

## Prevalence of Head and Neck Cancers in Lokoja, Kogi State, North Central Nigeria

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### ABSTRACT

**Background:** Head and Neck cancers constitute about 5-8% of total body cancers and are more common among the elderly, those with previous exposure to radiation, petrochemical byproducts and anti-cancers' drugs. Alcohol and tobacco have a synergistic causal effect on these cancers. Managing these cancers is challenging due to late presentation, funds and lack of necessary facilities.

**Objectives:** To determine the prevalence of head and neck cancers in Lokoja, to have a baseline data for future references and for public awareness programs.

**Materials and Methods:** A review of the data obtained from the Cancer Registry at Federal Medical Centre Lokoja North Central Nigeria from 2009 January to 2016 December was under taken and results presented in text and table format.

### Results

A total of 303 cancers were histological diagnosed and registered in the hospital cancer register. They were 114 breast (37.8%), 99 prostate (32.7%), 31 skin (10.23%), 28 lymphatic (9.24%), 18(5.9%) head and neck cancers and 13(4.2%) others. Of the 18 head and neck cancers found, Males were 8 and females were 10, and the male to female ratio was 1:1.25. Their ages range from 11 to 80 years, with a mean age of 28.33 years and a modal age of 51-60 years. Nasopharyngeal cancers were found commonest (38.8%), followed respectively by parotid cancers (22.2%) and thyroid cancers (11.1%).

### Conclusions

Although head and neck cancers are relatively uncommon, this study had shown that they exist and with nasopharyngeal cancer being the commonest.

**KEYWORDS:** Head, neck, cancers, nasopharyngeal carcinoma.

### Introduction

Head and neck cancers (HNC) are relatively uncommon in comparison with cancers of other parts of the body. They

constitute 5-8% of total body cancers in Europe and America<sup>1</sup>.Cancers statistics revealed that African-American men and women have a higher death rates from all cancers combined compared with Caucasian<sup>2</sup>. In Nigeria varied prevalence of 10-40% has been found in earlier studies<sup>3-5</sup> Variability may largely be due to geographical variation, variable diet of the people and the degree of exposure to various carcinogens in different parts of Nigeria as heterogeneous society<sup>6</sup>. The

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ideal prevalence of head and neck cancers is difficult to establish in Nigeria where there are no cancer centers, most studies are hospital based and the majority of the patients still patronizing alternative medical practitioners. Studies had shown that head and neck cancers prevalent rates are higher in India, France and USA than in Nigeria<sup>7-9</sup>. The burden of managing these head and Neck cancers in African, Nigeria inclusive, has long been realized to be enormous and the situation is not likely to be any better soon with the present economic recession confronting the continent<sup>10</sup>.

Head and Neck cancers can be classified either on the basis of the anatomical site of occurrence or on the basis of their histopathology<sup>11</sup>. In any case, their treatment will depend on patient's factors, stage of the disease at presentation, available facilities and man power.

Cancers aetiology is still unknown but some factors are known to influence their occurrences. Predisposing factors include geographical region and race of the individual, advancing age, previous exposure to irradiation, petrochemical byproduct exposure, past viral infections and prolonged use of alcohol or tobacco or both<sup>12-14</sup>.

#### **Description of study area**

Lokoja is the administrative capital of Kogi state, Nigeria. Lokoja town has a heterogenous population made up of the Igala, Ebira, Yoruba, Nupe, Okun, Oworo, Bassa-Nge, Kakanda, Egbura and Hausa. The population as estimated in the 2006 census indicated that the local government Lokoja had a population of 195,261. 45% of which comprises civil servants and business people, while 30% is made up of students and vocational workers and 25% farmers. Lokoja

town lies on latitude 70 49'North of the equator and longitude 60 44'East of the Greenwich meridian. The town is the most centrally located in Nigeria, located at the confluence of the rivers Niger and Benue. The study was carried out in a 500 bed Federal Government Hospital, which serves as a reference, teaching and specialist centre for the area.

#### **Study Population**

All ages who presented and with the histological diagnosis of cancers in the Federal Medical Centre Lokoja and who had their case registered in the cancer registry.

#### **Study Design**

It is a retrospective hospital based study.

#### **Ethical Consideration**

Approval for this study was obtained from the Research and Ethical Committee of the Federal Medical Centre Lokoja, Kogi state.

#### **Materials and Methods**

After obtaining approval from the Research and Ethical Review Committee of the Federal Medical Centre Lokoja, information about patient sex, age, type and site of cancer were obtained from the Cancer Registry of the hospital from 2009 January to December 2016. This was studied, analyzed and results presented in text and table format.

#### **Results**

A total of 303 cancers were histological diagnosed and registered in the hospital cancer register. They were 114 breast (37.8%), 99 prostate (32.7%), 31 skin (10.23%), 28 lymphatic (9.24%), 18(5.9%) head and neck cancers and 13(4.2%) others as shown in table 1. Of the 18 head and neck cancers found, Males were 8 and females were 10, and the male to female



## Prevalence of Head and Neck Cancer

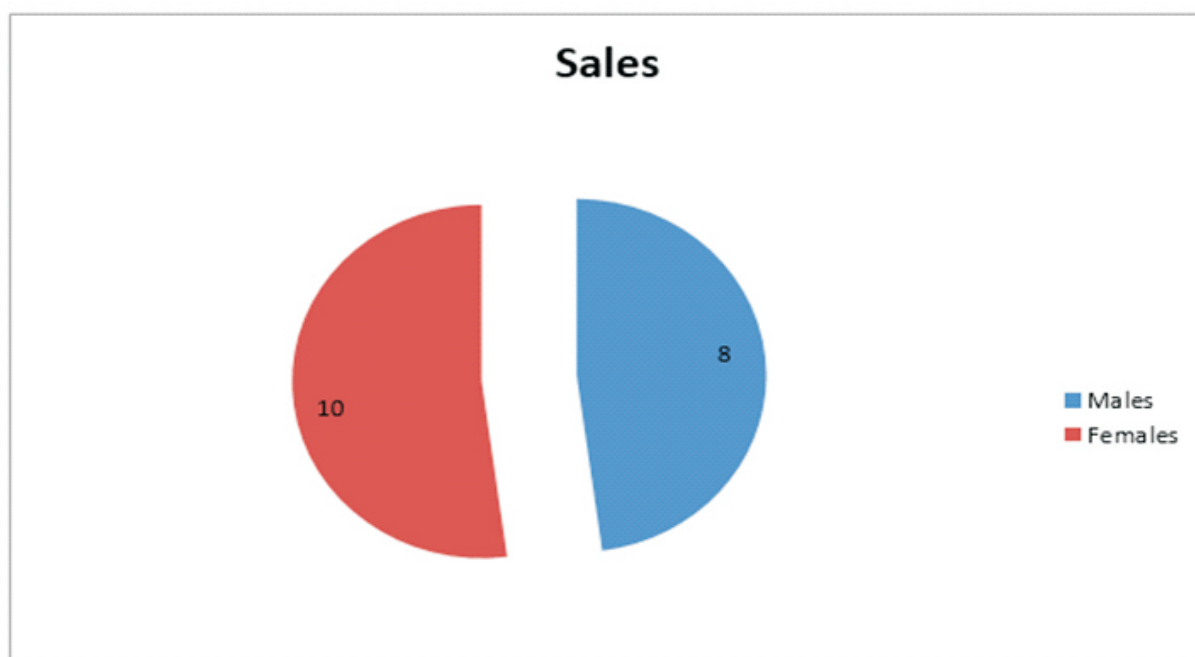
ratio was 1:1.25 as shown in figure1. Their ages range from 11 to 80 years, with a mean age of 28.33 years and a modal age of 51-60 years as indicated in figure2. Nasopharyngeal cancers were found commonest 7(38.8%), followed

respectively by parotid cancers 4(22.2%), thyroid cancers 2(11.1%), sinonasal cancers 2(11.1%), skin cancers 2(11.1%) and tonsil cancer 1(5.6%) as shown in table2.

**Table1:** Total number of patients with cancers and their site of occurrence in Lokoja, North Central Nigeria

Year	LN	Prostate	Blood	Bladder	Thyroid	Nose	Neck	NP	Tonsil	Parotid	Breast	Skin
2009	1	4	0	1	0	0	0	0	0	0	14	3
2010	2	3	4	0	0	2	1	1	0	0	16	4
2011	0	8	0	0	1	0	0	0	0	0	6	2
2012	2	8	0	0	0	0	0	0	0	1	5	2
2013	8	30	0	3	0	0	0	4	0	1	30	11
2014	5	20	0	0	0	0	0	0	1	1	9	3
2015	7	19	4	0	1	0	0	0	0	0	13	4
2016	3	7	1	0	0	0	1	2	0	1	21	2
<b>Total</b>	<b>28</b>	<b>99</b>	<b>9</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>7</b>	<b>1</b>	<b>4</b>	<b>114</b>	<b>31</b>

Total cancers during the study period=303, Head and Neck cancers found=18, Prevalence=5.9%



**Figure 1:** Gender distribution of patients with Head and Neck Cancers in Lokoja  
Male to female ratio=1:1.25

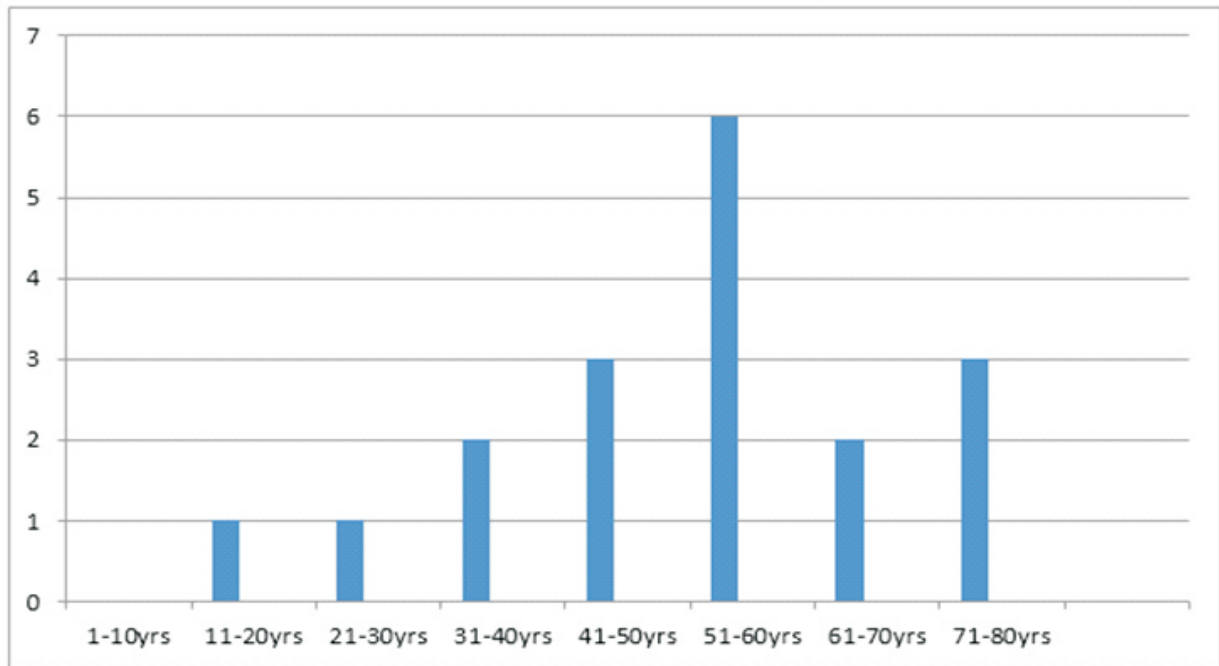


Figure 2: Age distribution of patients with Head and Neck Cancers in Lokoja

Group mean age=28.33years

Table 2: Head and neck cancers and their site of occurrence in Lokoja

Year	Thyroid	Nose	Neck	Nasopharynx	Tonsil	Parotid	Total (%)
2009	0(00.0%)	2(11.1%)	0(00.0%)	0(00.0%)	0(00.0%)	0(00.0%)	2(11.1%)
2010	0(00.0%)	0(00.0%)	1(5.5%)	1(5.6%)	0(00.0%)	0(00.0%)	2(11.1%)
2011	1(5.6%)	0(00.0%)	0(00.0%)	0(00.0%)	0(00.0%)	0(00.0%)	1(5.6%)
2012	0(00.0%)	0(00.0%)	0(00.0%)	0(00.0%)	0(00.0%)	1(5.6%)	1(5.6%)
2013	0(00.0%)	0(00.0%)	0(00.0%)	4(22.2%)	0(00.0%)	1(5.6%)	5(27.8%)
2014	0(00.0%)	0(00.0%)	0(00.0%)	0(00.0%)	1(5.6%)	1(5.6%)	2(11.1%)
2015	1(5.6%)	0(00.0%)	0(00.0%)	0(00.0%)	0(00.0%)	0(00.0%)	1(5.6%)
2016	0(00.0%)	0(00.0%)	1(5.6%)	2(11.1%)	0(00.0%)	1(5.6%)	4(22.2%)
<b>Total</b>	<b>2(11.1%)</b>	<b>2(11.1%)</b>	<b>2(11.1%)</b>	<b>7(38.8%)</b>	<b>1(5.6%)</b>	<b>4(22.2%)</b>	<b>18(100%)</b>

Total Head and Neck cancers=18, Nasopharyngeal cancers=7(38.9%)

### Discussion

Head and neck cancers (HNC) are relatively uncommon in comparison with cancers of other parts of the body. In this study, breast cancers had the highest prevalence followed by prostate cancers, while all the head and neck cancers put together had a prevalence of 5.9%. This finding is in support of the global prevalence of 5–8% reported earlier<sup>15</sup>. However, it is low when compared to other studies done in this country in the past<sup>16</sup>. In this study, from 2009 to 2016, it appears that

there is a significant rise in the incidence of the total body cancers as well as that of the head and neck cancers. This observation from this study alone may not be enough to conclude that there is an increase in the incident rates of cancers in this geographical region since there were no previous data to compare with. The prevalence of head and neck cancers may be difficult to establish in Nigeria as there are no head and neck cancer centers and facilities for diagnosis still lacking in many of our centers.



Most studies are hospital based and the majority of the patients still patronizing alternative medical practitioners<sup>17</sup>. The female preponderance found in this study is surprising to me as some of the known risk factors such as cigarette smoking and the intake of alcohol is not common amongst women in the studied population. Nasopharyngeal cancers are the most prevalent followed by the parotid cancers. This is not surprising as the geographical area of this study is the confluence of the Niger and the Benue rivers and fishing is both common as a hobby and as a profession among the

people. This may have led the people to the consumption of smoked un-gutted fish at an early age which may have predisposed them to the cancers of the nasopharynx<sup>18</sup>. This is in contrast to findings by Ologeet el<sup>19</sup> who found sinonasal cancers commonest (18%) followed by thyroid (12.4%) and nasopharynx (11.3%) in their study. The burden of managing these head and Neck cancers in African with Nigeria inclusive has long been realized to be enormous and the situation is not likely to be any better soon with the present economic recession confronting the continent.

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#### References

1. da Lilly-Tariah OB, Somefun AO, Adeyemo WL. Current evidence on the burden of head and neck cancers in Nigeria. *Head & neck oncology* 2009;1:14
2. Jemal A, Tiwari RC, Murray T, Ghafoor A, Samuels A, Ward E, et al. Cancer statistics, 2004. CA: A Cancer Journal for Clinicians 2004; 54(1):8-29.
3. Nwawolo CC, Ajekigbe AT, Oyeneyin JO, Nwankwo KC and Okeowo PA. Pattern of head and neck cancers among Nigerians in Lagos. *West African Journal of Medicine* 2001;20(2):111-116
4. Otoh EC, Johnson NW, Danfillo IS, Adeleke OA and Olasoji HA. Primary head and neck cancers in North Eastern Nigeria. *West African Journal of Medicine*. 2004;23(4):305-313.
5. Iseh K and Malami S. Pattern of Head and Neck Cancer in Sokoto. *Nigerian Journal of Otorhinolaryngology* 2006;3(2):77-83.
6. Torre LA, Bray F, Siegel RL, Ferlay J, Lortet-Tieulent J, Jemal A. Global cancer statistics, 2012. CA: a cancer journal for clinicians. 2015;65(2):87-108.
7. Siegel R, Naishadham D and Jemal A. Cancer statistics, 2012. CA: a cancer journal for clinicians. 2012;62(1):10-29.
8. Onyango JF, Awange DO, Njiru A and Macharia IM. Pattern of occurrence of head and neck cancer presenting at Kenyatta National Hospital, Nairobi. *East African Medical Journal* 2006;83(5):288-291
9. Elango JK, Gangadharan P, Sumithra S and Kuriakose MA. Trends of head and neck cancers in urban and rural India. *Asian Pacific journal of cancer prevention: APJCP* 2006;7(1):108-112.
10. Akinmoladun V, Pindiga U, Akintububo O, Kokong D and Akinyamoju C. Head and Neck Malignant Tumors in Gombe, Northeast Nigeria. *Journal of the West African College of Surgeons* 2013;3(3):1
11. Moyer JS and Bradford CR. *Head and Neck Malignancies*. Surgery: Springer; 2008;2097-116.
12. Onakoya PA, Nwaorgu OGB, Adenipekun AO, Aluko AA and IbekweTS. Quality of life in patients with head and neck cancers. *J Natl Med Assoc*. 2006;98(5):765-770



13. Ragin CC, Modugno F and Gollin SM. The epidemiology and risk factors of head and neck cancer: a focus on human papillomavirus. *Journal of Dental Research* 2007;86(2):104-114
14. Fan CY. Epigenetic alterations in head and neck cancer: prevalence, clinical significance, and implications. *Current Oncology Reports* 2004;6(2):152-161.
15. Amusa YB, Olabanji JK, Akinpelu VO, Olateju SO, Agbakwuru EA, Ndukwe N, et al. Pattern of head and neck malignant tumours in a Nigerian teaching hospital--a ten year review. *West African Journal of Medicine* 2004;23(4):280-285
16. Adeyemi BF, Adekunle LV, Kolude BM, Akang EE and Lawoyin JO. Head and neck cancer--a clinicopathological study in a tertiary care center. *Journal of the National Medical Association* 2008;100(6):690-697.
17. Adisa AO, Adeyemi BF, Oluwasola AO, Kolude B, Akang EE and Lawoyin JO. Clinico-pathological profile of head and neck malignancies at University College Hospital, Ibadan, Nigeria. *Head and Face Medicine* 2011;7:9.
18. Ologe F, Adeniji K and Segun-Busari S. Clinicopathological study of head and neck cancers in Ilorin, Nigeria. *Tropical Doctor* 2005;35(1):2-4.
19. Kanu OO, Nnoli MA, Asoegwu CA. Prevalence of head and neck tumours in Calabar, South Eastern Nigeria. *Asian Journal of Medical Sciences*. 2016;7(3):123-126

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