

## Multidisciplinary Treatment for Local Recurrence of Rectal Cancer

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**ABSTRACT.** **Purpose:** The aim of this study was to confirm retrospectively that multidisciplinary treatment including cryosurgery and chemotherapy (Mitomycin C, 5-FU, UFT) for recurrence of rectal cancer had a palliative benefit. **Methods:** From among 556 cases of rectal cancers (Dukes A: 154, B: 142, C: 165, D: 95) treated during the past 21 years, we studied 57 cases with local recurrence (multidisciplinary: 15 cases, reoperation: 29 cases, conservative: 13 cases). Two cases of the 57 were referred to us from other institutions. Eight of the 15 multidisciplinary group cases had been previously reoperated upon for local recurrence.

**Results:** The one-, three-, and five-year survival rates after treatment for local recurrence of rectal cancer were respectively as follows; multidisciplinary: 38.7%, 0%, 0%, reoperation: 51.7%, 11.4%, 0%, conservative: 30.8%, 0%, 0%. There were no significant differences between any combinations of the three treatments. However, significant differences were found in the three-, and five-year survival rates from first surgery, which were respectively as follows; multidisciplinary: 63.8%, 23.9%, reoperation: 67.3%, 50.5%, conservative: 30.8%, 0%. There were significant differences ( $p < 0.01$ ) between reoperation and conservative as well as between multidisciplinary and conservative treatments. The first choice of treatment for local recurrence was reoperation if possible. The only difference in indication between multidisciplinary and conservative treatments was whether or not the recurring tumor was treatable by cryosurgery. **Conclusion:** Whenever cases with a recurring tumor from rectal cancer complain of anal pain or inveterate bleeding, an attempt should be made to control such symptoms using multidisciplinary treatment.

**Key words:** local recurrence of rectal cancer —  
multidisciplinary treatment —  
cryosurgery for colorectal cancer

The first choice of treatment for local recurrence after the resection of rectal cancer is undoubtedly reoperation if possible. However, local spread of the tumor around the pelvic wall sometimes makes cure impossible with even reoperation. Whenever patients with a recurring tumor complain of perineal pain and/or inveterate anal bleeding, all efforts should be made to control such symptoms as effectively as possible by any available method. With this aim in mind, we have employed cryosurgery as one multidisciplinary treatment, since it can offer the palliative benefits of minimal bleeding and reduction of tumor bulk.<sup>1)</sup>

As the authors could not find any report focused on cryotherapy, we present the results of a retrospective study for local recurrence of rectal cancer comparing multidisciplinary treatment with reoperation and conservative therapy.

### MATERIALS AND METHODS

During the last 21 years (January 1974 to December 1994, Table 1), we have treated 556 rectal cancers (Dukes A : 154, B : 142, C : 165, D : 95). From among these, we chose to study 57 cases with local recurrence of rectal cancer (multidisciplinary treatment : 15 cases, reoperation : 29 cases, conservative treatment : 13 cases). Two of the 57 cases were referred to us from other institutions. Eight of the 15 multidisciplinary group cases had been reoperated previously for local recurrence of rectal cancer. Multidisciplinary treatment included various therapies combining open surgery with cryosurgery and chemotherapy (Mitomycin C, 5-FU, UFT).

TABLE 1. Number of patients with rectal cancer

Site	Dukes Classification				Total
	A	B	C	D	
Upper	18	30	18	20	86
Middle	51	58	80	39	228
Lower	85	54	67	36	242
Total	154	142	165	95	556

1974-1994

The rectal sites were approximately defined as follows; lower: anal verge-5 cm, middle: 5-10 cm, upper: 10-15 cm. The survival rates, including deaths due to postoperative complications and other illnesses, were calculated by the Kaplan-Meier method, and statistical differences were evaluated by the Cox-Mantel method.

## RESULTS

The sites of the 57 cases with rectal cancer and Dukes classification at first surgery were respectively as follows; upper: 5 cases (B: 2, C: 3), middle: 24 cases (A: 1, B: 4, C: 15, D: 4), and lower: 28 cases (A: 4, B: 7, C: 13, D: 4) (Table 2).

TABLE 2. Local recurrence after surgical treatment for rectal cancer

Site	Dukes Classification*				Total
	A	B	C	D	
Upper		2	3		5
Middle	1	4	15(1)	4	24(1)
Lower	4	7	13(1)	4	28(1)
Total	5	13	31(2)	8	57(2)

1974-1994

( ) Referred case

\*Stage at first surgery

Dukes classifications of multidisciplinary group (B: 4, C: 6, D: 5) were almost similar to conservative group (B: 1, C: 10, D: 2), however, only reoperation group (A: 5, B: 8, C: 15, D: 1) included 5 cases (17.2%) of A (Table 3).

TABLE 3. Number of patients with local recurrence of rectal cancer according to following treatment

Dukes Classification*	Multidisciplinary	Reoperation	Conservative
A		5 (17.2)	
B	4 (26.7)	8 (27.6)	1 (7.7)
C	6 (40.0)	15 (51.7)	10 (76.9)
D	5 (33.3)	1 (3.5)	2 (15.4)
Total	15(100.0)	29(100.0)	13(100.0)

1974-1994

(%)

\*Stage at first surgery

The mean interval from first surgery to local recurrence became shorter in the multidisciplinary and reoperation groups with advancement of stages, it was shortest in the conservative treatment group (Table 4).

TABLE 4. Mean interval from first surgery to local recurrence of rectal cancer

Dukes Classification*	Multidisciplinary (N=15)	Reoperation (N=29)	Conservative (N=13)
A		41.8M	
B	45.5M	33.8M	17.0M
C	26.0M	23.8M	17.4M
D	13.8M	6.0M	9.0M

1974-1994

M: Months

\*Stage at first surgery

The one-, three-, and five-year survival rates after local recurrence of rectal cancer were respectively as follows; multidisciplinary: 38.7%, 0%, 0%, reoperation: 51.7%, 11.4%, 0%, and conservative: 30.8%, 0%, 0% (Table 5).

TABLE 5. Survival rates of patients with local recurrence of rectal cancer according to following treatment

Following treatment	1-Year	3-Year	5-Year
Multidisciplinary			
from first surgery	93.3%	63.8%	23.9%
after recurrence	38.7%	0	0
Reoperation			
from first surgery	93.0%	67.3%	50.5%
after recurrence	51.7%	11.4%	0
Conservative			
from first surgery	76.9%	30.8%	0
after recurrence	30.8%	0	0

1974-1994

\*p&lt;0.01

Statistically, there were no significant differences between reoperation and multidisciplinary treatment (Fig 1). No noticeable differences between the survival rates of multidisciplinary and conservative treatment were found either (Fig 2).

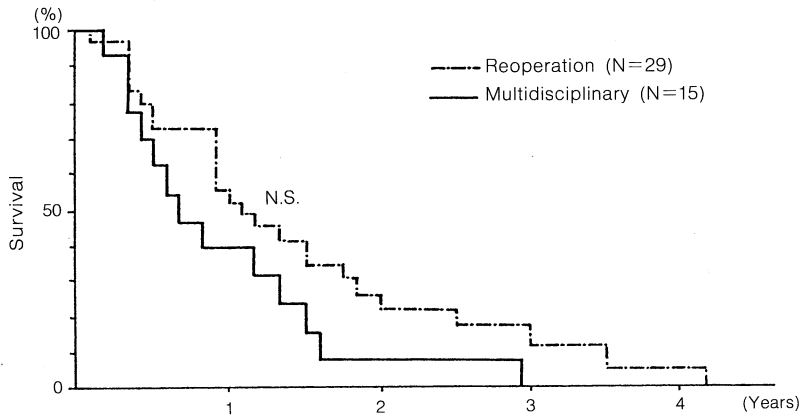


Fig 1. Survival rates after local recurrence of rectal cancer  
There were no significant differences between reoperation and multidisciplinary treatment.

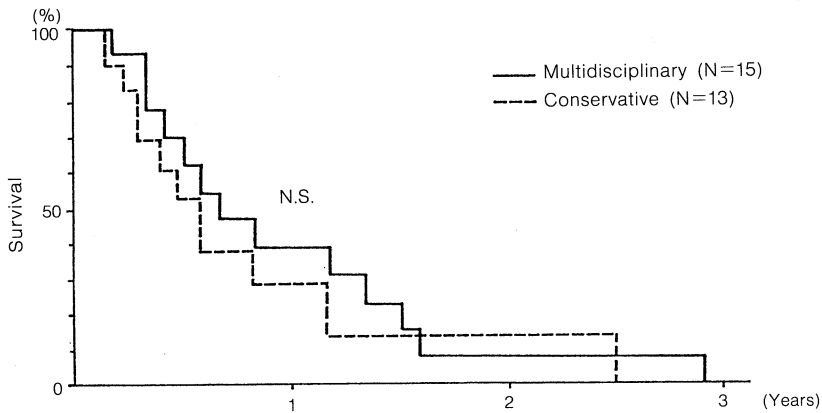


Fig 2. Survival rates after local recurrence of rectal cancer  
No noticeable differences between multidisciplinary and conservative treatment were found.

The three-, and five-year survival rates from first surgery were respectively as follows; multidisciplinary: 63.8%, 23.9%, reoperation: 67.3%, 50.5%, and conservative: 30.8%, 0% (Table 5). Comparison of the survival rates from first surgery showed no significant differences between reoperation and multidisciplinary treatment (Fig 3). However, comparison of the reoperation and conservative groups revealed a noticeable difference ( $p < 0.01$ ) (Fig 4). Similarly, there was a significant difference ( $p < 0.01$ ) between the multidisciplinary and conservative groups (Fig 5).

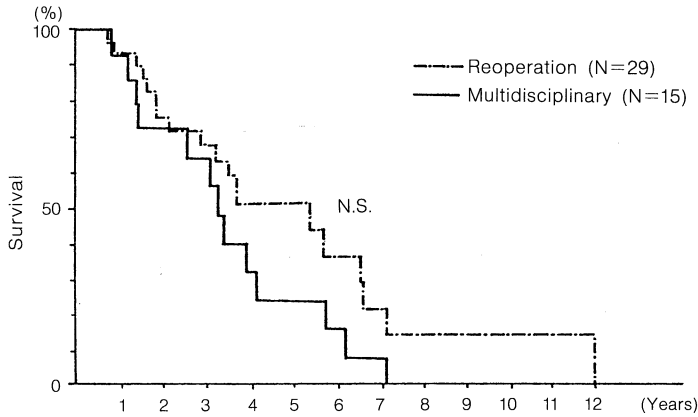


Fig 3. Comparison of the survival rates from first surgery showed no significant differences between reoperation and multidisciplinary treatment.

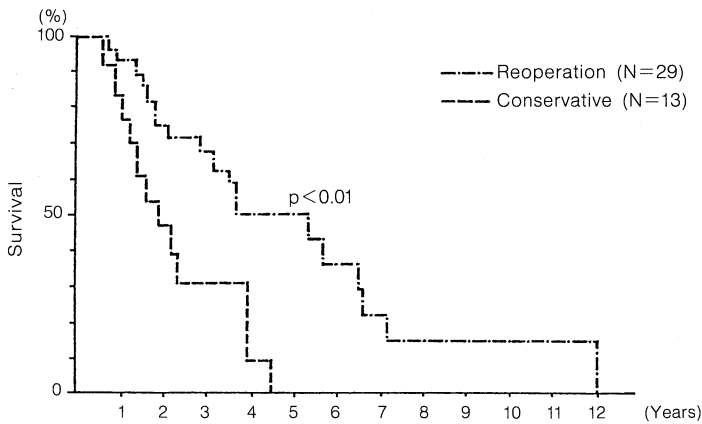


Fig 4. Comparison of the survival rates from first surgery revealed a noticeable difference ( $P<0.01$ ) between reoperation and conservative groups.

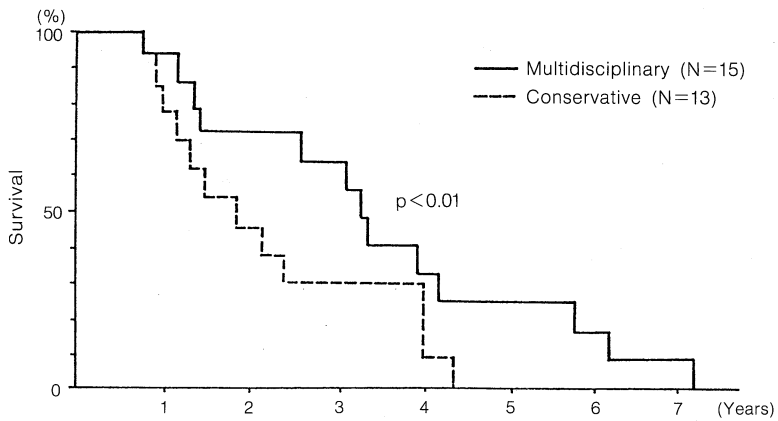


Fig 5. Survival rates from first surgery. There was a significant difference ( $p<0.01$ ) between multidisciplinary and conservative groups.

### DISCUSSION

Since advanced cancer such as Dukes D and postoperative recurrence often makes the survival rates lower, we need to improve the cure rate of such cases. The five-, ten-, and fifteen-year survival rates of 556 rectal cancers for the last 21 years were respectively as follows; Dukes A: 89%, 81%, 61%, B: 75%, 57%, 48%, C: 48%, 35%, 32%, and D: 7% -%, -%. Among them, there were 107 cases (19%) with recurrence (local: 57 cases, liver: 26 cases, lung: 24 cases) after rectal surgery.

The sites and these rates of local recurrence were nearly same (upper: 5.9%, middle: 10.5%, lower: 11.6%).

If the local recurrence was resectable, our first choice was reoperation. Only the reoperation group had five cases (17.2%) with Dukes A, and the other two groups included seven cases with D (multidisciplinary: 33.3%, conservative: 15.4%). The only difference in indication between the multidisciplinary and conservative groups was whether the recurring tumor was treatable by cryosurgery or not.<sup>2)</sup> Regarding the mean interval from first surgery to local recurrence, the periods of conservative group were shorter than reoperation and multidisciplinary groups.

Comparing the survival rates after local recurrence, there were no significant differences between any combinations of the three treatments. We previously reported that the survival period for resection of local recurrence was significantly greater ( $p < 0.05$ ) than that following cryosurgery.<sup>3)</sup> In this report there appeared to have been no differences between reoperation and the multidisciplinary treatment, because the survival time of the multidisciplinary group had improved over that of the previous results. Furthermore, 8 of 15 cases were treated by cryosurgery after reoperation for local recurrence. As for the survival rates from first surgery, a significant difference ( $p < 0.01$ ) was found between the reoperation and conservative groups, and also between the multidisciplinary and conservative groups. Considering the fact that there were no significant differences between the reoperation and multidisciplinary groups, these results confirmed that multidisciplinary treatment for local recurrence had palliative benefits toward prolong the survival time.

Since this retrospective study of multidisciplinary treatment revealed gradually better results, controlled trials and aggressive chemotherapy including cryosurgery and/or reoperation should be designed for the treatment of local recurrence of rectal cancer in the near future.

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