

SCIENCE NEWS®

The Weekly Newsmagazine of Science

Science Service Publication
Volume 144, No. 17, October 23, 1993

Alfred Scott McLaren	Publisher
Patrick Young	Editor
Blair Burns Potter	Managing Editor
Janice Rickerich	Production/Design Director
Greg W. Pearson	Associate Editor
Janet Raloff	Senior Editor Environment/Policy
Ron Cowen	Astronomy
Bruce Bower	Behavioral Sciences
Richard Lipkin	Chemistry/ Materials Science
Richard Monastersky	Earth Sciences
Kathy A. Fackelmann, Elizabeth Pennisi	Life Sciences/ Biomedicine
Ivars Peterson	Mathematics/Physics
Larry Norland	Editorial Assistant
Gabrielle Strobel	Science Writer Intern
Cait Anthony	Books/Resource Manager
Donald R. Harless	Advertising/Business Manager

SCIENCE NEWS (ISSN 0036-8423) is published weekly on Saturday, except the last week in December, for \$39.50 for 1 year or \$68.00 for 2 years (foreign postage \$6.00 additional per year) by Science Service, Inc., 1719 N Street, N.W., Washington, DC 20036. Second-class postage paid at Washington, DC, and additional mailing office. **POSTMASTER:** Send address changes to SCIENCE NEWS, P.O. Box 1925, Marion, OH 43305. Change of address: Four to six weeks' notice is required — old and new addresses, including zip codes, must be provided.

Copyright © 1993 by Science Service, Inc. Title registered as trademark U.S. and Canadian Patent Offices. Printed in U.S.A.

Editorial and Business Offices:
1719 N St., N.W., Washington, DC 20036
(202-785-2255)

Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

Subscription Department:
P.O. Box 1925, Marion, OH 43305
For new subscriptions only, call 1-800-247-2160.
For customer service, call 1-800-347-6969.

Letters

Breast cancer risk in perspective

I am writing to underscore some of the points made in "Refiguring the Odds" (SN: 7/31/93, p.76). It is worth reemphasizing that the risk of developing breast cancer is not the same as that of dying from invasive breast cancer. The overall incidence of breast cancer is about four times higher than the overall mortality rate, and the incidence rate has dramatically increased in recent years as a result of widespread mammography, by which very early lesions are being diagnosed.

At the same time, it must not be forgotten that other major diseases, such as coronary heart disease, stroke, and lung cancer, pose significantly greater risks of death than does breast cancer. Lung cancer, a largely preventable disease, has surpassed breast cancer as the leading cause of cancer deaths among women.

The use of the concept "risk of dying in the next 10 years" helps to overcome the apathy associated with thinking about "lifetime" risk

This Week

- 260 Gene, Biochemical Fixes Sought for CF
- 260 Crash course on a comet bound for Jupiter
- 261 Avalanche dynamics: Dripping water drops
- 261 From Antarctica: The Elvis of dinosaurs
- 262 DNA and pulsar research win 1993 Nobels
- 262 Weighing risks, benefits of mammography
- 263 Heart-attack victims show fatal depression
- 263 Clinton unveils new 'greenhouse' policy

Research Notes

- 270 Anthropology
- 270 Earth Science
- 271 Physical Science

Articles

- 264 Wine's Chemical Secrets
Cover: Wine has both enchanted and mystified connoisseurs. What gives a wine its special bouquet? What properties make a great wine unique? Today's chemists, in an effort to reveal the secrets of the fermented grape, bring the best analytical tools to bear on wine's mysterious chemistry. (Photo: The Wine Institute)
- 266 The Nine-Month Arthritis 'Cure'

Departments

- 258 Books
- 259 Letters

Science Service, which publishes SCIENCE NEWS, is a nonprofit corporation founded in 1921. It gratefully accepts tax-deductible contributions and bequests to assist its efforts to increase the public understanding of science, with special emphasis on young people. More recently, it has included in its mission increasing scientific literacy among members of underrepresented groups. Through its Youth Programs it administers the International Science and Engineering Fair, the Science Talent Search for the Westinghouse Science Scholarships, and publishes and distributes the *Directory of Student Science Training Programs for Precollege Students*.

Board of Trustees — *Chairman*, Glenn T. Seaborg; *Vice Chairman*, Gerald F. Tape; *Secretary*, David A. Goslin; *Treasurer*, Willis Harlow Shapley; Joseph W. Berg Jr.; Robert W. Fri; J. David Hann; Dudley Herschbach; Shirley M. Malcom; Elena O. Nightingale; Ben Patrusky; Peter H. Raven; H. Guyford Stever; Sanford J. Ungar; Deborah P. Wolfe. **Honorary Trustees** — Edward Bliss Jr.; Bowen C. Dees; O. W. Riegel; John Troan.

President: Alfred Scott McLaren; **Vice President and Business Manager:** Donald R. Harless.



and focuses on opportunities for the application of preventive measures and the early detection and treatment of precursor lesions and conditions associated with the major killing diseases. Rather than the present highly politicized and anxiety-provoking targeting of breast cancer, it would be more appropriate, in my opinion, to increase research on the causes and prevention of all major diseases that lead to premature deaths of women (and of men!).

Nicholas L. Petrakis
*Professor Emeritus of Preventive
Medicine and Epidemiology*
University of California, San Francisco
San Francisco, Calif.

The statement that "a woman's lifetime risk of getting breast cancer all depends on how you do the figuring" exemplifies how thorough the confusion of reality and statistics is. It's not a woman's *risk* that depends on "how you do the figuring," but the abstract and entirely unreal *estimate* of her risk.

Mark Mumper
Santa Cruz, Calif.

It does not surprise me that older women are getting a lot of breast cancer. What *does* surprise me is why the connection between breast cancer and the cumulative damage from mammograms is continually ignored by medical science.

A woman following the American Cancer Society guidelines would get her first mammogram at age 40, a mammogram every year or two until age 50, and one per year after that. This means that if a woman survives to age 90, she will have received 45 to 50 doses of ionizing radiation to the soft (and highly susceptible) tissue of her breasts!

I suggest that epidemiologists take a look at the correlation between breast cancer in older women and the number of mammograms received by them in their life histories. The results could very well cause the demise of a lucrative industry.

Bill Sturgeon
Petrolia, Calif.

See the article on p.262 of this issue.

— K. Fackelmann

OCTOBER 23, 1993

259