

BEHAVIOR RESPONSES TO FRUSTRATION
OF "PROMPT" AND "DELAY" CANCER PATIENTS

A Thesis
Presented to
the Faculty of the Graduate School
The University of Houston

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

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Marian Yeager
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BEHAVIOR RESPONSES TO FRUSTRATION
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ABSTRACT

Purpose of this study. The purpose of this study is the comparison of responses to frustration and stress-producing situations of "prompt" patients who seek immediate medical care upon the onset of cancer symptoms and "delay" patients, those who do not seek medical attention for three months or longer.

Previous studies have shown that although socio-economic, environmental and educational factors have some bearing on this problem, psychological factors are important in understanding the delay among cancer patients. Specifically, the present investigation was concerned with characteristic differences in frustration-aggression patterns between the "prompt" and "delay" cancer patients.

Testing procedures. The adult form of the Rosenzweig Picture-Frustration Study was administered individually to forty female cancer patients. The test served as a projective method to reveal the subject's characteristic patterns of responses to stress-producing situations.

Interviews were also held with the patients to obtain information regarding socio-economic situation, educational background, age, marital status, number of children, experience with cancer, exposure to cancer, education, and available medical facilities.

Subjects. The study consisted of forty white female cancer patients on the gynecological service at the M. D. Anderson Hospital, Tumor Institute for Research. Age range was from thirty to fifty-five. The prompt category consisted of twenty patients who sought immediate medical care, and the delay group were patients who sought medical care three months or longer after the onset of the first symptoms. All the patients had a pathologically proven diagnosis of pelvic carcinoma.

Results. A significant difference was found between the delay and prompt patients on the Extrapunitive and the Intrapunitive factors on the directional responses in the test.

Significant differences were found also between the prompt and delay patients on the three patterns of responses. The prompt patients consistently revealed more Extrapunitive patterns and the delay patients consistently revealed Intrapunitive and Impunitive patterns of responses.

No significant differences were found between the two groups on the type of response, i.e., the Ego-Defense, Obstacle-Dominance, and the Need-Persistence scores.

The prompt patients were able to express their aggression overtly and were directed toward action when confronted with the frustrating situation. This group obtained

scores that were close to the median scores of Rosenzweig's normative data, indicating that the prompt patient's responses were like those of the normal population and that it was the delay patients who differed in their responses to frustration.

Conclusion. The study revealed that delay in seeking medical care among cancer patients is related to the characteristic manner in which the delay patients respond to frustrating situations. They utilized defense mechanisms of denial and suppression when a stress situation arose and found difficulty in facing the reality of the situation. The prompt patients are more prone to manipulate and face the barriers causing the frustration, and they are able to overtly express their aggression.

Socio-economic factors, education, and experience with cancer did not differentiate between the prompt and delay groups.

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CHAPTER I

INTRODUCTION

The problem of delay in seeking medical care among cancer patients is being increasingly investigated in cancer clinics at the present time. In spite of the extensive cancer educational program, and of the medical facilities and cancer clinics made available to the public, a considerable proportion of patients continue to delay before obtaining medical attention.

What is a patient's reaction to cancer? It is believed that the reaction may be influenced by many existing factors in the individual's environment, his personality structure, economic situation, age, and past experiences. People react differently to illness due to any one of these factors. We find, particularly in chronic illness, varying degrees of stress and frustration, which patients handle through their own characteristic compensatory mechanisms.

This investigation is primarily concerned with studying different types of reaction to frustration among cancer patients. The question is whether patients who seek early medical care at the onset of symptoms characteristically react differently to frustration and stress than the patients who delay and avoid facing the reality of a possibly serious illness.

Shands, et al., found that reactions to stress situations vary from patient to patient and that a shifting reaction pattern is found also in the same individuals, depending upon environmental situations encountered by the patient. Characteristically, however, the patient will tend to react consistently to stress situations but . . . "The intensity will vary according to heredity, environment, and circumstance."¹

Rosenzweig² proposes that an individual may respond typically to frustration in one of three ways or a combination of these.

(1) He may manifest the emotion of anger and condemn the outer world (other persons, objects, and circumstances) for his frustration, adopting an attitude of hostility toward his environment. This type of reaction may be termed "extrapunitive."

(2) He may react with emotions of guilt and remorse and tend to condemn himself as blameworthy object. This type of reaction may be termed "intrapunitive."

(3) He may experience emotions of embarrassment and shame, making little of blame and emphasizing instead the conciliation of others and himself to the disagreeable situation. In this case he will be more interested in condoning than in condemning and will pass

¹ Shands, Marley C., Jacob E. Finesinger, Stanley Cobb, and Ruth Abrams, "Psychological Mechanisms in Patients With Cancer," Cancer, 4:1159, November, 1951.

² Rosenzweig, S., "The Experimental Measurement of Types of Reaction to Frustration," Henry A. Murray, editor, Explorations in Personality. New York: Oxford University Press, p. 585.

off the frustration as lightly as possible by making references, even at the price of self-deception, to unavoidable circumstances. This type of reaction may be termed "impunitive."³

The psychopathological aspects of this scheme are:

(1) The characteristic mode of defense for the extrapunitive type of reaction would be projection; (2) the intrapunitive type would be displacement and isolation; and (3) the impunitive type would be repression in its most complete form.

It is hypothesized in this investigation that the delay patients, those delaying medical care at the onset of symptoms, will reveal different patterns of reaction to stress than the prompt patients. In other words, the delay patients are expected to obtain higher scores and reveal more Intrapunitiveness (displacement and isolation, guilt and remorse) and Impunitiveness (repression with self deception) on the test than the prompt patients. The prompt patients are expected to be more Extrapunitive in their responses (aggressive in outwardly attacking the frustrating situation).

The cancer patient is under a severe form of stress which is disrupting to the personality. If patients are unable to integrate the new alien idea into the personality

³ Ibid., p. 587.

⁴ Rosenzweig, op. cit.

they will resort to substitutive and compensatory mechanisms such as suppression, denial, dissociation, identification, regression, conversion, and sublimation.⁵ Stress of this sort may activate all sorts of childhood fantasies and arouse strong guilt feelings. It is also quite common to hear cancer patients blame their disease on something or someone.

The patient with pelvic carcinoma who is treated with x-ray therapy or surgery is faced with the problem of sterility caused by treatment. To many patients this is not only a threat to their femininity, but a threat to their home and marriage.

Any chronic illness stirs up repressed feelings of insecurity and inadequacy, and cancer, particularly, has such connotation for patients.

Individuals tend to meet the threat of cancer in much the same way they meet other threats to their life and security. On one hand, some patients immediately become poised for action, and seek prompt medical care when symptoms are presented. While these patients undoubtedly experience fear, they are, for various reasons, better able to handle the stressful situation and are directed

⁵ Shands, Harley C., et al., op. cit.

toward action. Others try to avoid facing the reality of the situation, suppress their concern over their condition through the utilization of one or more of the defense mechanisms, and do not seek medical care until after a considerable delay. The tendency to deny unpleasantness is a very strong motivating factor in human beings. "The capacity of people to deceive themselves or to avoid unpleasant truths is shown nowhere more clearly than at a cancer clinic."⁶

Cancer, to most people, means a lingering painful death. They can accept the fact that cancer "happens to others" but reject the idea of such an illness happening to themselves. The idea of death is in the same way rejected as something very far removed from the individual's life. Cancer may mean also, for most people, not only suffering and pain, but mutilation and disfigurement and financial distress. Some patients feel that cancer is associated with filth and that the disease has a social stigma. Others feel that the disease is a means of punishment for their transgressions, and in these patients we see considerable manifestations of a guilt complex.

⁶ Solomon, Harry C., "Psychiatric Implications of Cancer," Rocky Mountain Medical Journal, October, 1947.

Disfigurement is more difficult for some women to contemplate than death itself, and many women would rather lose life than a breast. . . . The phrase "total hysterectomy" does not obliterate the idea of castration.⁷

The medical recommendations for treatment, including surgery and x-ray therapy, help to create anxiety as patients interpret these treatments as meaning pain and disfigurement or loss of part of the self. Physical disability may be considered as a frustrating and anxiety provoking situation which represents an attack upon the person by a hostile or unknown force.⁸

An individual abruptly faced with death assumes an entirely new perspective and attitude toward life. This change is difficult, if not impossible, for some people.

The defensive maneuvers the patients use can be termed (1) avoidance, where the patient overlooks the lesion; (2) suppression, where the lesion is noticed and dismissed; and (3) denial, where the significance is suspected but dismissed.⁹

The national cancer educational program undoubtedly reaches a large majority of people, yet we know that many individuals do not utilize the information given to them

⁷ Ibid.

⁸ Upham, Frances, "Cancer," A Dynamic Approach to Illness. New York: Family Service Association of America, 1949, p. 162.

⁹ Shands, Harley C., et al., op. cit.

through this medium. Shands¹⁰ believes that patients do not look at what they see, or, "to express the same thing in Gestalt terms, there is a failure of closure." It is the concept that cancer happens to others and in "the instances of delay there is a defect in the processing of information at hand."¹¹

In this study the delay patients are expected to reveal a characteristic difference in reaction to frustration and stress producing situations as compared to the prompt patients, who seek early medical care upon the onset of symptoms. Although other factors may be involved, one factor causing delay in a majority of cases is the patient's attempt to avoid or deny the frustrating situations. The prompt patients, on the other hand, will be more overtly aggressive in manipulating or overcoming the situation.

The Rosenzweig Picture-Frustration Study has been employed as a stimulus to obtain reactions to frustration or frustration-aggression patterns of the delay and prompt cancer patients.

In the Picture-Frustration Study¹² the responses

¹⁰ Ibid.

¹¹ Ibid.

¹² To be referred to as P-F Study.

are scored in two ways, in terms of the direction of aggression and in terms of type of reaction to frustration. The blame may be directed toward others or the environment (Extrapunitive), toward oneself (Intrapunitive), or it may be evaded by attempting to gloss over the frustration (Impunitive). The type of reaction may involve Ego Defense, Obstacle Dominance, or Need Persistence.

It is hypothesized that the delay patients will reveal a characteristic tendency to gloss over, avoid, deny, or evade the frustrating situations in the P-F Study. It is, therefore, anticipated that this group will obtain higher scores on the Intrapunitive and Impunitive factors on the test and lower Extrapunitive scores.

The prompt patients are expected to express overtly or to externalize their aggression and attempt to manipulate the barrier causing the frustration. This group is expected to obtain scores that are comparative to the normative scores on the Picture-Frustration Test.

CHAPTER II

RELATED STUDIES

Almost universally the thought of a malignant disease is associated with fear and anxiety. The great advances in medical science and in the cancer educational program have contributed considerably to the decrease in delay among cancer patients by endeavoring to educate the public that cancer can be cured if treated in the early stage of the disease. This factor has undoubtedly encouraged many patients to seek prompt medical attention. However, surveys of the statistics in this area continue to reveal a large percentage of delay among cancer patients. It appears that the cause of delay in the majority of cases is undoubtedly due to emotional factors.

Frustration, reactions to tension, and stress producing situations have been an important field of investigation and research in psychology.

The Rosenzweig P-F Study has been used in a number of investigations and studies of frustration-aggression patterns.

Lindzey¹ was interested in determining the effect of

¹ Lindzey, G. E., "An Experimental Test of the Validity of the Rosenzweig Picture-Frustration Study," Journal of Personality, 18:315-320, 1950.

frustration upon the performance of the P-F Study, and he found that Extrapunitive scores on the test increased significantly following a frustration experience.

McCary², Weinstein³, Monahan⁴, and Kirschner⁵ found in their investigations, through the use of the P-F Study, that there are definite differences in social and cultural aggressive reactions to frustration. The test served as a means whereby the differences in reactions to frustration could be objectively measured.

In recent years a number of investigations have been made to determine the causes of delay in cancer patients by using various methods such as interviewing and projective

² McCary, J. L., "Aggressive Reactions to Frustration Shown by Members of Two Cultural Groups." Unpublished Doctor's dissertation, The University of Texas, 1948.

³ Weinstein, Alvin D., "A Comparative Investigation of Frustration-Aggression Behavior Patterns Shown by Adult Members of Three Different Denominational Groups in Houston, Texas." Unpublished Master's thesis, The University of Houston, 1952.

⁴ Monahan, James A., "A Comparative Investigation of Aggressive Reactions of Negro and White Children Attending Two Schools in Austin, Texas." Unpublished Master's thesis, The University of Houston, 1949.

⁵ Kirschner, Rudolf, "A Comparative Study of Aggressive Reactions to Frustration Shown by Children of Three Different Denominations in Houston, Texas." Unpublished Master's thesis, The University of Houston, 1951.

techniques. The following is a review of various studies and statistical reports regarding the causes of delay among cancer patients.

During the interval March 1, 1944, through August 31, 1953, a total of 6,518 individuals were admitted to the M. D. Anderson Hospital, Tumor & Research Institute. More than one primary lesion was found in 433 patients. In 45.4 per cent of the total cases, there was no delay from the onset of the first symptom to the first visit to the physician. However, 36.1 per cent of the patients delayed longer than three months, and in 18.4 per cent of the total the duration of delay was unknown. A total of 1212 patients were admitted to the gynecology service during this period. In 32 per cent of the cases there was a delay of more than three months, and in 13.4 per cent the duration of symptoms was not known.⁶

According to the National Office of Vital Statistics,⁷ gynecological cancer kills more women than any other cancer. Deaths from cancer of the uterus account for 12.7 per 100,000 population; cancer of the ovary, 3.0 per 100,000; and other gynecologic cancer, 1.0 per 100,000,

⁶ MacDonald, Eleanor, Epidemiologist, M. D. Anderson Hospital, Tumor & Research Institute, Houston, Texas, Memorandum of Information.

⁷ Corsaden, James A., Gynecologic Cancer, New York: Van Nostrand Press, 1951, p. 1.

making a total of 17 per 100,000.

In a report⁸ by a committee in Philadelphia organized to study the causes of delay in the diagnosis of pelvic cancer, unnecessary delay in making the diagnosis was found in 74.6 per cent of the cases. The patient was solely guilty in 44 per cent and shared responsibility with the physician in 12.9 per cent, so that in 56.9 per cent of the cases she was wholly or partly responsible for the delay.

A study of the first cause of delay showed that ignorance of the importance of investigating abnormal uterine bleeding played only a small part. Much more important was evasion by one psychologic device or another based on an unreasoning fear or in some cases a conscious unwillingness to face a diagnosis which was to the patient a sentence of death. This general belief that cancer is incurable is based on:

- (1) The patient's own experience.
- (2) The general attitude of the community.
- (3) Her interpretation of the information given to her by the various agencies which are acting to improve the cancer situation.⁹

⁸ Ibid., p. 11.

⁹ Ibid.

In a survey at the Massachusetts General Hospital,¹⁰ where there was an appraisal of the personality and emotional difficulties confronting cancer patients, it was found that in 93 per cent of the cases, denial and avoidance of symptoms were due to feelings of guilt. The study also indicated that neither educational level, experience with cancer, nor cost of medical expenses reduced the time interval of seeking medical attention. It was found, however, that the more realistic the patients were about the illness, the earlier they sought diagnosis and treatment. The study revealed also that "termination of delay came about when the tensions between realistic concern and rationalization had reached a breaking point."¹¹

In a study¹² which consisted of 229 physicians who had cancer and 2,000 lay cancer patients, it was found that 39.8 per cent of the physicians who were also patients were responsible for delay in diagnosis and treatment, as compared with 39.5 per cent culpability in the case of the laymen-patients. In other words, the physicians were no better than the general population in seeking treatment without delay. The percentage of cases in which no delay

¹⁰ Abrams, Ruth D., and Jacob Finesinger, "Guilt Reactions in Patients With Cancer," Cancer, 6:474-479, May, 1953.

¹¹ Ibid.

¹² Pack, G. A., G. A. Robbins, and M. MacDonald, "Delay in the Diagnosis and Treatment of Physicians With Cancer," Cancer, 6:626-627, May, 1953.

occurred before diagnosis and treatment was 22.8 per cent for the 2,000 lay-patients and 26.6 per cent for the physician-patients. This is a difference of 16 per cent, which is smaller than would be expected.

Although physicians were in a better position to understand and take action against the presenting symptoms, it was found that they permitted an unjustifiable delay before treatment was instituted. It was also stated that the physicians were not sufficiently concerned about an early diagnosis of their own symptoms.¹³ This study would indicate that an important factor determining delay is not lack of concern, but denial or avoidance of the reality of the illness.

In a study¹⁴ on the delay in treatment of cancer carried out at Memorial Hospital in New York it was found that in an analysis of 1,000 cases, the patient alone was responsible for 44.3 per cent of the delays. The delay period, consisting of three months or over from the time of discovery of symptoms to the visit to the physician, was regarded as undue delay on the part of the patient. The causes for this delay were cited as ignorance of the seriousness of early symptoms, fear, unwillingness to face

¹³ Ibid.

¹⁴ Pack, George T., and James S. Gallo, "The Culpability for Delay in the Treatment of Cancer," American Journal of Cancer, 13:443-461, June, 1951.

the truth, and financial circumstances.

In another study,¹⁵ at the Memorial Center for Cancer, information obtained by interviewing 329 clinic patients revealed that there was a close relationship between delay by patients in seeking treatment for symptoms of cancer and their habits or criteria for seeking medical advice in general. The medical-care habits, according to a statistical analysis, varied according to age and educational background. Poor medical-care habits were more frequent among persons with a grammar-school or lower education and also among persons aged sixty or more years. It was observed in this study that "the value the individuals place on medical care and health is influenced by the contacts with illness, financial circumstances, the communities' attitudes toward illness, and family conditioning."¹⁶

Cobb,¹⁷ in a study of one hundred cancer patients at the M. D. Anderson Hospital in Houston, obtained interesting results through psychological testing procedures and interviewing. The study revealed that the prompt

¹⁵ King, Rena A., and John E. Leach, "Habits of Medical Care," Cancer, 4:221-225, May, 1951.

¹⁶ Ibid., p. 225.

¹⁷ Cobb, Beatrice A., "A Social Psychological Study of the Cancer Patient," unpublished Doctor's dissertation, The University of Texas, 1953.

patient "utilizes fear as an organizing agent to counteract the threat of dependency" and thus is active in combating the threat.

Intelligent, controlled fear seems characteristic of the "prompt." On the other hand, the "delay" patient is passive in his reaction under stress and his fear is more often diffused and unreasoning. He falls back further into his disposition toward negative reactivity and utilizes his energy in attempting to avoid, withdraw, or he accepts the passivity of punishment for reaction.¹⁸

Cobb found in the analysis of the Thematic Apperception Test that there is a trend "to activity of the prompt patients and passivity of the delays." Activity was defined as a disposition to cope with or master a situation, to seek out objects, and to manipulate them. Passivity was the disposition to avoid, withdraw from, or await impact of expected situations or to accept deprivations as inevitable. The results of the test revealed that activity or passivity as a "basic emotional approach had been learned through the years." The emotional attitude seemed to be accentuated by anticipatory fear of the tumor and ego-involvements with the members of the family.¹⁹

Symonds²⁰ explains that

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Symonds, P. M., Dynamics of Human Adjustment, New York: D. Appleton-Century Company, Inc., 1946, p. 3.

The most primitive reaction to frustration is aggressive behavior. The person towards whom it is directed. . . is likely to respond by counter aggression in the form of punishment. . . . To the person who showed the original aggression, punishment is painful and something to be avoided. Consequently, any situation or behavior on the part of the aggressor which is likely to bring punishment on himself is anticipated by the arousal of anxiety. Anxiety is one of the most distressing conditions in man and one which he does everything in his power to alleviate. . . . Individuals seek defenses against anxiety. . . . These adjustment mechanisms are modes of behavior which are to be found in everyone as methods employed to ward off anxiety.²¹

Frustration is such a universal aspect of experience. The phenomena are created through privation, deprivation, or conflict and involve states varying from mild drive to traumatic experiences.²²

Modes of adjustment to frustration are significant in understanding an individual's behavior and personality, in that these modes reveal one's methods of coping with stress and frustration.²³

²¹ Ibid.

²² Rosenzweig, Saul, "The Significance of Frustration as a Problem of Research," Character and Personality, 7:126-128, September, 1938, June, 1939.

²³ Freeman, Frank S., Theory & Practice of Psychological Testing. New York: Henry Holt & Company, 1950, p. 436.

CHAPTER III

METHOD AND PROCEDURES

Subjects. The subjects used in this investigation consisted of forty white female patients from the gynecological service at the M. D. Anderson Hospital, Tumor & Research Institute. Each patient had a pathologically proven pelvic malignancy revealed by microscopic study of the tissue removed by biopsy. The forty patients with pelvic carcinoma were selected on the basis of whether they had a pelvic malignancy and whether they fell into one of two divisions set up in the study. The first division consisted of twenty patients who were considered as prompt patients, and the second group consisted of twenty delay patients. The criteria of "delay and culpability" used in this study are as defined by Pack and Gallo.¹ According to this definition, the patient is considered culpable if she waits three months or longer after onset of first symptoms before consulting a physician and seeking medical care.² The twenty prompt patients consulted a physician any time under this three-month period of time. The forty patients selected

¹ Pack, George T., and James S. Gallo, "The Culpability for Delay in the Treatment of Cancer," American Journal of Cancer, 13:443, 1938.

² Ibid.

were either undergoing therapy for the malignancy or were reporting to the clinic for a routine follow-up examination, having previously completed the recommended course of treatment. None of the subjects were considered by the medical staff to be in the terminal phase of the disease.

The matching and medical data for the two groups are presented in Tables I and II.

Table I consists of the summarized data obtained during the interviews with each of the forty patients regarding their socio-economic situation. Examination of this table reveals that there is very little difference between the delay and prompt patients in education, economic situation or family income, medical facilities available, and family hospitalization. The mean age for the sample population is 44.6 for the prompt and 44.9 for the delay group. The marital status is approximately the same. In the prompt category only two married patients are childless, whereas six of the delay patients had no children.

There were eighteen prompt patients who had been exposed to cancer education through the media of radio, television, and literature, whereas only eleven delay patients said they had been exposed to this or any other type of health education.

The data in this table seem to indicate that socio-economic factors are not paramount factors in determining whether a cancer patient will be prompt or will delay seeking medical care.

TABLE I

MATCHING DATA ON PROMPT AND DELAY PATIENTS

Socio-Economic Situations		Prompt Patients	Delay Patients
Age	Mean	44.6	44.9
	Range	32-54	33-55
Marital Status			
	Married	17	16
	Widowed	2	2
	Divorced	1	2
Number of Children			
	Mean	2.2	2.9
	Range	1-6	1-7
	No Children	2	6
School Grades Completed			
	Mean	8.2	8.2
	Range	4 - 2 yrs. col.	2-11
Economic Situation			
	Average Monthly Income	\$183.90	\$168.20
Hospitalization Insurance			
	With	10	6
	Without	10	14
Medical Facilities Available			
	Yes	20	20
	No	0	0
Exposure to Cancer Education			
	Yes (Radio-Literature-TV)	18	11
	No	2	9

The information in Table II was obtained through interviews with the patients and further pertinent medical information obtained from the medical records.³

Carcinoma of the cervix headed the list for pelvic malignancy in both groups. Records of the incidence of cancer show the cervix to be the leading site for pelvic malignancies at the M. D. Anderson Hospital, and these findings can be considered a representative sample.⁴

Thirteen prompt patients sought medical care when they first became aware of irregular vaginal bleeding, and four experienced slight pain with these symptoms at the time of the first visit to the physician. The mean duration of symptoms for this group is 26.2 days, or a range of one day to two months.

In contrast, ten delay patients waited until they experienced heavy vaginal bleeding with severe pain before seeking medical care. The mean duration of symptoms for this group is 14.4 months, or a range from four months to four years. The delay patients, as a whole, experienced

³ By permission of Dr. R. L. Clark, Director-in-Chief, M. D. Anderson Hospital, Research & Tumor Institute, University of Texas, Houston, Texas.

⁴ Wall, John A., Chief of Gynecological Service, M. D. Anderson Hospital.

far more discomfort and for a much longer period of time than the prompt patients. Both groups had the same number of family relations with cancer. This seems to contradict the hypothesis that experience with cancer in the family alerts patients to obtain early medical attention. There were only seven out of the forty patients who had gone for routine periodic medical check-ups, four in the prompt and three in the delay group. This small number between the two groups points out the need for emphasis on periodic physical examinations in the cancer educational program.

Only one patient, and in the delay group, attributed the cause of her delay to economics. A total of nine delay patients said that they thought they had cancer during the time they were experiencing the symptoms but continued to postpone medical treatment.

TABLE II

MEDICAL DATA ON PROMPT & DELAY CANCER PATIENTS

	Prompt	Delay
Diagnosis		
Carcinoma of Cervix	18	16
Carcinoma of Ovary	1	0
Adenocarcinoma of Endometrium	1	4
Symptoms		
Pain	3	1
Irregular Vaginal Bleeding	13	9
Pain and Vaginal Bleeding	4	10
Duration of Symptoms before Seeking Medical Care		
Mean	26.2 days	14.4 months
Range	1 day-2 mos.	4 mos.-4 yrs.
Menopause		
Yes	11	8
No	9	12
Cancer in Family		
Yes	8	8
No	12	12
Routine Periodic Medical Check-ups		
Yes	4	3
No	16	17
Patient's Evaluation of Symptoms		
Thought Due to Cancer	4	9
Other Conditions	16	11
Economics as Reason for Delay	0	1

Testing Technique. The procedure employed in this study to measure responses to stress producing situations was the Adult Form of the Rosenzweig Picture-Frustration Study.⁵ This device is a projective, self-administered paper and pencil test that has been designed to measure conscious reactions to frustration.

The Picture-Frustration Study is a technique by which responses to everyday stress situations can be disclosed through the method of picture-association. The assumption of the test is that the subject will consciously or unconsciously identify himself with the frustrated individual in the picture and project his own feelings and reactions to the frustrating situation.

The material of the test consists of twenty-four cartoon-like pictures, each representing two or more persons who are involved in a mildly frustrating situation of common occurrence. In each picture, there is one person instigating the frustration who is shown saying words to the second person in the picture, whose reply is not given. Facial expressions are intentionally omitted from both persons.

⁵ Rosenzweig, Saul, "The Picture-Association Method and Its Application in a Study of Reactions to Frustration," Journal of Personality, 14:3, September, 1945.

The patient was presented the test leaflet and the following instructions were read:

Each of the following pictures contains two or more people. One person is always shown saying certain words to another. You are asked to write in the empty space the very first reply to these words that comes into your mind.⁶

Each of the written responses is scored for the direction of aggression, i.e., Extrapunitiveness (E), Intrapunitiveness (I), and Impunitiveness (N), and for type of reaction, i.e., Obstacle-Dominance (OD), Ego-Defense (ED), and Need-Persistence (NP). Rosenzweig defines these terms as follows:

Extrapunitiveness. Aggression is employed overtly and directed toward the personal or impersonal environment in the form of emphasizing the extent of the frustrating situation, blaming an outside agency for the frustration, or placing some other person under obligation to solve the problem at hand.

Intrapunitiveness. Aggression is employed overtly, but directed by the subject against himself in the form of a martyr-like acceptance of the frustration as beneficial, acknowledgement of guilt or shame, or an assumption of responsibility for correcting the frustrating situation.

Impunitiveness. Aggression is evaded or avoided in any overt form and the frustrating situation is described as insignificant, as no one's fault, or as likely to be ameliorated by just waiting or conforming.

Obstacle-dominance. The barrier which occasions the frustration of the subject stands out in the form

⁶ Rosenzweig Picture-Frustration Study Booklet.

of emphasis of its severity, interpretation of it as a boon, instead of an obstacle, or a description of it as of slight importance.

Ego-defense. The ego of the subject plays the chief part in the response, and the subject either blames someone else, assumes the blame, or describes the responsibility for the frustration as not attributable to anyone.

Need-persistence. The trend of the response is toward the solution of the problem inherent in the frustrating situation and the reaction takes the form of demanding the services of some other person in the solution, of placing the subject himself under the obligation to make the necessary correction or of appealing to time and normally expected ensuing circumstances to bring about rectification.⁷

Another measure on the test, the Group Conformity Rating (GCR), is arrived at by comparing the testee's scores on specific items with a set of popular responses from normative data collected by Rosenzweig.

The purpose of the schema upon which the test is based is to classify subjective types of immediate and primarily conscious reaction to frustration. The following chart presents the salient points.⁸

⁷ Rosenzweig, op. cit.

⁸ Rosenzweig, Saul, "Reactions to Frustration," Henry A. Murray, editor, Explorations in Personality, New York: Oxford University Press, 1938, p. 586.

TYPES OF SUBJECTIVE REACTION TO FRUSTRATION

Name of Type	Extrapunitive	Intrapunitive	Impunitive
Pathognomonic Features (Upon Frustration)			
Emotions	Anger (with hostility)	Guilt (with remorse)	Embarrassment (with shame)
Judgments	Condemnation of outer world	Condemnation of self	Condonement of self & others
Dynamic & Genetic Basis			
Instincts	Aggressive needs outwardly directed	Aggressive needs inwardly directed Hate-guilt	Erotic needs (love-guilt)
Attitudes of Identification	Fear of punishment	Need for punishment	Fear of loss of love
Psychological Aspects			
Modes of Defense	Projection	Displacement & isolation	Repression (with self-deception)
Mental Disorders	Paranoid	Compulsive & obsessional	Hysterical
Libidinal Types (Freud)	Narcissistic	Compulsive	Erotic

Interviews with the patients were designed to obtain material regarding education, socio-economic situation, previous experience with cancer, exposure to cancer education, marital history, number of children, and availability of medical facilities.

The necessary medical information was obtained from the medical record of the patient, which included the diagnosis, chief complaint, onset of symptoms, and period

of time elapsing from first symptom to first visit to physician.

The P-F Study was administered individually to the forty patients, and the patients were reassured that the test results would not become a part of their medical record.

The standard Rosenzweig P-F procedure was employed to compute the raw scores for each of the seven factors previously mentioned.

CHAPTER IV

RESULTS

The results on the Rosenzweig test will be analyzed first in terms of the differences between prompt and delay patients on group medians for (1) direction of response; (2) type of response; (3) group conformity rating; and (4) super-ego blocking scores.

The second analysis of the results will be presented in terms of the differences in frequencies between the prompt and delay patients on the following patterns: (1) directional responses regardless of type; (2) type of responses regardless of direction; and (3) factors regardless of type or direction.

The data in Table III show a significant difference at the .01 level of confidence between the delay and prompt patients on the Extrapunitive (E) scores of the test. The critical ratio on this factor is 3.08.

There is a significant difference between the .05 and .10 level of confidence on the Intrapunitive (I) scores between the prompt and delay patient. The critical ratio is 1.86.

Although the delay patients achieve higher scores on the Impunitive (N) factor of the test, the critical ratio of 1.22 between the two groups reveals no significant difference.

TABLE III

MEDIANS, STANDARD ERRORS AND CRITICAL RATIOS
BETWEEN PROMPT AND DELAY AND NORMATIVE GROUPS IN THE
DIRECTIONAL RESPONSES OF THE PICTURE FRUSTRATION STUDY

Groups	No. of Subjects	Extrapunitive			Intrapunitive			Impunitive		
		Median	SE	CR	Med.	SE	CR	Med.	SE	CR
Prompt	20	46.5	5.2		27.3	3.1		27.0	3.9	
				3.08*			1.86***			1.22
Delay	20	27.0	4.3		34.0	1.9		33.7	3.8	
Normative	50	45.0	**		28.0	**		28.0	**	

* Significant at the .01 level of confidence.

** Not available.

*** Significant between the .05 and .10 level of confidence.

Table IV does not reveal any significant differences between the two groups on the Obstacle-Dominance (OD), Ego-Defense (ED), and Need-Persistence (NP) scores. Both groups obtained medians which were close to the median of the normal population according to this analysis.

TABLE IV

MEDIANS, STANDARD ERRORS, AND CRITICAL RATIOS BETWEEN PROMPT, DELAY AND NORMATIVE GROUPS ON THE TYPE RESPONSES OF THE PICTURE-FRUSTRATION STUDY

Groups	No. Subj.	Obstacle Dominance			Ego Defense			Need Persistence		
		Median	SE	CR	Med.	SE	CR	Med.	SE	CR
Prompt	20	19.0	1.85	-	59.2	2.43	1.06	20.0	2.74	.15
Delay	20	19.0	1.38		54.5	2.47		20.5	1.65	
Normative	50	20.0	*		52.0	*		28.0	*	

* Not available.

Table V reveals a significant difference at the .02 level of confidence between the prompt patients and the normative group of Rosenzweig's on the Group Conformity Rating (GCR). The critical ratio on this factor is 2.56.

There is no significant difference between the prompt

and delay patients on the GCR, the critical ratio being 1.04. There is also no significant difference between the delay and normative group on this factor.

In the super-ego blocking scores, the table reveals no significant difference on the E factor nor on the I factor between the prompt and delay patients.

TABLE V

MEDIANS, STANDARD ERRORS, AND CRITICAL RATIOS BETWEEN PROMPT, DELAY AND NORMATIVE GROUPS ON THE GROUP CONFORMITY & SUPER-EGO BLOCKING SCORES OF THE P-P STUDY

Groups	No. Subj.	Group Conformity Rating			Super-Ego Blocking Scores					
		Median	SE	CR	E			I		
Prompt	20	56.5	3.55		5.37	.57		5.80	.80	
				*1.04				*.95		*.10
Delay	20	61.0	2.43		4.04	.87		5.93	.96	
				*1.93						
Normative	50	68.0	2.75							
Prompt										
				**2.56						
Normative										

* Not significant.

** Significant difference at the .02 level of confidence.

A survey of the data in Table VI shows that there is a significant difference between the prompt and delay patients in the three different patterns of responses.

The first pattern represents the relative frequency of directional response regardless of type, i.e., the largest Extrapunitive, the largest Intrapunitive, and the largest Impunitive frequency found in each row of the scoring columns.

The critical ratio of 8.26 between the two groups on this pattern is found to be significant between the .02 and .01 level of significance.

TABLE VI

PATTERNS OF RESPONSES
FREQUENCY OF DIRECTIONAL RESPONSES REGARDLESS OF TYPE
AND CHI SQUARES BETWEEN THE PROMPT AND DELAY GROUPS

Groups	E I M	I M E	M E I
	E M I	I E M	M I E
Prompt	15	2	3
Delay	6	4	10
Chi Square	8.26 *		

* Significant between .02 and .01 level of confidence.

Table VII reveals the results of the scores on the second pattern of responses. This pattern summarizes the percentages from the complementary point of view (type rather than direction) and states the largest factor by frequency under Obstacle Dominance, Ego Defense, or Need Persistence.

Chi square of 6.32 is significant at the .05 level of confidence.

TABLE VII

FREQUENCY OF TYPE OF RESPONSES REGARDLESS OF DIRECTION
AND CHI SQUARE BETWEEN PROMPT AND DELAY PATIENTS

Groups	E I M	I M E	M E I
	E M I	I E M	M I E
Prompt	13	4	3
Delay	6	4	10
Chi Square	6.32*		

* Significant at .05 level of confidence.

The third pattern, in Table VIII, presents the results of the three factors most frequently found in order of size, regardless of type or direction. The chi square of 6.32 shows a significant difference at the .05 level of confidence between the two groups. These findings are the same as revealed in Table VII.

TABLE VIII
FREQUENCY OF THREE FACTORS
REGARDLESS OF TYPE OR DIRECTION
AND CHI SQUARE BETWEEN PROMPT AND DELAY PATIENTS

Groups	E I M	I M E	M E I
	E M I	I E M	M I E
Prompt	13	4	3
Delay	6	4	10
Chi Square	6.32 *		

* Significant at .05 level of confidence.

CHAPTER V

DISCUSSION OF RESULTS

Analysis of the directional responses found in Table III reveals that the delay patients obtained significantly lower Extrapunitive scores than the prompt patients. The delay patients appear to experience difficulty in expressing overtly their aggression, and they tend to characteristically avoid, deny, or gloss over stress producing situations. The cancer patients who delay in seeking early medical attention seem to feel or express hope that "time will take care of everything." The delay patients showed more Intrapunitiveness and Impunitiveness on the test than the prompt patients, indicating that the delay patients have a tendency to blame themselves for the frustrating situation. They tend also to show more self-deception, regression, shame or embarrassment over the frustration encountered and respond in a martyr-like acceptance of the stress producing situation. The delay patients, characteristically accepting blame, indicate that they have considerable feelings of guilt. These results are similar to those found in the survey¹

¹ Abrams, Ruth D., and Jacob Pinesinger, "Guilt Reactions in Patients with Cancer," Cancer, 6:474-479, May, 1953.

of cancer patients at Massachusetts General Hospital, where, in 93 per cent of the cases, denial and avoidance of symptoms were due to feelings of guilt. The survey also showed that the prompt patient was more realistic in facing the illness rather than resorting to various defense mechanisms which were characteristic of the delay patients.

The prompt patients tend to express their aggression overtly, directing it toward someone or something in the environment. This group obtained Extrapunitive, Impunitive, and Intrapunitive scores which were in close agreement with the normative data of Rosenzweig. These findings would indicate that the prompt cancer patients are more like the normal population in their responses to frustrating situations. It is the delay patients that differ from the norm in reacting to stress.

In the analysis of the scores on the type of responses, i.e., the Obstacle Dominance, Ego Defense, and Need Persistence, no significant differences between the two groups were found. In view of the results of the directional responses, significant differences were anticipated on the type of responses.

Results of the group conformity rating reveal that the delay patients obtained higher scores than the prompt patients. Furthermore, the prompt patients obtained lower

and significantly different scores than the normative group. This is contrary to expectations since the delay patients were expected to reveal less social conformity than the prompt patients. It is difficult to interpret these findings, but it may be that the emotional tension the patients were experiencing because of their illness tended to affect this factor. There are no significant differences between the two groups on the super-ego blocking scores, although the prompt patients obtained somewhat higher E scores. A significant difference was expected between the groups on E and I scores, however.

In the analysis of the three patterns, significant differences between the two groups are found. In each of the three patterns the prompt patients reveal consistently more Extrapunitiveness on the test, whereas the delay patients obtain greater Impunitive and Intrapunitive scores. Interpretation of these findings, similar to those found in the directional responses, reveals that the delay patients tend to avoid or deny the frustrating situation, accepting blame readily and hoping that someone else or time will take care of the problem. The prompt patients have little or no difficulty facing the reality of the problem and they are able to express outwardly any aggression they feel. This response is in contrast to the delay

patient, who accepts the frustrating situation in a martyr-like manner and at the same time experiences shame and embarrassment.

The characteristic responses to frustration seen in the delay patients in this study are discussed by Shands² in his study of the causes of delay in cancer patients. He explains that patients found with cancer utilize various defense mechanisms such as avoidance, where the patient overlooks the lesion; suppression, where the lesion is noticed and dismissed; and denial, where the significance is suspected but dismissed. He also found that the patients reacted consistently to stress situations.

The above cited pathological devices utilized by the delay patients in this study and those studied by Shands³ were also suspected to be the cause of delay in the survey⁴ made by the Philadelphia Committee. This group studied female patients who had pelvic malignancies and found that the patients' delay was based on unreasoning fear or a conscious unwillingness to face a suspected fatal illness.

² Shands, Harley, Jacob E. Finesinger, Stanley Cobb, and Ruth D. Abrams, "Psychological Mechanisms in Patients With Cancer," Cancer, 4:1159-1160.

³ Ibid.

⁴ Corsaden, James A., Gynecologic Cancer. New York: Van Nostrand Press, 1951, p. 11.

In the study⁵ consisting of physicians and lay patients who had cancer, it was evident that the cause for delay among the physicians was not due to lack of education or socio-economic factors, but due to the denial or avoidance of facing the reality of the illness.

Cobb⁶ found in her investigation of the cause of delay in both male and female cancer patients that the prompt patient utilized fear as an organizing agent and was active in combating threat. On the other hand, Cobb's study revealed that the delay patient utilized energy in attempting to avoid or withdraw from the stress producing situation. The delay patient was more passive, accepting deprivations as inevitable. The prompt and delay patients in this study revealed the same characteristic responses to frustration, i.e., the prompt patient was overtly aggressive and directed toward action, whereas the delay patient tended to deny or gloss over the frustrating situation.

The present study further bears out, based on information obtained through interviews with the patients, that the socio-economic situation, experience with cancer, nor

⁵ Pack, G. A., G. A. Robbins, M. MacDonald, "Delay in the Diagnosis and Treatment of Physicians With Cancer," Cancer, 6:626-627, May, 1953.

⁶ Cobb, Beatrix A., "A Social Psychological Study of the Cancer Patient," unpublished Doctor's dissertation, The University of Texas, 1953.

availability of medical facilities decreased the interval between seeking medical care and the onset of the symptoms. A very negligible difference was found between the two groups in regard to these factors. These findings were similar to those of the Massachusetts survey,⁷ where these factors did not influence the patient to seek early medical attention.

Cancer in the family apparently had little effect in alerting the patients to seek prompt medical care. Cobb⁸ found this to be so in her investigation.

This study also revealed that the delay patients experienced far more discomfort and for a much longer period of time before seeking medical care. The prompt patient's mean delay was 26.2 days, while the delay group obtained a mean of 14.4 months' period of delay before the first visit to a physician was made.

The results of this investigation give further evidence that the causes of delay in seeking medical care among cancer patients are not basically attributable to socio-economic conditions, education, nor experience with the disease, but are essentially due to the characteristic responses to frustration and stress producing situations of the individual.

⁷ Abrams, op. cit.

⁸ Cobb, op. cit.

CHAPTER VI

SUMMARY AND CONCLUSION

This study was designed to determine if there are significant differences in reactions and responses to frustrations between prompt cancer patients, i.e., those seeking early medical care at the onset of symptoms, and delay cancer patients, or those waiting three months or longer after onset of symptoms. Specifically, it was concerned with comparing the delay and the prompt patients on characteristic patterns of responses to frustration or stress producing situations.

The population of the study consisted of forty white female cancer patients on the gynecological service at the M. D. Anderson Hospital. Each patient had a pathologically proven diagnosis of pelvic carcinoma. The ages ranged from thirty-two to fifty-five, with a mean age of forty-five.

The Adult Form of the Rosenzweig Picture-Frustration Study, which is a controlled projective technique for obtaining patterns of aggressive responses to frustrating situations, was administered individually to the forty patients, and an interview was held with each patient to obtain information regarding the socio-economic situation. The study was divided into two groups: twenty prompt

patients who sought medical care at the onset of symptoms or under a three-month period of time, and twenty delay patients who waited three months or longer before seeking any medical attention.

The two groups of cancer patients were compared from the standpoint of significant differences between the various factors on the test: Extrapunitiveness, Intrapunitiveness, Impunitiveness, Obstacle Dominance, Ego Defensiveness, Need Persistence, and Group Conformity Rating. The following results were obtained from this investigation.

A significant difference was found between the delay and prompt patients on the Extrapunitive and the Intrapunitive factors on the directional responses to the test. Interpretation of these results reveals that the delay patients tend to suppress their aggression and try to avoid, evade, or deny the frustrating situation. They characteristically accept the blame of the frustrating situation in a martyr-like manner. They express shame and embarrassment at the frustrating situation and have a tendency to hope that time will take care of the problem.

The prompt patients obtained scores in the directional responses and type responses which were close to the medians of the normative data of Rosenzweig. This indicates that the prompt patients are more like the normal

population, and it is the delay patients who differ from the norm.

No significant differences were obtained between the two groups of cancer patients on the types of responses to the test, i.e., the Obstacle Dominance, Ego Defensive, and Need Persistence factors. There was also no significant difference on the Super-Ego scores between the groups.

On the Group Conformity Rating the delay cancer patients obtained higher scores than the prompt patients, which is contrary to expectations. The prompt patients were expected to be more socially conforming than the delay patients. Furthermore, the prompt patients differed significantly with their low GCE scores from the normative data. The fact that these patients were experiencing considerable anxiety regarding their illness may have shifted the scores in this direction.

Significant differences were found between the prompt and delay patients on the three patterns of responses. The prompt patients consistently revealed more Extrapunitive patterns, showing their tendency to express outwardly their aggression and to be more directed toward action in manipulating the barrier causing the frustration.

The delay patients consistently revealed Intrapunitive and Impunitive patterns, showing their tendency to avoid or deny the frustrating situation.

The socio-economic situation, experience with cancer, or availability of medical facilities were not related to delay between the onset of symptoms and the first visit to a physician. The mean average in these categories was approximately the same in the two groups. Exposure to cancer education was found present to a greater degree in the prompt patient group, but the difference was not significant.

The results of this study give further evidence that the causes for delay in cancer patients may be attributable, in part, to psychological factors and the characteristic patterns of responses that the patients utilize in facing or handling a frustrating situation.

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APPENDICES

PROMPT CANCER PATIENTS

	GCR %	OD		ED		NP		E		I		M	
		T	%	T	%	T	%	T	%	T	%	T	%
Totals	1104	95.0	384	299	1150	109.5	447	199.5	824	143.5	592	139.5	572
Mean	55.2	4.75	19.4	14.95	57.5	5.47	22.35	9.97	41.2	7.17	29.6	6.97	28.6
Median	56.5		19.0		59.2		20.0		46.5		27.3		27.0
S. D.	12.33	1.5	6.4	5.14	8.6	2.3	9.5	4.31	16.1	2.51	10.7	3.28	13.6
S. E.	3.55		1.8		2.4		2.7		5.2		3.1		3.9

DELAY CANCER PATIENTS

	GCR %	OD		ED		NP		E		I		M	
		T	%	T	%	T	%	T	%	T	%	T	%
Totals	1198	105.9	387	264.5	1094	119.5	490	134.5	552	167.5	689	178.5	736
Mean	59.95	5.29	19.3	13.22	54.7	5.97	24.5	6.72	27.6	8.37	34.4	8.9	36.8
Median	61.0		19.0		54.5		20.5		27.0		34.0		33.7
S. D.	8.45	1.8	4.7	1.8	8.4	1.5	5.8	3.6	15.0	1.7	6.7	3.1	13.3
S. E.	2.43		1.38		2.47		1.65		4.3		1.9		3.8

PROMPT CANCER PATIENTS

	GCH	OD		ED		NP		E		I		M	
	%	T	%	T	%	T	%	T	%	T	%	T	%
1	62	6.5	27	14	58	3.5	14.	13.0	54	6.5	27	4.5	18
2	62	2.0	8	15	62	6.5	27.	12.0	50	6.0	25	5.5	22
3	58	4.0	16	13	54	7.0	29	3.0	12	12.0	50	9.0	37
4	66	8.0	33	14	58	2.0	8	14	58	6.5	27	3.5	14
5	66	5.5	22	14	58	4.5	18	11.5	47	8.0	33	4.5	18
6	50	5.5	22	14.5	60	4.0	16	14.5	60	6.0	25	3.5	14
7	66	5.0	20	9.5	39	9.5	39	2.0	8	7.0	29	15.0	62
8	33	5.5	22	17.0	70	2.0	8.0	19.5	81	3.5	14	1.5	6
9	41	3.0	12	17.5	72	3.5	14	12.5	52	8.5	35	3.0	12
10	66	6.0	25	12.5	52	6.5	27	4.0	16	12.5	52	8.5	35
11	54	5.0	20	14.0	58	5.0	20	7.5	31	8.5	35	8.0	33
12	33	3.0	12	14.5	60	6.5	27	7.5	31	9.5	39	7.0	29
13	83	5.0	20	16.0	66	3.0	12	12.0	50	6.5	27	5.5	22
14	66	4.0	16	9.5	39	11.0	45	4.0	16	11.5	47	9.0	37
15	54	7.0	29	13.0	54	4.0	16	7.0	29	6.0	25	11.0	45
16	50	3.5	14	14.0	58	7.0	29	12.0	50	6.0	25	6.5	27
17	45	5.5	22	14.0	58	5.0	20	9.5	39	2.5	10	12.5	52
18	41	4.0	16	12.0	50	8.0	33	9.5	39	5.5	22	9.0	37
19	50	5.0	20	12.0	52	6.5	27	11.0	45	6.5	27	6.5	27
20	58	2.0	8	17.5	72	4.5	18	13.5	56	4.5	18	6.0	25
T	1104	95.0	384	299.0	1150	109.5	447	199.5	824	143.5	592	139.5	572
M	55.2	4.75	19.4	14.95	57.5	5.47	22.35	9.97	41.2	7.17	29.6	6.97	28.6
SD	12.33	1.5	6.4	5.14	8.6	2.3	9.5	4.31	16.1	2.51	10.7	3.28	13.6

PROMPT CANCER PATIENTS

	O D			E D			N P		
	E	I	M	E	I	M	E	I	M
1	3.5	2.0	1.0	9.0	2.5	2.5	.5	2.0	1.0
2	1.0	0	1.0	8.5	4.0	2.5	2.5	2.0	2.0
3	0	2.0	2.0	1.0	6.0	6.0	2.0	4.0	1.0
4	4.0	3.0	1.0	8.5	3.5	2.0	1.5	0	.5
5	5.0	.5	0	8.5	6.0	4.5	3.0	1.5	0
6	3.0	2.0	.5	11.5	3.0	0	0	1.0	3.0
7	0	1.0	4.0	2.0	2.5	5.0	0	3.5	6.0
8	4.5	1.0	0	13.0	2.5	1.5	2.0	0	0
9	1.0	1.0	1.0	9.5	7.0	1.0	2.0	.5	1.0
10	1.0	2.0	3.0	2.0	6.0	4.5	1.0	4.5	1.0
11	2.0	2.0	1.0	4.0	3.0	7.0	1.5	3.5	0
12	1.0	1.0	1.0	6.5	5.5	2.5	0	3.0	3.5
13	2.5	0	2.5	9.5	4.5	2.0	0	2.0	1.0
14	1.0	.5	2.5	1.5	5.0	3.0	1.5	6.0	3.5
15	1.5	1.5	4.0	4.5	1.5	7.0	1.0	3.0	0
16	1.0	2.0	.5	8.0	3.5	2.5	3.0	.5	3.5
17	2.5	1.5	1.5	7.0	1.0	6.0	0	0	5.0
18	1.5	1.5	1.0	4.5	3.0	4.5	3.5	1.0	3.5
19	1.5	1.0	2.5	7.5	3.5	1.5	2.0	2.0	2.5
20	0	0	2.0	13.5	3.5	.5	0	1.0	3.5
T	37.5	25.5	32.0	135.0	77.0	64.0	27.0	41.0	41.5
M	1.87	1.27	1.6	6.75	3.85	3.2	1.35	2.05	2.07
SD	1.44	.637	11.44	3.608	1.521	2.22	1.103	1.601	1.707

DELAY CANCER PATIENTS

	GCR	OD		ED		NP		E		I		N	
	%	T	%	T	%	T	%	T	%	T	%	T	%
1	41	5.0	20	14.0	60	4.0	16	4.5	39	6.5	27	7.5	31
2	83	5.0	23	11.5	48	7.0	29	10.5	44	7.0	29	6.5	27
3	67	4.0	16	15.0	62	5.0	21	6.0	25	9.0	37	9.0	37
4	54	3.5	14	14.0	58	7.0	29	3.5	14	8.0	33	13.0	54
5	62	7.0	29	9.5	35	8.0	33	6.0	25	10.5	43	8.0	33
6	62	5.0	20	13.0	54	6.0	25	5.5	22	7.5	31	11.0	45
7	66	3.0	12	15.0	62	6.0	25	9.0	37	7.0	29	8.0	33
8	83	5.0	20	13.5	56	5.5	22	5.0	20	8.0	33	11.0	45
9	66	4.0	16	13.5	56	6.5	27	8.0	33	9.5	39	6.5	27
10	45	5.5	22	14.5	60	4.5	18	15.5	64	5.5	22	3.5	14
11	75	5.5	22	16.5	68	2.5	10	7.0	29	6.0	25	11.5	47
12	33	4.0	16	12.5	52	7.0	29	3.0	12	10.	41	10.5	43
13	75	2.5	10	17.0	72	4.5	18	3.5	14	8.5	35	12.0	50
14	54	4.5	18	14.0	58	5.5	22	1.0	4	10.0	41	13.0	54
15	54	5.5	22	13.5	56	5.5	22	10.5	43	6.5	27	7.5	31
16	54	5.5	22	11.0	45	7.5	31	0	0	8.0	33	16.0	66
17	66	7.5	31	12.5	52	4.0	16	10.0	41	11.	45	3	12
18	25	4.0	16	11.0	45	8.0	33	4.0	16	11	45	8	33
19	75	4.5	18	11.0	45	8.5	35	7.0	29	11	45	6	25
20	58	5.0	20	12.0	50	7.0	29	10.0	41	7.0	29	7.0	29
T	1198	105.9	387	264.5	1094	119.5	490	134.5	552	167.5	689	178.5	736
M	59.95	5.29	19.3	13.22	54.7	5.97	24.5	6.72	27.6	8.37	34.4	8.9	36.8
SD	8.45	1.8	4.9	1.8	8.4	1.5	6.5	3.6	15.0	1.7	7.01	3.1	13.3

DELAY CANCER PATIENTS

	O D			E D			N P		
	E	I	M	E	I	M	E	I	M
1	2.0	2.5	.5	6.5	3.0	5.0	1.0	1.0	2.0
2	1.0	1.0	3.5	6.5	3.0	2.0	3.0	3.0	1.0
3	1.0	2.0	1.0	4.0	5.0	6.0	1.0	2.0	2.0
4	2.0	.5	1.0	1.5	5.0	7.5	0	2.5	4.5
5	4.0	2.5	.5	1.5	3.5	4.5	.5	4.5	3.0
6	2.0	2.0	1.0	3.5	3.0	6.5	0	2.5	3.5
7	1.0	1.0	1.0	6.0	3.0	6.0	2.0	3.0	1.0
8	1.0	1.0	3.0	3.0	4.0	6.5	1.0	3.0	1.5
9	1.0	2.0	1.0	5.0	5.5	3.0	2.0	2.0	2.5
10	2.0	2.0	1.5	11.5	2.0	1.0	2.0	1.5	1.0
11	1.5	1.0	3.0	5.5	5.0	6.0	0	0	2.5
12	1.0	2.0	1.0	1.0	6.0	5.5	1.0	2.0	4.0
13	.5	1.0	1.0	2.0	6.0	9.0	1.0	1.5	2.0
14	1.0	.5	3.0	0	7.0	7.0	0	2.5	3.0
15	2.0	2.0	1.5	7.5	1.0	5.0	1.0	3.5	1.0
16	0	2.0	3.5	0	4.5	6.5	0	1.5	6.0
17	2.5	3.0	2.0	6.5	5.5	1.0	1.0	3.0	0
18	1.0	2.0	1.0	3.0	6.0	2.0	0	3.0	5.0
19	.5	2.0	2.0	5.5	3.0	2.5	1.0	6.0	1.5
20	3.0	0	2.0	6.0	3.0	3.0	1.0	4.0	2.0
T	30.0	32.0	34.0	86.0	84.0	85.5	18.5	52.0	48.2
M	1.5	1.6	1.7	4.3	4.2	4.27	.82	2.6	2.42
SD	.92	.76	.96	2.80	1.50	3.093	.915	1.27	1.508