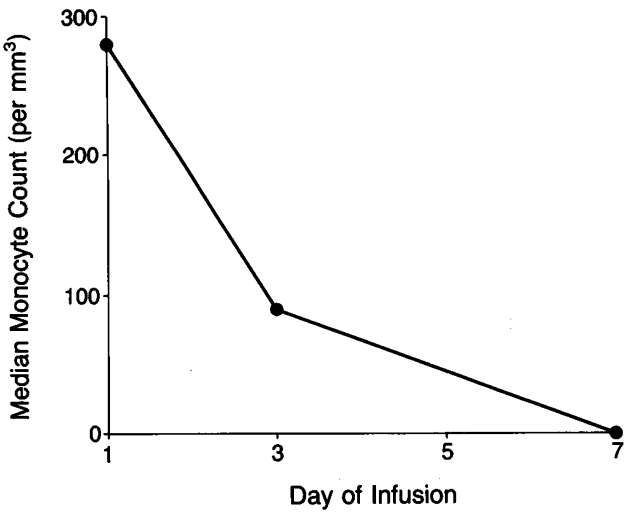

Figure 1. Median Absolute Peripheral-Blood Monocyte Count after Four Courses of Infused 2-Chlorodeoxyadenosine.
The count declined rapidly, with the disappearance of circulating monocytes on day 7.

123 g per liter, and the platelet count was 202,000 per cubic millimeter. The marrow was normocellular, a computed tomographic scan of the abdomen showed no hepatosplenomegaly or lymphadenopathy, and a bone survey was normal.

Four courses of 2-chlorodeoxyadenosine (0.1 mg per kilogram of body weight per day for 7 days by continuous intravenous infusion) were administered every 28 to 35 days. The second course was delayed by the development of dermatomal herpes zoster and was later complicated by transient grade 3 neutropenia (absolute neutrophil count, <500 to 1000 per cubic millimeter). The patient has been in unmaintained complete remission for more than 17 months, with no cutaneous or mucosal lesions. On follow-up, the white-cell count was 4500 per cubic millimeter with a normal differential count, the hemoglobin concentration was 128 g per liter, and the platelet count was 166,000 per cubic millimeter. The patient is now two months post partum, having delivered a normal 5½-lb (2.5-kg) girl by cesarean section.

During each course of 2-chlorodeoxyadenosine blood monocytes disappeared completely (Fig. 1). The median absolute monocyte count was 280 per cubic millimeter before treatment (range, 90 to 380), 90 after 48 hours of 2-chlorodeoxyadenosine treatment (range, 50 to 330), and 0 on day 7 during all four courses.

2-Chlorodeoxyadenosine, uniquely able to destroy resting and dividing cells[4] and potently toxic to monocytes,[3] offers advantages in the treatment of monocyte-derived neoplasms and chronic inflammatory conditions. The potential activity of this drug in the treatment of histiocytic diseases is encouraging and warrants further investigation in Langerhans'-cell histiocytosis, hemophagocytic histiocytosis, and other related disorders.

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1. Komp DM. Concepts in staging and clinical studies for treatment of Langerhans' cell histiocytosis. Semin Oncol 1991;18:18-23.
2. Beutler E, Piro LD, Saven A, et al. 2-Chlorodeoxyadenosine (2-CdA): a potent chemotherapeutic and immunosuppressive nucleotide. Leuk Lymphoma 1991;5:1-8.
3. Carrera CJ, Terai C, Lotz M, et al. Potent toxicity of 2-chlorodeoxyadenosine toward human monocytes *in vitro* and *in vivo:* a novel approach to immunosuppressive therapy. J Clin Invest 1990;86:1480-8.
4. Seto S, Carrera CJ, Kubota M, Wasson DB, Carson DA. Mechanism of deoxyadenosine and 2-chlorodeoxyadenosine toxicity to nondividing human lymphocytes. J Clin Invest 1985;75:377-83.

THE MEDICAL TREATMENT OF OPEN-ANGLE GLAUCOMA

To the Editor: In his review of open-angle glaucoma (April 15 issue),[1] Dr. Quigley concluded that "the available data from clinical studies suggest that there is a significant reduction in the rate of initial injury when eyedrops are used to lower pressure." We recently completed an overview of all published randomized controlled trials of the medical treatment of open-angle glaucoma,[2] and we disagree with this conclusion. Although a large number of such trials (n=102) have been carried out, only a few (8 of 102) have focused on the question of medical treatment for glaucoma with an appropriate study design and the use of visual-field changes (as opposed to intraocular pressure) as an end point.

Indeed, pooling of the data from six placebo-controlled trials with a minimal follow-up of three months suggested a moderate but statistically significant reduction in mean intraocular pressure (−4.9; 95 percent confidence interval, −7.3 to −2.5).[2] Data on the more clinically relevant end point of long-term visual-field changes were, however, available in only three randomized controlled trials, and statistical analysis of their combined data failed to provide convincing evidence of a beneficial effect of treatment (odds ratio, 0.75; 95 percent confidence interval, 0.42 to 1.35). Moreover, the exceedingly short follow-up in these trials (only 10 percent measured intraocular pressure for one year or more) does not allow the assessment of the still unclear relation between pressure reduction and progression of visual dysfunction. Taken together, the evidence from these trials indicates that medical treatment can indeed reduce intraocular pressure; however, the data are not informative with regard to the efficacy of treatment over the long term on a more clinically relevant end point.

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1. Quigley HA. Open-angle glaucoma. N Engl J Med 1993;328:1097-106.
2. Rossetti L, Marchetti I, Orzalesi N, Scorpiglione N, Torri V, Liberati A. Randomized clinical trials on medical treatment of glaucoma: are they appropriate to guide clinical practice? Arch Ophthalmol 1993;111:96-103.

Dr. Quigley replies:

To the Editor: In their quotation from my article, Rossetti et al. omitted the following sentence: "The protective effect [of lowering the intraocular pressure] is not absolute, however, and not all trials show a significant effect." Three clinical trials have been performed with visual-field testing as the outcome variable. In two, the incidence of initial field loss

was reduced by 50 percent in the treated groups. The third study found no statistically significant result of treatment. Rossetti et al. found in their meta-analysis of these three studies* that "overall, data suggest a 25 percent reduction in the occurrence of visual field changes." I believe that my summary of these data is accurate and consistent with the level of detail that was possible in a brief review of the entire subject of glaucoma.

Rossetti et al. also fail to note my acknowledgment that "randomized clinical trials are in progress to answer these important questions." This year, the National Eye Institute funded a multicenter clinical trial with more than 1500 patients to study the magnitude of the effect of lowering intraocular pressure on the incidence of initial visual-field loss in open-angle glaucoma. Those of us who will devote five to eight years to this study agree that we need to know more about the efficacy of glaucoma treatment.

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*Rossetti L, Marchetti I, Orzalesi N, Scorpiglione N, Torri V, Liberati A. Randomized clinical trials on medical treatment of glaucoma: are they appropriate to guide clinical practice? Arch Ophthalmol 1993;111:96-103.

TREATMENT FOR LIFE-THREATENING ILLNESS

To the Editor: Do physicians, nurses, allied health professionals, and members of the general public systematically choose more aggressive treatment for patients they do not know and family members than they would want for themselves?

To answer this question, we prepared a questionnaire, which was completed by 90 doctors, 251 nurses and other health professionals, and 193 high-school students and members of the general public. Using a standard clinical scenario tested in other studies,[1-3] we asked respondents to choose a treatment for an 82-year-old man with dementia who was described as having arrived in the emergency department with life-threatening gastrointestinal bleeding; no guidance was available from the patient, his family, or others. There were three sets of circumstances: in one the respondent was the patient, in the second the patient was a family member, and in the third the respondent was the emergency room physician treating a patient he or she did not know. The choices consisted of "palliative," "limited," "surgical," or "intensive" treatment; cardiopulmonary resuscitation (CPR) or no CPR; and four feeding strategies, ranging from tube feeding to spoon feeding only.

Respondents chose more aggressive treatment for a person they did not know than for a family member and, in turn, more aggressive treatment for a family member than for themselves ($\chi^2_F = 84.00$; df = 2; $P<0.001$ by Friedman's analysis of variance) (Table 1). The same pattern was seen for feeding choices ($\chi^2_F = 58.48$; df = 2; $P<0.001$) and CPR use ($\chi^2_Q = 139.32$; df = 2; $P<0.001$ by Cochran's test). There was no significant difference in the degree of aggressiveness between the two groups of respondents.

This study has some limitations. A survey may not represent what people will actually do. In previous studies, however, the survey choices of elderly people[4] closely approximated their actual choices when they completed advance directives.[5] The results are consistent with our previous observations that physicians[3] and nurses,[2] when presented with the same hypothetical case, said they would provide more extensive treatment than elderly persons and residents of a home for the aged said they would want for themselves under similar conditions.[4,5]

This is a relatively small, Canadian sample that was not randomized. Caution should be exercised in applying the results to other settings. We conclude that with respect to the treatment of incompetent older adults, people indicate they would do unto others as they would not want done unto themselves.

Table 1. The Types of Treatment for Life-Threatening Illness Chosen by the Respondents When They Imagined That They Were the Patient, That a Family Member Was the Patient, and That They Were the Physician Treating a Patient They Did Not Know.*

Type of Treatment	Total (N = 534)	Physicians (N = 90)	Nurses and Other Health Professionals (N = 251)	General Public (N = 193)
			percent	
Self				
Palliative	67.6	68.9	71.3	63.8
Limited	23.4	22.2	24.7	22.1
Surgical	4.1	4.4	2.8	4.9
Intensive	4.9	4.4	1.2	9.2
Family member				
Palliative	54.3	51.5	60.2	49.1
Limited	30.7	37.8	31.5	25.2
Surgical	7.9	7.8	6.0	10.4
Intensive	7.1	3.3	2.4	15.3
Unfamiliar patient				
Palliative	36.7	30.0	39.0	38.0
Limited	39.0	43.3	44.2	29.4
Surgical	11.8	14.4	9.6	12.9
Intensive	12.5	12.2	7.2	19.6

*Because of rounding, not all columns sum to 100.

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1. Molloy DW, Guyatt GH, Alemayehu E, et al. Factors affecting physicians' decisions on caring for an incompetent elderly patient: an international study. Can Med Assoc J 1991;145:947-52.
2. Lever JA, Molloy DW, Eisemann M, et al. Variability in nurses' decisions about the care of chronically ill elderly patients: an international study. Humane Med 1992;8:138-44.
3. Alemayehu E, Molloy DW, Guyatt GH, et al. Variability in physicians' decisions on caring for chronically ill elderly patients: an international study. Can Med Assoc J 1991;144:1133-8.
4. Molloy DW, Guyatt G, Alemayehu E, McIlroy W. Treatment preferences, attitudes toward advance directives and concerns about health care. Humane Med 1991;7:285-90.
5. Molloy DW, Urbanyi M, Horsman J, Guyatt GH, Bedard M. Two years experience with a comprehensive health care directive in a home for the aged. Ann R Coll Physicians Surg Can 1992;25:433-6.