



FIGURE 3a The route of the Long Safari, Burkitt's 'holiday with a purpose'.

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FIGURE 3b Burkitt's map of Africa showing the distribution of Burkitt Lymphoma cases identified during 'the Long Safari'.

A COMBINED MEDICAL AND SURGICAL STAFF MEETING
will be held
on Wednesday, 22nd March, 1961 at 5.15 p.m.
IN THE COURTAULD LECTURE THEATRE.

Mr. D.P.Burkitt from Makerere College,
Uganda will talk on "The Commonest Children's
Cancer in Tropical Africa. A Hitherto
unrecognised Syndrome".

FIGURE 5 The notice announcing Burkitt's lecture at the Middlesex Hospital in 1961

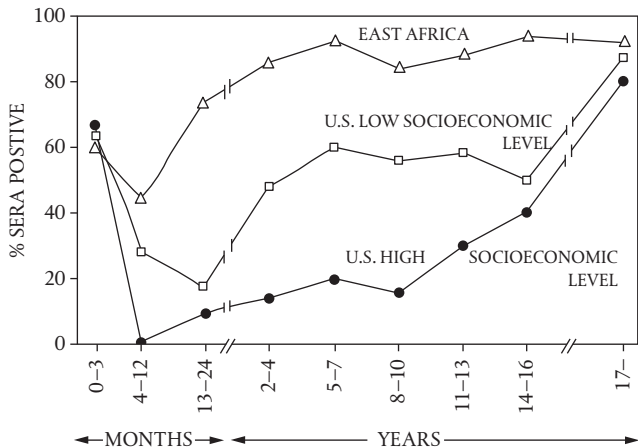


FIGURE 9 Chart showing the age of acquisition of EBV antibodies in East Africa and the US

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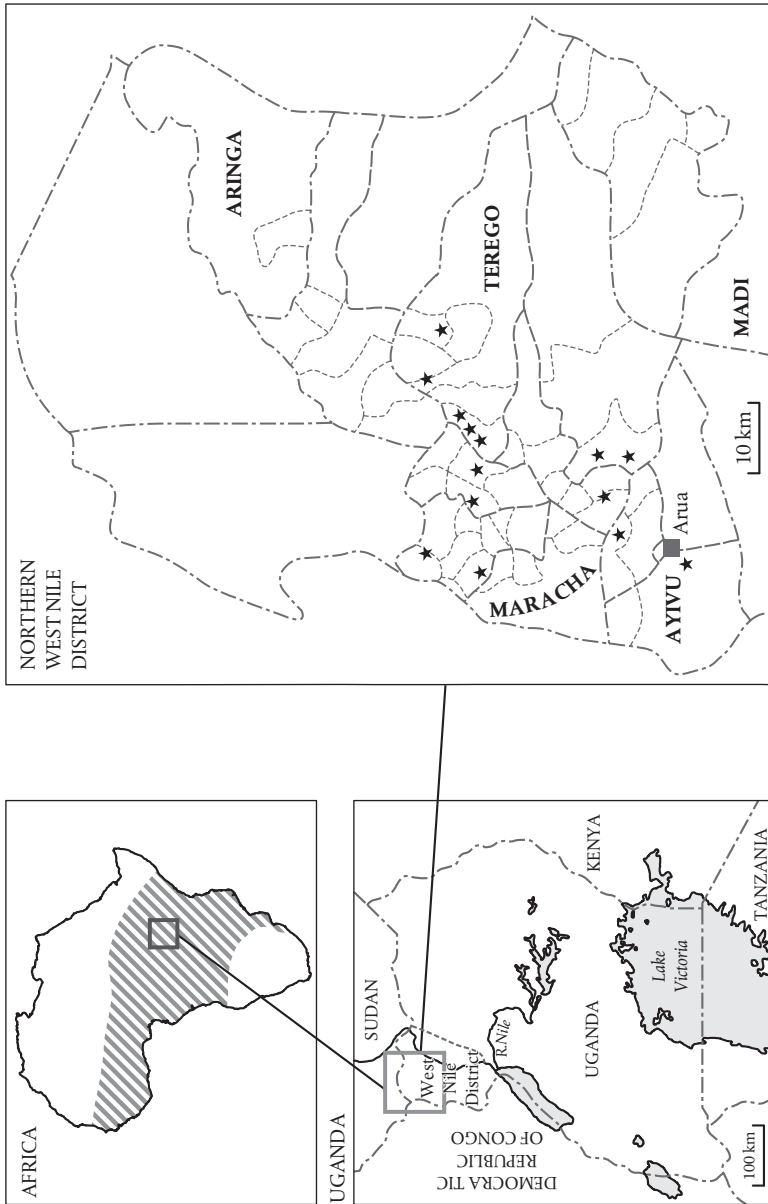


FIGURE 11 Maps showing the recruitment area for the EBV epidemiology study in West Nile District, Uganda

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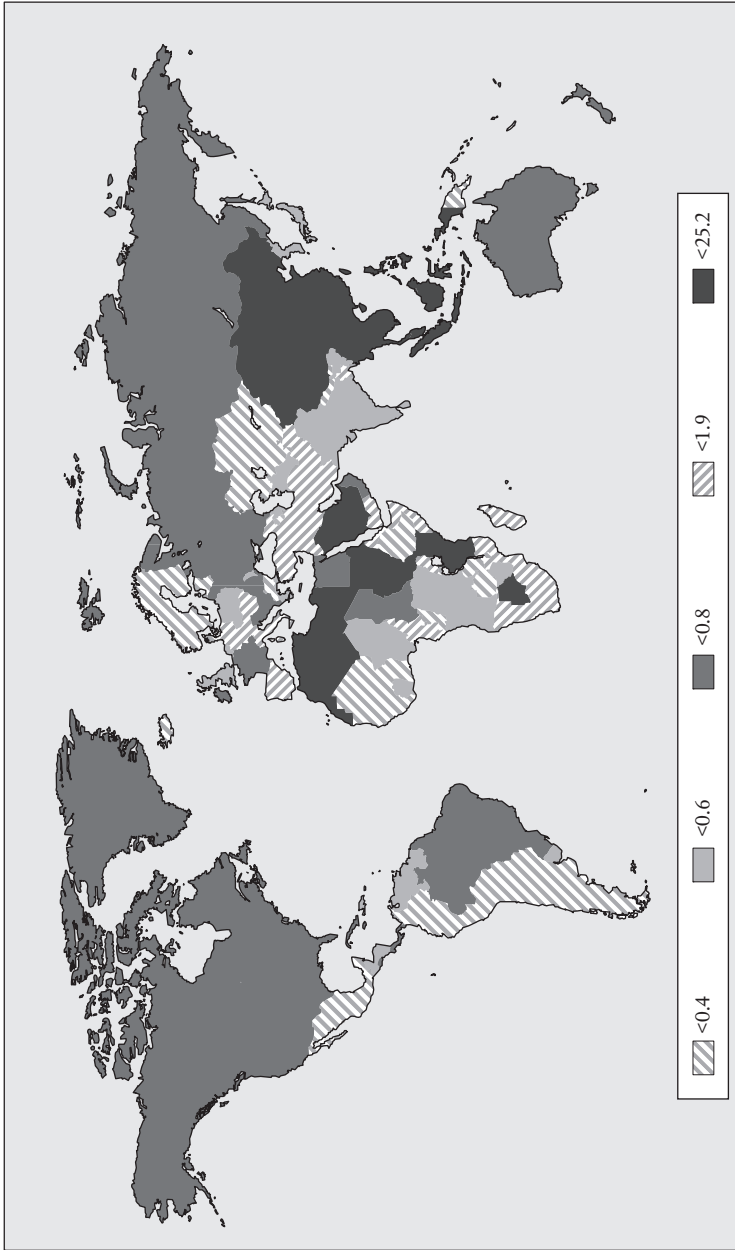
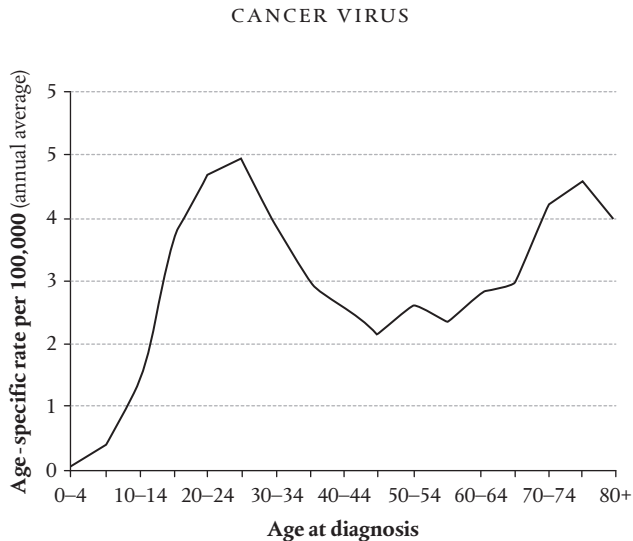


FIGURE 13 — World map showing the incidence of nasopharyngeal carcinoma. (Note that this Map uses disease incidence from national statistics and so, for China, does not show the large variation of incidence within the country, from low in the north to high in the south.)



Source: Cancer Care Ontario (Ontario Cancer Registry, 2006)

FIGURE 14 Chart showing the age-related incidence of Hodgkin Lymphoma as seen in the developed world

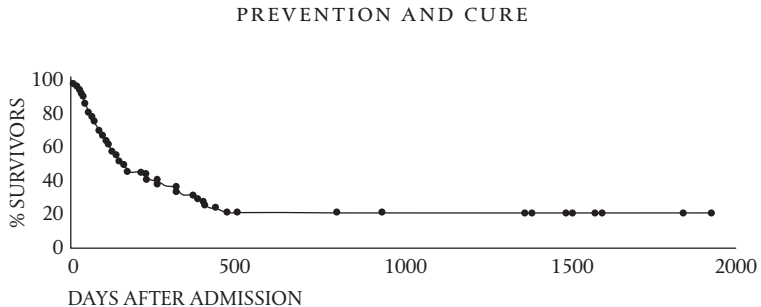


FIGURE 16 Chart showing the survival curve for Burkitt Lymphoma patients treated by Burkitt and colleagues.

PREVENTION AND CURE

TABLE 1 Estimated new cases of EBV-associated cancers worldwide per year

| Cancer | Number of cases | Number of cases attributable to EBV |
|-------------------|-----------------|-------------------------------------|
| Burkitt lymphoma: | | |
| Sporadic | 400 | 100 |
| Endemic | 7800 | 6600 |
| Gastric carcinoma | 933,900 | 84,050 |
| Hodgkin lymphoma | 62,400 | 28,600 |
| NPC | 80,000 | 78,100 |
| Total | | 197,450 |

From Cohen et al., Science Translational Medicine 3(107): 1–3. 2011. Reprinted with permission from AAAS.

TIME LINE OF KEY DISCOVERIES RELATING TO EPSTEIN-BARR VIRUS

1958—Denis Burkitt described a tumour in African children now known as Burkitt Lymphoma. He went on to show that the tumour incidence was geographically restricted to regions with high temperature and rainfall. This suggested that, like malaria and yellow fever, the tumour was caused by an infectious agent with an insect vector. (*Chapter 1*)

1964—Anthony Epstein and Yvonne Barr found a ‘new’ virus in Burkitt lymphoma cells now known as Epstein-Barr virus or EBV. Subsequent work showed that almost all cases of African Burkitt lymphoma contain the virus genome. (*Chapters 2 and 4*)

1966—First evidence of a link between EBV and nasopharyngeal carcinoma (NPC), a tumour located at the back of the nose and very common in southern China. It is now known that every cell in 100% of NPC tumours worldwide contain the virus genome. (*Chapter 5*)

1968—EBV infection shown to cause infectious mononucleosis (glandular fever), a common illness in adolescents and young adults. The virus is spread in saliva and so the disease is commonly known as ‘the kissing disease’. (*Chapter 3*)

1975—EBV infection shown to cause a rare, inherited, fatal form of infectious mononucleosis in boys, now called x-linked lymphoproliferative syndrome. (*Chapter 6*)

1978—Large field studies in Africa showed that children developing Burkitt lymphoma could be distinguished from control children by very high levels of antibodies to EBV present for several years before the tumour appeared. (*Chapter 4*)

1980—EBV found to cause lymphoma in recipients of organ transplants who are immune suppressed to prevent organ rejection. (*Chapter 6*)

1984—The complete EBV genome sequenced. This led to identification of EBV ‘oncogenes’ - virus genes that drive cells to grow and, on rare occasions, to cause cancer. (*Chapters 6 and 9*)

1987—EBV found in Hodgkin Lymphoma. It is now known that around 50% of Hodgkin Lymphoma cases globally are associated with EBV. (*Chapter 7*)

1988–1990—EBV found in rare tumours of T lymphocytes and of natural killer cells, most often seen in South-East Asian people. (*Chapter 7*)

1995—First successful use of immune T lymphocytes to treat an EBV-associated cancer, the lymphoma appearing in immune-suppressed transplant recipients. (*Chapter 8*)

TIME LINE

2007—First control trials of an EBV vaccine in humans. This research is still ongoing using new animal models to determine the optimal strategy for prevention of EBV-related diseases. (*Chapter 8*)

2000–2010—Mounting evidence of a link between EBV infection and multiple sclerosis. (*Chapter 9*)