

# FIVE YEAR SURVIVAL FOLLOWING SURGERY FOR 50 CASES OF COLORECTAL CANCER - A PERSONAL SERIES

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## ABSTRACT

*In a personal series of 56 patients with colorectal cancer operated over a 3-year period from 1984 to 1986, 50 patients were followed up until death or for at least 5 years. The age, distribution, clinical features and stage of disease at presentation appear to be similar to those in the West. All 5 of Dukes A, 10 of 11 cases of Dukes B and 8 of 16 cases of Dukes C disease have survived at least 5 years. The 5-year survivors include a patient who had undergone right hepatectomy for a large liver metastasis. The 5-year survival in this small personal series appears encouraging.*

**Keywords:** five year survival, colorectal cancer, surgical treatment of colorectal cancer, clinical treatment of colorectal cancer, hepatectomy for liver metastasis

## INTRODUCTION

In the West, the clinical presentation, pathology, treatment and results of treatment of colorectal cancer have been well documented. However, in Singapore, although there have been a number of papers on the subject<sup>(1-7)</sup>, there has hitherto, been no report on the long-term results of treatment. This paper presents a personal series of cases surgically treated in Singapore. The patients have been followed up until death or for at least 5 years so that the data obtained might provide some information on the immediate and long-term results of treatment of colorectal cancer in Singapore.

## PATIENTS AND METHODS

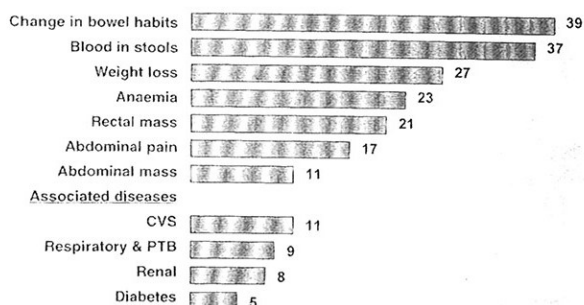
During the 3-year period, 1984 to 1986, 56 patients with colorectal cancer were operated personally by the present author at the Singapore General Hospital and the National University Hospital.

Amongst the 56 patients, six patients from Malaysia and Indonesia had incomplete follow-up. All the other 50 patients were followed up until death or for at least 5 years.

The age of the 50 patients ranged from 44 to 75 years, with a mean of 60 years. There were 20 men and 30 women, and all were Chinese except for one Indian man.

The duration of symptoms from onset to diagnosis varied from one month to 2 years, with a mean of 6 months.

**Fig 1 - Clinical Features of 50 patients with Colorectal Cancer**

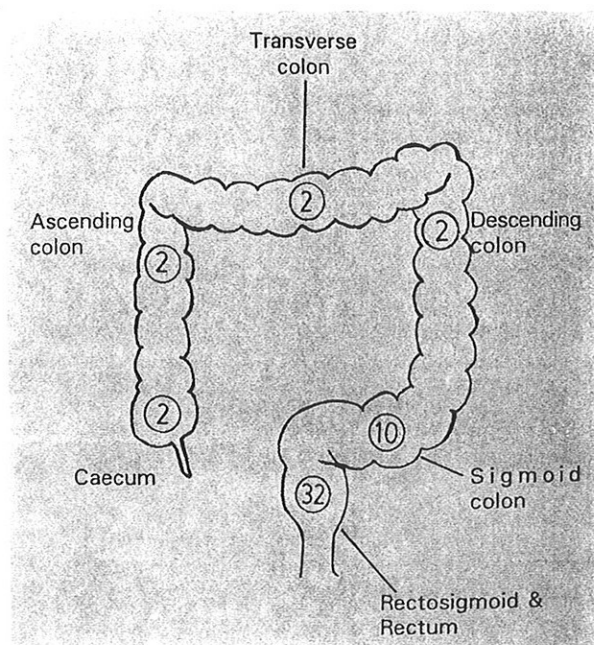


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**Fig 2 - Sites of cancer in 50 patients with colorectal cancer**



The clinical features are summarised in Fig 1. Although change of bowel habits is the commonest presentation (39 of 50 patients), bowel symptoms may sometimes be absent, especially in right-sided tumours. In 21 of the 50 patients, a rectal mass could be felt on per rectal examination, emphasising the frequency of rectal involvement and the importance of performing a rectal examination. Associated systemic diseases were often present because of the occurrence of colorectal cancer in older patients.

## Pathology

The site of cancer in the colorectum is shown in Fig 2. By far the commonest site was the rectum and recto-sigmoid region, accounting for 32 of 50 cases.

The stage of disease in the 50 patients based on clinical, radiological and pathological examination of the excised specimens is shown in Table I. The disease was thus potentially curable in 32 patients (Dukes A: 5, Dukes B:11, Dukes C:16) but was too advanced for a curative attempt in 18 patients with peritoneal and/or distant spread of disease.

The cancer were all adenocarcinomas, and described by

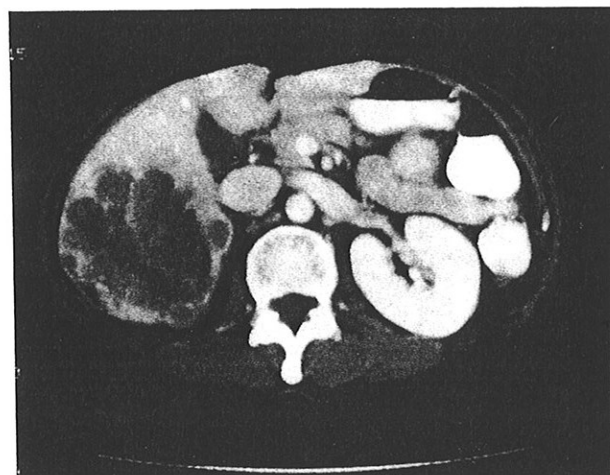
**Table I - Staging of disease and crude 5 year survival in 50 patients with colorectal carcinoma**

Dukes Stage	No	5-Year Survival
A - Tumour confined to bowel	5	5
B - Tumour has involved serosal surface	11	10
C - Tumour has spread to regional lymph	16	8
D - Carcinoma peritonei and/or blood borne metastasis present	18	0
<b>Total</b>	<b>50</b>	<b>23</b>

**Table II - Operative procedures performed for cure in 32 patients with colorectal carcinoma**

No. of patient	Operative Procedure	Sites of Lesion
9	Abdominal-perineal resection	Rectal cancer less than 7 cm from anal verge
14	Anterior resection	Rectal cancer 7-16 cm from anal verge
3	Sigmoid colectomy	Cancer of sigmoid colon
2	Left Hemicolectomy	Cancer of sigmoid colon (1) and descending colon (1)
4	Right Hemicolectomy	Cancer of caecum, ascending colon and transverse colon

**Fig 3 - Abdominal CAT scan showing large liver metastasis 1 years after resection of sigmoid carcinoma**



the pathologist to be either moderately or poorly differentiated.

#### Surgical treatment

In 18 patients with Dukes D disease, palliative resection, bypass or colostomy were performed.

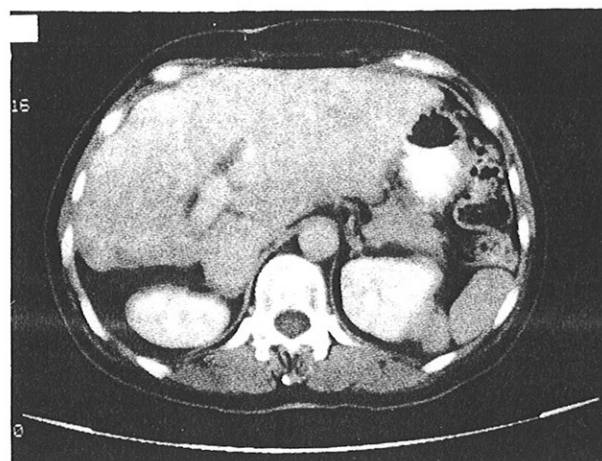
Attempted curative resection was performed in 32 patients with Dukes A, B and C diseases using standard surgical techniques. The operative procedures for the various sites of cancer are summarised in Table II.

#### RESULTS

There was no operative mortality in any of the 50 patients subjected to surgery. None of the patients who presented with

**Fig 4 - Abdominal CAT scan showing regenerated liver following right hepatectomy for liver metastasis.**

**Patient is alive and well 6 years after hepatectomy, free of carcinoma.**



Dukes D disease survived 5 years.

Amongst the 32 patients with Dukes A, B and C disease, 23 have survived for 5 or more years. Five year survivors occurred in all 5 patients with Dukes A disease, 10 to 11 patients with Dukes B disease and 8 of 16 patients with Dukes C disease (Table I).

One of the patients with Dukes B disease who survived more than 5 years developed a large metastasis 1 years after sigmoid colectomy (see Fig 3). She underwent right hepatectomy 6 years ago and continues to remain well with normal liver function and a regenerated left lobe of liver (Fig 4).

#### DISCUSSION

Colorectal cancer is the most rapidly increasing cancer in Singapore. In both sexes, the rates are higher than those in Eastern Europe, Latin America and Asia, but lower than those in Western Europe, North America, Australia and New Zealand<sup>(5)</sup>. Both genetic and dietary factors have been implicated in the pathogenesis of colorectal cancer<sup>(8,9)</sup>. In Singapore, the increasing incidence is probably related to an ageing population and a change towards higher fat, lower residue diet, associated with increasing affluence. Currently, the age, clinical features, site and stage of colorectal cancer in Singapore are similar to those in the West<sup>(10,11)</sup> as shown by a previous report<sup>(6)</sup> and supported by the present series.

The present series is small though results of surgical treatment appear encouraging. There was no operative mortality and all 5 cases of Dukes A, 10 of 11 cases of Dukes B and 8 of 16 cases of Dukes C have survived 5 years or more. These figures of crude survival compare with 81%, 50% and 33% respectively for Dukes A, B, C disease in a recent series from Scotland<sup>(12)</sup> - figures probably representative of results obtained in the West.

Although Dukes staging has been recognised for more than 50 years as the most important prognostic factor for colorectal cancer, three other aspects which may affect results have drawn attention in the recent literature. These are clinico-pathological features other than Dukes staging, appropriate use of surgical procedures and techniques and use of adjuvant chemotherapy and radiotherapy in selected cases.

Two recent clinico-pathological studies using multivariate analysis showed four factors - stage, race, tumour morphology as well as vascular and/or lymphatic microinvasion, to be sig-

nificantly related to the outcome for colonic and rectal carcinoma<sup>(13,14)</sup>. On the basis of these findings and using all four variables, a new clinico-pathological staging system, which is an elaboration of the Dukes staging, has been proposed<sup>(14)</sup>. In this connection, it is of interest to note that survival probabilities are worse in the blacks than in the whites. In the present small series, an encouraging 5-year survival has been noted in the Singapore Chinese. However, it would require an analysis of a much larger series to ascertain whether race as a prognostic factor is significant in the Singapore population.

Good results after surgical resection of colorectal cancer depend on well established surgical techniques eg wide excision with clearance of regional lymph nodes as well as gentleness, early ligation of blood vessels and irrigation of bowel ends with iodine. The importance of surgical technique in influencing results is exemplified by a recent report of an incidence of local recurrence after rectal excision ranging from less than 5% to more than 20%, depending on who performed the operation<sup>(15)</sup>. Interestingly, current literature draws attention to the relationship of sutures to anastomotic recurrence and the possibility of reducing anastomotic recurrence by the use of sutureless anastomotic techniques<sup>(16)</sup>, and we are currently evaluating the use of these in our patients.

In recent years, an encouraging 5-year survival rate of about 25% for patients who have had colorectal metastasis resected has been reported<sup>(17)</sup>. Best results have been obtained in patients with 1-3 evident unilobar hepatic metastases that can be resected with wide margins and who have no evidence of extrahepatic metastasis and this has been estimated to comprise 7-10% of all patients with hepatic metastases from colorectal cancer. A recent paper has also pointed out that whereas non-radical resection neither modified the prognosis of untreated patients, nor led to any 5-year survival, curative procedures, even though finally unsuccessful, resulted in increased survival of about a year<sup>(18)</sup>. The present series includes a patient who has survived from recurrent disease for 6 years after resection of a large liver metastasis from colonic carcinoma.

Adjuvant therapy was not used in our present series because until recently no trials have demonstrated unequivocal beneficial effect from adjuvant treatment. With encouraging

reports on the beneficial effect of radiotherapy on rectal cancer<sup>(19)</sup>, and combination chemotherapy on colorectal cancer<sup>(20)</sup>, we now offer adjuvant radiotherapy for Dukes B and C rectal cancer, and 5 fluorouracil combined with levamisole for Dukes C colorectal cancer, and are monitoring any improvement in the 5-year survival.

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