

# HOSPITAL BASED CANCER REGISTRY

## Amrita Institute of Medical Sciences, Ponekkara, Kochi, Kerala

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The Amrita Institute of Medical Sciences and Research Centre (AIMS) was started in 1998. The AIMS is now under the Amrita Vishwa Vidyapeetham (University) which was established in 2003.

The AIMS encompasses the Medical College, Institute of Nanosciences, Dental College, College of Pharmacy, Nursing College, Nursing School and Centre for Allied Health Sciences. Graduate and post graduate courses in several specialties are conducted in the institute.

The Amrita Institute of Medical Sciences is a 1200 bedded tertiary care hospital with 28 operation theatres, 210 well equipped intensive care beds. During the year 2014, new patient registrations was 1,36,524.

Oncology Division of AIMS, comprises of Radiation Oncology, Medical Oncology & Haematology and Breast & Gynaec Oncology. Apart from these, other specialty clinics at AIMS also see cancer patients.

The Radiation oncology division has 3 linear accelerators, HDR Brachytherapy, Stereotactic Radiosurgery. The Unit for Cyber knife installation will be completed soon. Medical Oncology and Haematology has adopted recent advances in chemotherapy including bone marrow transplantation. Surgical Oncology mainly deals with Breast and Gynaec Oncology. It also undertakes Robotic Surgery.

There has been a constant increase in cancer patient registration and in 2014 a total of 4305 new cancer patients drawn from all over Kerala has been registered in AIMS. Cancer patients are seen not only in Oncology clinics but also in all super specialty clinics namely GI, Pulmonology, General Surgery, Head and Neck, Urology, Neurology, Gynaecology, Nephrology, Orthopaedic and Pain and Palliative Care.

The hospital has a well organised computerised Hospital Information System which enables to record the information from every patient attending AIMS.

The AIMS hospital cancer registry was established in 2004. This is the first cancer registry in an NGO medical college in the country. The registry collects information from OP registration, IP records, Pathology and Laboratory records, Surgery records and Death records in addition to Oncology clinic records.

In 2010, the ICMR-NCRP offered the HBCR-DM software which is now being used by the AIMS Hospital Registry. This has helped us to obtain standardised information and link it with NCRP-HBCR system. Information collection and processing are according to the NCRP procedure manual for hospital registries and are in accordance with ICD-10, ICD-O-3 codes, TNM Staging and International Tabulating Systems. Follow up of the patients is an active function of this registry. The final data and tabulation reported here are processed by the NCRP, eliminating inconsistencies in age, gender, site and type of cancer and also the duplicates.

During the three year period of 2012-2014, a total of 10,647 (Male - 6017, Female - 4630) cancer cases were recorded and reported in the current AIMS Registry report.

AIMS Cancer Registry has been supporting the work of several other neighbourhood registries; PBCR and HBCR. It has participated in the ICMR-NCRP – National Study of Patterns of Care and Survival Studies of Head and Neck cancers, Breast Cancer and Cervix Cancer. A total of 5792 cancer cases have been abstracted and information has been provided to this National study.

The HBCR AIMS acknowledges the co-operation received from all Clinical Departments, Histopathology Division, Medical Records Office and Administration. The active co-operation and total support received from the Oncology division is also acknowledged.

#### Staff of Registry

Sr. Tumour Registry Assistants.	:	<b>Ms Suma M.S.</b>
Sr. Tumour Registry Assistant	:	<b>Ms Usha Bai S.</b>
Sr. Data Entry Operator	:	<b>Ms Thanuja Gopakumar</b>
Follow-up Assistant	:	<b>Ms Mini A. P.</b>

Table A.1 gives the total number of new cancers registered in hospital during the period of three years from 1<sup>st</sup> January 2012 to 31<sup>st</sup> December 2014. Accordingly, there were 10,647 new cancers registered (6,017 males and 4,630 females).

Table A.2 indicates the number and proportion of specific sites of cancer associated with use of tobacco relative to all cancers.

The basis of diagnosis of cancers registered is shown in Table A.3. The proportion of microscopic confirmation was about 88% in males and 96% in females.

Table A.4 shows the details of microscopically verified cancers. More than 80% of patients were diagnosed by primary histology.

Table A.5 gives the number and relative proportion of cancer patients in diverse clinical extent of disease before treatment at the time of registering at the RI.

Table A.6 gives the number and relative proportion of cancer patients according to different treatment modality.

**Table A.1: Number (#) and Proportion (%) according to Sex and Sex Ratio Percent**

Males		Females		Sex Ratio	Total Cases
#	%	#	%		
6017	56.5	4630	43.5	130	10647

**Table A.2: Number (#) and Proportion (%) of Tobacco Related Cancers (TRC) Relative to All Sites of Cancer**

Sites of Cancer	Males		Females	
	#	%	#	%
Lip	5	0.1	3	0.1
Tongue	198	3.3	79	1.7
Mouth	185	3.1	59	1.3
Oropharynx	26	0.4	2	0.0
Hypopharynx	66	1.1	13	0.3
Pharynx	7	0.1	-	-
Oesophagus	161	2.7	52	1.1
Larynx	205	3.4	16	0.3
Lung	676	11.2	205	4.4
Urinary Bladder	133	2.2	20	0.4
<b>TRC</b>	<b>1662</b>	<b>27.6</b>	<b>449</b>	<b>9.7</b>
<b>All Sites</b>	<b>6017</b>	<b>100.0</b>	<b>4630</b>	<b>100.0</b>

**Table A.3: Number (#) and Relative Proportion (%) of Cancers Based on Different Methods of Diagnosis**

Method of Diagnosis	Males		Females	
	#	%	#	%
Microscopic	5276	87.7	4448	96.1
All Imaging Techniques	708	11.8	173	3.7
Clinical	12	0.2	5	0.1
Others	21	0.3	4	0.1
<b>Total</b>	<b>6017</b>	<b>100.0</b>	<b>4630</b>	<b>100.0</b>

**Table A.4: Number (#) and Relative Proportion (%) of Cancers Based on Different Types of Microscopic Diagnosis**

Types of Microscopic Diagnosis	Males		Females	
	#	%	#	%
Primary Histology	4337	82.2	3876	87.2
Secondary Histology	207	3.9	128	2.9
Primary Cytology	105	2.0	83	1.9
Secondary Cytology	49	0.9	32	0.7
Blood Film	207	3.9	103	2.3
Bone Marrow	371	7.0	225	5.1
<b>All Microscopic*</b>	<b>5276</b>	<b>100.0</b>	<b>4447</b>	<b>100.0</b>

\* Excludes few cases diagnosed by autopsy

**Table A.5: Number (#) and Relative Proportion (%) of Cancer Patients according to Clinical Extent of Disease (Excluding Patients Previously Treated)**

Clinical Extent	Males		Females	
	#	%	#	%
Localised (L)	1014	19.1	1070	29.9
Regional (R)	981	18.5	825	23.1
L+R	1995	37.5	1895	53.0
Distant	828	15.6	444	12.4
Others	1270	23.9	759	21.2
Unknown	1221	23.0	480	13.4
<b>All Stages</b>	<b>5314</b>	<b>100.0</b>	<b>3578</b>	<b>100.0</b>

**Table A.6: Number (#) and Relative Proportion (%) of Cancer Patients according to Any Specific Treatment Relative to all Treatment Procedures (Treatment Only at RI)**

Treatments	Males		Females	
	#	%	#	%
Any Surgery	1439	29.5	1683	35.7
Any Radiotherapy	1452	29.8	1128	23.9
Any Chemotherapy	1731	35.5	1468	31.1
Any Hormone Therapy	169	3.5	417	8.8
Any Others	81	1.7	23	0.5
<b>Total</b>	<b>4872</b>	<b>100.0</b>	<b>4719</b>	<b>100.0</b>