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Cancer Risks and Prevention Practices Among Vietnamese Refugees

CHRISTOPHER N. H. JENKINS, MA, MPH; STEPHEN J. McPHEE, MD; JOYCE ADAIR BIRD, PhD; and NGOC-THE HA BONILLA, San Francisco

Although Vietnamese refugees are the fastest-growing Asian minority in the United States, little is known about their health knowledge and practices, especially regarding cancer prevention. To address this problem, we interviewed a randomly selected sample of 215 Vietnamese adults living in the San Francisco Bay Area. Results indicated that 13% had never heard of cancer, 27% did not know that cigarette smoking can cause cancer, and 28% believed that cancer is contagious. Although hepatitis B-related liver cancer is endemic among Vietnamese, 48% had never heard of hepatitis B. Among men ($n = 116$), 56% were smokers (versus 32% in the general US population). Male cigarette smoking was significantly associated with incomes below the poverty level ($P < .01$), residence in the US for 9 years or less ($P < .05$), not knowing that smoking causes cancer ($P < .05$), and limited English proficiency ($P < .01$). Binge drinking was reported by 35% of men. Young Vietnamese of both sexes reported consuming diets higher in fat and lower in fiber than when they lived in Vietnam. Among eligible women, 32% had never had a Papanicolaou test (versus 9% of US women), 28% had never had a breast examination (versus 16%), and 83% had never had a mammogram (versus 62%). Education about cancer and its risk factors, smoking cessation, and cancer screening are high priorities for this population.

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In the 15 years since 1975, the number of Vietnamese living in the United States has climbed to 725,000 (Linda Gordon, PhD, Office of Refugee Resettlement, US Department of Health and Human Services, oral communication, April 1989).¹ Vietnamese are the fastest-growing Asian-Pacific minority in the United States.¹ Population projections indicate that by 2030 they will vie with Filipinos in being the largest Asian-Pacific minority in the country.¹

Preliminary data have suggested possible excess cancer mortality at certain sites among Vietnamese.² Certain behaviors, including cigarette smoking, excessive dietary intake of fat,³ low dietary intake of fiber,³ and consumption of alcohol,⁴ have been linked epidemiologically to an increased risk of cancer. In the Vietnamese population in particular, the high seroprevalence of hepatitis B surface antigen (HBsAg)* poses a risk for liver cancer.⁵

Cancer mortality can be lowered by reducing behavioral risk factors, screening for the early detection of cancer, and providing immunoprophylaxis for the offspring of women who are positive for HBsAg.⁶⁻¹⁰ For the Vietnamese immigrant population, however, there are no data on the prevalence of behavioral risk factors, the use of cancer screening procedures, or knowledge of cancer. National surveys do not report data for Vietnamese.¹¹⁻¹³ To obtain these data, therefore, we did a survey of persons in Vietnamese households in the San Francisco Bay Area.

*The prevalence of HBsAg among Vietnamese refugees who arrived in this country from 1984 to mid-1987 was 14.4% (Gregory Pierce, PhD, Centers for Disease Control, written communication, June 1987).

Subjects and Methods

Households for inclusion in the sampling frame were chosen from Vietnamese names listed in the San Francisco and Oakland, California, telephone books. Vietnamese telephone listings, which accounted for 42% of the sampling frame, are easily found because 12 Vietnamese family names account for 85% of all Vietnamese.¹⁴ To gain access to those not listed in telephone directories, we obtained names from the rosters of refugee resettlement organizations, Vietnamese religious organizations, mutual assistance associations, and refugee medical clinics. These sources accounted for the remaining 58% of the sample.

Questions were asked about demographics, health care access and use, knowledge about cancer, health beliefs and practices, the use of cancer screening tests, the prevalence of cigarette smoking, the prevalence of alcohol consumption, and diet. To facilitate comparisons between data for Vietnamese and national data, questions regarding cigarette smoking and alcohol consumption were adapted from the National Health Interview Survey (US Department of Health and Human Services, Office of Smoking and Health, unpublished data, 1987) and the Behavioral Risk Factor Surveillance System Data Collection Instrument (Centers for Disease Control, unpublished data, 1987). Because many respondents were not familiar with several cancer screening tests and their terminology, interviewers explained these procedures before ascertaining respondents' screening status. Interviewers clarified the concept of the stool occult blood test, for example, by showing respon-

From the Division of General Internal Medicine, Department of Medicine, and Institute for Health Policy Studies, University of California, San Francisco, School of Medicine.

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Reprint requests to Christopher N. H. Jenkins, MA, MPH, Division of General Internal Medicine, Department of Medicine, University of California, San Francisco, School of Medicine, 400 Parnassus Avenue, A 405, San Francisco, CA 94143-0320.

dents a sample of the test kit itself. To assess whether dietary changes might be increasing cancer risks in the survey population, interviewers asked respondents if they ate more, the same, or less of four indicator high-fat foods (beef, pork, eggs, and cheese) and two high-fiber foods (green vegetables and fruit) since arriving in the US. Questions about the use of traditional medical practices were open-ended.

The questionnaire was written in English, translated into Vietnamese, and backtranslated into English following the method suggested by Eyton and Neuwirth.¹⁵ We compared the backtranslation with the English original to ensure the lexical equivalence of the Vietnamese version. The questionnaire was pilot tested with members of the target population for comprehension and cultural sensitivity and then revised.

A 14-member community advisory board, made up of leaders in the Vietnamese community, assisted the project staff in the development of the sampling frame and in the writing of the survey questionnaire.*

Using a computer program, a random sample of persons was drawn, and letters in Vietnamese explaining the study were sent to those persons in each household. A few days later, one of two Vietnamese interviewers telephoned the households to make an appointment for an interview. Those for whom no telephone listing could be found were contacted at their residences.

Criteria for inclusion in the sample were Vietnamese ethnicity (defined by self-identification), residence in the San Francisco Bay Area, and age 21 years or older. Some Chinese-Vietnamese (Vietnamese of Chinese ethnic origin) were unintentionally included in the sampling frame because a number of Chinese-Vietnamese have names that are indistinguishable from Vietnamese names. Those who identified themselves as Chinese-Vietnamese were excluded from the sample because earlier research has shown that the two groups differ considerably on a number of demographic variables.¹⁶

Because key Vietnamese community informants cautioned during survey planning stages that enumerating household members would arouse the suspicion of the interviewers and, thus, lower the response rate, no enumeration was attempted. Therefore, an interview was conducted with the first household member who agreed to it. Face-to-face interviews were conducted in the Vietnamese language and lasted about an hour.

Data were analyzed using standard techniques. Tests of significance included χ^2 for cross-tabulations and F tests for analysis of variance.

Results

The sampling frame consisted of 3,220 persons, and 779 persons—nearly a quarter of the population—were selected for the sample. Of these, 174 did not meet eligibility criteria and 216 had moved, leaving 389 eligible for inclusion in the survey. We interviewed 215 of these, for a response rate of 55%. Interviewers were unable to contact 15 persons, and 159 refused to be interviewed. Of those interviewed, 13% had no known telephone and were, therefore, contacted directly at home.

*The following served as a community advisory board: Arthur Chen, MD; Luu Van Lai; Sister Rosaline Lieu Nguyen, MS; Nguyen Thoa; Vu Duc Vuong; Truong Thi Bach, MD; Nguyen Ngoc Canh, PhD; Chung Hoang Cuong, PhD; Eric Crystal, PhD; Nguyen Van Dinh, MSW; John Driscoll, PhD; Chiang-Peng Ngin, MPH; Nguyen T. Nguyen; and Sally Shankland. These members also assisted in gaining access to respondents, as did Hoang Tuan Anh, MD; Paul Delay, MD; Reverend Thich Quang Chon; Janice Louie, RD; Hai Ninh; John Driscoll, PhD; and Pham Tanh, MD. Thai Vinh Khiem assisted with data collection.

Sociodemographic Characteristics

Based on the survey data, Vietnamese in the catchment area were entirely foreign born (Table 1). Most earned a low income and had not completed a high school education. Nearly half reported no or limited verbal proficiency in English. Most of the respondents reported that they had some form of health insurance. Overall, respondents made a mean of 7.2 physician visits during the past year, but 12% did not see a physician at all.

The San Francisco Bay Area has several private-practice Vietnamese physicians and clinics that provide Vietnamese translators. Most respondents with a regular physician chose to go to one who was Vietnamese. Of those who saw a non-Vietnamese physician, 53% reported that a Vietnamese translator was available during their visits. Only 9% of the total sample reported that they never had a translator when they sought medical care. The use of Vietnamese physicians was not related significantly to respondents' English-language proficiency.

Knowledge

Although most had heard of cancer, there were gaps in the respondents' knowledge about the role of cigarette smoking or diet in "causing" cancer (Table 2). Nearly a third thought that cancer is contagious. A large majority of women (89%) had never heard of the Pap test. By comparison, only 3% of women in the general US population have never heard of this procedure.¹⁷

The awareness of hepatitis B was low. Having heard of hepatitis B was not associated with sex, age, level of educa-

TABLE 1.—Sociodemographic Characteristics of Survey Respondents (n = 215)

	Respondents
Sex, %	
Male	54
Female	46
Median age (range), yr	35 (21-78)
Country of birth, % Vietnam	100
Background, %	
Urban	89
Rural	11
Mean number of years in US (SD)	7.6 (3.4)
Spoken-English proficiency, %	
None	24
Limited	22
Fair	26
Good	28
Completed high school, %	41
Employed, %	37
Median household income, \$	11,500
Below poverty level, %	53
Health status, %	
Excellent/good	46
Fair/poor	54
Health insurance, %	
None	15
Medi-Cal/Medicare	55
Private	30
Has regular source of medical care, %	89
Ethnicity of regular physician, %	
Vietnamese	47
Non-Vietnamese	17
No regular physician	36
Had ≥ 1 physician visit last year, %	88

SD=standard deviation

tion, having an income below the poverty level, or number of years of residence in the United States.

Use of Traditional Medical Practices

Vietnamese employ several traditional medical practices.¹⁸⁻²¹ To ascertain if the use of traditional medicine interferes with seeking Western treatment of cancer symptoms, interviewers asked respondents what treatment they would choose first for six different symptoms. For symptoms such as headache, cold, or fever, 18% to 43% chose traditional practices (Table 3). But for possible cancer symptoms, such as blood in the stool, a breast lump, or unusual vaginal bleeding or discharge, fewer (1% to 9%) chose traditional treatments. More respondents chose Western treatment.

Smoking

Vietnamese men reported cigarette smoking at a rate almost twice that of US men (56% versus 32%) (Table 4).²² Vietnamese women, on the other hand, smoke at a third the rate of US women (9% versus 27%).²² Among Vietnamese men, 16% formerly smoked and 28% had never smoked. Former smokers had quit a mean of 4.5 years ago, and all but one of these had quit after arriving in the US. Among Vietnamese women, none were former smokers.

The mean number of cigarettes smoked per day by male smokers was 13.4 (standard deviation 8.7), lower than the mean number of 23 for US white men²³ but comparable to those of other US minorities. US black men are reported to smoke a mean of 15 cigarettes per day²³ and California Hispanic men a mean of 11 per day.²⁴ Of the Vietnamese male smokers, 88% reported smoking high-tar, high-nicotine cigarette brands, and 54% reported "always smoking right after awaking in the morning." While most (82%) said they wanted to quit smoking, a majority (71%) thought it would be hard to do so. More than two thirds (69%) reported that their physicians had advised them to quit or reduce smoking.

Vietnamese men who were significantly more likely to smoke were those with incomes below the poverty level ($P < .01$), those who had come to this country within the past nine years ($P < .05$), those who did not know that smoking causes cancer ($P < .05$), and those with limited English proficiency ($P < .01$). There were no significant associations between smoking and education level, consumption of alcohol during the previous month, marital status, employment status, self-reported health status, and age.

Alcohol Consumption and Diet

The prevalence of alcohol consumption was 67% among male respondents but only 18% among female respondents, compared with 66% for men and 47% for women in the general US population (Table 4).³ The prevalence of heavier drinking among Vietnamese respondents paralleled closely the US rates.

None of the female respondents, but 35% of the male respondents, reported binge drinking. Younger Vietnamese men (ages 21 to 34, $n = 46$) reported binge drinking less frequently than their counterparts in the general California population (22% versus 35%),²⁵ but older Vietnamese men (older than 54, $n = 15$) reported more binge drinking than their California counterparts (20% versus 10%). For men aged 35 to 54 ($n = 55$), binge drinking rates were comparable among Vietnamese and Californians (25% versus 24%).

As shown in Table 5, although 48% to 73% of respondents reported eating more high-fat foods since arriving in the US, only 13% to 15% reported eating less high-fiber

TABLE 2.—Health Knowledge of Survey Respondents ($n = 215$)

Question	Response, %		
	Yes	No	DK/NA
Have you ever heard of cancer?	87	13	..
Does smoking cause cancer?	74	4	22
Do some foods cause cancer?	45	13	42
Do some chemicals in food cause cancer?	59	6	35
Will living near someone with cancer cause cancer?	28	35	36*
Have you ever heard of the Pap test?	15	85	..
Have you ever heard of hepatitis B?	52	48	..
Have you had hepatitis B?	1	94	2
Do you know someone with hepatitis B?	18	80	2
Do you know anyone vaccinated for hepatitis B?	1	84	15

DK = don't know, NA = not applicable.

*Because of rounding of numbers, percentages may add up to less than 100%.

†Women only ($n = 99$).

TABLE 3.—Choosing Traditional Versus Western Treatment for Selected Symptoms ($n = 215$)

Symptom	Respondents' Treatment Choice, %*	
	Traditional	Western
Headache	17	77
Cold	34	63
Fever	18	78
Blood in stool	9	83
Breast lump†	2	96
Unusual vaginal bleeding or discharge†	1	93

*Percents do not total 100% owing to rounding.

†Women only ($n = 99$).

TABLE 4.—Prevalence of Cigarette Smoking and Alcohol Consumption, Vietnamese and General US Population*

Smoking and Drinking Prevalence	Vietnamese, %		US, %	
	Men ($n = 170$)	Women ($n = 99$)	Men	Women
Current smokers	56	9	32	27
Former smokers	16	0	30	18
Never smoked	28	91	38	55
Current drinkers†	67	18	66	47
Heavier drinkers‡	13	0	10	2
Binge drinkers§	35	0	22	8

*Sources: US smoking: Pierce et al,²² and National Health Interview Survey, Office of Smoking and Health, unpublished data, 1987. US drinking: Behavioral Risk Factor Survey Surveillance System, Centers for Disease Control, unpublished data, 1987.

† ≥ 1 drink in past month.

‡ ≥ 2 drinks per day in past month.

§ ≥ 5 drinks on ≥ 1 occasion in past month.

TABLE 5.—Consumption of Indicator Foods Since Arrival in United States ($n = 215$)

Food Category	Respondents' Reported Consumption, %		
	More	Same	Less
High fat			
Beef	73	17	10
Pork	57	25	18
Eggs	54	25	21
Cheese	48	48	4
High fiber			
Green vegetables	64	21	15
Fruit	68	19	13

food. From the six food categories, respondents reported a mean number of 2.59 (standard deviation 1.38) dietary changes toward food high in fat or low in fiber. A one-way analysis of variance showed that the younger the respondents, the more likely they were to make these changes. Those aged 21 to 34 ($n = 98$) made 2.89 changes, those aged 35 to 54 ($n = 88$) made 2.44 changes, and those aged 55 or older ($n = 29$) made 2.03 changes ($P < .01$). There was no relationship between sex and dietary change.

Cancer Screening

For each of five cancer screening tests, the respondents were more likely than the general US population to report that they had never had the procedure (Figure 1). For example, after interviewers explained the Pap test, 32% of the Vietnamese women reported that they had never had one compared with only 9% of women in the general US population.¹⁷

In addition, more Vietnamese were overdue for each of the five procedures than their US counterparts (Figure 2). Data for the Pap test show that 71% of the women surveyed were either overdue for or had never had a Pap test compared with 40% of women in the general US population.¹⁷

Age-eligible respondents whose regular physicians were Vietnamese were significantly less likely than those with non-Vietnamese physicians to have ever received a rectal examination ($P < .05$) or a stool occult blood test ($P < .05$). Women aged 34 or older ($n = 47$) were significantly more likely than younger women to have ever received a breast examination ($P < .05$), as might be expected. There were no significant associations, however, between respondents' screening status and income, type of health insurance, level of education, sex, number of years of residence in the United States, or knowledge of cancer.

Discussion

Despite the growing number of Vietnamese in the United States, there have heretofore been no studies regarding cancer prevention for this population. The data presented here show that among San Francisco Bay Area Vietnamese, cancer screening rates are low and important behavioral risk factors for cancer, especially cigarette smoking among men, are high. In addition, there are gaps in this population's knowledge about cancer and its risk factors.

Caution should be exercised, however, in generalizing from these findings to the population of San Francisco Bay Area Vietnamese as a whole. Although the sampling frame captured major segments of the population, it was not all-inclusive and, therefore, may not be representative. Although households were randomly selected, persons within these households were not. We think it is the more acculturated Vietnamese who more readily agreed to an interview. The direction of bias, therefore, should be toward underestimating the cancer prevention needs of this population.

In addition, the survey response rate (55%) was relatively low. Some respondents failed to keep scheduled interview appointments. Others might have agreed to an interview if they had been offered payment. Even more important in accounting for the low response rate may be the suspicion with which Vietnamese often regard outsiders—even of their own ethnicity. For Vietnamese, who have faced generations of warfare, avoiding strangers who ask questions has become an important survival skill.

All information about behaviors are based on self-reports, which may differ from actual behavior. Most of the findings cited here for US populations are also derived from reported behavior. Thus, the data presented here and the US

data should be comparable. Finally, because of the small sample size, particularly for analyzing subsets of the data, point estimates are subject to sampling error.

Despite these limitations, however, to our knowledge this is the first comprehensive survey of cancer risks and screening among a randomly selected group of Vietnamese refugees in the US.

The most striking finding is the high prevalence of cigarette smoking among Vietnamese men. Although their level of consumption is moderate, it is of concern that nearly all smokers prefer cigarettes high in tar and nicotine, that many report one symptom of nicotine addiction (smoking soon after waking in the morning), and that most feel it would be difficult to quit. On the other hand, the profile of the male smoker that emerges from our data (the more recent, less acculturated refugee) may mean that as this population acculturates, smoking rates will decline and ap-

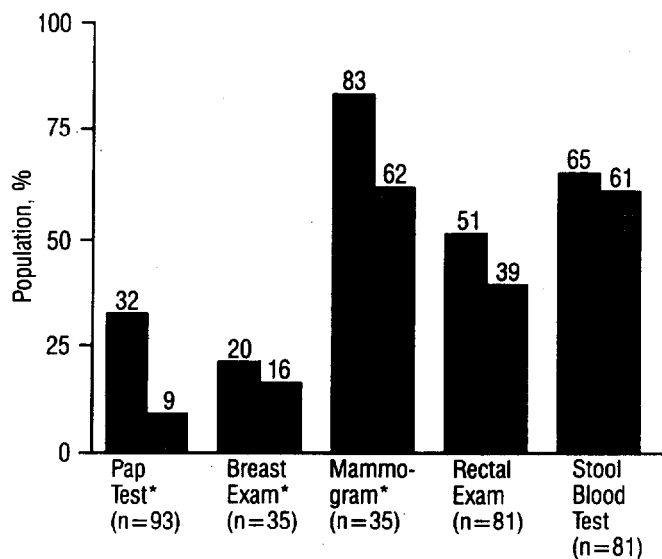


Figure 1.—Percent of population aged 40 years and older never having cancer screening procedures, Vietnamese and United States. ■ = Vietnamese; □ = US (from National Health Interview Survey, unpublished data, 1987); * = women only (Vietnamese Pap smear data for women 21 and older, US Pap smear data for women 18 and older)

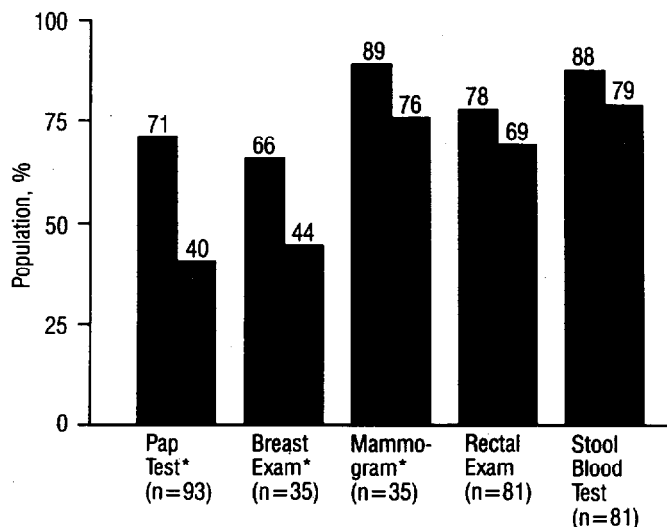


Figure 2.—Percent of population aged 40 years and older overdue (had cancer screening procedures > 1 year ago or never) for cancer screening procedures, Vietnamese and United States. ■ = Vietnamese; □ = US (from National Health Interview Survey, unpublished data, 1987); * = women only (Vietnamese Pap smear data for women 21 and older, US Pap smear data for women 18 and older)

proach those of the general US population. The fact that nearly all male former smokers have quit since arriving in this country adds weight to this supposition. Further research is needed to observe smoking prevalence trends and further characterize smoking behavior in this population.

When compared with the general US and California populations, there is little excess alcohol consumption among Vietnamese. Vietnamese women, in fact, drink at lower rates than their US counterparts. The excess rates of binge drinking reported by Vietnamese men, especially those aged 54 and older, indicate one subgroup that may be at higher risk.

The traditional Vietnamese diet is low in fat and high in fiber.²⁶ Survey respondents, however, reported that they are making food choices that raise the amount of fat and lower the amount of fiber in their diets. The dietary changes shown here may reflect the increased availability of food since arriving in the US. Our study shows, however, that dietary change is greatest in the more rapidly assimilating younger cohorts, which indicates that acculturation may also play a role. Although changes are evident in the diet, we do not know if the increased fat and decreased fiber consumption reaches levels linked to increased cancer morbidity.

Although hepatitis B prevention has become a priority in a number of public health agencies in the United States, the Centers for Disease Control report that only 2% of the Southeast Asian refugees in this country have been immunized.²⁷ In addition, programs that identify high-risk pregnant women who are positive for HBsAg are not always successful in gaining compliance from patients in completing the series of immunizations for their infants.²⁸ Our study, which shows a low awareness of the issue of hepatitis B in the Vietnamese community, indicates that culturally appropriate education about hepatitis B is needed to improve compliance with immunoprophylaxis programs.

We suspect that the low cancer screening rates observed here reflect lower levels of cancer screening in Vietnam. There may also be barriers in this country that reduce access to the health care system and that might contribute to these low rates.

Although nearly half the persons interviewed reported limited English-language proficiency, this factor was not a barrier to health care access as Vietnamese physicians and translators were widely available. Language may pose a barrier to Vietnamese living in other parts of the United States, however, where language-appropriate health care services may not be available.

The use of traditional medical practices did not appear to pose a barrier to seeking appropriate Western medical treatment of symptoms of cancer. The data show that a belief in and the use of both medical systems coexist. More study of actual rather than self-reported behavior is needed to further clarify to what extent traditional medical practices may cause a delay in seeking Western medical treatment.

Our findings indicate that Vietnamese are seeking physicians and that opportunities for screening do exist. Fewer respondents reported no visit to a physician during the past year compared with the US population (12% versus 24%).²⁹ Because most respondents rated their health as "fair" or "poor," however, it is reasonable to assume that visits were not made for preventive care. Finally, respondents had a rate of health insurance coverage comparable with that of the general US population (85% versus 87%).³⁰

Because respondents with Vietnamese physicians had lower rates of rectal examinations and stool occult blood

tests, Vietnamese cultural considerations may pose barriers to some cancer screening. It has been widely reported that Vietnamese patients, especially women, are reluctant to disrobe for a physical examination.^{16,21,31,32} It is possible that, together, Vietnamese patients' resistance and Vietnamese physicians' deference to patients' modesty may create a barrier to the performance of these tests.

The National Cancer Institute has set a goal of reducing cancer mortality in the United States by as much as 50% by the year 2000.³ Minority populations, such as the Vietnamese, should not be left out of cancer prevention efforts. The data presented here should alert the public health community to the cancer prevention needs of the Vietnamese refugee population in this country. High priorities for the Vietnamese should include education about cancer and its risks and prevention, education about hepatitis B and its prevention, and programs to promote smoking cessation, moderation of alcohol intake, dietary modification, and cancer screening.

REFERENCES

1. Bouvier LF, Agresta AJ: The future Asian population of the United States, *In* Fawcett JT, Carino BV (Eds): Pacific Bridges: The New Immigration From Asia and the Pacific Islands. Staten Island, New York, Center for Migration Studies, 1987
2. Schwartz SM, Thomas DB: Estimates of Cancer Incidence Among South-east Asian Refugees in the United States. Presented at the annual meeting of the American Public Health Association, New Orleans, October 1987
3. Greenwald P, Sondik EJ (Eds): Cancer Control Objectives for the Nation: 1985-2000, National Institutes of Health publication No. 86-2820. Bethesda, Md, US Dept of Health and Human Services (DHHS), Public Health Service, National Cancer Institute, Monograph #2, 1986
4. Third Special Report to the US Congress on Alcohol and Health from the Secretary of Health, Education and Welfare. Rockville, Md, US Dept of Health, Education and Welfare, Public Health Service, National Institute on Alcohol Abuse and Alcoholism, 1979
5. Beasley RP, Hwang LY, Lin CC, et al: Hepatocellular carcinoma and hepatitis B virus—A prospective study of 22,707 men in Taiwan. *Lancet* 1981; 2:1129-1133
6. Working Guidelines for Early Cancer Detection: Rationale and Supporting Evidence to Decrease Mortality [Monograph]. Washington, DC, Early Detection Branch, Division of Cancer Prevention and Control, National Cancer Institute, 1987
7. Guidelines for the cancer-related checkup: Recommendations and rationale. CA 1980; 30:4-50
8. Beasley RP, Lee GCY, Roan CH, et al: Prevention of perinatally transmitted hepatitis B virus infections with hepatitis B immune globulin and hepatitis B vaccine. *Lancet* 1983; 2:1099-1102
9. Wong VCW, Ip HMH, Reesink HW, et al: Prevention of the HBsAg carrier state in newborn infants of mothers who are chronic carriers of HBsAg by administration of hepatitis B vaccine and hepatitis B immunoglobulin. *Lancet* 1984; 1:921-926
10. Stevens CE, Toy PT, Tong MJ, et al: Perinatal hepatitis B virus transmission in the United States. *JAMA* 1985; 253:1740-1745
11. Moss AJ, Parsons VL: Current estimates from the National Health Interview Survey—United States, 1985 (US DHHS publication No. [PHS] 86-1588). *Vital Health Stat* [10] 1986; (160):i-iv, 1-182
12. McDowell A, Engel A, Massey JT, et al: Plan and operation of the Second National Health and Nutrition Examination Survey, 1976-1980 (US DHHS publication No. [PHS] 81-1317). *Vital Health Stat* [1] 1981; (15):1-144
13. Remington PL, Smith MY, Williamson DF, et al: Design, characteristics, and usefulness of state-based behavioral risk factor surveillance: 1981-1986. *Public Health Rep* 1988; 103:366-375
14. Huard P, Durand M: *Connaissance du Viet-Nam*. Hanoi, Vietnam, L'Ecole Française d'Extreme Orient, 1954
15. Eytton J, Neuwirth G: Cross-cultural validity: Ethnocentrism in health studies with special reference to the Vietnamese. *Soc Sci Med* 1984; 18:447-453
16. Rumbaut RG: Mental health and the refugee experience: A comparative study of Southeast Asian refugees, *In* Owan TC, Bliatout B, Lin KM, et al (Eds): Southeast Asian Mental Health: Treatment, Prevention, Services, Training, and Research, US DHHS publication No. (ADM) 85-1399. Washington, DC, Dept of Health and Human Services, 1985
17. Centers for Disease Control (CDC): Provisional estimates from the National Health Interview Survey supplement on cancer control—United States, January-March, 1987. *MMWR* 1988; 37:417-425
18. Hoang GN, Erickson RV: Cultural barriers to effective medical care among Indochinese patients. *Annu Rev Med* 1985; 36:229-239
19. Nguyen D: Culture shock—A review of Vietnamese culture and its concepts of health and disease. *West J Med* 1985; 142:409-412
20. Marr DG: Vietnamese attitudes regarding illness and healing, *In* Owen NG (Ed): *Death and Disease in Southeast Asia*. Singapore, Oxford University Press, 1987, pp 162-186
21. Tung TM: Indochinese Patients: Cultural Aspects of the Medical and Psychiatric Care of Indochinese Refugees. Falls Church, Va, Action for South East Asians, Inc, 1980

22. Pierce JP, Fiore M, Novotny T, et al: Trends in cigarette smoking in the United States: Projections to the year 2000. JAMA 1989; 261:61-65
23. The Health Consequences of Smoking: A Report of the Surgeon General. Washington, DC, US DHHS. Public Health Service, Office of Smoking and Health, 1988
24. Marin G, Perez-Stable EJ, Marin BV: Cigarette smoking among San Francisco Hispanics: The role of acculturation and gender. Am J Public Health 1989; 79:196-199
25. CDC: Drinking and driving and binge drinking in selected states, 1982 and 1985—The Behavioral Risk Factor Surveys. MMWR 1987; 35:788-791
26. Carlson E, Kipps M, Thomson J: Feeding the Vietnamese in the UK and the rationale behind their food habits. Proc Nutr Soc 1982; 41:229-237
27. Marwick C: Challenge for immunization programs: Protect preschool, postschool generations. JAMA 1988; 260:1675-1676
28. Klonz KC: A program to provide hepatitis B immunoprophylaxis to infants born to HBsAg-positive Asian and Pacific Island women. West J Med 1987; 146:195-199
29. Health care coverage by age, sex, race and family income: United States, 1986. Adv Data Vital Health Stat No. 139, DHHS publication No. (PHS) 87-1250. Hyattsville, Md, National Center for Health Statistics, 1987
30. Current estimates from the National Health Interview Survey United States, 1987, US DHHS publication No. (PHS) 88-1594. Vital Health Stat [10] 1988; (166)
31. Muecke MA: Caring for Southeast Asian refugee patients in the USA. Am J Public Health 1983; 73:431-438
32. Grizzel S, Savale J, Scott P, et al: Indochinese refugees have vastly different views and use of medical care system. Mich Med 1980 Dec, pp 624-628