BURDEN OF CANCER IN INDIA: GLOBOCAN 2018 ESTIMATES

Incidence, Mortality, Prevalence, and Future Projections of Cancer in India

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ABSTRACT

This article provides the latest figures of cancer incidence, mortality, prevalence, and future projections in India, estimated by GLOBOCAN 2018 produced by the International Agency for Research on Cancer (IARC). GLOBOCAN 2018 has estimated over 1·1 million new cancer cases and 0·78 million cancer deaths in India in 2018.

Both sexes combined, breast cancer is the most commonly observed cancer (14% of the total cases) and it is the leading cause of cancer death (11·1% of the total cases) in India. In terms of incidence, breast cancer is followed by cancers of lip oral cavity (10·4%), cervix uteri (8·4%), lung (5·9%), and stomach (5%). For mortality, breast cancer is followed by cancers of lip oral cavity (9·3%), lung (8·1%), cervix uteri (7·7%), and stomach (6·6%).

Cancers of lip oral cavity are leading cause of cancer incidence (16·1%) and mortality (12·3%) in males. Among females, breast cancer is the most commonly diagnosed cancer (27·7%) and is the leading cause of death (23·5%). These are followed by cancers of lung and stomach in males, cancers of cervix uteri and ovary in females as the leading cause of cancer incidence and mortality in India.

Over all top six cancer types account for 48·6% incident cases and 48·7% cancer deaths in 2018 in India and the burden of these cancer types can be reduced by adopting preventive measures, screening, early detection and quality treatment at early stages.

The number of incident cases in India are estimated to rise from 1·15 million to 1·9 million and the number of cancer deaths are estimated to rise from 0·78 million to 1·33 million by 2040.

Key Words: GLOBOCAN, Cancer, Incidence, Prevalence, Mortality, India

INTRODUCTION

Cancer is globally being recognized as one of the major causes of morbidity and mortality [1]. It is the second leading cause of death (16%) following cardiovascular diseases (31%) [2,3]. Worldwide cancer incidence and mortality is growing at an alarming rate [1,4]. Several reasons comprising of growing population, ageing, increasing prevalence of risk factors, such as smoking, alcohol, infections, unhealthy lifestyles, physical inactivity, and socio-economic factors have led to the appearance of cancer as a significant public health problem. Poor access to preventive services, late diagnosis, lack of proper diagnostic, and quality treatment also contribute to higher burden of cancer [1,3].

GLOBOCAN (global cancer incidence, mortality and prevalence) database is an initiative of International Agency for Research on Cancer (IARC) that produces estimations of incidence, mortality, and prevalence of cancer using the best accessible information in every nation to build a global cancer profile The IARC is a dedicated cancer organization of the World Health Organization (WHO) and the aim of IARC is to advance global collaboration in cancer research. The GLOBOCAN database, compiled by IARC, is updated routinely, giving estimates on global cancer incidence, mortality, prevalence, and future projections throughout the world [1,5].

IARC announced the most recent figures of global cancer burden on 12th September 2018 through GLOBOCAN database [5]. The GLOBOCAN 2018 database is available online as part of the IARC Global Cancer Observatory (GCO) and presents the recent figures of incidence, mortality, and prevalence of thirty six types of cancer worldwide in 185 countries. The results of GLOBOCAN 2018 are available at (http://gco.iarc.fr/).

GLOBAL CANCER BURDEN 2018

The GLOBOCAN 2018 reported that worldwide cancer burden is projected to have escalated to 18·1 million new cases and 9·6 million cancer deaths in 2018 [1]. Globally, one among five males and one among six females develop cancer during their lifespan, and one among eight males and one among eleven females die from the cancer [4]. Worldwide, the 5-year prevalence, is projected to be 43·8 million. By 2040, the global cancer burden is anticipated to reach 29·5 million new incident cases and 16·3 million deaths [5].

Overall lung cancer is the most frequently diagnosed cancer (11·6%) and is responsible for (18·4%) cancer deaths in both sexes combined. The top five most incident cancers in both sexes combined are lung cancer (11·6%), female breast cancer (11·6%), colorectal cancer (10·2%), prostate cancer (7·1%), and stomach (5·7%). For mortality lung cancer (18·4%) is followed by cancers of colorectum (9·2%), stomach (8·2%), liver (8·2%), and breast (6·6%) [1]. Table 1 gives the summary of global cancer burden in males, females, and both sexes.

Table 1: Summary of global cancer statistics: GLOBOCAN 2018

	Males	Females	Both sexes
Population	3850719284	3782099828	7632819272
Number of new cancer cases	9456418	8622539	18078957
Age-standardized incidence rate (World)	218·6	182·6	197·9
Risk of developing cancer before the age of 75 years	22·4%	18·3%	20·2%
Number of cancer deaths	5385640	4169387	9555027
Age-standardized mortality rate (World)	122·7	83·1	101·1
Risk of dying from cancer before the age of 75 years	12·7%	8·7%	10·6%
5-year prevalent cases	21014830	22826472	43841302
Top 5 most frequent cancers (including non-melanoma skin cancer)	Lung / Prostate / Colorectum / Stomach / Liver	Breast / Colorectum / Lung / Cervix uteri / Thyroid	Lung / Breast / Colorectum / Prostate / Stomach
Top 5 cancers in terms of mortality (including non-melanoma skin cancer)	Lung / Liver / Stomach / Colorectum / Prostate	Breast / Lung / Colorectum / Cervix uteri / Stomach	Lung / Colorectum / Stomach / Liver / Breast

Source: GLOBOCAN-2018

CANCER BURDEN IN INDIA: GLOBOCAN 2018

Cancer is a key healthcare concern in both developed and developing countries. With increased detection and advancements in cancer, India is also experiencing worrying increase in cancer incidence and mortality. The burden of cancer in India is projected to be over 1·1 million new cases and 0·78 million deaths in 2018 [5,7]. The summary of cancer statistics in India for males, females, and both sexes is given in Table 2.

Table 2: Summary of cancer statistics in India: Globocan 2018

	Males	Females	Both sexes
Population	701 546 980	652 504 878	1 354 051 855
Number of new cancer cases	570 045	587 249	1 157 294
Age-standardized incidence rate (World)	89·8	90·0	89·4
Risk of developing cancer before the age of 75 years	9·8%	9·4%	9·6%
Number of cancer deaths	413 519	371 302	784 821
Age-standardized mortality rate (World)	65·8	57·5	61·4
Risk of dying from cancer before the age of 75 years	7·3%	6·3%	6·8%
5-year prevalent cases	1 000 485	1 257 723	2 258 208
Top 5 most frequent cancers (including non-melanoma skin cancer)	Lip oral cavity / Lung / Stomach / Colorectum / Oesophagus	Breast / Cervix uteri / Ovary / Lip oral cavity / Colorectum	Breast / Lip oral cavity / Cervix uteri / Lung / Stomach

Top 5 cancers in terms of mortality (including non-melanoma skin cancer)	Lip oral cavity	Breast	Breast
	Lung	Cervix uteri	Lip oral cavity
	Stomach	Ovary	Lung
	Oesophagus	Lip oral cavity	Cervix uteri
	Colorectum	Lung	Stomach

Source: GLOBOCAN-2018

BURDEN OF MAJOR CANCER TYPES IN INDIA IN 2018

Both sexes combined, breast cancer is the most frequently observed cancer (14% of the total cases) and it is the leading cause of cancer death (11·1% of the total cases) in India. In terms of incidence, breast cancer is followed by cancers of lip oral cavity (10·4%), cervix uteri (8·4%), lung (5·9%), and stomach (5%). Cancers of breast, lip oral cavity, and cervix uteri are responsible for more than 32% of the total cancer burden. For mortality, breast cancer is followed by cancers of lip oral cavity (9·3%), lung (8·1%), cervix uteri (7·7%), and stomach (6·6%) [5,7]. Pie charts in Figure 1A & 1B shows the distribution of estimated number of new cases and deaths (both sexes combined) in 2018 in India: Source GLOBOCAN 2018.
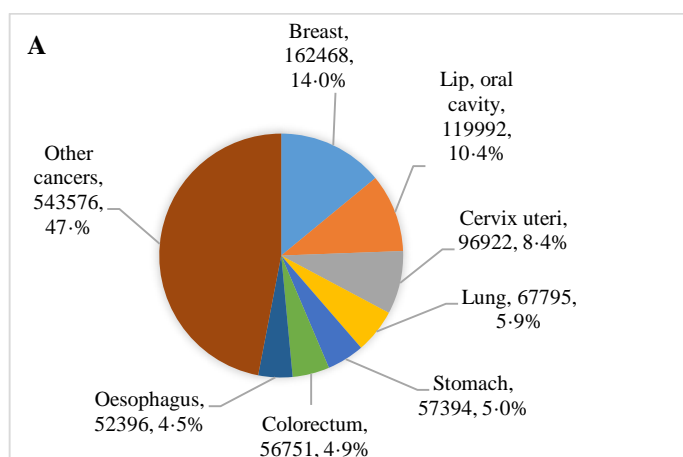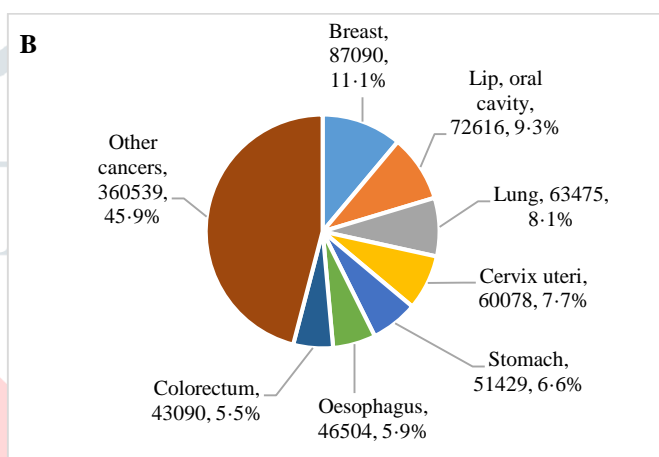

Fig.1A. Distribution of new cases

Fig.1B. Distribution of deaths

GENDER WISE CANCER INCIDENCE AND MORTALITY PATTERNS IN INDIA

Cancers of lip oral cavity are the leading cause of cancer incidence (16·1%) and mortality (12·3%) in males. Incidence is followed by cancers of lung (8·5%), stomach (6·8%), colorectal (6·4%), and esophagus (5·9%). For mortality, cancers of lung (11%), stomach (8·5%), esophagus (7·6%), and colorectum (6·9%) are other leading causes of cancer death in males [5].

Among females, breast cancer is the most commonly diagnosed cancer (27·7%) followed by the cancers of cervix uteri (16·5%), ovary (6·2%), lip oral cavity (4·8%), and colorectum (3·4%). Breast cancer is also the leading cause of cancer death in women (23·5%) followed by cancers of cervix uteri (16·2%), ovary (6·5%), lip oral cavity (5·9), and lung cancer (74·9%) [5]. Pie charts in Figure 2 shows the distribution of estimated number of cases (Incidence) and deaths (mortality) among males and females due to different cancer types in 2018 in India: Source GLOBOCAN 2018.
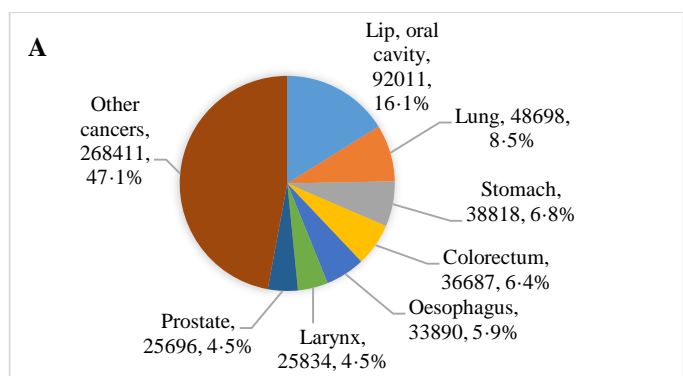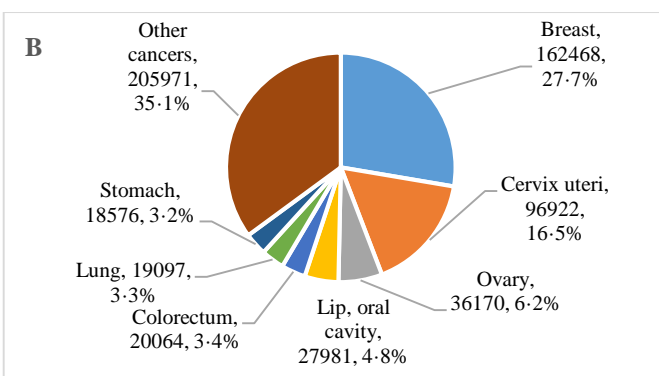

Fig.2A. Incidence, Males
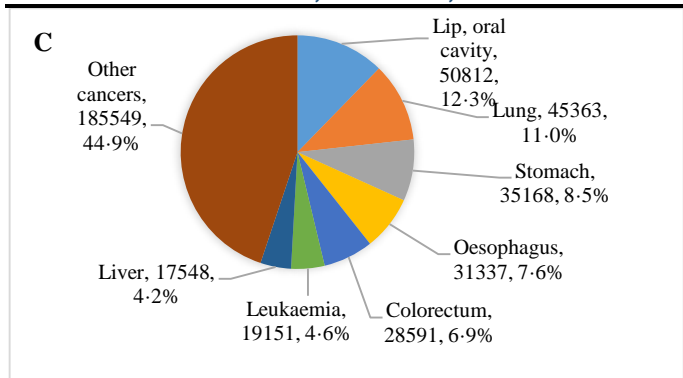

Fig.2B. Incidence Females
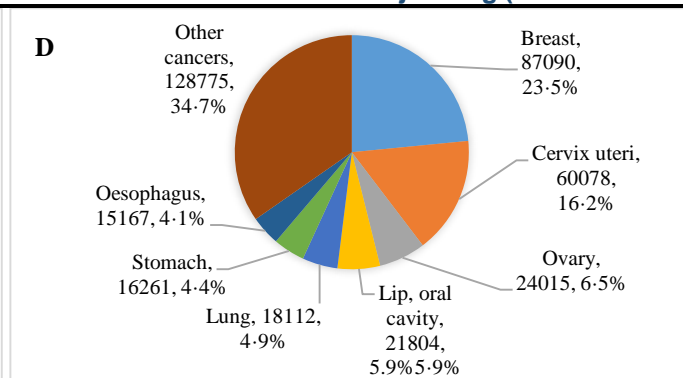
Fig.2C. Mortality, Males

Fig.2D. Mortality, Females

Bar chart in Figure 3 shows the estimated age standardized incidence and mortality rates (world) of top 10 cancers (both sexes, all ages): Source GLOBOCAN 2018. The age standardized rates (ASRs) are calculated per 100000 persons. ASRs allow comparisons between the populations that are nor influenced by differences in their age structures.
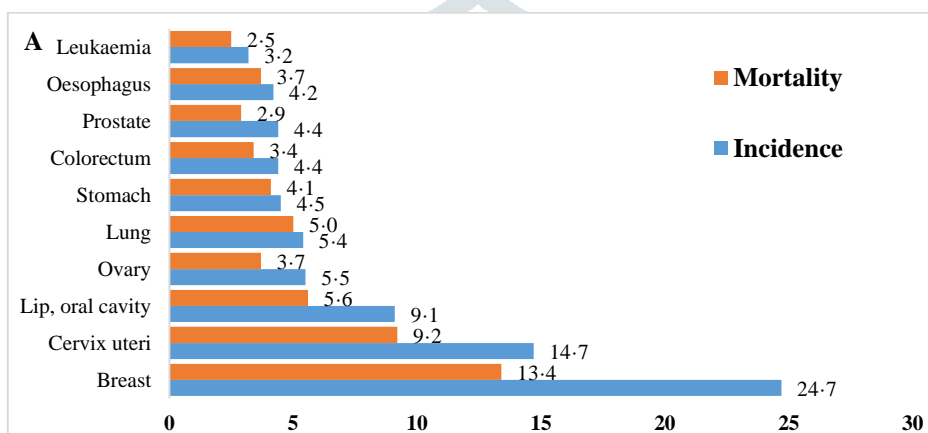

Fig.3. Distribution estimated age-standardized (World) incidence and mortality rates

DISTRIBUTION OF INCIDENT CASES AND DEATHS BY CANCER TYPES

GLOBOCAN 2018 has estimated over 1·1 million new cases and 0·78 million cancer deaths in India in 2018. Table 3 shows the distribution of number of new cases and deaths for thirty five cancer types with International Statistical Classification of Diseases codes (ICD-10).

Table 3: Distribution of new cases and deaths in 2018, India

S. no.	Cancer Site	ICD Code	New Cases			Deaths		
			Number	Rank	%	Number	Rank	%
1	Breast	C50	162468	1	14	87090	1	11·1
2	Lip, oral cavity	C00-C06	119992	2	10·4	72616	2	9·3
3	Cervix uteri	C53	96922	3	8·4	60078	4	7·7
4	Lung	C33-C34	67795	4	5·9	63475	3	8·1
5	Stomach	C16	57394	5	5	51429	5	6·6
6	Oesophagus	C15	52396	6	4·5	46504	6	5·9
7	Leukaemia	C91-C95	42055	7	3·6	32471	7	4·1
8	Ovary	C56	36170	8	3·1	24015	9	3·1
9	Larynx	C32	28721	9	2·5	17640	15	2·2
10	Brain, CNS	C70-C72	28142	10	2·4	24003	10	3·1
11	Non-Hodgkin lymphoma	C82-C86	28110	11	2·4	23510	11	3·0
12	Liver	C22	27670	12	2·4	25627	8	3·3
13	Colon	C18	27605	13	2·4	19548	14	2·5
14	Gallbladder	C23-C24	25999	14	2·2	19676	13	2·5
15	Hypopharynx	C12-C13	25947	15	2·2	8804	22	1·1
16	Prostate	C61	25696	16	2·2	17184	16	2·1

17	Rectum	C19-C20	24251	17	2·1	20056	12	2·6
18	Bladder	C67	18926	18	1·6	10231	19	1·3
19	Thyroid	C73	18688	19	1·6	5128	25	0·65
20	Oropharynx	C09-C10	17903	20	1·5	14953	17	1·90
21	Kidney	C64-C65	15454	21	1·3	9911	20	1·30
22	Corpus uteri	C54	13328	22	1·2	5010	27	0·64
23	Multiple myeloma	C88-C90	12923	23	1·1	9900	21	1·30
24	Pancreas	C25	10860	24	0·94	10528	18	1·30
25	Penis	C60	9938	25	0·86	6930	23	0·88
26	Hodgkin lymphoma	C81	9115	26	0·79	5714	24	0·73
27	Salivary glands	C07-C08	7676	27	0·66	5106	26	0·65
28	Vagina	C52	5208	28	0·45	2918	30	0·37
29	Nasopharynx	C11	5086	29	0·44	3715	28	0·47
30	Anus	C21	4895	30	0·42	3486	29	0·44
31	Testis	C62	4414	31	0·38	1955	32	0·25
32	Vulva	C51	3446	32	0·30	1756	33	0·22
33	Melanoma of skin	C43	3048	33	0·26	2053	31	0·26
34	Mesothelioma	C45	1676	34	0·14	1577	34	0·20
35	Kaposi sarcoma	C46	92	35	0·01	56	35	0·01
Data Source: GLOBOCAN 2018								

DISTRIBUTION OF PREVALENT CASES (5 YEAR) BY CANCER TYPES

According to GLOBOCAN 2018 results, breast cancer (18%) is the most prevalent cancer in India followed by cancers of lip oral cavity (12%), cervix uteri (10%), Colorectum (5%), and leukemia (5%) [6]. Table 4 presents estimated number of prevalent cases (5 years) all cancers (both sexes, all ages) in India.

Table 4: Estimated number of prevalent cases in 2018, India

S. no.	ICD	Cancer site	Prevalence (5yr.)	Proportions
1	C00-97	All cancers	2258208	166·8
2	C50	Breast	405456	62·1
3	C00-06	Lip, oral cavity	265255	19·6
4	C53	Cervix uteri	225689	34·6
5	C18-21	Colorectum	113046	8·3
6	C91-95	Leukaemia	105592	7·8
7	C56	Ovary	80422	12·3
8	C16	Stomach	72149	5·3
9	C33-34	Lung	65805	4·9
10	C32	Larynx	65041	4·8
11	C82-86, C96	Non-Hodgkin lymphoma	64496	4·8
12	C70-72	Brain, CNS	62562	4·6
13	C73	Thyroid	50939	3·8
14	C15	Oesophagus	49369	3·6
18	C61	Prostate	47558	6·8
16	C67	Bladder	43486	3·2
17	C09-10	Oropharynx	43015	3·2
18	C12-13	Hypopharynx	34081	2·5
19	C54	Corpus uteri	33747	5·2

20	C64-65	Kidney	31577	2·3
21	C23-24	Gallbladder	31357	2·3
22	C88+C90	Multiple myeloma	24375	1·8
23	C81	Hodgkin lymphoma	24039	1·8
24	C60	Penis	23345	3·3
25	C22	Liver	21880	1·6
26	C07-08	Salivary glands	15375	1·1
27	C62	Testis	13453	1·9
28	C11	Nasopharynx	12640	0·93
29	C52	Vagina	11391	1·7
30	C25	Pancreas	8453	0·62
31	C51	Vulva	8445	1·3
32	C43	Melanoma of skin	7331	0·54
33	C45	Mesothelioma	1819	0·13
34	C46	Kaposi sarcoma	193	0·01

Data Source: GLOBOCAN 2018

FUTURE PROJECTIONS OF NUMBER OF NEW CASES AND DEATHS IN INDIA BY 2040

According to GLOBOCAN 2018, the number of new cases in India is estimated to rise from 1·15 million in 2018 to 1·9 million by 2040 and the estimated number of cancer deaths is estimated to rise from 0·78 million to 1·33 million by 2040 [5].

The number of incident cases in males is estimated to grow from 0·57 million to 0·95million and the projected number of cancer deaths will increase from 0·4 million to 0·7 million by 2040. In females, the estimated number of incident cases will grow from 0·58 million to 0·95 million and the projected number of cancer deaths will rise from 0·37 million to 0·63 million by 2040. Bar charts in Figure 4A&B shows the estimated number of incident cases and deaths from 2018-2040 in India overall and both sexes separately: Source GLOBOCAN 2018.
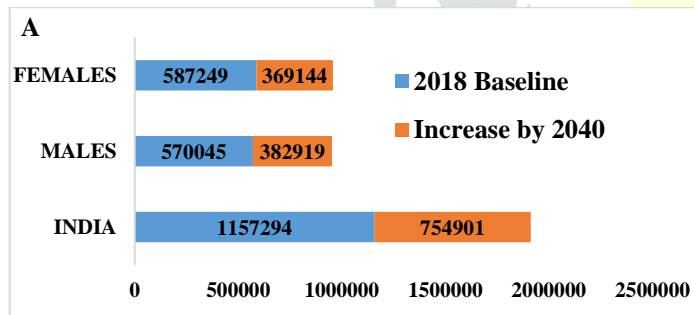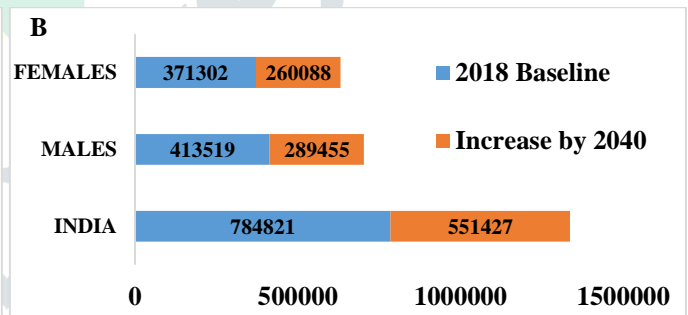

Fig.4A. Incident cases, 2018-2040

Fig.4B. Deaths, 2018-2040

The burden of breast cancer is growing at a worrying rate in India with 0·26 million new incident cases and 0.15 million estimated deaths followed by cancers of lip oral cavity with 0.19 million new cases and 0.12 million deaths by 2040. The rising cancer incidence and mortality due to epidemiological transitions is aided by an increase in life expectancy and ever aging population. According to GLOBOCAN 2018, projected number of incident cases (ages 70+) from 2018 to 2040 will rise from 0·24 million in 2018 to 0·54 million by 2040 and the projected number of cancer deaths (ages 70+) is estimated to increase from 0·19 million to 0·43 million by 2040 in India. The risk of developing cancer before the age of 75 years in males and females is 9·8% and 9·4% respectively while the risk of dying from cancer before the age of 75 years among males and females is 7·34% and 6·2% respectively.

DISCUSSION

World Health Organization reported five prominent risk factors implicated in one third of deaths from cancer. These include tobacco and alcohol use, sedentary life style, high body mass index, low fruit and vegetable intake. Tobacco (smoked or smokeless) is the major risk factor for cancer development and is responsible for almost 22% of cancer deaths followed by cancer causing infections responsible for up to 25% of cancer cases

in lower and middle income countries (LMICs) e.g. hepatitis B for liver cancer and human papilloma virus for cervical cancer [8,9].

According to WHO, approximately 70% of cancer deaths take place in LMICs [10]. In LMICs including India, cancer patients have a poor prognosis because of late diagnosis and cases already grown to advanced stages, low cancer awareness and skewed cancer care facilities [11]. More than 80% of cancers in India present in advanced stages which makes their management a difficult task [12]. Approximately 70% of the Indian cancers are caused by avoidable risk factors including tobacco (40%), infection related (20%) and 10% others [13]. Mallath et al. reported that socioeconomic inequalities and disparities in access to quality health care are the major determinants of burden of cancer in India [14].

Overall breast cancer has emerged as the leading cause of incidence and mortality in India in 2018. Breast cancer came to be the most frequently diagnosed form of cancer among Indian women in 2009 [14]. Overall breast cancer is now the leading cause of cancer death (11%) in India and account for more than one fifth of all the female cancer mortality.

Hereditary and genomic factors account for 5-10% of the breast cancer cases [1]. Brinton et al. reported that elevated incidence rates are also attributed to an increased prevalence of risk factors such as early age menstruation, later age at menopause, late age at first birth, fewer children or nulliparity, oral contraceptives, hormone replacement therapy, alcohol intake, and unhealthy/sedentary life styles. Breastfeeding and physical activity are known to be potential protective factors [15]. Chaurasia et al. reported that one in twenty two females is likely to develop breast cancer during her life in urban areas as compared to rural areas where one in sixty females develops breast cancer in her life. Overall, one in twenty eight females is likely to develop breast cancer during her lifespan [16]. Since timely diagnosis of breast cancer has more chances to be recovered, regular self-examination by females is a way of early detection of breast cancer [12].

Cancers of lip oral cavity are the second leading cause of incidence and mortality in India in 2018. In males, cancers of lip oral cavity account for 16·1% incident cases and 12·3% deaths as compared to the 4·8% new cases and 5·9% deaths in females. Tobacco is the most significant directly attributable cause of cancer and is responsible for approximately 80-90% cases of lip oral cavity cancers (NCRP-2013) [17]. In India, tobacco chewing is more prevalent than smoking and has resulted in added burden of lip oral cancers [18].

Tobacco is being used both as smoked (bidis, cigars, cigarettes, hookah, chillum etc) and smokeless products (gutka, pan masala, oral tobacco, betel quid etc). Global Adult Tobacco Survey (GATS) India 2016-17 reported that overall 10·7% of all adults (19·0% of males and 2% of females) smoke tobacco. 21·4% of all adults use smokeless tobacco (males 29·6% and females 12·8%) [19]. Global youth tobacco survey (GYTS) India (ages 13-15) 2009-10 reported that, overall 14·6% of youth use tobacco (smoked or smokeless) of which 4·4% smoke cigarettes and 12·5% use some other product of tobacco [20].

WHO Framework Convention on Tobacco Control has proven to reduce active smoking in many nations, these measures must be implemented in India not only to reduce but ultimately eliminate the usage of tobacco products which in time would substantially reduce the preventable cancer burden in India [21].

In females, cancers of cervix uteri are the second highest cause of incidence and mortality following breast cancer. Overall, cancers of cervix uteri are third and fourth cause of incidence and mortality respectively. Early age at first sexual intercourse, poor sexual hygiene, multiple sexual partners, frequent childbirth are some of the few reproductive risk factors for cervical cancer [18]. Burden of infection related cancers is high in developing countries due to limited infection prevention practices. According to report provided by Catalan Institute of Oncology (ICO) Information Centre on Human Papillomavirus (HPV) related cancers in India 2018, the crude incidence rate of HPV-related cervical cancer in India is 14·9% [22]. In cervical cancer, 83·2% females have HPV-16/HPV-18 detected, highlighting its importance in the development of cervical cancer [22].

Lung cancer is the second most commonly detected cancer and second most common cause of cancer death in men in India. Overall lung cancer is fourth most commonly detected and top third cause of mortality in India. Among females lung cancer is the fifth leading cause of death. Tobacco escalates the risk of developing lung cancer by 10-20 fold and is significant avoidable cause of cancer related deaths [23,24]. Globally lung cancer is the leading cause of cancer incidence and mortality. In western populations more than 80% of lung cancer are attributed to smoking and a significant reduction in lung cancer burden can be achieved through tobacco control [1].

Cancers of stomach, colorectum, and esophagus are ranked third, fourth and fifth respectively in terms of incidence among men in India. Over all stomach cancer is fifth leading cause of incidence and mortality. Stomach, esophagus, Colorectum and liver cancers have been linked with diet and infections. *Helicobacter pylori* is the major risk factor for development of stomach cancer and is attributed with approximately 90% of noncardia gastric cancers [25].

Numerous studies have shown an elevated risk of colorectal cancers with consumption of processed and red meat though the carcinogenic mechanism is not clear. Processed and red meat have been recognized as potential carcinogens and implicated with elevated cancer mortality [26,27]. Both processed and red meat increase the risk for colon cancer17% per 100 g/day of red meat and 18% per 50 g/day of processed meat [26].

Owing to its cultural diversity, the food in Indian subcontinent is unique. Consumption of deep fried and hot food with significant amount of spices and food additives, dried fish have been implicated as the key risk factors for gastric cancers [28,30]. Alcohol intake has been linked with increased risk of carcinomas of mouth, pharynx, larynx, colon, rectum, pancreas, and esophagus in multiple studies. An increased risk of 10% in males and 3% in females have been attributed to alcohol consumption. Allen et al. reported an increased risk of 6% per consumption of 10g/day of alcohol in women [31].

The new figures provided by GLOBOCAN 2018 for future projections has estimated 1·1 million new incident cancer cases and 0·78 million cancer deaths in 2018 to grow up to 1.9 million incident cases and 1·33 million cancer related deaths in 2040. A study on projections of number of cancer cases in India (2010-2020) by takiar et al. reported that the total cancer cases are likely to go up from 0·98 million cases in 2010 to 1·1 million cases in 2020 [12]. Prasad et al. estimated burden of cancers measuring incidence of cases in India and its states till 2025 and reported that the cancer incidence will increase from 1·37 million cases in 2015 to nearly 1·8 million by 2025, an increase of more than 31·4% [18].

Conclusion

Cancer burden in India is estimated at over 1·1 million new cases 0·78 million deaths in 2018 suggesting an alarming rise in this devastating disease in India and world across. This calls for early detection policies and efficient prevention strategies implemented throughout the country without any socioeconomic disparities. Overall top six cancer types account for 48·6% incident cases and 48·7% cancer deaths in India in 2018 and the burden of these cancer types can be reduced by adopting preventive measures, screening, early detection and quality treatment at early stages.

India has 60-70% preventable cancer burden which could be prevented by properly strengthening the country's public health system. Cancer awareness and screening programs along with avoidance of predisposing factors such as alcohol for respiratory and gastric cancers, tobacco for lip oral cavity and lung cancers, diet and weight for colorectal cancers. Cost-effective vaccination for infection related cancers including HPV for cervical cancer, and hepatitis B for hepatocellular carcinomas. Tobacco control laws and programs need to be implemented across the country to reduce the ever growing incidence and mortality due to preventable cancers. Consumption of more vegetables and fruits, regular physical activity, nutrition and weight control are some of the important preventive strategies.

Cancer registration should be made mandatory in India acting as a source of information regarding country's cancer related incidence, prevalence, morbidity, mortality data, and for better monitoring, evaluation, and effectiveness of national health programs in cancer.

Search Strategy and Selection Criteria

The data for cancer incidence, mortality, prevalence and future projections for India were obtained from GLOBOCAN 2018 database compiled by the International Agency for Research on Cancer (IARC). The results of GLOBOCAN-2018 are available at (http://gco.iarc.fr/). The other sources of data were identified for this review by searching Google Scholar, PubMed, Science Direct and references from the relevant articles using the search terms "cancer", "India", "incidence", "mortality", "burden". We also searched the websites of the International Agency for Research on Cancer (IARC), Global Cancer Observatory (GCO) and World Health Organization (WHO).

Conflict of Interest

We declare that we have no conflicts of interest to disclose.

Acknowledgements

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