

# Histopathological Study of Intestinal Neoplasms.



## Medical Science

**KEYWORDS:** Adenocarcinoma ; GIST ; DUKE's stage.

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### ABSTRACT

*AIMS: To study the prevalence of various intestinal neoplasms in our institute with special reference to site wise distribution and classification and prevalence into benign and malignant lesions.*

*MATERIALS AND METHODS: Retrospective study of 100 specimens of intestinal neoplasms received in Department of Histopathology in B.J Medical College , Civil Hospital Ahmedabad during the period of eleven months from Jan 2014 to Nov 2014 was done. Microscopic evaluation and histopathology reporting were done according to standard criteria.*

*RESULTS: Among the neoplastic lesions adenocarcinoma of large intestine (80%) was the most common finding. Maximum number of cases were found in 5th decade with male preponderance(M : F=1.78 : 1).*

*CONCLUSION: Most of the neoplastic lesions were found in large intestine with maximum cases noted in the 5th decade with male preponderance.*

### INTRODUCTION :

The small intestine and colon account for the majority of GI tract length and are common sites of tumors - both primary and metastatic. Intestinal Neoplasm is a common form of neoplasm in India and world over. It is a leading cause of death in the developed world, although more than half cases of carcinoma occurs in developing world it further emphasizes proper documentation of histopathologically diagnosed neoplasm in the gastrointestinal tract.

### AIMS AND OBJECTIVES:

- To study the prevalence of various intestinal neoplasms in our institute. This heading shall give special emphasis in reference to the following two features:
  - To give site wise distribution of various neoplastic lesions and compare its distribution.
  - To give male to female ratio of various intestinal neoplasm.
- To correlate the study done in our institute with the studies done in nationwide, worldwide statistics of intestinal neoplasm.
- To classify prevalence into benign and malignant lesions and to give the level of differentiation for the tumors wherever possible.

### MATERIAL AND METHODS:

This is a retrospective study of 100 specimens of intestinal tumors which were received in Department of histopathology in B.J Medical College, Civil Hospital Ahmedabad during the period of eleven months from Jan 2014 to Nov 2014.

The specimen obtained after surgical exploration of patient were examined grossly and then grossing done as per conventional method; after overnight fixation by 10% formalin & processing as per conventional method. All the slides had been routinely stained with H&E.

**TABLE 1: DISTRIBUTION OF INTESTINAL NEOPLASMS ACCORDING TO TYPE**

INTESTINAL LESIONS	NO.OF CASES	PERCENTAGE(%)
NEOPLASTIC	BENIGN	4
	MALIGNANT	96
TOTAL	100	100

Above table shows that out of the 100 neoplastic lesions ; 4% were benign and 96% cases were malignant.

**TABLE 2: DISTRIBUTION OF INTESTINAL NEOPLASMS ACCORDING TO SITE**

Site	Neoplastic	Percentage (%)
Small Intestine	12	12
Large Intestine	82	82
Anal Canal	2	2
Appendix	4	4
Total	100	100

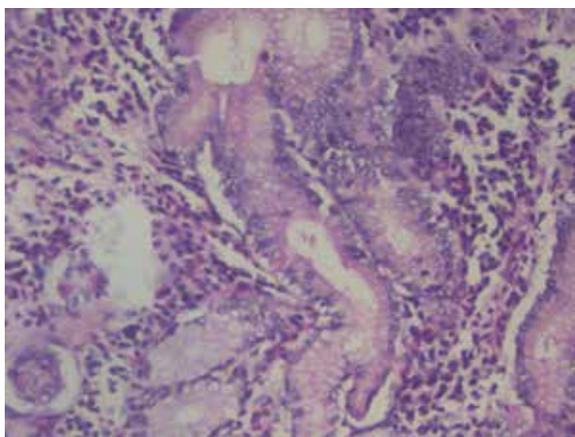
Above table shows large intestine harbours most of the neoplastic lesions(82%) with a small percentage occurring in other sites as well {small intestine(12%) , appendix (4%) and anal canal (2%)}

**TABLE 3: DISTRIBUTION OF VARIOUS NEOPLASMS ACCORDING TO THEIR HISTOPATHOLOGICAL TYPE**

TYPE	NO. OF CASES	PERCENTAGE (%)
ADENOMATOUS POLYP	4	4
ADENOCARCINOMA	80	80
GIST	4	4
LYMPHOMA	2	2
MELANOMA	2	2
CARCINOIDS	8	8
TOTAL	100	100

The above table shows that **adenocarcinoma** was the most common neoplastic lesions.

**ADENOCARCINOMA IN GIT**



**TABLE 4: DISTRIBUTION OF NEOPLASTIC LESIONS OF INTESTINE ACCORDING TO AGE AND SEX OF PATIENTS**

AGE	MALE	FEMALE	TOTAL	PERCENTAGE(%)
0-10	0	0	0	0
11-20	2	0	2	2
21-30	2	4	6	6
31-40	10	6	16	16
41-50	28	8	36	36
51-60	6	8	14	14
61-70	8	6	14	14
71-80	6	4	10	10
>80	2	0	2	2
TOTAL	64(64%)	36(36%)	100	100%

The above table shows that the neoplastic lesions of the intestine are most common in the age group **41-50 years**. There was also a **male preponderance**.

**TABLE 5: SITE WISE DISTRIBUTION OF NEOPLASTIC LESIONS.**

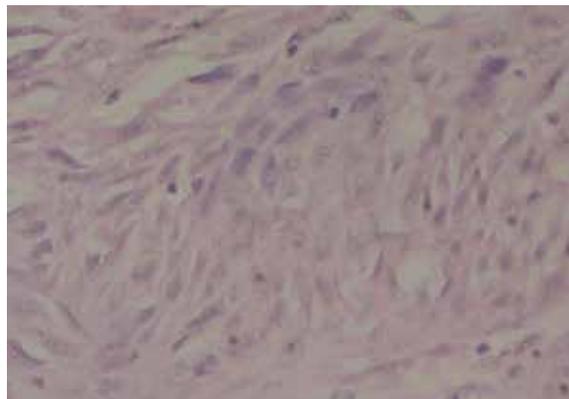
Site	No Of Cases	(%)
Small intestine	16	16
Colorectum	82	82
Anal canal	2	2
Total	100	100

The above table shows that **colo-rectum** is the most common site of neoplastic lesion of intestine.

**TABLE 6: DISTRIBUTION ADENOCARCINOMA ACCORDING TO DUKE'S STAGE**

HISTOL-OGY	DUKE A	DUKE B	DUKE C	TOTAL	%
NON-MUCINOUS	0	42	26	68	85
MUCINOUS	0	0	6	6	7.5
SIGNET RING	0	2	4	6	7.5
TOTAL	0	44	36	80	100

**MUCINOUS ADENOCARCINOMA**



**GIST**

**TABLE NO 7: COMPARISON OF AGE AND SEX WISE INCIDENCE OF VARIOUS MALIGNANT LESIONS OF LARGE INTESTINE WITH OTHER STUDY BIR HOSPITAL STUDY 4**

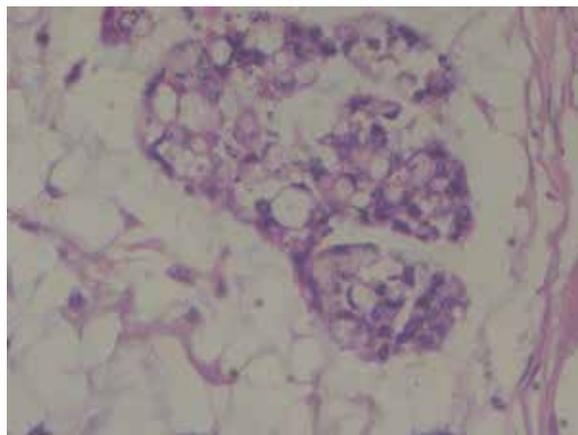
AGE	ADENOCARCINOMA			GIST			NHL			T	%
	M	F	T(%)	M	F	T(%)	M	F	T(%)		
0-15	1	0	1	0	0	0	1	0	1	2	2.7
16-30	1	3	4	1	0	1	1	0	1	6	8.2
31-45	6	3	9	0	0	0	2	0	2	11	15.1
46-60	15	14	29	0	0	0	0	0	0	29	39.6
61-75	16	2	18	1	0	1	0	0	0	19	26.2
>75	4	1	5	1	0	1	0	0	0	6	8.2
TOTAL	43	23	66(90.4)	3	0	3(4.1)	4	0	4(5.5)	73	100

**OUR STUDY**

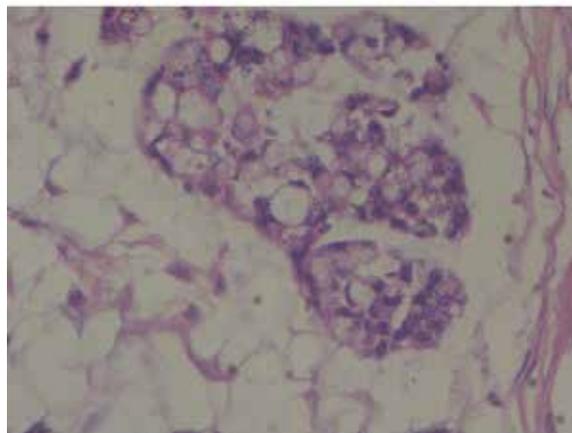
AGE	ADENOCARCINOMA			GIST			NHL			T	%
	M	F	T(%)	M	F	T(%)	M	F	T(%)		
0-15	2	0	2	0	0	0	0	0	0	2	2.5
16-30	2	2	4	0	0	0	0	0	0	4	5
31-45	12	10	22	0	0	0	0	0	0	24	27.5
46-60	16	10	26	0	0	0	0	0	0	24	32.5
61-75	12	10	22	0	0	0	0	0	0	22	27.5

>75	4	0	4	0	0	0	0	0	0	4	5
TOTAL	48	32	80	0	0	0	0	0	0	80	100

In our study among the malignant tumors of large intestine 80(80%) cases were adenocarcinoma ,which was comparable to BIR hospital study. Male and female ratio in our study was 1.5:1,which was also comparable to other study . In our study most common age group was 46-60 years which was comparable to BIR hospital study



SIGNET RING ADENOCARCINOMA



CONCLUSION:

1. Neoplastic lesions were mainly found in large intestine with smaller number also occurring in small intestine ; appendix and anal canal.
2. Colorectum was the most common site of neoplastic lesion of intestine.
3. Among the neoplastic lesions, adenocarcinoma(80%) was the most common histological type.
4. Others such as carcinoids(8%) , adenomatous polyp(4%) , GIST (4%) , lymphoma(2%) and melanoma(2%) also occurred , but with much less frequency.
5. Maximum cases were noted in the 5<sup>th</sup> decade with a male preponderance.

TABLE 8 : COMPARISON OF DIFFERENTIATION AND DUKE'S GRADING WITH OTHER STUDY

HIS-TOL-OGY	DUKE A		DUKE B		DUKE C		TOTAL	
	Our study	JPMA	Our study	JPMA	Our study	JPMA	Our study	JPMA
NON-MUCINOUS	0	0	42(95.5)	51(73.9)	26(72.2)	4(14.8)	68(85)	59
MUCINOUS	0	0	0	18(26.1)	6(16.6)	12(44.4)	6(7.5)	30
SIGNET RING	0	0	2(4.5)	0	4(11.1)	11(40.8)	6(7.5)	11
TOTAL	0	0	44(100)	69(100)	36(100)	27(100)	80(100)	100

In our study 68(85%) cases were of non mucinous type, 6(7.5%) were mucinous & 6(7.5%) were of signet ring type. Thus most common type is Non Mucinous which is comparable with JPMA study.

The total number of histologically diagnosed signet ring adenocarcinoma cases(7.5%) in our study is also comparable with JPMA study(11%).

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