

So You Consider Hair Dye Safe?

To the Editor:

Re "It's Safe to Hide the Gray, a New Cancer Study Says" (news article, Feb. 2): The American Cancer Society-Food and Drug Administration study that finds "almost no connection between hair dyes and fatal cancers" is seriously flawed in design and interpretation. While a fourfold increase in mortality from relatively rare cancers, non-Hodgkin's lymphoma and multiple myeloma, was noted in some 1,100 women using permanent black dyes for more than 20 years, the study trivialized the significance of that increase as based on only very few cases.

Although the study, which was published in the *Journal of the National Cancer Institute*, concluded that hair dyes pose no overall cancer risk, it recommended "removal of carcinogens from hair dyes and appropriate labeling of hair coloring products."

This study was based on a group of women with an average age of 56 enrolled in 1982, when they were questioned on hair dye use, and followed until 1989, when their average age was 63. However, cancers are much more likely to develop beyond that age, reflecting the long latency following exposure to carcinogens. Rates for development of cancer in women older than 63 are up to 20 times higher for non-Hodgkin's lymphoma and multiple myeloma; 34 times for bladder cancer, and 8 times for breast cancer, which the study exculpated. The study would have missed the great majority of these.

The negative findings on breast cancer are further invalidated by the study's failure to analyze for other critical risk factors besides hair dyes, particularly duration of oral contraceptive use and age at onset; duration and dosage of estrogen replacement therapy, and history of mammography. The last is particularly important, as repeated mammography in healthy premenopausal women has been consistently associated with excess breast cancer mortality in some eight randomized controlled trials over the last decade.

The study also substantially underestimated hair dye exposure because it was based on only those women who had begun to use hair dye by 1982, without consideration of those who began later, but remained

grouped among nonusers. Also missed were women using semipermanent dyes, about 20 percent of the market, which are chemically very similar to permanent dyes and probably pose similar cancer risks.

With these limitations, the striking discrepancy between the new findings and those of some six previous recent studies that provide strong evidence on the carcinogenicity of hair dyes is not surprising. For instance, a well-designed study in Nebraska, found that hair dye use would account for about 20 percent of all non-Hodgkin's lymphoma deaths in women; United States rates for this cancer have increased more than 100 percent since 1950. These and other studies also strongly incriminate multiple myeloma, leukemia and ovarian cancer, and suggest a relationship to breast cancer.

More recklessly misleading than the Cancer Society study is an accompanying editorial in the same journal that conclusively dismissed any cancer risk from hair dyes and recommended against any further studies.

There is substantial evidence on the carcinogenic hazards of petrochemical hair dyes. Their use represents a major class of avoidable cancer risks to some 50 million United



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States women. Legislative and regulatory action is now decades overdue. While waiting, women should switch to noncarcinogenic, organic hair dyes.

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