

DEPARTMENT OF SURGICAL ONCOLOGY

Thoracic Surgery Unit

Introduction

Thoracic Surgery at BP Koirala Memorial Cancer Hospital deals with non-cardiac thoracic diseases. The main emphasis is on diagnosis and treatment of thoracic lesions which are suspected or diagnosed malignant neoplasms. Thoracic Unit has three operating days/ week. Thoracic unit as a separate division was established on 4, dec 2006. A separate Thoracic ward was opened in year 2009.

The Thoracic Surgery Unit and its faculty provide operative, perioperative, and critical care for all diseases of the thorax, including:

- Early and locally advanced lung cancer
- Pretreatment staging of thoracic neoplasms
- Minimally invasive surgery (MIS) including VATS and advanced laparoscopic surgery
- Esophageal carcinoma
- Gastroesophageal Junction tumors
- Management of complex esophageal diseases (complications of gastroesophageal reflux, neuromotor diseases, etc.)
- Tracheal tumors and airway management
- Malignant pleural and pericardial effusions
- Mesothelioma and other malignant pleural diseases
- Chest wall tumors
- Pulmonary metastases
- Mediastinal tumors
- Others.



Manpower: 4

Dr Binay Thakur, Consultant and Chief, Thoracic Surgery. Head of Surgical Oncology

Dr Guo Yang, Visiting Consultant Thoracic Surgeon from People's Republic of China

Dr Mukti Devkota, Registrar

Dr Robin Lama, Medical Officer

Professional training:

Dr Binay Thakur attended “Intensive course in Laparoscopic General Surgery” in Asia Institute of Tele Surgery, Asia IRCAD - Taiwan during Oct 18-21, 2010. He obtained Diploma in Laparoscopic Surgery from Strasbourg University, France in Nov 2010.

Papers presented

Dr. Binay Thakur presented following papers:

1. Early Lung Cancer. Multidisciplinary Cancer Management Course & 2nd National Oncology Conference: SFO-N and ASCO. Kathmandu Nepal, March 5-8, 2010
2. Eight-year experience in esophageal cancer surgery at BPKMCH, Nepal. Multidisciplinary Cancer Management Course & 2nd National Oncology Conference: SFO-N and ASCO. Kathmandu Nepal, March 5-8, 2010
3. Comparison between concurrent chemoradiation followed by surgery vs. surgery for the treatment of locally advanced esophageal cancer. Multidisciplinary Cancer Management & 2nd National Oncology Conference: SFO-N and ASCO. Kathmandu Nepal, March 5-8, 2010
4. Disparities in lung cancer in the Nepalese population. American Society for Preventive Oncology Annual Meeting 2010, Las Vegas, Nevada

Dr Binay Thakur and Dr Mukti Devkota presented the following papers:

1. Is there a controversy in surgical approach to cancer of GE Junction? Experience at BPKMCH. X International Surgical Conference SSN. Kathmandu, Nepal. Nov 25-27, 2010
2. Treatment of Esophageal cancer - still a challenge for oncologists and surgeons in Nepal. X International Surgical Conference SSN. Kathmandu, Nepal. Nov 25-27, 2010
3. Aspergillosis in a non-immunocompromised patient. X International Surgical Conference SSN. Kathmandu, Nepal. Nov 25-27, 2010
4. Esophagectomy with gastric pull-up through right thoracotomy without laparotomy: a case report with review of literature. X International Surgical Conference SSN. Kathmandu, Nepal. Nov 25-27, 2010
5. An initial experience with minimally invasive surgery for cancer of esophagus and GE Junction. X International Surgical Conference SSN. Kathmandu, Nepal. Nov 25-27, 2010

Articles in Journal:

The following two articles were accepted for publication in the coming issues of the respective journals:

1. Thakur B, Zhang CS, Meng XL, Bhaktman S, Bhurtel S, Khakural P. Eight-year experience in esophageal cancer surgery. Indian Journal of Cancer
2. Binay Thakur, Chun Shan Zhang, Yang Guo, Robin Lama. Comparison between concurrent chemoradiation followed by surgery vs. surgery for locally advanced cancer of esophagus. Indian Journal of Surgery

The following article was published:

1. Hashibe M, Siwakoti B, Wei M, Thakur BK, Pun CB, Shrestha BM, Burningham Z, Lee YA, Sapkota A. Socioeconomic status and lung cancer risk in Nepal. *Asian Pacific J Cancer Prev*, 2010; 12, 1083-1088

Workshop attended

Workshop on Laparoscopic Gynaecological Cancer Surgery, BP Koirala Memorial Cancer Hospital, Nepal. 10-11 april, 2010.

OPD and in-patients data have been shown in tables 1 and 2, and figures 1 and 2.

Table 1. OPD patients.

Month	New			Follow-up			Total		G.Total
	Male	Female	Total	Male	Female	Total	Male	Female	
January	61	57	118	117	106	223	178	163	341
February	57	49	106	129	129	258	186	178	364
March	127	348	475	141	508	649	268	856	1124
April	56	58	114	162	119	281	218	177	395
May	19	13	32	54	44	98	73	57	130
June	60	48	108	126	116	242	186	164	350
July	55	50	105	121	115	236	176	165	341
August	74	55	129	222	136	358	296	191	487
September	57	47	104	155	118	273	212	165	377
October	56	43	99	132	75	207	188	118	306
November	56	47	103	180	124	304	236	171	407
December	57	42	99	149	84	233	206	126	332
Total	735	857	1592	1688	1674	3362	2423	2531	4954

Table 2. In-patients.

Month	Male	Female	Total
January	12	9	21
February	7	5	12
March	11	12	23
April	12	5	17
May	11	9	20
June	7	11	18
July	18	15	33
August	22	22	44
September	19	10	29
October	12	15	27
November	17	15	32
December	21	20	41
Total	169	148	317

Figure 1

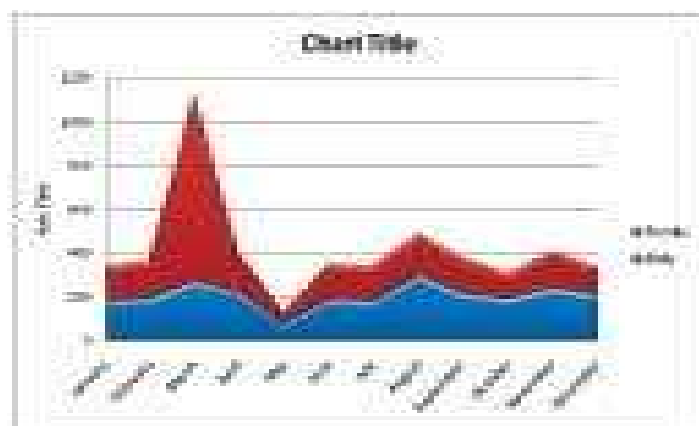
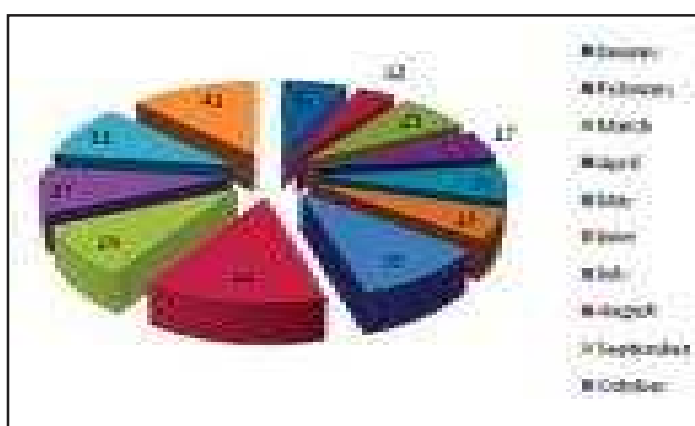


Figure 2

**Minor surgical procedures:**

Various biopsies, debridement, drainage, tube thoracostomy, etc: 247

Major surgical procedures:

N= 233

Mean age = 52 yrs (range: 3-85 yrs)

Male = 140 (60.1%)

Female = 93 (39.9%)

Details of diseases and major surgical procedures have been shown in tables 3 and 4.

Table 3. Diseases for which surgery was performed.

Diseases	Number	Percentage (%)
Ca lung	64	27.5
Ca esophagus	44	18.9
Ca Gastroesophageal junction	17	7.3
Others	24	10.3
Chest wall tumor	15	6.4
Pleural effusion	11	4.7
Soft tissue sarcoma	10	4.3
Lung mass	9	3.9
Ca stomach	8	3.4
Anterior mediastinal mass	5	2.1
Empyema thoracis	2	.9
Pulmonary Cyst (hydatid)	2	.9
Mesothelioma	2	.9
Posterior mediastinal mass	2	.9
Thyroid cancer (retrosternal)	2	.9
Gall bladder cancer	2	.9
Periampullary cancer	2	.9

Thymoma	1	.4
Mediastinal germ cell tumor	1	.4
Mediastinal lymphoma	1	.4
Thymic carcinoma	1	.4
Lung metastasis	1	.4
Aspergilloma	1	.4
Status post pneumonectomy with BPF	1	.4
Dermatofibrosarcomaprotuberance	1	.4
Cystic hygroma	1	.4
Esophageal foreign body	1	.4
Bronchiectasis	1	.4
Chylothorax	1	.4

Table 4. Surgical procedure.

Procedure	n	%
Pulmonary	72	30.9
Pneumonectomy	7	3
Lobectomy	34	14.6
Wedge resection	3	1.3
Open lung biopsy	16	6.8
Diagnostic VATS	4	1.7
Excision of thoracic/ pulmonary mass	4	1.7
Closure of Bronchopulmonary fistula	1	.4
Pulmonary cystectomy (Hydatid)	3	1.3
Mediastinum	12	5.1
Mediastinoscopy	4	1.7
Excision of anterior mediastinal mass	5	2.1
Thymectomy	2	.9
Ligation of thoracic duct	1	.4
Pleural diseases	21	9
Pleurectomy, decortications	8	3.4
Tube thoracostomy	13	5.6
Esophageal diseases	45	19.3
Mckeown's esophagectomy	16	6.8
Laparoscopic assisted 3-incision esophagectomy	7	3
Feeding jejunostomy	7	3
VATS - 3 - incision esophagectomy	4	1.7
Radical esophagectomy with 3-field		

nodal dissection	4	1.7
Ivor-Lewis esophagectomy	1	.4
Esophagectomy (lt thoracic)	1	.4
Ttranshiatal esophagectomy	1	.4
Esophagectomy (rt thoracic and neck)	2	.9
Esophageal exclusion with colonic interposition	1	.4
Re-laparotomy and lavage	1	.4
Gastroesophageal junction tumors	17	7.3
Transhiatal gastroesophagectomy	5	2.1
Mckeown's gastroesophagectomy	3	1.3
Feeding jejunostomy	2	.9
Ivor-Lewis gastroesophagectomy	1	.4
VATS - 3-incision gastroesophagectomy	1	.4
Laparoscopic Ivor-Lewis gastroesophagectomy	1	.4
VATS-laparoscopic gastroesophagectomy	1	.4
Gastroesophagectomy with colonic interposition	1	.4
Exploratory laparotomy	1	.4
Diagnostic laparoscopy	1	.4
Chest wall tumors	8	3.4
Chest wall resection with muscular flap reconstruction	6	2.6
chest wall resection with mesh repair	2	.9
Gastric tumors	5	2.1
Total gastrectomy with distal Esophagectomy	1	.4
Subtotal gastrectomy	2	.9
Total gastrectomy	1	.4
GJ stomy	1	.4
Sternotomy and completion thyroidectomy	1	.4
Extended cholecystectomy	2	.9
Soft tissue tumors	13	5.6
Wide local excision	12	5.2
Wide local excision with SSG	1	.4
Miscellaneous	37	15.9

As shown in the tables, our main procedures are related to surgery for lung and esophageal/ GE junction malignancies.

New services:

In year 2009, we had started esophageal dilatation with nasogastric tube insertion prior to chemoradiation for patients with grade IV dysphagia due to esophageal cancer. We had started endoscopic polypectomy as well. We have given the continuity to these procedures.

In year 2009, for the first time in Nepal, we along with Head and Neck team had successfully performed pharyngolaryngoesophagectomy for the cancer of hypopharynx extending to upper esophagus. Esophageal resection was done thoracoscopically. In year 2010, we have concentrated more and more on minimally invasive surgery. Again, to the best of our knowledge, for the first time in Nepal we performed esophagectomy/ gastroesophagectomy using minimally invasive approach (thoracoscopically and laparoscopically). We succeeded to perform the esophagectomy in two patients using right thoracotomy (without laparotomy) and neck incision only, a technique which is quite new and has not been mentioned in standard text books of surgery.

Research activities:

We are actively participating in a Lung cancer research programme in collaboration with researchers from USA. Besides, the following clinical trials are being carried out:

1. Two field Vs three field nodal dissection for cancer of esophagus
2. Minimally invasive esophagectomy Vs. open esophagectomy for cancer of esophagus.
3. Association of trace elements with lung cancer.

Future plans:

We are planning to emphasize more on minimally invasive surgery for esophageal and lung malignancies. We are planning to do VATS lobectomy and VATS thymectomy in the year to come.

Soon, we are going to establish a microvascular technique for free flaps and free grafts. We will be using mediastinoscopy routinely for nodal staging of non-small cell lung cancer.

