

全球兒童癌症概況*

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** Charles Stiller 是牛津兒童癌症研究組 (CCRG) 的流行病學家。CCRG 曾參與一系列的兒童癌症國際研究，且與英國兒童癌病研究組保持聯繫。

兒童癌症是罕見疾病，各地的數字只有輕微的差別。在擁有可靠數據的國家，每年在一百萬名15歲以下的兒童中，有80至160人患上癌症。孩童由出生成長至15歲，患有癌症的機會，相等於每420至830名兒童，就有一人染病。

西方國家15歲以下病童佔總患癌(成人及兒童)人數的0.5%，即每200名患者，只有一位是小孩。其他地區癌症兒童所佔的比率較高，例如印度和部分拉丁美洲地區是3%，非洲為4至5%，中東則高達10%。這些數字有差別的原因有二：首先，兒童佔發展中國家人口的大多數。例如，兒童佔了波多黎各人口的三分之一，阿曼有近半人口是兒童；而英國的兒童只佔五分之一。除了成年人口較少，在發展中國家患癌的機會亦較低。在波多黎各，75歲患癌的風險為20%；阿曼是10%，而英國則高至30%。

雖然整體數字維持在穩定水平，但是不同地域因素與某種兒童癌症形成有密切關係。白血病在工業化國家最普遍，佔總數三分之一，而腦癌則佔五分之一至四分之一之間。幾項主要的兒童胚胎瘤，如神經母細胞瘤、視網膜細胞瘤、腎母細胞瘤和肝原細胞瘤，另佔15%。跟淋巴瘤(包括何杰金氏淋巴瘤和非何杰金氏淋巴瘤)一樣，軟組織肉瘤及骨瘤合共約佔10%。

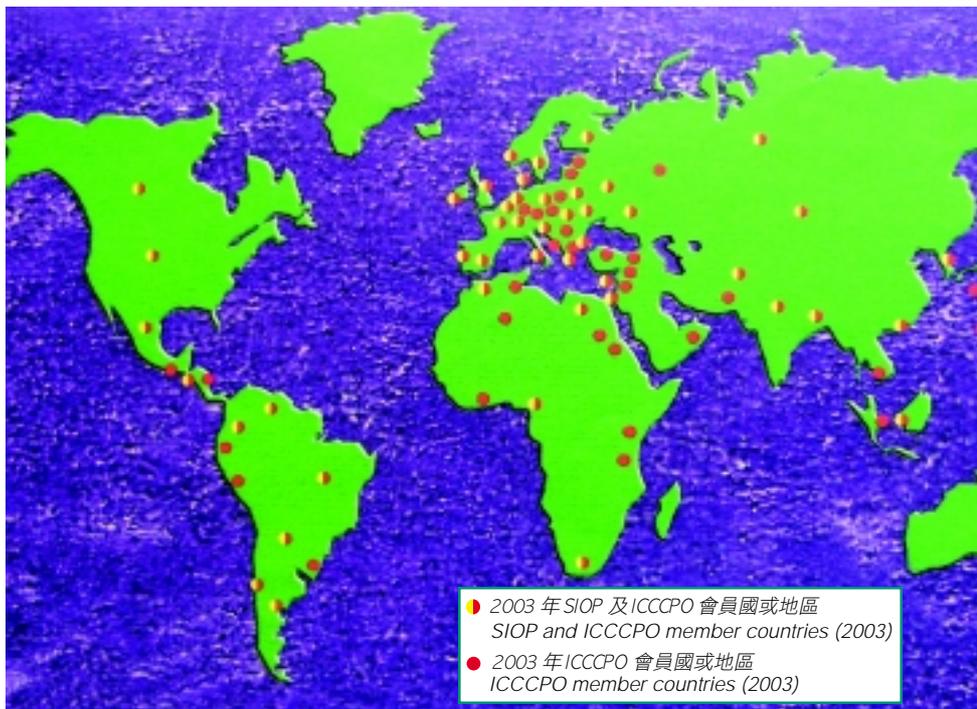
在發展中國家，白血病並不普遍；尤其是在非洲的撒哈拉地區，數字只是西方國家的四分之一。不知道是否該地區風險較低，還是缺乏檢查神經系統的設備以致無法斷症，腦瘤數字亦比工業化國家為低。淋巴瘤在發展中國家則較為常見。Burkitt 淋巴瘤是熱帶非洲和新畿內亞最普遍的兒童癌症，佔總數的四分之一，原因是當地的瘧疾感染率偏高。如果當地能遏止瘧疾傳播，相信患上此病的兒童

將會大幅減少。

卡波濟氏肉瘤是部分愛滋病肆虐的非洲中部及南部國家最常見的兒童癌症，過半的烏干達癌症兒童患上卡波濟氏肉瘤。若能打擊愛滋病的蔓延，兒童患上此症的機會亦會相對減少。

肝癌患者多數是成年人，很少兒童患上肝癌。在乙型肝炎成為風土病的國家，較多兒童患上肝癌。台灣推行大型乙型肝炎防疫計劃，已大大降低當地兒童肝癌的數字。預計即將展開這項計劃的國家，亦會出現類似的緩減。

各地的兒童癌症存活率差別很大，通常跟國家的富裕程度有密切關係；最富裕的西方國家存活率最高。由於缺乏醫療設備、無法負擔醫療費用、及未能及早斷症，貧窮國家的存活率最低。可是，發展中國家接受治療的兒童，存活率跟西方國家的數字相近。多份報告指出，幾個國家的急性淋巴細胞性白血病及何杰金氏淋巴瘤的五年存活率，分別超過70%及85%。最近有研究指出，即使在非常貧窮及資源有限的國家——馬拉維，仍有超過半數患上 Burkitt 淋巴瘤的兒童治愈。



Childhood Cancer — A Global Perspective*

Charles Stiller**

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Childhood cancer is rare everywhere and the total incidence varies remarkably little. In nearly all countries with reliable cancer registry data, there are between 80 and 160 new cases of cancer per million children aged under 15 each year. This equivalent to a risk of roughly one in 830 to one in 420 that a child will develop cancer in the first 15 years of life.

In western industrialised countries, children under 15 only account for about 0.5 per cent (one in 200) of all cancers. Elsewhere, larger proportions of cancer patients are children. In India and parts of Latin America, about 3 per cent of all cancers are diagnosed before age 15, in America the figure is around 4.5 per cent and in some Middle Eastern populations as many as 10 per cent of all cancers occur in children. They are two main reasons for this variation. Children from a larger proportion of the total population in most developing countries — for example, about a third of the population of Costa Rica and nearly half of the population of Oman is aged under 15, compared with a fifth of that of the UK. Not only are there proportionally fewer adults in developing countries, they are also less likely to get cancer; the risk of developing cancer by age 75 is nearly 20 per cent in Costa Rica and only 10 per cent in Oman, compared with almost 30 per cent in the UK.

Although the total incidence is fairly constant, there are important geographical differences in the occurrence of particular types of childhood cancer. In industrialized countries, leukaemia is the most frequent, accounting for about a third of all cases, and between a quarter and a fifth are brain tumours. The main embryonal tumours of childhood — neuroblastoma, retinoblastoma, Wilms' tumour and hepatoblastoma — account for a further 15%. Sarcomas of soft tissue and bone together account for about 10 per cent, as do lymphomas (Hodgkin's disease and non-Hodgkin's combined).

In developing countries, leukaemia tends to be less frequent, especially in sub-Saharan Africa, where its incidence is only about a quarter of that in western countries. Brain tumours are also less frequent but it is not known how much is due to lower risk rather than failure to diagnose

tumours in areas where neurological facilities are scarce or non-existent. By contrast, lymphomas are more frequent in developing countries. Most strikingly, Burkitt's lymphoma is the commonest childhood tumour in much of tropical Africa and in Papua New Guinea, accounting for about a quarter of all childhood cancer. The high incidence in this region results from infection with high levels of malaria. If malaria were ever to be eradicated, the incidence of Burkitt's lymphoma should fall dramatically.

In parts of central and southern Africa most seriously affected by AIDS epidemic, Kaposi's sarcoma has become the most frequent childhood cancer. In Uganda, more than half of all childhood cancers are Kaposi's sarcoma. If the AIDS epidemic abates, Kaposi's sarcoma would be expected once again to become relatively rare in children.

Liver carcinoma is mainly a disease of adults, and rarely occurs in children anywhere in the world; however, it is more frequent where hepatitis B is endemic. A mass immunization programme against hepatitis B in Taiwan has led to a sharp fall in the incidence of childhood liver carcinoma, and a similar reduction should appear in other countries which have more recently started hepatitis B immunization.

The probability of survival from childhood cancer varies widely between countries. In general, it is closely related to levels of affluence, with the highest survival rates in the wealthiest western countries, intermediate survival in middle-income countries including Eastern Europe, and lowest survival in the poorest countries. This is partly because of the expense of treatment and shortage of medical facilities and partly because many more children in poorer countries are only diagnosed when their disease has reached a more advanced stage. Survival rates for children treated at specialist centres in developing countries, however, are often not much lower than in western countries. For example, there are reports of five-year survival of 70 per cent or more from Hodgkin's disease in several countries. Recent studies in Malawi have shown that, even in the poorest countries of sub-Saharan Africa with very limited resources, it is possible to cure more than half the children with Burkitt's lymphoma.

