

## DISCUSSION

### Trends in cancer incidence rates

The most common cancers in the Transkei region are oesophageal, cervical, breast, lung, prostate and liver. OC ranked the highest in both males and females. Centane had the highest incidence rates in both males and females. These rates have been consistently high for 45 years since the first report by Rose (1973).

The overall incidence rates for all cancers in males and females during the period 1996-2000, were 44.8 per 100 000 and 46.5 per 100 000, respectively, whereas during 1991-1995 period (Somdyala, *et al.*, 2003) the rates were 63.5 per 100 000 in males and 51.2 per 100 000 in females. The overall incidence rates for OC in males and females during the period 1996-2000 were 31.2 per 100 000 and 21.8 per 100 000, respectively, whereas during 1991-1995, the rates were 76.6 per 100 000 and 36.5 per 100 000, males and females, respectively. There is an apparent decrease in the incidence rates of OC that was more marked in males when compared with rates for the period 1991-1995 (Parkin, *et al.*, 2003).

OC rates in the Transkei region are much higher when compared with the OC rates in South Africa as reported by the NCR during the period 1993-1995. Although OC in black males was ranked the highest (Sitas, *et al.*, 1998) the national ASR (14.3 per 100 000) was two to three times lower than the current rates in Centane, Bizana and Lusikisiki districts. In Zimbabwe, OC was also amongst the most common cancers in black males during the period 1992-1997 (Chokunonga, *et al.*, 2000) with the ASR of 6.4 per 100 000. OC is ranked the highest in countries such as Iran, China and amongst Black Americans (Parkin, *et al.*, 1997). The aetiology is not clear as these countries have different cultures. Smoking, alcohol consumption, dietary deficiencies and fungal toxins are some of the risk factors that have been found to be associated with the development of OC.

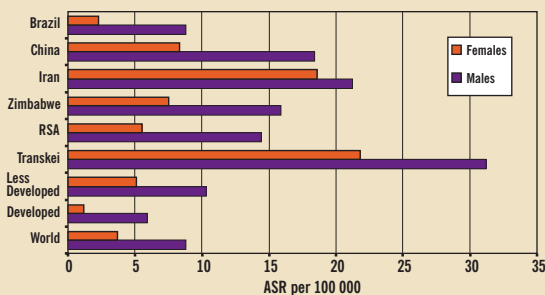


Figure 18. International comparison of OC, by sex

Cervical cancer was ranked the second with overall ASR of 15.2 per 100 000 whereas, in the world it ranks the seventh (Parkin, *et al.*, 1999). Lusikisiki (27.2 per 100 000) and Butterworth (21.9 per 100 000) districts had the highest incidence rates. Almost the same incidence rates were observed in Lusikisiki (28.0 per 100 000) during the period 1991-1995. Incidence rates increased by three fold in Butterworth when compared with the 1991-1995 report (Somdyala, *et al.*, 2003). Cervical cancer is one of the common cancers in developing countries such as India, Brazil and African countries (Sitas, *et al.*, 1998). In South Africa, the incidence rates are very high in black females when compared with white females (Sitas, *et al.*, 1998).

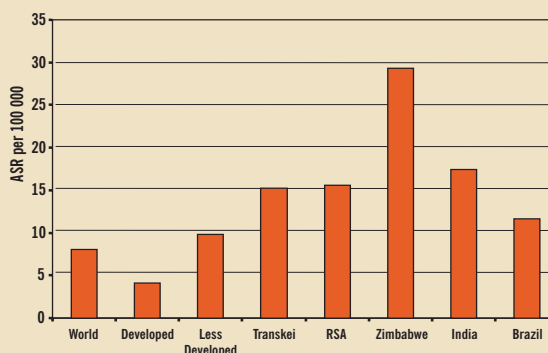


Figure 19. International comparison of cervical cancer

Patterns in breast cancer are changing and gradually increasing when compared with 1985-1990 (Makaula, *et al.*, 1996) and 1991-1995 (Somdyala, *et al.*, 2003). The incidence rates range between 5.8 per 100 000 and 10.5 per 100 000. These rates are much lower than those in the NCR (13.2 per 100 000) and elsewhere in the world. This is one of the less common cancers in black females in South Africa though black American females have very high incidence rates (Sitas, *et al.*, 1998). High incidence



rates of breast cancer are common in white females in South Africa (Sitas, *et al*, 1998).



Figure 20. International comparison of breast cancer

Liver cancer is typically a problem of developing countries. Like other cancers, several factors are responsible for the induction of liver (hepatocellular) cancer amongst which are alcohol induced cirrhosis, hepatitis B and C viruses and the mycotoxin aflatoxin B<sub>1</sub>. (Sitas and Norman, 1995).

This cancer was very low in females when compared to males in the four districts. Liver cancer incidence rates were also low when compared with other countries like Thailand where it is ranked the highest in the world (Deerasamee, *et al*, 2001). Other countries in Africa such as Gambia (36.0 per 100 000) and Harare in Zimbabwe (34.6 per 100 000) have very high incidence rates of liver cancer, especially in males (Sitas, *et al*, 1998).

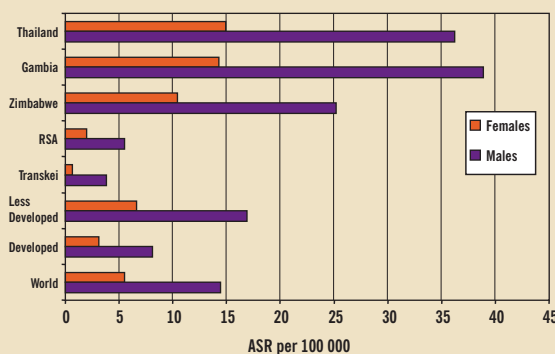


Figure 21. International comparison of liver cancer, by sex

Lung cancer had low incidence rates in both males (6.2 per 100 000) and females (1.3 per 100 000) in the four districts. Relatively low rates were also

observed by the NCR (11.7 per 100 000) during the period 1993-1995 (Sitas, *et al*, 1998). World incidence rates are very high especially in the United Kingdom (69.7 per 100 000) as well as in some African countries such as Harare in Zimbabwe (17.4 per 100 000) (Ferlay, *et al*, 2000). In West African countries such as Mali (4.8 per 100 000) and Uganda (1.5 per 100 000), lung cancer incidence rates are very low (Sitas, *et al*, 1998).

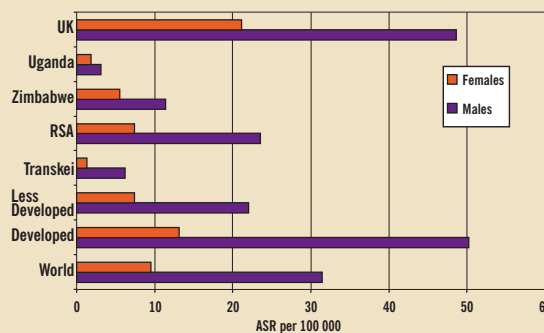


Figure 22. International comparison of lung cancer, by sex

Prostate cancer was amongst the common cancers in four districts with the ASR of 3.6 per 100 000. Butterworth had the highest incidence rates (7.4 per 100 000) when compared with other districts. The risk factors for prostate cancer are unknown but appear to be related to dietary factors such as a high intake of fat, meat and eggs whereas vegetables appear to be protective.

Since Butterworth is a more industrialised district with an urbanised community, this may account for the higher risk of this cancer. In South Africa, the prostate cancer incidence rate is higher in white males (57.8 per 100 000) than in black males (13.0 per 100 000) (Sitas, *et al*, 1998). In developed countries the incidence is more than five times higher than in developing countries (40.1 vs 7.6 per 100 000) (Parkin, *et al*, 1999). One possible reason is that prostate specific antigen (PSA) testing is more readily available in developed than in developing countries.

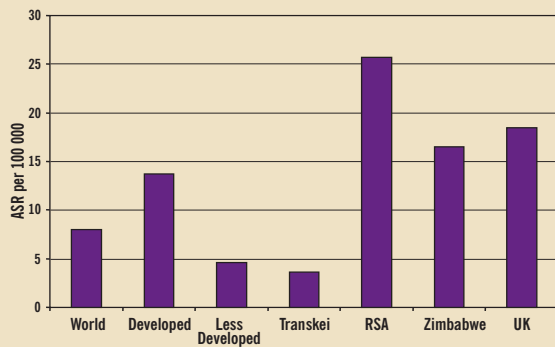


Figure 23. International comparison of prostate cancer

### Problems and limitations that were experienced in carrying out the study

The number of cases in the four districts has decreased when compared to the previous reports, 1985-1990 (Makaula, *et al.*, 1996) and 1991-1995 (Somdyala, *et al.*, 2003). The reasons for the decrease are assumed to be due to decline in health care delivery services, poor record keeping which resulted to under reporting and some cancers might have been missed by the registry because of various reasons of which some are mentioned below.

- Childhood cancers and cancers of liver and prostate could be under reported because of the scarcity of specialists such as paediatricians, pathologists, oncologists and relevant facilities in the rural hospitals. Clinicians might not be keen to do biopsies at an advanced stage of the cancer

as no treatment is available. However, pathologists in Umtata General, which is the regional referral hospital and Frere hospital, the only hospital with oncology services in the region are providing an invaluable service to confirm diagnosis.

- Record keeping in the rural collaborating hospitals is generally poor because manual filing is still used and sometimes not properly done. This makes retrieval of discharged patients' records sometimes impossible.
- Population coverage for 1996 is not satisfactory with specific reference to Butterworth hospital data where 1996 and 1997 records could not be found.
- Extra care needs to be taken in interpreting the recorded age of the patients. Many patients particularly in older groups do not know their exact age and sometimes the age given is an estimate.
- Some patients, who visit hospitals outside the Transkei borders for example in Durban and East London, give addresses of relatives who stay in surrounding areas of these cities and therefore rendering themselves non-residents of the four districts.

Despite these limitations the results from this study should be treated as minimum levels of the incidence of cancer in four districts.

