

RESULTS

Total number of new cases

The total number of new cancer cases reported in the four districts was 1 394 during the period 1996-2000. There were more females (842) than males (552). The annual number of male cases was fairly consistent from year to year (Figure 3). The number of females increased and was above 200 in 1998. This increase necessitated further investigation where we identified that the number of females with cancer of oesophagus was much higher in Lusikisiki, particularly in July 1998. The reason for this is unknown.

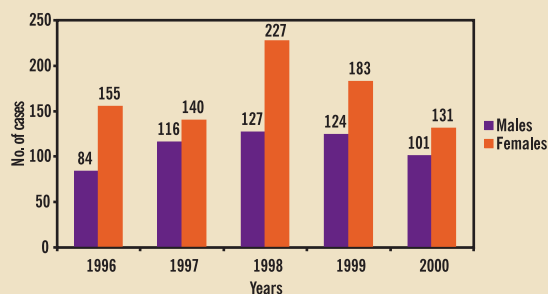


Figure 3. Number of cases by sex, 1996-2000

Source of information of cancers reported during 1996-2000 period

The contribution of different hospitals that are the main sources of information was analysed using CanReg3 analysis program. These hospitals are those in the defined registration area (four selected districts; Butterworth, Centane, Bizana and Lusikisiki) and referral hospitals (Umtata General, Frere, Cecilia Makiwane, Kokstad, King Edward VIII, King George V and Addington).

Table 2. Source of cancer cases reported during 1996-2000

Source of information	Number of cases	Percentage
Hospitals in the defined registration area	891	63,9
Referral hospitals	503	36,1
Total	1394	100

The contribution of each hospital during 1996-2000 period is shown in Figure 4. The following hospitals, St Elizabeth, Frere and Tafalofefe contributed more than 150 cases each. There were 131 cases from Durban and Kokstad in the KwaZulu-Natal province.

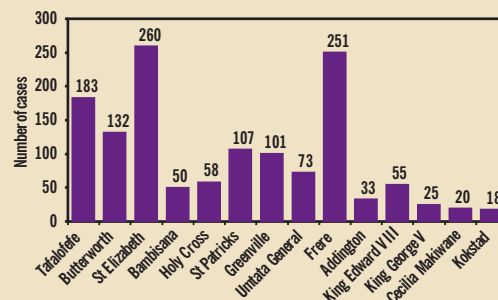


Figure 4. Number of cases reported by source, 1996-2000

The method of diagnosis (Table 3) for all cancer cases reported during 1996-2000 period as according to the IARC recommended table was also monitored. Almost half of the reported cancer cases were clinically diagnosed. This is not uncommon in a rural setting such as the four selected districts of the Transkei region; where there is scarcity of specialists such as oncologists. Oesophageal cancer was the most common cancer reported and is one of the cancers that can be diagnosed clinically.

Table 3. Method of diagnosis on cancer cases reported during 1996-2000

Method of diagnosis	Number of cases	Percentage
Clinical	691	49,6
Cytology	174	12,5
Histology of primary	375	26,9
Histology of metastasis	6	0,3
Laboratory test	30	2,2
Surgery/autopsy	79	5,7
Death certificate	1	0,1
Unknown	38	2,7
Total	1394	100

Most common cancers in males

The most common cancers reported in males during the period 1996-2000 were: (Figure 5).

- Oesophageal cancer.
- Lung cancer.
- Liver cancer.
- Prostate cancer.

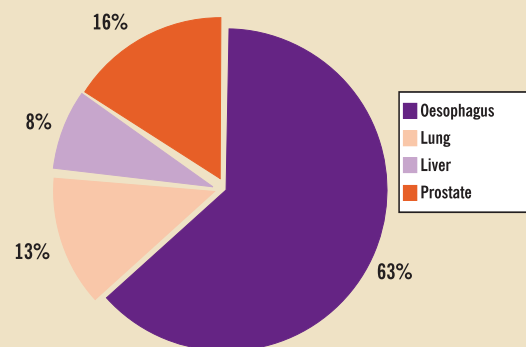


Figure 5. Most common cancers in males, 1996-2000

The annual trends of these cancers are presented in Figure 6.

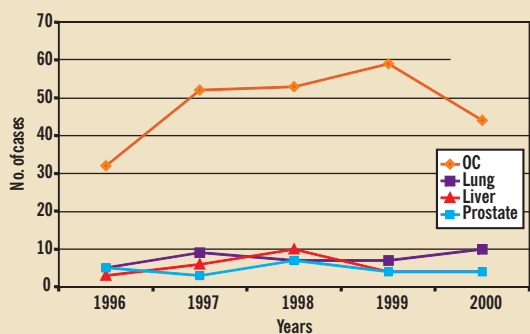


Figure 6. Annual trends of the most common cancers in males, 1996-2000

Most common cancers in females

The most common cancers in females during the period 1996-2000 were (Figure 7.):

- Oesophagus.
- Cervix.
- Breast.
- Lung.
- Liver

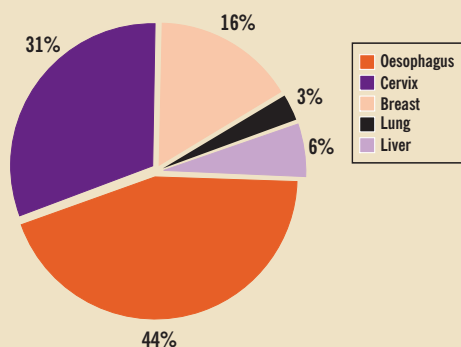
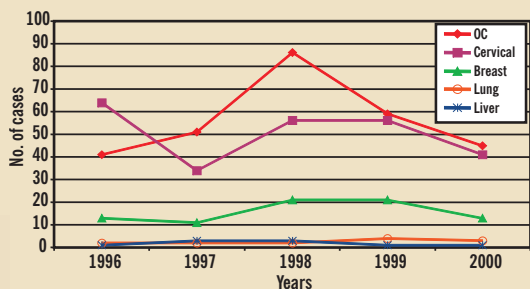


Figure 7. Most common cancers in females, 1996-2000

The annual trends of these cancers are presented in Figure 8.

Figure 8. Annual trends of most common



cancers in females, 1996-2000

Other site specific cancers reported, in males and females.

Other cancers reported in males and females during the period 1996-2000 were:

- Tongue
- Mouth
- Pancreas
- Skin
- Stomach
- Larynx
- Colon
- Kidney
- Thyroid
- Uterus
- Unspecified sites

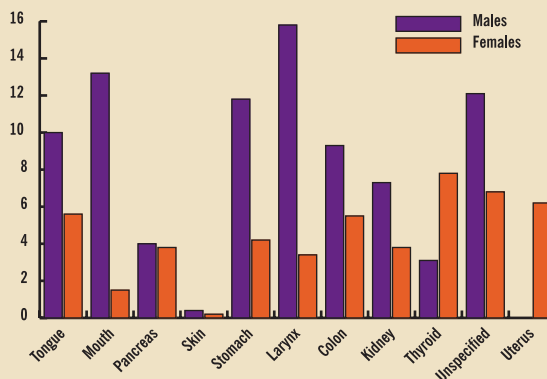


Figure 9. Other site specific cancers reported by sex, 1996-2000

Age standardised rates (ASR)

Comparison of the crude cancer rates can give a false impression because of differences in the age structure of the populations to be compared (Boyle and Parkin, 1991). Since cancer is more common in older ages, crude rates are higher in older populations than younger ones. Thus, when comparing cancer levels between two or more areas, or when investigating the pattern of cancer over time for the same area, it is important to allow for the changing or differing population age structure. This is accomplished by age standardisation. A direct method has been used in this analysis where the standard population used was the World Standard Population (Parkin, *et al.*, 1997).

The age standardised rates (ASR) for all cancers were 44.8 per 100 000 for males and 46.5 per 100 000 for females. The ASRs and standard error



were calculated for each district, based on the total number of cases (male and female) during the 5 year period (Table 4).

Table 4: Age standardized rates (ASR) and standard error for most common cancers, 1996-2000

Age standardized incidence rate (per 100 000)									
	Male		Female		Male		Female		
	OC	OC	Lung	Lung	Liver	Liver	Prostate	Cervix	Breast
Butterworth	14.2	14.5	12.9	2.4	3.2	0	7.4	21.9	14.9
Centane	44.8	32.6	1.3	1.5	4.1	0	3.5	13.5	6.1
Bizana	31.0	22.7	6.3	1.0	4.1	1.7	2.1	13.4	5.6
Lusikisiki	35.0	17.6	4.4	0.3	3.8	0.7	1.3	27.2	3.7

Standard error for age adjusted incidence rate (per 100 000)									
	Male		Female		Male		Female		
	OC	OC	Lung	Lung	Liver	Liver	Prostate	Cervix	Breast
Butterworth	3.4	2.9	3.4	1.2	1.6	0	2.7	3.5	3.0
Centane	6.0	3.9	0.9	0.8	2.1	0	1.5	2.6	1.8
Bizana	4.1	2.5	2.0	0.6	1.6	0.7	1.0	1.9	1.1
Lusikisiki	3.7	1.9	1.3	0.3	1.2	0.4	0.6	2.5	1.1

OC = oesophageal cancer

Age standardized rates in males (Table 4, Fig. 10)

OC was the most common cancer in males with 240 cases reported during 1996-2000 period. The highest incidence rate occurred in Centane with the ASR of 44.8 per 100 000. Lusikisiki had the second highest incidence rate (35.0 per 100 000) followed by Bizana (31.0 per 100 000). The lowest incidence rate was reported in Butterworth, 14.2 per 100 000.

Lung cancer was the second most frequent cancer reported during this period. The highest incidence rate reported was in Butterworth (12.9 per 100 000), followed by Bizana (6.3 per 100 000) and Lusikisiki (4.4 per 100 000). The lowest incidence rate was reported in Centane (1.29 per 100 000).

Liver cancer was the third most common cancer in males. Both Centane and Bizana had high incidence rates with identical ASRs of 4.1 per 100 000. In Lusikisiki the incidence rate (3.8 per 100 000) was the second highest while the lowest rate was reported in Butterworth (3.2 per 100 000).

Prostate cancer incidence rates were the highest in Butterworth (7.42 per 100 000) followed by Centane (3.5 per 100 000). Bizana (2.1 per 100 000) and Lusikisiki (1.3 per 100 000).

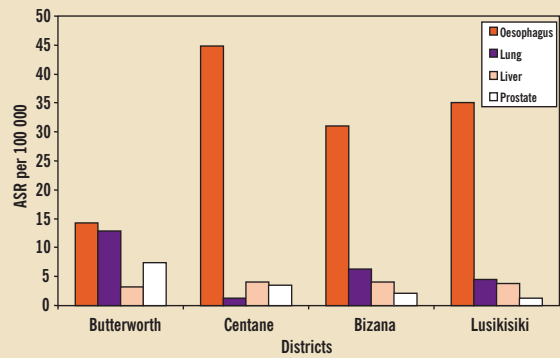


Figure 10. ASR for common cancers in males by district, 1996-2000

Age standardized rates in females (Table 4, Fig. 11)

Oesophageal cancer was the most common reported cancer in females. The highest incidence rate reported were in Centane (32.6 per 100 000). Bizana (22.7 per 100 000) had the second highest incidence rate followed by Lusikisiki (17.6 per 100 000). Butterworth (14.5 per 100 000) had the lowest incidence rate, almost similar to that of males.

Cervical cancer was the second most common cancer in females and the highest incidence rate reported was in Lusikisiki (27.2 per 100 000). Butterworth (21.9 per 100 000) had the second highest incidence rate. Bizana (13.4 per 100 000) and Centane (13.5 per 100 000) had almost identical incidence rates.

Breast cancer rated the third most common cancer in females. The highest incidence rate was reported in Butterworth (14.9 per 100 000). In Centane the incidence rate was 6.1 per 100 00 followed by Lusikisiki (5.6 per 100 000). The lowest incidence rate was reported in Bizana (3.7 per 100 000).

Lung cancer rated the fourth commonest cancer in females. Butterworth (2.4 per 100 000) had the highest incidence rate followed by Centane (1.5 per 100 000) and Bizana (1.0 per 100 000). The lowest incidence rate was reported in Lusikisiki (0.3 per 100 000).

Liver cancer rated fifth in females and nine cases were recorded during this period. Only two districts reported cases, Bizana (6) and Lusikisiki (3). Bizana (1.7 per 100 000) had the highest incidence rate, followed by Lusikisiki (0.7 per 100 000). No cases were recorded in Butterworth and Centane during this period.

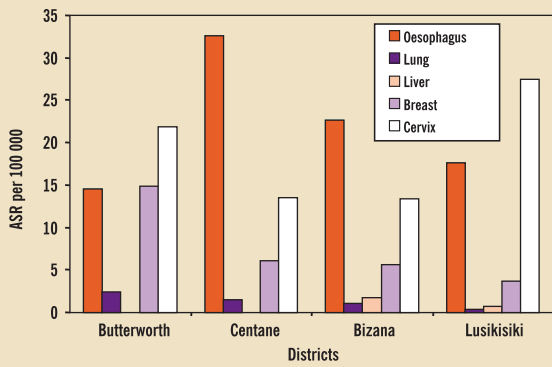


Figure 11. ASR for most common cancers in females by district, 1996-2000

Cancer pattern variations and age distribution

Oesophageal cancer was the most common cancer reported in both males and females during 1996-2000 period. The highest incidence of OC occurs at the age of 50-69 in males and 55-69 in females.

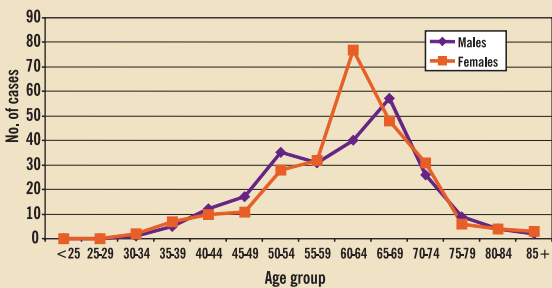


Figure 12. Oesophageal cancer age distribution by sex, 1996-2000

Lung cancer ranked the second most common cancer reported in males, but fourth in females. The highest incidence in males is at the age of 50-55 whereas in females at 44-49.

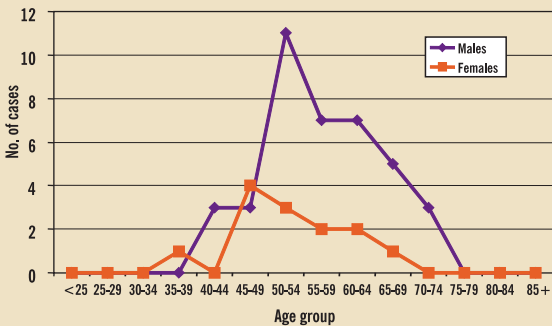


Figure 13. Lung cancer age distribution by sex, 1996-2000

Liver cancer ranked the third most common cancer in males, but fifth in females. There were 27 male

and 9 female cases reported. The number of cases reported were relatively low in this region especially since no female cases were reported in Butterworth and Centane.

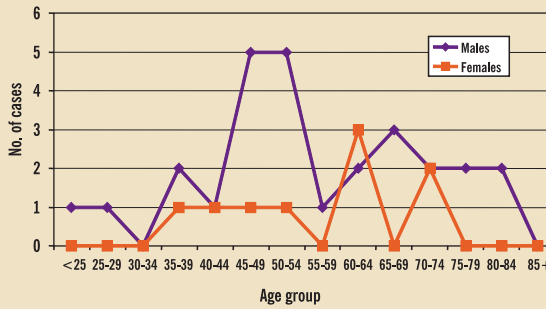


Figure 14. Liver cancer age distribution by sex, 1996-2000

Prostate cancer ranked the fifth most common cancer reported in males during 1996-2000 period. Most cases reported were from Butterworth. The highest incidence of the disease is at the age 60-64.

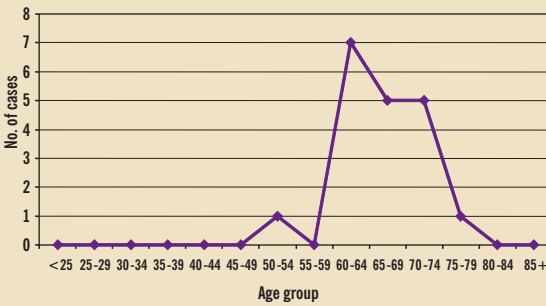


Figure 15. Prostate cancer age distribution, 1996-2000

Cervical cancer was the second most common cancer reported in females. In Butterworth, cervical cancer incidence rate was even higher than OC whereas with the other three districts; Centane, Bizana and Lusikisiki was the second most common cancer in females. Cervical cancer was diagnosed at an age as early as 25 yrs with the highest incidence at an age of 55.

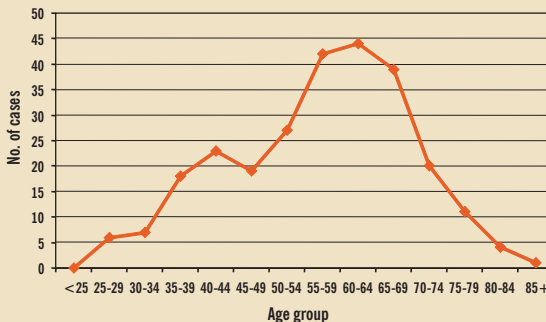


Figure 16. Cervical cancer age distribution, 1996-2000



Breast cancer was the third most common cancer reported in females. Breast cancer was already diagnosed at an age of 25 while the risk increases as a function of age with the highest incidence at 50 - 54 yrs. In Butterworth, breast cancer incidence rate was two to three times higher when compared with the other three districts; Centane, Bizana and Lusikisiki (Table 4).

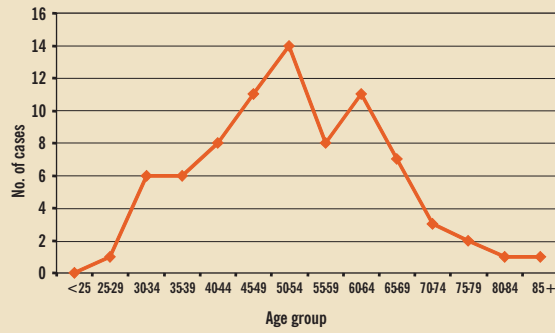


Figure 17. Breast cancer age distribution, 1996-2000