

Chapter 8 – SIKKIM: Cancer & Health Indicator profile

8.1 Demography of the Population Based Cancer Registry

Sikkim State PBCR	
PBCR situated in	Sir Thutob Namgyal Memorial Hospital, Gangtok
PBCR Name	Sikkim
Coverage Area	Sikkim State
PBCR Established Year	2003
Number of sources of registration	40
Area (in Sq.km)	7096
Urban & Rural covered (%)	25.2 & 74.8
Population as per 2011 Census	
Males	323070
Females	287507
Total	610577
Major Ethnic groups	Nepalese, Bhutias, Lepchas
Cancer is still not been made notifiable in Sikkim	

8.2 Risk Factor & Health Practices

Risk Factor for Cancer	Urban		Rural		Total	
	Males	Females	Males	Females	Males	Females
Adults (age 15-49 years)						
Literacy (%)	93.3	89.5	90.0	85.2	91.5	86.6
Use of any kind of tobacco (%)	39.6	8.2	40.8	6.9	40.3	7.3
Consumption of alcohol (%)	48.9	22.7	52.9	23.1	51.2	23.0
Proportion attempted to stop smoking or using tobacco in any other form during the past 12 months	10.3	23.4	15.9	18.1	13.5	20.0
Overweight or obese (BMI \geq 25.0 kg/m ²) (%)	41.5	34.1	29.7	23.1	34.8	26.7
Children under age 6 months exclusively breastfed (%)		70.7		48.6		54.6

Source: NFHS-4 (2015 -16)

Health practices & Health seeking	Urban		Rural		Total	
	Males	Females	Males	Females	Males	Females
Adults (age 15-49 years)						
Comprehensive knowledge of HIV/AIDS (%)	37.7	31.5	34.9	21.3	36.1	25.5
Have Ever Undergone Examinations of Cervix (%)		11.8		13.3		12.8
Have Ever Undergone Examinations of Breast (%)		6.0		7.2		6.8
Institutional births (%)		95.3		94.4		94.7
Population and Household Profile						
Both Sex						
Households using improved sanitation facility (%)	76.0		94.2		88.2	
Households using clean fuel for cooking (%)	93.0		42.4		59.1	
Households with any usual member covered by a health scheme or health insurance (%)	32.6		29.2		30.3	

Source: NFHS-4 (2015 -16)

8.3 Health Systems at a Glance

Health Facilities	Number
Sub centre	147
Primary Health Centres	24
Community Health Centres	2
Sub Divisional Hospital	0
District Hospitals	4
Mobile Medical Unit	4
AYUSH	3
Cancer treating hospitals *	1
Radiotherapy facilities *	0
Cancer patient welfare schemes *	0
Palliative care centres *	1

Source: Rural Health Statistics report (2014 -15); * Provided by Cancer registry

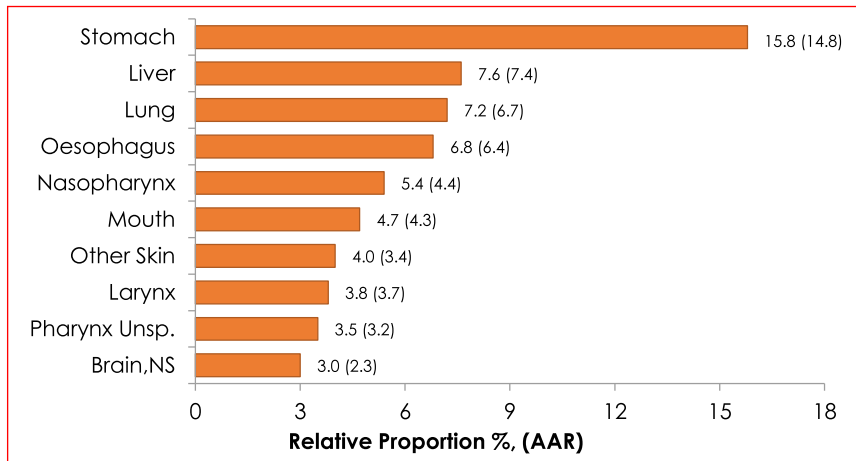
8.4 Number and Age Adjusted Incidence Rate (Reporting years: 2012-14)

Sex	Number of New Cancer cases	AAR
Males	707	90.7
Females	678	100.3

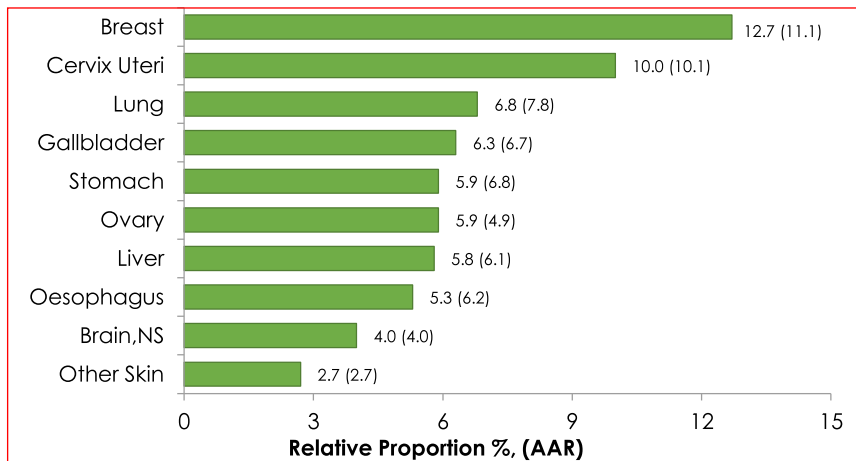
AAR - Age Adjusted Incidence Rate per 1,00,000 population

8.5 Leading Sites of Cancer

Leading Sites of Cancer in Males



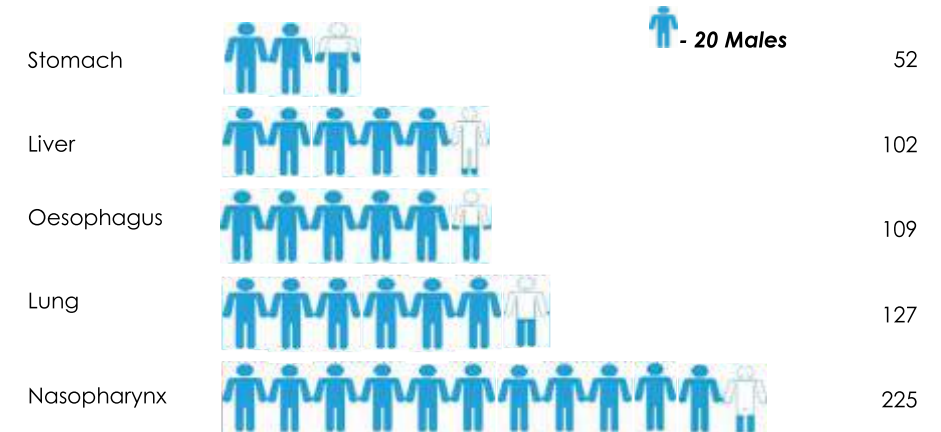
Leading Sites of Cancer in Females



In males, proportion of Stomach cancer is the highest followed by Liver and Lung. These three sites contribute almost one third (31%) of all cancers. In females, Breast cancer is the commonest followed by Cervix Uteri and Lung. These three sites contribute almost one third (30%) of all cancers.

8.6 Possibility of one in number of person developing cancer in (0-74) years of age

Males



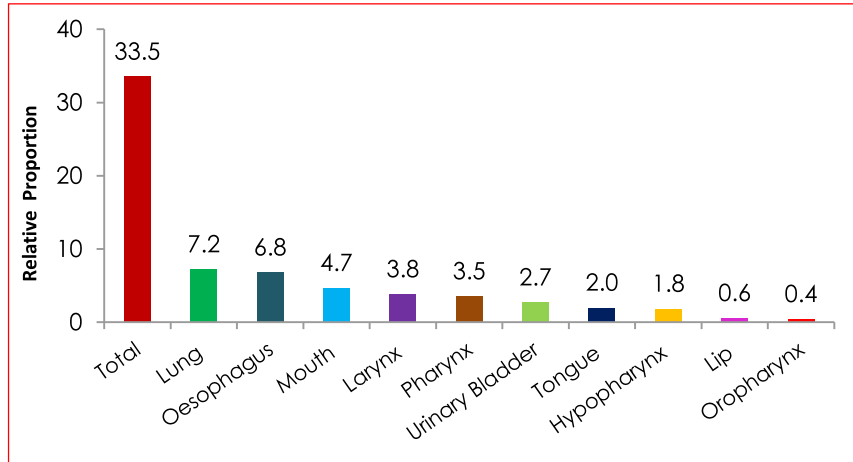
Females



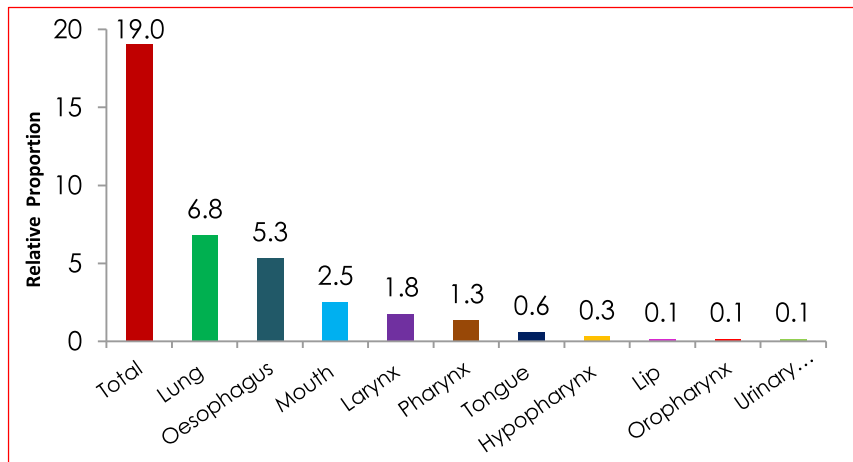
The average risk that a person will develop Stomach cancer in their lifetime (0-74 years) is about 1 in 52 for males. Similarly, 1 in 82 females will possibly develop Cervix Uteri cancer in their lifetime (0-74 years).

8.7 Sites of the Cancers known to be associated with use of tobacco

Males

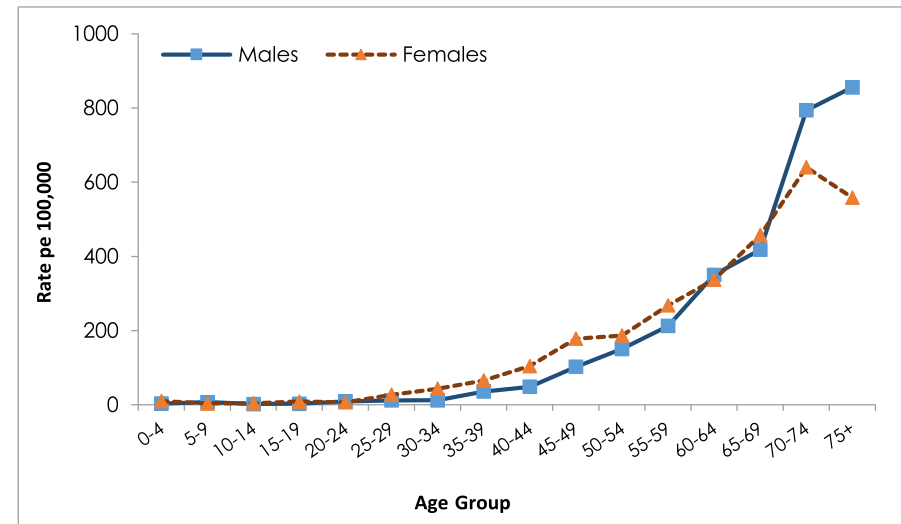


Females



Around 33% and 19% of all cancers in males and females are respectively associated with the use of tobacco. Among these proportion of Lung, Oesophagus and Mouth are leading in both sexes.

8.8 Age Specific Rate (ASpR)



Age Specific Incidence Rate is highest for males in 75+ age group. For females, it is observed in 5 years each (70-74 yrs). Age specific incidence rates show distinct rise from 35- 39 years age onwards in both sexes.

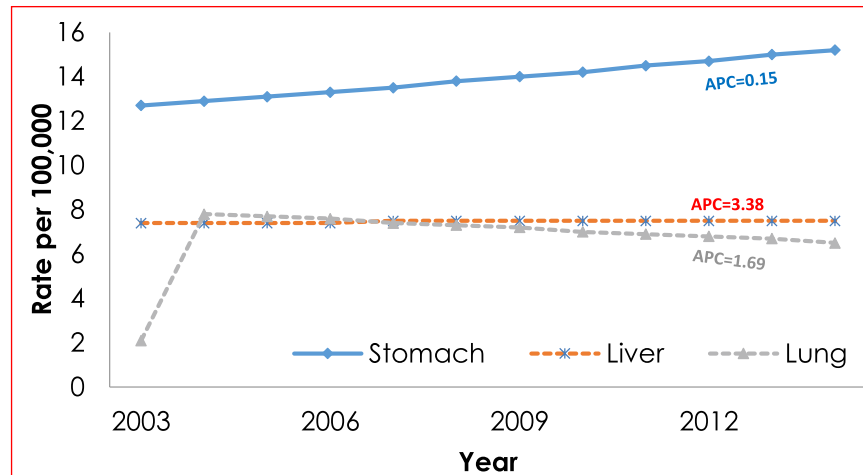
8.9 Ethnicity wise proportion of cancer cases

Cultural Group	Number	Proportion
Nepalese	901	65.1
Bhutias	278	20.1
Lepchas	106	7.7
Others	26	1.9
Missing/Unknown	74	5.3
Total	1385	100.0

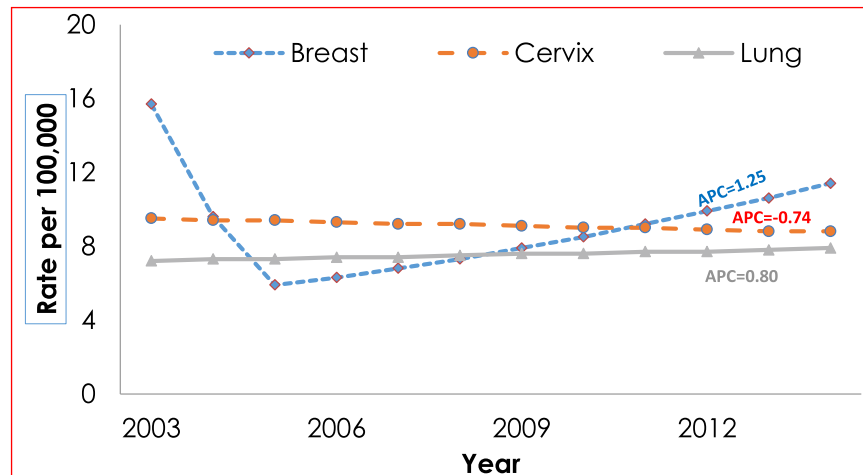
Approximately 65% of the cancer cases belong to Nepalese and followed by Bhutias contribute to 20% of all cancers.

8.10 Trends over time in Cancer Incidence

Males



Females



* Significant Joinpoint model & Annual Percent Change (APC) ($p < 0.05$)

In Males, cancers of Stomach, Liver and Lung are increasing over the years; similarly, Breast and Lung cancers are showing an increase whereas Cervix cancer is showing a decline although these are not statistically significant.

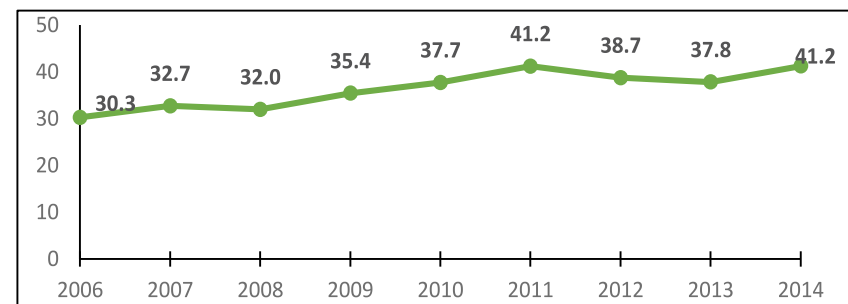
8.11 Cancer Deaths

Case Fatality Ratio (CFR)			
Sex	Incidence case	Death	CFR (%)
Males	707	365	51.6
Females	678	311	45.9
Both Sexes	1385	676	48.8

Approximately 50% cancer deaths are reported related to newly diagnosed case of cancer.

8.12 Status of Medical Certification of Cause of Death *

Implementation status of MCCD	
Existing Allopathic Medical Institutions	31
Medical Institutions Covered under MCCD	31
Medical Institutions reported MCCD data as per the National list	28
Ranking of States/UTs in the medical certification of cause of death, 2014	11



Trend in proportion of medically certified deaths to total registered deaths in Sikkim, 2006-14

Rank	Cause of death	Percentage
1	Circulatory System	26.5
2	Digestive system	17.1
3	Certain Infectious & Parasitic Diseases	11.9
4	Respiratory System	8.8
5	Injury Poisoning	7.1
6	Neoplasms	6.3
7	Certain Conditions Originating in Perinatal Period	5.7
8	Symptoms, Signs & Abnormal Findings	2.4
9	Other groups	14.1

* Report on Medical Certification of Cause of Death (MCCD), 2008 -14, Office of the Registrar General of India, Government of India.

Coverage of institutions and reporting of MCCD are satisfactory. Conditions of the Circulatory system is the leading cause of death. Quality of cause of death information has to be further improved.



Advocacy Points

- Cancer of Stomach, Liver and Lung are most common in men.
- Cancer of Breast, Cervix and Lung are most common in women
- One third of cancers in men are associated with the use of tobacco.
- Cancer cases start rising from 35 years and reach peak at 75 years affecting the economically productive age group.
- High burden of risk factors such as tobacco, alcohol, obesity etc., need to be addressed through appropriate prevention programme and health education.
- Use of clean fuel needs to be promoted in rural sectors to minimize indoor air pollution.
- Coverage of screening for breast, cervix and oral cancer needs to be improved.
- Cancer treatment facilities particularly radiotherapy, palliative care etc need to be established and strengthened.
- Cancer patient welfare and other relevant health insurance scheme needs to be in place to improve affordability and access to health care.
- Strengthening the reporting of cause of death is required to generate accurate mortality estimates.
- Notifiability of Cancer needs to be considered to ensure completeness of cancer reporting in the state.