

DOCUMENT RESUME

ED 390 088

CS 509 104

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 TITLE The Effects of Cancer and Cancer Treatment: What Teachers Should Know.  
 PUB DATE Apr 95  
 NOTE 17p.; Paper presented at the Annual Meeting of the Central States Communication Association (Indianapolis, IN, April 19-23, 1995).  
 PUB TYPE Viewpoints (Opinion/Position Papers, Essays, etc.) (120) -- Speeches/Conference Papers (150)  
 EDRS PRICE MF01/PC01 Plus Postage.  
 DESCRIPTORS \*Cancer; Classroom Environment; Higher Education; Medicine; Physical Health; \*Public Speaking; \*Special Health Problems; \*Student Attitudes; \*Student Needs; Undergraduate Students  
 IDENTIFIERS Faculty Attitudes; \*Health Communication

ABSTRACT

High school biology textbooks feature little coverage of cancer, so that college students are not generally informed about the condition. At the same time, there has been a dramatic increase in the number of young people who survive cancer, which means that college instructors are likely to have students who have or have had cancer. Instructors must now consider: (1) the effects of cancer and cancer treatment; (2) the relevancy of cancer in the classroom; and (3) effective strategies to use when encountering students with cancer in class. Generally the effects or side effects of cancer treatment can be divided into three categories; the physical, the cognitive, and the psychosocial. Physical side effects include hair loss, headache, nausea, skin irritation, and mouth sores. Chemotherapy and radiation therapy have also been known to cause a decrease in cognitive abilities. Problems with self-image, especially in younger children, are not uncommon. Since many students may have had some contact with cancer but still not know as much as they would like to about it, public speaking classes offer an excellent opportunity for filling in gaps in students' medical education. Informative speeches, for instance, could most aptly take on the topic. In confronting students with cancer, teachers should ask the student what he or she needs, if anything. Alleviate general student fear with facts through presentations. Also, provide an address for students who would like to send a letter to a student in the class with cancer. (Contains a table and 16 references.) (TB)

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# The Effects of Cancer and Cancer Treatment: What Teachers Should Know

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Central States Communication Association Convention  
April 1995 Indianapolis, Indiana

CS509104

Recently, there has been a dramatic increase in the number of young people who survive cancer. Twenty years ago, for example, only five per-cent of this population were expected to survive (Charlton, Pearson, & Morris-Jones, 1986). Today, there is a fifty to seventy per-cent expected survival rate for the most common childhood cancers ("Young Cancer Survivors," 1993; Treiber, Schramm, & Mabe, 1986; Charlton et al., 1986). Successful treatment of young persons with cancer is attributed to groundbreaking advances in the medical field. There is a down side, however, to these optimistic statistics. In the push to find a 'cure' for cancer, the medical community has neglected the 'care' of young cancer patients (Car-Gregg and Hampson, 1986). With the increasing number of persons who survive this disease, however, contemporary health care professionals have begun to put an emphasis on normalizing the lives of these individuals. Central to this theme is the educational process (Katz, Rubinstein, Hubert, & Blew 1988; Hening and Fritz, 1983; Sachs, 1980).

Researchers have learned that elementary and secondary students incur difficulties when they attend school during or after cancer treatment (American Cancer society, 1988; National Cancer Institute, 1987; Charlton et al., 1986). Less is known, however, about the college student.<sup>1</sup> Yet when one considers the increasing survival rates for cancer patients, and recent statistics that suggest one in four persons will get cancer (American Cancer Society, 1990), it seems possible that college instructors may encounter a student with cancer. When this situation occurs, college instructors may lack information about the effects of cancer or cancer treatment.

With the growing size of college classrooms, it has become increasingly common for instructors to have little personal contact with students. For

example, a lecture hall filled with two hundred students prohibits student/instructor interaction. In this environment it is probable that an instructor might never learn if she had a student with cancer. Conversely, many public speaking courses are still held in relatively small classrooms. In addition, the performative nature of this course often fosters a strong classroom community and allows for open communication, debate, and self disclosure. Thus, I believe the public speaking course can help address an important social, political, and personal subject like cancer.

In order to provide current information about cancer/cancer treatment and illustrate the benefits of covering this subject in the basic course, I will divide this paper into three categories: (1) effects of cancer and cancer treatment, (2) the relevancy of cancer in the college classroom, and (3) strategies for the instructor who encounters a student with cancer. First, I will provide current information about cancer and cancer treatment. This section should be especially helpful for instructors who lack information about the side effects of this disease. The second component of this essay will demonstrate the need to provide current information about cancer at the college level. In this section I argue that the basic course provides an excellent opportunity for instructors and students to learn about cancer while enhancing speaking and research skills. In the third section of this paper I provide strategies for instructors who encounter a student with cancer.

The effects of cancer and cancer treatment. Generally, side effects from cancer or cancer treatment can be divided into three categories: (1) physical, (2) cognitive, and (3) psychosocial (Rich, 1993). Physical side effects can be considered acute (short term) or chronic (long term). Hair loss, headaches, nausea, skin irritation, and mouth sores are possible acute conditions

(National Cancer Institute, 1988; Van Dongen and Sanders -Woudstra, 1986). During high doses of chemotherapy or radiation, students with cancer may experience a multitude of these conditions. Often the student will appear pale and fatigued. Instructors should not assume, however, that students who look ill should not attend class. Often times the student may be grateful for an opportunity to get out of the house or hospital. Students may also incur long term, or chronic ailments. Chronic ailments can include brain damage, graft versus host infection, (GVH) skeletal abnormalities, secondary cancers, and amputations (Van Dongen-Melman and Sanders-Woudstra, 1986). Some chronic ailments, like GVH for example, can present ongoing problems such as rashes, fevers, and viruses.<sup>2</sup>

Due to high levels of chemotherapy and radiation treatment, a significant decline in intellectual ability has been noted in young persons with cancer (Van Dongen-Melman and Sanders-Woudstra, 1986). Unfortunately, it is difficult for teachers to make the correlation between cognitive problems and cancer because a student's academic performance may not suffer for months, or even years after treatment. Thus, a healthy student may struggle academically because of chemotherapy or radiation treatment completed in high school. When this occurs, "teachers are frequently fooled into thinking the student is just lazy, uncooperative, or psychologically distressed" (American Teacher, 1993, p. 2). Hence, if a student is struggling academically and has a history of cancer, it is useful to speak with the student about her treatment and consult a health care professional to obtain information.

Psychosocial dysfunction constitutes the third type of side effect associated with cancer. These problems may be especially prevalent in

younger college students who are trying to establish a positive identity and self image. Problems with self image often take place as a result of the student's altered physical appearance. In addition, a student's perspective about career goals can be adversely affected if he believes that the cancer is terminal (Ettinger and Heiney, 1993). Finally, cancer/cancer treatment can cause anxiety, depression, and withdrawal (Van Dongen-Melman and Sanders-Woudstra, 1986). Ultimately, any psychosocial problem can consume a great deal of the students' energies and detract from their ability to succeed in the classroom.

Devoting a section of the public speaking course to the study of cancer. College instructors who choose not to incorporate cancer education in their classes may do so because they feel it is being adequately covered in high school. Unfortunately, this is not the case. In fact, after reviewing the six most common high school biology texts, Bittner and Burrow (1984) found "glaring voids in the topic of cancer" (p. 293). The following chart illustrates the lack of cancer education at the high school level:

Table I  
 Cancer Coverage in Six High School Biology Textbooks  
 (Taken from Barrow and Bittner, 1984)

Categories	Textbooks (page numbers)					
	Biological Science: An Inquiry Into Life	Biological Science: A Molecular Approach	Biology (Creager)	Biology (Slesnick)	Biology for Living	Modern Biology
I. Science Aspects of Cancer	253-254,115	263	146-147,686	249	575-577	
A. Definition of cancer					574	
B. Stages of cancer						
C. Possible causes						
1. Environmental	732-734	320-322	69		575	213
2. Viral			312,314-315	246	575	
3. Health and lifestyle	731-732		570		32-33	
II. Clinical Aspects of Cancer						
A. Detection						
1. Seven danger signals					578	
2. Self-examination (breast, testes, etc.)						
3. Advanced techniques (Mammography, etc.)						
B. Sites of Cancer						
1. Leukemia	115-253	263-4	315		576	
2. Breast			315		574,577	
3. Colon-rectal						
4. Lung					574,577	
5. Bone			315		577	
6. Skin (including lips)	732	322			574,577	
7. Gastric-intestinal	115				574	
8. Liver	115				577	
9. Other						

	Biological Science: An Inquiry Into Life	Biological Science: A Molecular Approach	Biology (Creager)	Biology (Slesnick)	Biology for Living	Modern Biology
C. Treatments						
1. Continued observation					581	
2. Chemotherapy	115		147		581	
3. Surgical	115		147		581	
4. Radiation therapy	115	320			581	
5. Immunotherapy			686			
6. Research	734	12,264				
7. Rehabilitation			315		579	
III. Psycho-social Aspects of Cancer						
A. Physical concerns					582	
1. Loss of hair						
2. Amputation					582	
3. Pain					582	
4. Reaction to therapy						
B. Emotional						
1. Unproven cancer cures (i.e., laetrile)						
2. Recovery rate/terminal						
3. Family/Hospice						
C. Economic concerns						
1. Insurance						
2. Medication						
3. Therapy (cost and travel)						
4. Surgery						
5. Prosthetic devices						
6. Loss of salary						
7. Rehabilitation						
D. Interpersonal communications (Medical / Patient/ Family).						

Considering the void in high school cancer education, it is not surprising that college students are eager to gain information about this disease. For example, Stronck (1983) annually asks students in a biology course for non majors to rank the subjects they most want to learn about. Each year, "hundreds of students give 'cancer' the highest number of points" (Stronck, 1983, p. 379). This instructor concludes that college students want to learn about cancer for two primary reasons: (1) cancer is not sufficiently covered in high school, and (2) healthy students want to learn preventative strategies.



Although biology courses can play an integral role in cancer education, I believe the basic course also provides some unique opportunities for students to learn about this disease. For example, informative speeches could be designed to raise awareness and provide current information about cancer. Students might choose from a variety of topics that include: different types of cancer, chronic illness, costs of cancer treatment, cure rates, cancer prevention, traditional and nontraditional treatments, side effects, and terminal illness/death and dying. The subject of cancer could also be a central component of persuasive speeches. Persuasive topics could include: a public ban on smoking, eating healthier, volunteering at a cancer organization, taking sun precautions, joining the national bone marrow registry, and performing breast or testicular exams on a consistent basis. In addition, instructors could use impromptu speeches to facilitate discussion about cancer. For example, an instructor might ask, "What would you do if you learned that you (or a friend/family member) had cancer? A question of this nature could reveal misperceptions about cancer and spark interest to learn more about the disease.

There are considerable benefits for creating a speech assignment designed to raise awareness about cancer. First, students will be learn about a subject that is relevant to their lives. Considering that one in four persons will get cancer (American Cancer Society, 1990), it is likely that students have had (or will have) some experience with this disease. Second, students will have an opportunity to refine research skills. With the large amount of current research available on cancer, students should be able to consult newspapers, periodicals, books, and journal articles. In addition, if the campus library has a contemporary computer system, students could be asked

to secure research from one of the numerous online medical services. Finally, devoting one speech round to this subject will inevitably produce a great deal of information about cancer. Even though there are an increasing number of long term survivors,<sup>3</sup> a "doom and despair" response to cancer is still prevalent due to a lack of knowledge about cancer and cancer treatment (Bittner and Burrow, 1984, p. 285). Devoting one component of the basic speech course could help disseminate current facts about this disease to college students.

Strategies for teachers who encounter a student with cancer. What would you do if you learned that a student was diagnosed with cancer? Would you know how to approach her/him? Isaacs and McElroy (1980) believe that the teacher in this situation "often feels a strong sense of responsibility but may not know how to respond" (p. 320). This scenario may be especially problematic in the basic course, where teachers often form close bonds with students. Usually, teachers are fearful that they have an inadequate knowledge base regarding the disease (Pallmeyer et al., 1986; Treiber et al., 1986). In addition, teachers are often not sure how to treat the student (Charlton et al., 1986; Treiber et al., 1986).

Unfortunately, there are no "sure things" for instructors who have a student with cancer because people react to cancer in a variety of ways. In addition, the classroom environment will usually dictate which intervention strategies are most efficacious. Still, I believe there are some general strategies that can be of use to instructors. The following list is compiled from current research on cancer and four years of personal experience working with young people who have this disease.

- (1) Ask the student what he needs from you as his instructor. It is acceptable to ask if you can be of assistance more than once. Be willing to take an active role when it is requested.
- (2) Alleviate fears with facts. Students are often hesitant to talk about cancer because they equate the subject with death. If you have a student with cancer (or a long time survivor) in class, she may be willing to give a presentation to the class. If you are interested in providing current information to a classroom of healthy students, invite a health care professional to give a presentation or devote a speech round to this subject.
- (3) Provide a home or hospital address for students who want to send a letter or card to the student with cancer. This is a simple gesture that can remind the student that he has not been forgotten.
- (4) Offer to serve as a liaison between the student and her other instructors. If your student cannot attend class because of cancer treatment, offer to inform her other instructors.
- (5) Set aims and goals for students with cancer and keep your expectations high. Do not assume that they will be unable to complete the course. Remember, "hopes do not vanish with illness."
- (6) If the student misses class, have an address where you can send the assignments.
- (7) Apply normal limits of behavior to the student. Having cancer does not mean that a person can disrupt class. In addition, preferential treatment may alienate other classmates. If behavioral problems persist, consider contacting a health care professional. The student's problems may be a direct result of cancer treatment.

- (8) Try not to patronize the student or tell him you know how he feels (You probably don't).
- (9) Learn everything you can about cancer and cancer treatment. Most national and local cancer organizations are willing to provide free, current information (A list of cancer related organizations follows the reference page).
- (10) Provide an opportunity for students to talk about their personal feelings. Cancer is a serious topic that can potentially foster emotional responses from students. In addition, if a student with cancer in your class is diagnosed as terminal or dies during the course of the semester, classmates may be grateful for an opportunity to discuss their feelings. Since most of us are not licensed counselors, it may be necessary to solicit the services of a university professional who is trained in grief counseling.
- (11) If the student is feeling too ill to attend full classes, allow her to attend partial classes so that she continues to feel like a member of the learning community.

Conclusions. With the increasing number of young survivors, it is important for teachers to recognize that they play a critical role in the lives of students with cancer. In fact, researchers believe that school can potentially normalize the cancer patient's life ("Young cancer survivors", 1993). Unfortunately, many instructors may not have current information about cancer and cancer treatment. Thus, a student's eagerness to return to school during or after treatment can be blunted by a teacher's fear or lack of confidence (Charlton et al., 1986).

This essay has provided current information about cancer and cancer treatment for the college instructor who encounters a student with cancer. In

addition, I have shown that college students are eager to learn about cancer and ways to prevent the onset of this disease. I have also demonstrated that the basic public speaking course can provide an excellent opportunity for students and instructors to learn more about a disease that will inevitably have a profound impact on our lives. Some general intervention strategies have been provided for instructors who encounter a student with cancer. If the basic course instructor is willing to take the initiative on cancer education, it will inevitably provide reciprocal benefits for healthy students, students with cancer, and the community.

## Footnotes

<sup>1</sup> The vast majority of research on reintegration programs and cancer education focuses almost exclusively on elementary and secondary students. Thus, I have found it necessary to adapt some of the articles cited in this essay to illuminate the needs of the college student. Whenever possible, I have consulted college age cancer patients and survivors to validate the findings of this essay. Currently there is a great need to conduct more research that specifically addresses the needs of college students with cancer.

<sup>2</sup> GVH can occur after a cancer patient receives a bone marrow transplant. This infection can be chronic or acute. Acute GVH usually occurs immediately after a bone marrow transplant. Chronic GVH is an incurable, life long infection.

<sup>3</sup> Long term survivors are those who are still alive five years after diagnosis.

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Cancer Organizations:

American Cancer Society: (National Office)	404-320-3333
Cancer Care, Inc.	212-221-3300
Cancer Information Service	800-4-CANCER
Candle Lighters	202-659-5136
Children's Hospice International	800-242-4453
Leukemia Society of America	202-573-8484
Make-A-Wish Foundation	602-240-6600
National Childrens' Cancer Society	800-622-0190
National Coalition For Cancer Survivorship	505-764-9956
National Hospice Organization	703-243-5900