

Head- Neck Cancer Burden in Bangladesh

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Introduction:

Cancer is a deadly name for resource constrain developing country like Bangladesh. It is not just a killer; it tells a lot of human stories- which comprises with fear, cry, depression, financial crisis, love, care, deep sorrow and happy moments of cure.

Cancer is the first or second leading cause of premature death (i.e. at ages 30-69 years) in 134 of 183 countries, and it ranks third or fourth in an additional 45 countries.¹

Globally in 2020, every 6 deaths include 1 cancer patient and number of deaths by cancer was 10 millions. It may be increased to 15 millions by the next decade. Death of two-third cancer patients in the developing countries.²

In Bangladesh 114 persons per lac is suffering from various cancer. In an unpublished data from Bangladesh, about 55 persons per lac affected by Head-Neck Cancer. Approximately 20 lacs cancer patient in Bangladesh. Newly affected are 53 person per lac. 2 lacs affected in every year and about 1 lac died of cancer in every year. In this country 12% death due to cancer. Daily death about 273 in Bangladesh. According to study, there is a definite risk of it to be doubled by upcoming three decades.³

Cancer Types:

In human body, there are about 100 trillion cells. Uncontrolled and uncoordinated proliferation of cells makes cancer. About 200 different types of cancer may affect human being. 1 out of 2 people affected by cancer in his lifetime. Male are two times affected than female. 3 out of 5 ignore their symptoms of cancer.⁴

What are the Head- Neck Cancers?

There are at least 30 types of cancer that affects head and neck regions are called collectively Head- Neck Cancers.

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Table-I

Anatomical subsites of the head and neck based on ICD-10

Main Site	ICD-10 code
Malignant neoplasms of lip	C00
Malignant neoplasm of base of tongue	C01
Malignant neoplasm of other and unspecified part of tongue	C02
Malignant neoplasm of gum	C03
Malignant neoplasm of floor of mouth	C04
Malignant neoplasm of palate	C05
Malignant neoplasm of other and unspecified parts of mouth	C06
Malignant neoplasm of parotid gland	C07
Malignant neoplasm of other and unspecified major salivary glands	C08
Malignant neoplasm of tonsil	C09
Malignant neoplasm of oropharynx	C10
Malignant neoplasm of nasopharynx	C11
Malignant neoplasm of piriform sinus	C12
Malignant neoplasm of hypopharynx	C13
Malignant neoplasm of other and ill-defined sites in the lip, oral cavity and pharynx	C14
Malignant neoplasm of nasal cavity & middle ear	C30
Malignant neoplasm of accessory sinuses	C31
Malignant neoplasm of larynx	C32
Malignant neoplasm of other and ill-defined sites	C76

ICD-10: International classification of Diseases-Tenth revision

Head-Neck Cancer Scenario:

There are 4 different types of head neck cancer out of top 10 cancer internationally. According to data, 33 head neck cancer patient out of 100 male cancer patient and 11-13 head neck cancer patient out of 100 female cancer patients. Head Neck cancer patients mostly affecting developing countries.⁴

According to various statistics collectively various head-neck cancers are the leading cancer in Bangladesh. To understand the scenario some facts should be included into the consideration. In Bangladesh there is no complete cancer registry. For this reason, it is difficult to conclude accurately on highest burden of cancer type. There is a published report by National Institute of Cancer Researches and hospital (NICRH) (2015-2017) highest affected cancer was lung cancer (26.1%) in male and breast cancer (30.4%) in female and combined lung cancer 16.6%.⁵ In this report Head- Neck cancer components are shown separately.

Top listed 10 cancers of male shows 4 are head- neck cancer. 2 out of 4 are fully categorized as head- neck cancer and rest 2 out of 4 are partly categorized as head- neck cancer. Again, Top listed 10 cancers of female shows 3 are head- neck cancer. 1 out of 3 is fully categorized as head- neck cancer and rest 2 out of 3 are partly categorized as head- neck cancer. So, summation of all component of head-neck cancer of this list will go to near highest (Table-I).

Moreover, most of thyroid cancers are not included in this report. Because of thyroid cancer after surgery, Radioactive Iodine Ablation therapy is the treatment of choice. Only few thyroid cancers are reported to NIRC for conventional radiotherapy and etc. International study shows almost half of the

population harbors Thyroid disorders/ nodules. Almost 10% of thyroid nodule may affected by thyroid cancer. Differentiated Thyroid cancers are exclusively treated by surgery and Radioactive Iodine Ablation therapy. Radioactive Iodine Ablation therapy is given by various institutes of nuclear medicine all over the country. So, Thyroid cancer patients are not reported to NICRH and not included their published report.

In a published report from National institute of nuclear medicine and applied sciences (NINMAS) shows about 2500 Thyroid cancer patients reported annually in all nuclear medicine Centre of Bangladesh. Again, all Thyroid cancer patients are not coming here as because all patients usually not required RAI therapy especially early differentiated thyroid cancer or not willing to take RAI Therapy in spite of offering and explaining about the necessity of it.

Very recently there is an 'Evidence from population-based cancer registry' unpublished report named "Distribution of Cancers in Bangladesh" studied by Epidemiology division of Department of public health and informatics of Bangladesh Medical University (BMU). The study was conducted from July 2023 to ongoing at Hossainpur upazila, Kishoreganj. It aimed to find out the distribution of cancers among Bangladeshi population.

201,668 participants of 46,631 family have been included in this study. Number of prevalent cases was 106 cancer patient / lac. This study reveals top 5 cancers among male Larynx-13.2%, stomach-10.2%, Lip, Oral Cavity-8.8%, Esophagus-7.4%, Bronchus and lung-7.4%. and top 5 cancer among female Breast-35.4%, Cervix uteri- 12.3%, Lip and Oral Cavity-10.8%, Thyroid Gland-7.7%, Ovary-4.6% (Table-II).⁶

Table -II
Top 10 Cancer attending NICRH in 2015-2017

Men	Percentage	Women	Percentage	Both sexes	Percentage
Lung	26.1	Breast	30.4	Lung	16.6
Oesophagus	14	Cervix	16.7	Breast	14.1
Stomach	5.7	Lung	5.4	Cervix	7.7
Liver	5.1	Rectum	3.8	Oesophagus	4.5
Lymphoma	2.7	Cheek/Buccal Mucosa	3.2	Stomach	3.9
Rectum	3.3	Oesophagus	3	Liver	3.5
Bladder	4.1	Gall bladder	2.5	Lymphoma	3.3
Tongue	2.1	Stomach	2.4	Rectum	3
Larynx	2.2	Liver	2.3	Cheek/ Buccal mucosa	2.5
Blood	0.6	Lymphoma	2.1	Gall bladder	1.4
	65.9		71.8		60.5

NICRH=National Institute of Cancer Research Hospital

Table- III
Top 5 cancer distribution: study of DPHI of BMU-2024

Male	Percentage	Female	Percentage
Larynx	13.0	Breast	36.4
Stomach	10.4	Cervix Uteri	11.1
Bronchus and Lung	8.7	Lip, Oral Cavity	10.1
Lip, Oral Cavity	7.0	Thyroid gland	7.1
Esophagus	6.1	Ovary	5.1

DPHI= Department of Public Health and informatics

In both male and female 2 out of top 5 cancers are Head-Neck Cancer.

Table- IV
Top 10 most frequent cancers by both sex: study of DPHI of BMU-2024

ICD 10 Code	Type	Percentage
C 50	Breast	16.8
C 01-06	Lip, Oral Cavity	8.4
C16	Stomach	7.0
C32	Larynx	7.0
C53	Cervix Ute ri	5.1
C34	Bronchus and Lung	5.1
C15	Esophagus	4.7
C18	Colon	4.2
C73	Thyroid Gland	3.7
C77	Lymph Nodes	3.7

In top ten cancer list lip, Oral Cavity, Larynx, Thyroid gland cancers are exclusively managed by Head-Neck surgeon. Esophagus and Lymph nodes are also managed by Head-Neck surgeons partly.

So, by considering all the facts it is revealed that combination of all head neck cancers will be highest among all the cancers.

Treatment facilities in Bangladesh

Cancer is the surgical disease. Few dedicated head-neck surgeons are working in the background of increasing demand.

First Head & Neck Surgery Division established under the department of Otolaryngology at BSMMU on 06/12/2010.

The first teletherapy (cobalt 60) machine was installed at a private hospital named Kumudini Hospital at Mirzapur in 1953.⁷

Now approximately 16-18 cancer centers are in operation with the facilities of EBRT where actual

demand about 200 according to WHO based on population.

Medical treatment of cancer is suitable for few Head-Neck Cancers. Mostly they are not curative, costly and a lot of side effects.

Sufferings of Head-Neck cancer patients in Bangladesh

Sufferings of Head - Neck cancer patient in Bangladesh mostly due to 4 reasons

Advanced presentation

Insufficient treatment facilities

Absence of referral system

Absence of feasible, affordable, and cost-effective treatment

What should we do!

Awareness builds up to all levels. Risk factor should be isolated and understandable to common population. Stop exposure from harmful risk factors. Cessation of all habits that may initiate cancer. Preventive steps should be taken to avoid Head-Neck cancer. Educate the common population about Head-Neck cancer. Regular Screening program for early detection of Head-Neck Cancer. Early diagnosis may cure almost all head-neck cancers. Regular physician education is essential to keep them updated. Outcome of treatment regularly monitored and audited. Survived patients carefully and regularly followed up.

Some preventive measures are reflecting in the slogan of World Cancer Day.

“Close the care gap”-Slogan of World Cancer Day-2022-2024

‘United by Unique’-United in our message, Unique in our stories- Slogan of World Cancer Day-2025-2027 Bangladesh with global partners in Head-Neck Cancer

Bangladesh is a member of International Federation of Head and Neck Oncologic Societies (IFHNOS) and Asian Head Neck Societies (AHNS). World Head Neck Cancer Day (July 27) are celebrating every year in Bangladesh together with 55 Head-Neck Societies, 51 Countries and UICC.

Conclusion:

Head Neck Cancer is one of the top-ranking cancers in Bangladesh and Globally. It should be appropriately addressed in policy making level. Treatment facilities should be increased. Manpower should be appropriately trained. Dedicated personnel are required to face the challenge of increased head-neck cancer burden. Awareness program should be observed comprehensively and continuously more focused to remote areas.

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