagus, central nervous system, and liver and malignant melanoma. This group also has established an international twin study of cancer patients and a large prospective study of multiple potential risk factors and cancer in an elderly retired community in southern California. Leadership and notable research in the Epidemiology and Biostatistics Program have been provided by Thomas H. Mack, M.D. (lower left), and Malcolm C. Pike, Ph.D. (lower right).

Other divisions of the USC Comprehensive Cancer Center are devoted to basic research, clinical investigations, cancer control, and education.

**Basic Research.** Laboratory scientists at the USC Cancer Center are investigating the basic mechanisms that underlie cancer. Their studies are targeted at understanding the basic causes of cancer, discovering fundamental differences between cancer cells and their normal counterparts, and designing rational approaches to cancer treatment and prevention.

**Clinical Investigations.** Research involving patients is an integral aspect of the USC Cancer Center, providing a link between laboratory discoveries and improved methods of treatment for various types of disease.

**Cancer Control.** Cancer control activities include behavioral, psychosocial, and biological investigations to develop effective means of cancer prevention, early detection and intervention, delivery of optimal treatment, and rehabilitation. The object of much of this research is to modify unhealthy life-styles and improve patterns of self-care. The Cancer Control Program also brings the resources and expertise of the Cancer Center to the community through professional education.

**Education.** All divisions of the Cancer Center have educational components that may be used in educational programs for students from the USC Schools of Medicine, Dentistry, Nursing, Pharmacy, and Public Administration. The Center Center includes more than 30 existing projects in cancer education.