

Multi Institutional Cervical Cancer Incidence & Trend in Nepal - 2017

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Abstract

Cervical cancer is the most common cancer and leading cause of mortality among Nepalese women. The trend of cervical cancer can be useful for effective planning to reduce the cancer incidence. This study aims to determine the multi institutional cervical cancer incidence and assess the trend in over fifteen years in national cancer registry system. This was a retrospective study with secondary data analysis of new cervical cancer registered in hospital based national cancer registry programme conducted by B.P. Koirala Memorial Cancer Hospital, Bharatpur, Chitwan, Nepal. In the year of 2017, net 928 new cases of cervical cancer were registered out of 5577 female cases in Nepal (Male n =4939, Total n= 10516). Large no of cases reported from BP Koirala Memorial Cancer Hospital followed by Bhaktapur Cancer Hospital and Paropakar Maternity & Women Hospital, Thapathali, Kathmandu. Age group of 50-54 years were most prevalent for cervical cancer. Maximum of patients were from Chitwan District and followed by Kathmandu and Rupandehi. The trend of cervical cancer was seen to be fluctuating yearly during 2003 to 2017. Well organized awareness activities, HPV vaccination and screening programme recommended to prevent and control the cervical cancer burden in Nepal

Key words: Cervical cancer, Incidence, Registry, Nepal

I. Introduction

Most of the cervical cancer found in developing countries and lower socio economic status. In Nepal, hospital based data show that it is the top most cancer in females. According to National Cancer Registry programme (NCRP), Nepal which collects hospital based data from twelve major hospitals and is the only aggregate data on cancer in the country shows that cervical cancer is the leading cancer among the women. According to most recent data from NCRP 2017, cervical cancer accounts for 16.6% of all cancer in women. It was mostly prevalent in marital women. Cervical cancer is the fourth most common cancer among women globally with in estimated 570,000 new cancers 2018 representing 6.6 % of all female cancers. Approximately 90% of death from cervical cancer occurred in low-and middle income countries. In Asian women, cervical cancer ranked second after breast cancer.

II. Material and Methods

This was a retrospective study with secondary data analysis of new cervical cancer registered in hospital based National Cancer Registry Programme conducted by B.P. Koirala Memorial Cancer Hospital, Bharatpur, Chitwan, Nepal. The data analysis was carried out by using SPSS 19.0.

III. Limitation of the Study

The study used only the secondary data from national cancer registry programme of Nepal, which include 12 major hospitals in the nation.

IV. Sources of Data: Twelve major hospitals of the nation.

1. Bhaktapur Cancer Hospital (BCH) Bhaktapur
2. Bir Hospital (BH) Mahaboudha, Kathmandu
3. Manipal Teaching Hospital (MTH) Pokhara, Kaski
4. BP Koirala Memorial Cancer Hospital(BPKMCH) Bharatpur
5. Tribhuvan University Teaching Hospital (TUTH) Kathmandu
6. Kanti Children's Hospital (KCH) Maharajgunj, Kathmandu
7. BP Koirala Institute of Health Sciences (BPKIHS) Dharan, Sunsari
8. Shree Birendra Hospital(SBH) Kathmandu
9. Civil Service Hospital(CSH) Kathmandu
10. Patan Academic of Health Science(PAHS) Lalitpur
11. Paropakar Maternity & Women Hospital (PMWH) Kathmandu
12. Nepalgunj Medical College Teaching Hospital (NMCTH) Kohalpur

V. Result

This was a descriptive study with secondary data analysis of new cervical cancer cases were recorded and collected from different 12 major hospitals of the nation. Data analysis was proceeding by using by using SPSS 19.0.

Table 1. Summary of Total Cancer Cases (2003-2017)

S.N.	Total cases (2003-2017) for both sex				Number of Cervix cancer	Percentage of cervical cancer
	Years	Total cases	Male	Female		
1	2003	3251	1488 (46%)	1763 (54%)	441	25.0
2	2004	4201	2030 (48%)	2171 (52%)	483	22.2
3	2005	4397	2057 (47%)	2340 (53%)	501	21.4
4	2006	4908	2325 (47%)	2583 (53%)	551	21.3
5	2007	6035	2758 (46%)	3277 (54%)	648	19.7
6	2008	5949	2702 (45%)	3247 (56%)	732	22.5
7	2009	6199	2970 (48%)	3229 (52%)	688	21.3
8	2010	6773	3192 (47.1%)	3581 (52.9%)	699	19.5
9	2011	7088	3295 (46.5%)	3793 (53.5%)	755	19.9

10	2012	7212	3291 (45.6%)	3921 (54.4%)	747	19.0
11	2013	8729	4011 (46.0%)	4718 (54.0%)	832	17.6
12	2014	9036	4014 (44.4%)	5022 (55.6%)	852	17.0
13	2015	9718	4483 (46.1%)	5235 (53.9%)	868	16.6
14	2016	10117	4697(46.4%)	5420 (53.6%)	912	16.2
15	2017	10516	4939(46.97%)	5577 (53.03 %)	928	16.6

Figure 1. Trend of Cervical Cancer Based on Registered Cancer Cases for Both Sex (2003-2017)

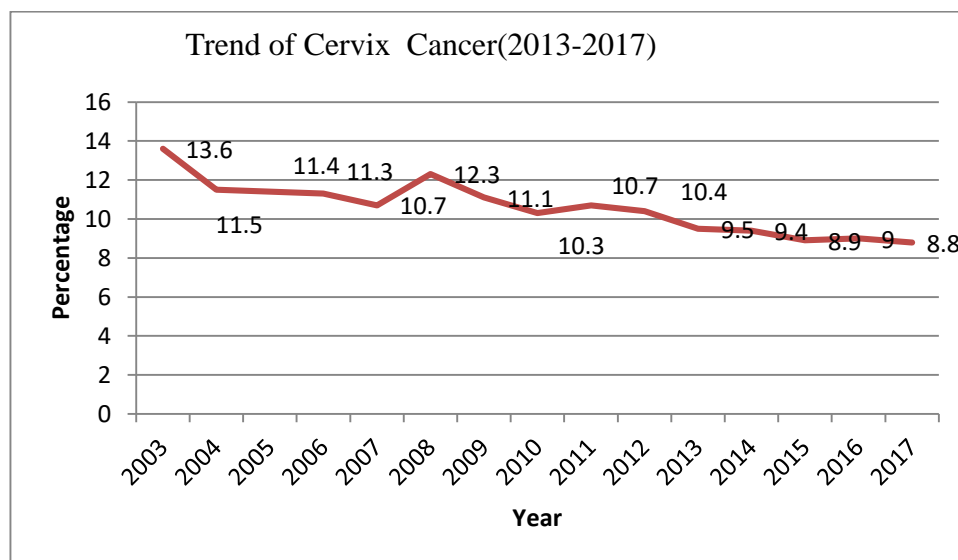


Figure 2. Trend of Cervical Cancer Based on Registered Cancer Cases for Female (2003-2017)

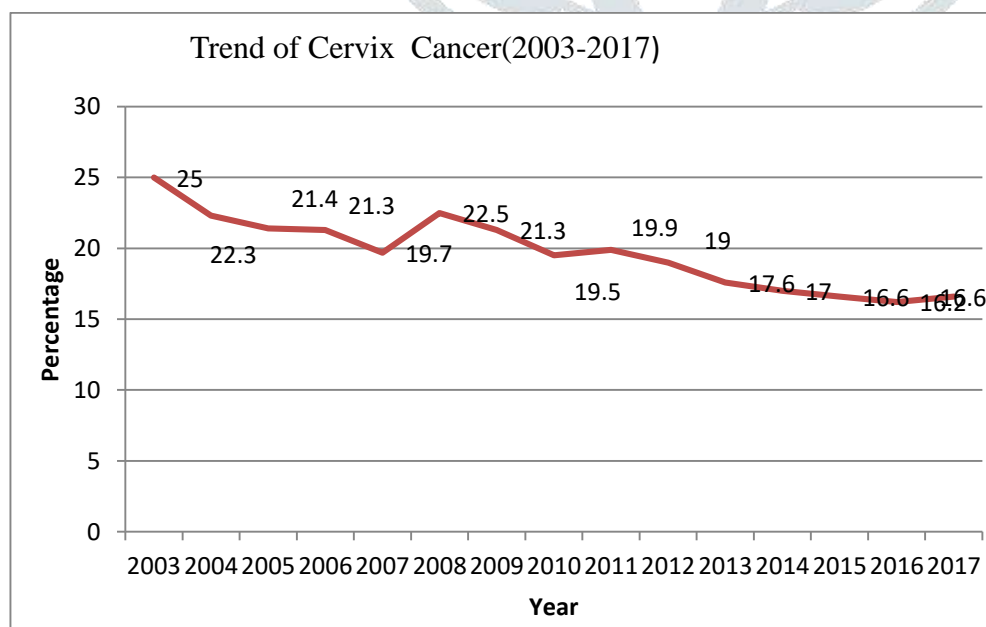


Table 2. Total Cancer Cases for Female - 2011

Distribution of cases by site				
S.N.	ICD-10	Topography	Number	Percentage
1	C 53	Cervix uteri	755	19.9
2	C 50	Breast	608	16.1
3	C 34	Bronchus & lung	391	10.3
4	C 56	Ovary	225	5.9
5	C 16	Stomach	147	3.9
6	C 73	Thyroid	143	3.8
7	C 23	Gall bladder	125	3.3
8	C 76	Other & ill defined sites	76	2.0
9	C 20	Rectum	76	2.0
10	C 92	Leukemia/myeloid	68	1.8
11	**	Other cancer cases	1179	31.0
Total			3793	100.0

Total 3. Total Cancer Cases for Female - 2012

Distribution of cases by site				
S.N.	ICD-10	Topography	Number	Percentage
1	C53	Cervix uteri	747	19.1
2	C50	Breast	641	16.3
3	C34	Bronchus & lung	398	10.2
4	C56	Ovary	238	6.1
5	C16	Stomach	148	3.8
6	C23	Gall bladder	144	3.7
7	C73	Thyroid	122	3.1
8	C76	Other & ill defined sites	88	2.2
9	C71	Brain	78	2.0
10	C20	Rectum	76	1.9
11	**	Other cancer cases	1241	31.6
Total			3921	100.0

Total 4. Total Cancer Cases for Female - 2013

Distribution of cases by site				
S.N.	ICD-10	Topography	Number	Percentage
1	C53	Cervix uteri	832	17.6
2	C50	Breast	728	15.4
3	C34	Bronchus & lung	492	10.4
4	C56	Ovary	350	7.4
5	C16	Stomach	215	4.7
6	C23	Gall bladder	161	3.4
7	C73	Thyroid	126	2.7
8	C32	Larynx	116	2.5

9	C20	Rectum	110	2.3
10	C22	Liver	110	2.3
11	C71	Brain	99	2.1
	**	Other cancer cases	1478	31.5
		Total	4718	100.0

Total 5. Total Cancer Cases for Female - 2014

Distribution of cases by site				
S.N.	ICD-10	Topography	Number	Percentage
1	C53	Cervix uteri	852	17.2
2	C50	Breast	826	16.5
3	C34	Bronchus & lung	549	10.9
4	C56	Ovary	350	7.1
5	C16	Stomach	223	4.4
6	C23	Gall bladder	220	4.4
7	C73	Thyroid	145	2.9
8	C20	Rectum	134	2.7
9	C32	Larynx	112	2.1
10	C22	Liver	108	2.2
11		Other cancer cases	1503	29.9
		Total	5022	100.0

Total 6. Total Cancer Cases for Female - 2015

Distribution of cases by site				
S.N.	ICD-10	Topography	Number	Percentage
1	C53	Cervix uteri	868	16.6
2	C50	Breast	838	16.0
3	C34	Bronchus and lung	574	11.0
4	C56	Ovary	365	7.0
5	C23	Gall bladder	235	4.5
6	C16	Stomach	227	4.3
7	C73	Thyroid gland	143	2.7
8	C20	Rectum	120	2.3
9	C71	Brain	108	2.1
10	C32	Larynx	106	2.0
11	**	Others cancer	1651	31.5
		Total	5235	100.0

Table 7. Total Cancer Cases for Both Sex – 2016

Distribution of cases by site				
S.N.	ICD-10	Topography	#	%
1	C34	Bronchus and lung	1342	13.26
2	C53	Cervix uteri	912	9.01
3	C50	Breast	904	8.93
4	C16	Stomach	499	4.93
5	C56	Ovary	392	3.87
6	C23	Gall bladder	387	3.82

7	C91	Leukemia/lymphoid	313	3.09
8	C32	Larynx	289	2.85
9	C71	Brain	279	2.75
10	C20	Rectum	259	2.56
11	**	Others cancer	4541	44.88
Total			10117	100.00

Table 8 . Total Cancer Cases for Male - 2016

S.N.	ICD-10	Topography	#	%
1	C34	Bronchus and lung	798	16.98
2	C16	Stomach	284	6.04
3	C32	Larynx	223	4.74
4	C91	Leukemia/lymphoid	213	4.50
5	C67	Bladder	198	4.21
6	C71	Brain	174	3.70
7	C20	Rectum	150	3.19
8	C85	NHL	141	3.00
9	C02	Other and unspecified parts of tongue	139	2.95
10	C22	Liver and intrahepatic bile duct	136	2.89
11	**	Other cancers	2241	47.71
Total			4697	100.00

Table 9 . Total Cancer Cases for female - 2016

S.N.	ICD-10	Topography	#	%
1	C53	Cervix uteri	912	16.02
2	C50	Breast	874	16.12
3	C34	Bronchus and lung	544	10.03
4	C56	Ovary	392	7.23
5	C23	Gall bladder	269	4.96
6	C16	Stomach	215	3.96
7	C73	Thyroid gland	174	3.21
8	C22	Liver and intrahepatic bile duct	118	2.17
9	C20	Rectum	109	2.01
10	C71	Brain	105	1.93
11	**	Other cancers	1708	31.51
Total			5420	100.00

Table 10 Total Cancer Cases for Both Sex - 2017

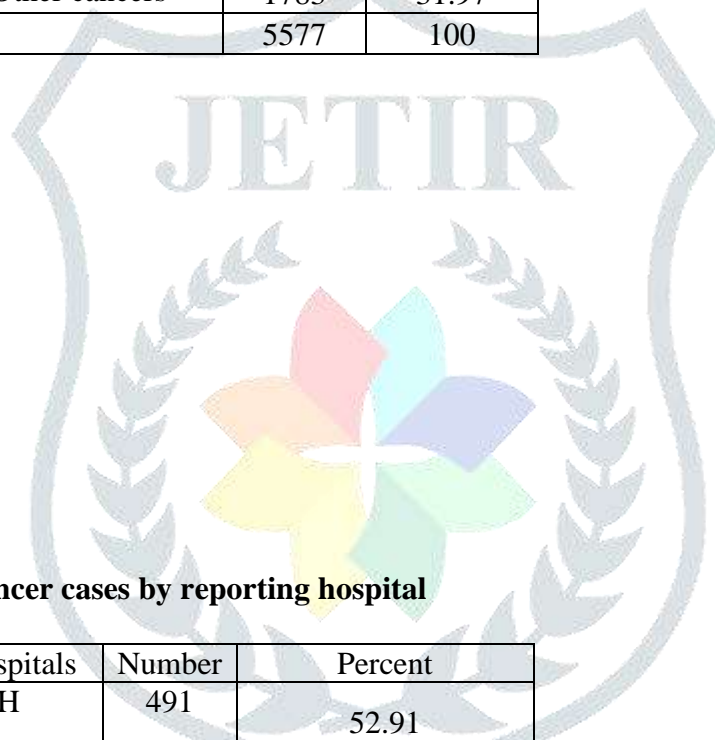
S.N.	ICD-10	Topography	#	%
1	C34	Bronchus and lung	1347	12.81
2	C53	Cervix uteri	928	8.82
3	C50	Breast	916	8.71
4	C16	Stomach	536	5.10
5	C23	Gall bladder	420	3.99
6	C56	Ovary	393	3.74
7	C67	Bladder	312	2.97
8	C22	Liver	302	2.87
9	C91	Leukemia/lymphoid	288	2.74
10	C32	Larynx	278	2.64
11	**	Other cancers	4796	45.60
Total			10516	100.0

Table 11 Total Cancer Cases for Male - 2017

S.N.	ICD-10	Topography	#	%
1	C34	Bronchus and lung	787	15.93
2	C16	Stomach	324	6.56
3	C67	Bladder	241	4.88
4	C32	Larynx	204	4.13
5	C22	Liver	183	3.71
6	C91	Leukemia/lymphoid	169	3.42
7	C02	Other & unspecified parts of tongue	162	3.28
8	C20	Rectum	161	3.26
9	C18	colon	158	3.20
10	C06	Other & unspecified parts of mouth	153	3.10
11	**	Other cancers	2397	48.53
Total			4939	100

Table 12 Total Cancer Cases for Female - 2017

S.N.	ICD-10	Topography	Number	Percent
1	C53	Cervix uteri	928	16.64
2	C50	Breast	891	15.98
3	C34	Bronchus and lung	560	10.04
4	C56	Ovary	393	7.05
5	C23	Gall bladder	281	5.04
6	C16	Stomach	212	3.80
7	C73	Thyroid gland	174	3.12
8	C22	Liver and intrahepatic bile duct	119	2.13
9	C91	Leukemia/lymphoid	119	2.13
10	C18	Colon	117	2.10
11	**	Other cancers	1783	31.97
Total			5577	100

**Table 13 Cervical cancer cases by reporting hospital**

S.N.	Reporting hospitals	Number	Percent
1	BPKMCH	491	52.91
2	BPKIHS	11	1.19
3	BCH	326	35.13
4	BH	16	1.72
5	TUTH	10	1.08
6	KCH	0	0.00
7	MTH	8	0.86
8	SBH	11	1.19
9	CSH	12	1.29
10	PAHS	10	1.08
11	PMWH	31	3.34
12	NMCTH	1	0.11
Total		928	100.00

Table 14 Cervical cancer cases by age group - 2017

S.N.	Age group	Number	Percent
1	0-4 yrs	0	0
2	5-9 yrs	0	0
3	10-14 yrs	0	0
4	15-19 yrs	2	0.22
5	20-24 yrs	7	0.75
6	25-29 yrs	13	1.40
7	30-34 yrs	20	2.16
8	35-39 yrs	66	7.11
9	40-44 yrs	93	10.02
10	45-49 yrs	131	14.12
11	50-54 yrs	145	15.63
12	55-59 yrs	127	13.69
13	60-64 yrs	138	14.87
14	65-69 yrs	77	8.30
15	70-74 yrs	67	7.22
16	75-79 yrs	32	3.45
17	80 + yrs	10	1.08
Total		928	100

Table 15 Cervical Cancer by districts for Female –2017

S.N.	Districts	Number	Percent
1	Achham	5	0.54
2	Arghakachi	12	1.29
3	Baglung	10	1.08
4	Baitadi	3	0.32
5	Bajhang	2	0.22
6	Bajura	0	0.00
7	Banke	20	2.16
8	Bara	15	1.62
9	Bardia	22	2.37
10	Bhaktapur	7	0.75
11	Bhojpur	3	0.32
12	Chitwan	50	5.39
13	Dadeldhura	3	0.32
14	Dailekh	4	0.43
15	Dang	28	3.02
16	Darchula	3	0.32
17	Dhading	22	2.37
18	Dhankuta	2	0.22
19	Dhanusha	21	2.26
20	Dolkha	8	0.86
21	Dolpa	0	0.00
22	Doti	4	0.43
23	Gorkha	22	2.37

24	Gulmi	11	1.19
25	Humla	0	0.00
26	Ilam	6	0.65
27	Jajarkot	2	0.22
28	Jhapa	40	4.31
29	Jumla	7	0.75
30	Kailali	25	2.69
31	Kalikot	3	0.32
32	Kanchanpur	17	1.83
33	Kapilvastu	9	0.97
34	Kaski	26	2.80
35	Kathmandu	45	4.85
36	Kavrepalchowk	9	0.97
37	Khotang	6	0.65
38	Lalitpur	7	0.75
39	Lamjung	11	1.19
40	Mahottari	10	1.08
41	Makwanpur	28	3.02
42	Manang	0	0.00
43	Morang	30	3.23
44	Mugu	1	0.11
45	Mustang	0	0.00
46	Myagdi	4	0.43
47	Nawalparasi	24	2.59
48	Nuwakot	13	1.40
49	Okhaldhunga	5	0.54
50	Palpa	11	1.19
51	Panchthar	2	0.22
52	Parbat	8	0.86
53	Parsa	19	2.05
54	Pyuthan	13	1.40
55	Ramechap	7	0.75
56	Rasuwa	4	0.43
57	Rautahat	10	1.08
58	Rolpa	8	0.86
59	Rukum	5	0.54
60	Rupendehi	45	4.85
61	Salyan	4	0.43
62	Sankhuwasabha	2	0.22
63	Saptari	19	2.05
64	Sarlahi	24	2.59
65	Sindhuli	6	0.65
66	Sindhupalchowk	15	1.62
67	Siraha	25	2.69
68	Solukhumbu	1	0.11
69	Sunsari	31	3.34
70	Surkhet	15	1.62
71	Syanjha	23	2.48
72	Tanahun	17	1.83
73	Taplejung	1	0.11
74	Tehrathum	0	0.00
75	Udayapur	8	0.86
Total		928	100

VI. Discussion

In this study, cancer patients of all sex and age groups was conducted to assess the frequency of different types of cancer from January 1st to December 31st 2017. A total of 10516 cancer cases were reported from participatory hospitals to B. P. Koirala Memorial Cancer Hospital. Only 928 were cervical cancer out of 10516 cases. Collected data were coded according to ICD-03 and ICD-10 published by WHO/IARC. And n=928 cervical cancer cases were proceeded for analysis using SPSS 19.0. The present data provide an update of the cervical cancer burden in Nepal.

This study shows, large no of cases reported from B.P. Koirala Memorial Cancer Hospital, Bharatpur, Chitwan followed by Bhaktapur Cancer Hospital, Bhaktapur and Paropakar Maternity & Womwn Hospital, Thapathali, Kathmandu.

According to age distribution, age group of 50-54 years was most prevalent for cervical cancer. Most of the cases were from Chitwan followed by Kathmandu and Rupandehi.

VII. Conclusion

The trend of cervical cancer was seen to be fluctuating yearly during 2003 to 2017. Age group of 50-54 years was most prevalent for cervical cancer in 2017. Most of the cases were from Chitwan followed by Kathmandu and Rupandehi.

VIII. Recommendation

Well organized awareness activities, HPV vaccination and screening programme was recommended to prevent and control the cervical cancer burden in Nepal.

Acknowledgements

The author would like to offer thank to all staffs of data source intuition for providing valuable information towards this study.

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