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PACIFIC ISLAND CANCER REGISTRY UPDATE

INTRODUCTION

Reporting of cancer cases to a registry is a basic tool in the study of cancer prevention. It enables health professionals to determine the extent of cancer in different areas and ethnic groups as well as possible causes and risk factors. It also allows effective allocation of resources for cancer programmes.

The first cancer registries in the Pacific were established in Papua New Guinea in 1958 and Fiji in 1965. Since the 1970s, several other registries have been developed to cover the countries and territories of American Samoa, Fiji, French Polynesia, Guam and New Caledonia. In other countries cancer registration is done through visiting registrars and pathologists.

Many of the Pacific Island countries do not yet have permanent cancer registries at a local level. It was therefore recommended at the Eighth Regional Conference of Permanent Heads of Health Services in 1979 that a uniform cancer reporting system for the region be developed by the South Pacific Commission. The establishment of a regional cancer registry within SPC was approved by the South Pacific Conference in 1980 and included in the 1981 SPC work programme. The Pacific Islands Cancer Registry (PICR) was established in collaboration with the University of Southern California and the University of Hawaii.

Cancer registration in the Pacific needs to be a regional collaborative activity since many patients and/or pathological samples are referred to neighbouring countries for diagnosis and are registered in overseas registries of Australia, New Zealand and the United States. In the past ten years cancer registrars from California, Hawaii and New Zealand have visited Pacific Island countries for the SPC to search, document and confirm past cases of cancer.

Retrospective data were also collected from registries in New Zealand, Australia and the United States.

Extra-budgetary funding was granted by the New Zealand Medical Research Council, the American Cancer Society (Hawaii) and the Charles Judd

Memorial Fund (Queens Medical Center of Hawaii) to support the travel expenses of the registrars to almost all Island countries in 1989, with Fiji, French Polynesia and New Caledonia being visited in early 1990. Data entry and analysis were performed by SPC and the University of Southern California.

Collaboration with the WHO International Agency for Research on Cancer (IARC) was strengthened by the visit of an IARC computer analyst during the SPC epidemiology workshop in April 1989. Software for cancer registration on microcomputers (Canreg) was demonstrated and installed in 1989 in Fiji, French Polynesia, Guam, New Caledonia, Northern Marianas, Palau and Vanuatu. This software allows data entry checks and the production of crude age-specific and age-adjusted incidence rates.

RECENT REPORTS FROM THE PACIFIC ISLAND CANCER REGISTRY (PICR)

Recent registry reports (up to 1987-88) from American Samoa, Cook Islands, Fiji, French Polynesia, Guam and New Caledonia have been analysed by the University of Southern California. A summary of these results is shown in Figures 1 and 2.

There are obvious difficulties in attempting to obtain good descriptive cancer data on the numerous populations scattered throughout the Pacific Islands. Because of the small number of cancer cases in some of the islands, cancer rates will not give an accurate picture unless data collection continues for a long time. In addition, complete collection of cancer cases is not possible in certain areas, but clearly this is a problem common to all registries world-wide.

It is suspected that cancer cases in both French Polynesia and American Samoa were under-reported since the age-adjusted incidence rates (AAIR) are low. It is likely that some cases of cancer amongst American Samoan residents are diagnosed and treated in Hawaii or California and

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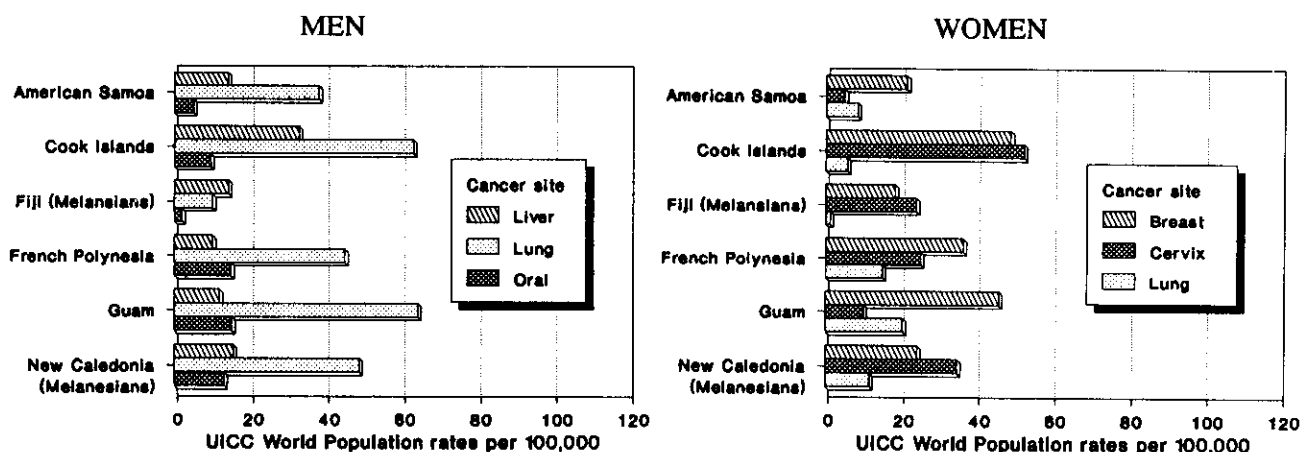
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therefore not reported to the registry in American Samoa. In the French Polynesia, the registry has only been able to collect information on cancer from all sources (private, public, military) since 1988.

The AAIRs for the Cook Islands are high, probably because of the difficulty in distinguishing Cook Islanders who reside in New Zealand from those who only go there for

diagnosis and treatment. These rates could be inflated by 20 to 25 per cent, although this is difficult to ascertain in the absence of specific data.

The graphs clearly demonstrate the unusually low rates of many cancers in Fiji, although the registry only accounts for pathologically confirmed cases. The extent of clinically diagnosed cases is currently under investigation at the Fiji cancer registry.



INCIDENCE RATES FOR CANCER

Note: Estimated age-adjusted rates

Source: Brian E. Henderson, University of Southern California Comprehensive Cancer Center.

Fragmentary cancer registration data have been received from the Federated States of Micronesia, Kiribati, Marshall Islands, Northern Marianas, Palau, Papua New Guinea, Solomon Islands, Tonga, Vanuatu, Wallis and Futuna and Western Samoa.

PACIFIC CANCER FILES

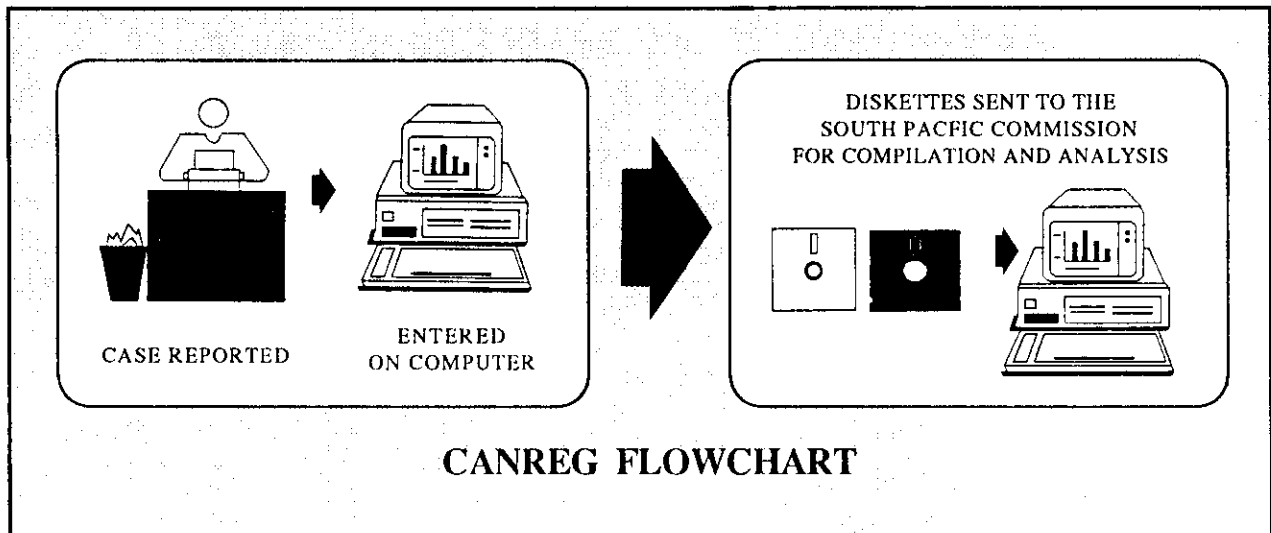
Cancer data collected so far have allowed for some useful comparisons amongst the different island and ethnic group populations. It is now possible to draw general conclusions about some of the cancer problems in the Pacific Islands. For example, the findings of the Registry show excessive incidence rates for several tumors:

- Lung cancer accounts for approximately 30 per cent of all cancers in men from American Samoa, Cook Islands, French Polynesia, Guam and New Caledonian Melanesians. Up

to 80 per cent of the lung cancers are due to smoking, which is common in these communities. Aggravating factors include starting to smoke at an early age, greater inhalation, high concentration of carcinogens in the tobacco smoke, or perhaps less resistance to cancer because of a low vegetable and fruit consumption.

- Oral cancer is strongly associated with betel nut chewing. A study in the Solomon Islands found the highest risk of oral cancer in users who regularly used lime when chewing betel nut. The practice of betel nut chewing can be found in Papua New Guinea, Solomon Islands, Guam and elsewhere in Micronesia (Northern Marianas, Palau and FSM) and probably accounts for most oral cancers in those areas as well. High oral cancer rates can also be caused by excessive alcoholic intake or smoking, which are common in most of the Island urban centres.

- **Oesophageal cancer** rates were elevated in Melanesian men of New Caledonia and Polynesian men in French Polynesia. These high rates are probably related to the excessive consumption of alcoholic beverages and tobacco in these Territories.
- **Liver cancer** accounts for about 10 per cent of all cancers in Pacific Islanders. There is a strong association between chronic hepatitis B infection (especially at a young age) and liver cancer. In the past few years a number of Island countries have started mass immunisation of newborns against hepatitis B to prevent chronic liver diseases and cancer. However, the effect of hepatitis B virus alone cannot explain variations amongst countries and ethnic groups. Other factors, such as high alcohol intake, drugs, industrial chemicals and the general environment, may also be significant.
- **Cervical cancer** accounts for approximately 20-30 per cent of all cancers in women in the Pacific. Cervical cancer is strongly associated with sexually transmitted diseases (STDs) such as human papilloma virus infection. Promotion of safe behaviour to prevent AIDS and STDs will also help in preventing most cervical cancer. Morbidity and mortality from cervical cancer are entirely preventable by Pap smear screening and early detection.

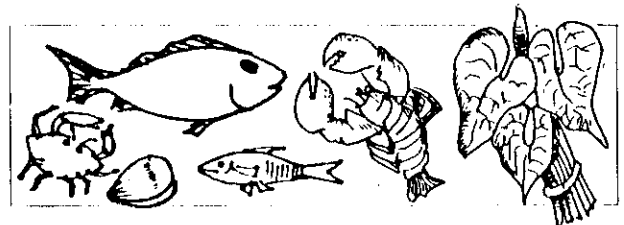


PICR CANCER RESEARCH

SPC began cancer studies in the 1960s with *ad hoc* mail surveys. Specific research was conducted in New Caledonia, where the impact of the nickel industry on respiratory cancer was studied in the late 1970s. This was followed by a ten-year longitudinal study conducted by INSERM, the French national health research institute, which failed to prove a higher incidence of respiratory cancers amongst nickel workers. A review of cancer mortality was also performed in the Solomon Islands in 1982.

A regional survey of lifestyle risk factors for cancer was started in 1988 in Rarotonga, Cook Islands and continued in Fiji in July 1989, with further studies planned in French Polynesia, Guam and New Caledonia. In these studies particular emphasis is placed on dietary habits, alcohol consumption, cigarette smoking and exercise levels; specialised biological testing is

also conducted for vitamins, hormones, hepatitis B markers, etc. SPC *Information Circular No. 128 (Health 3/89)* provides an overview of this survey.

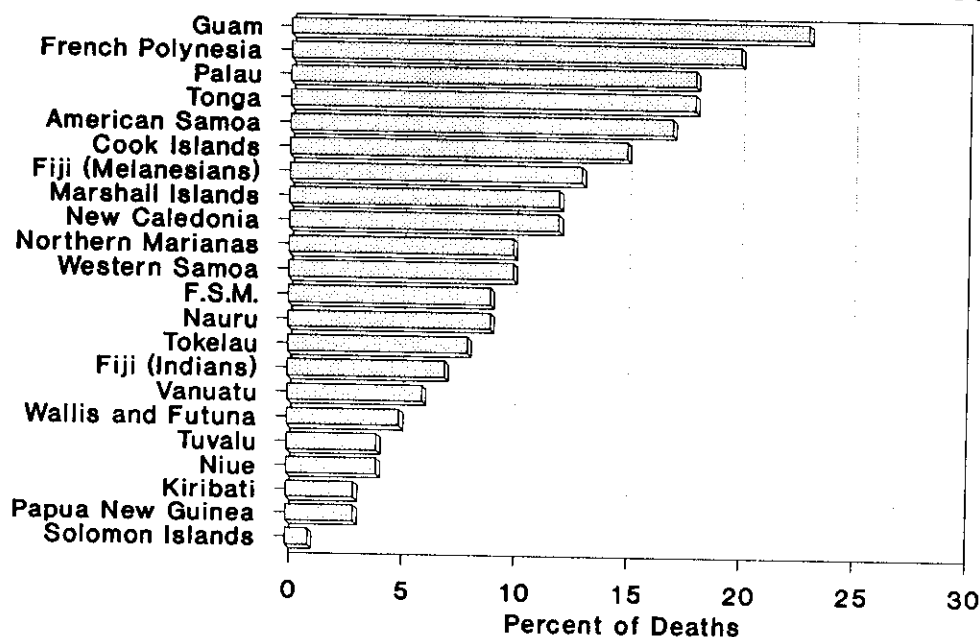


The SPC Pacific Island Food Composition Programme (PIFCP) is producing and distributing data on the nutrient content of commonly eaten Pacific foods such as green leaves, roots, fruits and seafood. The food composition data will be used to determine possible dietary links in the prevention of cancer in the Pacific Islands.

REGIONAL INFORMATION ON CANCER

- **Travelling registrar visits:** The PICR will be sending consultants to visit the Cook Islands, Fiji and Vanuatu, to assist these countries in their cancer registry activities. These visits will take place in the next few months using consultant registrars from Australia, New Caledonia and New Zealand.
- **WHO cancer course:** The International Agency for Research on Cancer, in collaboration with the WHO Regional Office for the Western Pacific, is organising a course on epidemiological methods in cancer control. This course will be held in Manila from 15 to 26 October 1990. Contact the WHO Regional Office of the Western Pacific for further information and application forms.
- **Regional survey on lifestyle risk factors for cancer:** The survey in French Polynesia was scheduled to start in mid-June 1990. Field work and analysis will be performed by PICR consultants from the University of Hawaii Cancer Research Center.

PERCENTAGE OF ALL DEATHS FROM CANCER SOUTH PACIFIC COMMISSION CANCER REGISTRY 1979-83



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