**CLINICAL Q&A**

**To Draw or Not to Draw: Drawing Blood Cultures From a Potentially Infected Port Site**

**Question:** Should blood cultures be drawn from an unaccessed implanted vascular access device if signs or symptoms of infection are apparent over the port site?

**Answer:** Evaluation of patients with cancer who are febrile should be conducted with particular attention directed to the most frequent sites of infection, including the mouth, lungs, soft tissues, and urinary and gastrointestinal tracts (Pizzo, 1999). Patients who are immunocompromised may present with fever and no localizing symptoms (e.g., erythema over a port site) and no evidence of a specific site of infection. A complete history and physical examination should be performed, as well as a complete blood cell count, cultures of blood and urine, and a radiographic chest film, with stool and oropharyngeal cultures when indicated (Pizzo). Further specific studies are necessary when patients’ presenting symptoms warrant additional examination. This may include lumbar puncture or additional radiographic films.

Because vascular access devices alter the skin defense barrier of patients who are immunocompromised, their presence increases the risk for infection (Pizzo, 1999). Although these devices can greatly improve vascular access for patients with cancer, they must be considered as a potential source of infection in patients who are febrile and immunocompromised. Totally implanted intravascular devices (IVADs) have the lowest reported rate of catheter-related bloodstream infections, possibly because they are located beneath the skin without entry points for microorganisms when not cannulated (Pearson & Hospital Infection Control Practices Advisory Committee [HICPAC], 1996).

Patients with IVADs who are immunocompromised can present with a local port-pocket infection or a catheter-related bloodstream infection. Comprehensive clinical assessment is necessary to determine the extent of the infection. Port-pocket infections are defined as infections that may contain purulent fluid in the subcutaneous pocket that could be associated with necrosis of the overlying skin, as well as erythema and tenderness over the port site, without a concomitant bloodstream infection (Mermel et al., 2001; Pearson & HICPAC, 1996; Silberzweig, Sacks, Khorsandi, & Bakal, 2000). If superficial exudate can be aspirated and cultured from the port pocket, this should be done in an attempt to identify the organism and tailor antibiotic therapy appropriately (Wickham, Purl, & Welker, 1992). The catheter tunnel also should be inspected and palpated, as a tunnel infection may be present in the absence of a port-pocket infection.

Drawing blood cultures from IVADs (without evidence of infection) is necessary in patients who are febrile and immunocompromised; in fact, two sets of blood cultures through the central venous catheter, along with a peripheral set, should be obtained using a quantitative or semiquantitative culture method (Mermel et al., 2001). A positive blood culture result drawn through a catheter requires clinical interpretation, but a negative result is useful for excluding catheter-related bloodstream infection (Mermel et al.). However, if patients present with signs and symptoms of port-pocket infections, obtaining cultures through unaccessed devices is not recommended (Ramsey & Richardson, 1995; Wickham et al., 1992). By placing a needle through an infection, the possibility exists of tracking infectious material through the skin into the port septum. This can allow microorganisms to enter the bloodstream, and a systemic infection may result (Ramsey & Richardson). However, if port-pocket infections occur while the ports are cannulated already, then leaving the needle in place to obtain catheter cultures and administer IV antibiotics is acceptable (Wickham et al.).

Treatment of uncomplicated port-pocket infections requires meticulous site care and either oral or IV antibiotics for 10–14 days (Mermel et al., 2001; Ramsey & Richardson, 1995). Common pathogenic organisms seen with port-pocket infections include staphylococcus aureus, coagulase-negative staphylococci, and gram-negative bacilli (Mermel et al.). It may not be necessary to surgically remove the implanted device (Raad & Bodey, 1992). However, the device must be removed for all candida infections, port abscesses, and complicated infections, and a course of appropriate antibiotic therapy should be started (Mermel et al.).

Reinsertion of IVADs should not be attempted until systemic antibiotic therapy has begun and repeat blood cultures show negative results (Mermel et al., 2001). Although IVADs have helped to provide patients with cancer with needed infusion therapy, they are not without risks. Prompt assessment of patients who are febrile and immunocompromised is essential, with particular attention paid to likely sites of infection. Assessment of central venous catheter sites is crucial, and blood cultures should be obtained to determine the presence of infectious microorganisms and identify appropriate antibiotics for therapy. Patients with port-pocket infections require expert clinical assessment and should not have cultures drawn directly from the unaccessed port septum itself. Instead, clinicians should rely on peripheral cultures only. The possibility of seeding the bloodstream of patients who are immunocompromised with microorganisms by accessing a port with signs or symptoms of infection should be avoided.

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**References**


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Coping With Cancer Resource List

QUESTION: Many resources are available to help patients with cancer and their families cope with and manage the disease, but trying to sift through and organize this information is overwhelming. Could you provide a concise list of resources on the topic of “coping with cancer” that nurses could hand out to patients who are seeking information on this topic or use as a guide when choosing books or pamphlets to add to a patient library?

ANSWER: Once a person receives a diagnosis of cancer, that person joins the ranks of cancer survivors and families on a journey of coping with cancer. In 2002, an estimated 1,284,900 new cases of cancer will be diagnosed in the United States (Jemal, Thomas, Murray, & Thun, 2002). This means that this year, over a million families in this country alone are faced with the task of coping with cancer. The term “family” in this context applies to more than just the immediate relatives of a cancer survivor; it includes many other people that share important relationships with the cancer survivor (Boyle, 2002).

The journey of coping with cancer involves a wide range of experiences and emotions that will be different for each individual. A diagnosis of cancer involves multiple stressors, and cancer survivors need to develop new skills to deal with these stressors (Barsevick, Much, & Sweeney, 2000). Just as different phases comprise the journey of a cancer survivor, different phases of coping require different resources (Nail, 2001). Many resources are available to help cancer survivors on their journey, and the task of sorting through them can be overwhelming. Figure 1 is a “tour guide” for the journey; the resources described are about coping and apply to any type of cancer at any stage in the journey of a cancer survivor.

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References

Books

• The Human Side of Cancer (Jimmie Holland, MD; Harper Collins, 1994; Hardback, 331 pages; $25)
This book is devoted to the emotional, spiritual, and psychological issues that accompany a diagnosis of cancer. Holland offers expertise as a psychiatrist and approaches this topic from a personal standpoint as she shares the stories of many patients with cancer with whom she has worked. She emphasizes that each person has a different coping style and provides insight into helping patients find their own coping style. Holland provides a balanced review of complementary and alternative therapies. Hypnosis, meditation, and art therapy are a few of the complementary therapies addressed in the book. She writes about facing the issues of grief and loss, advanced disease, and searching for the meaning of life and death. She also discusses how to make the most of the patient-physician relationship.

• Chicken Soup for the Surviving Soul (Jack Canfield, Mark Victor Hansen, Patty Aubrey, Nancy Mitchell, RN, and Beverly Kirkhart; Health Communications, Inc., 1996; Paperback, 360 pages; $12.95)
This book is a collection of stories about people who have faced a cancer diagnosis and found ways to cope. The people are real, and their stories provide hope to patients with cancer. The stories are both funny and serious and attempt to reassure patients with cancer that they are not alone in the struggles that they face. Each chapter represents one of seven themes: hope, faith, love, support, attitude, insight and lessons, and courage and determination.

• Can I Still Kiss You? Answering Your Children’s Questions About Cancer (Neil Russell; Health Communications, Inc., 2001; Paperback, 125 pages; $8.95)
This book is an essential resource for any parent diagnosed with cancer. Written by a father diagnosed with cancer when his sons were 11 and 13, it is a candid account of his struggle to discuss his diagnosis with his children. It contains questions children have about cancer and helpful ways parents can attempt to answer those questions. It is a short, easy read and designed for parents and children to read together to open communication lines about cancer and the impact it has on a family.

• Surviving Cancer Emotionally: Learning How to Heal (Robert Granet, MD; John Wiley and Sons, Inc., 2001; Paperback, 226 pages; $15.95)
This book has a wealth of information on the emotional effects of cancer, as well as insights on coping with cancer. It is broken down into three basic sections: cancer and feelings, the emotional course of cancer, and emotional disorders associated with cancer. It also contains practical medical information on cancer treatment. It is an “emotional survival guide” for any patient with cancer to have on hand.

• Kitchen Table Wisdom: Stories That Heal (Rachel Naomi Remen, MD; Riverhead Books, 1996; Paperback, 333 pages; $12.95)
Remen writes that she believes in the power of stories and the healing that can come by sharing them with others. In this book, she shares others’ stories as well as many of her own. She discusses how doctors can receive healing from their patients and the power a person has to affect another simply through the sharing of stories. Her writing is warm and personal, as if readers have been invited to her kitchen table for tea. This is a book to be enjoyed in small pieces, story by story.

• Surviving Cancer (Margie Levine; Broadway Books, 2001; Paperback, 234 pages; $12.95)
This book reflects Levine’s personal story of how she survived an aggressive cancer. She explains her “prescription” for survival, a combination of traditional and complementary therapies that helped her beat her cancer. She writes of 31 things that she believes helped her survive, and each one is described in a short chapter. These items include music, nature, humor, forgiveness, journaling, support groups, acupuncture, meditation, self-empowerment, energy healing, visualization, therapeutic massage, spiritual connection, and choosing an advocate.

• The Courage to Laugh (Allen Klein; Tarcher/Putnam, 1998; Paperback, 215 pages; $14.95)
This book is unique in that it focuses on how humor can help people cope with loss and illness. A poignant and detailed discussion explains how humor can bring healing and encouragement in the midst

Figure 1. Cancer Resources

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of crises, such as being hospitalized, dealing with cancer or AIDS, and facing death. Erma Bombeck, Gilda Radner, and many others who have experienced cancer are quoted, and the book lists some profound statements from children with cancer. This book is an easy read and is meant to bring smiles and perhaps even a good laugh to its readers.

- **When the Worst That Can Happen Already Has** (Dennis Wholey; Berkley Books, 1992; Paperback, 362 pages; $9.95)
The short stories and essays in this book are written by people who have experienced different types of crises, such as a serious illness or the loss of a loved one. It is broken up into several different themes, including faith, hope, love, loss, change, strength, wisdom, purpose, support, survival, attitude, and suffering. It is a similar format to the “Chicken Soup” series and, overall, an encouraging read.

- **Beyond Miracles: Living With Cancer** (Stephen Hersh, MD; Contempoary Books, 1998; Paperback, 327 pages; $15.95)
This book contains practical and inspirational advice for cancer survivors, no matter where they are in the course of their disease or treatment. The author is a psychiatrist who provides insight into the emotional and psychological needs of cancer survivors. He focuses on the importance of patients taking an active role in their treatment. He offers advice on taking control of pain, increasing healing skills, choosing and working with a physician, and surviving clinic and hospital visits. He also discusses nontraditional treatments, work, hope, living with uncertainty, terminal illness and dying, and the role of family and friends in living with cancer.

**Pamphlets**
The American Cancer Society provides several cancer information pamphlets and booklets free of charge to people with cancer and their families and friends. They can be obtained by calling the American Cancer Society at 800-227-2345 or visiting its Web site at www.cancer.org.

- **After Diagnosis**: This pamphlet provides brief, general answers to common questions that arise at the time of a new cancer diagnosis.

- **Communicating With Friends and Relatives About You**: This pamphlet offers suggestions on how to tell others about a cancer diagnosis, as well as how to respond to their questions.

- **Listen With Your Heart**: This is a pamphlet for family members and friends of people with cancer. It is short, but it contains some helpful tips for communicating with those with cancer.

- **A Message of Hope: Coping With Cancer in Everyday Life**: This is a longer pamphlet (22 pages) that discusses the topics of emotional effects of a cancer diagnosis, making informed decisions, talking with others, adjusting to physical changes, and sexuality. It also has a section for family members and friends dealing with the emotional issues they are facing. It lists resources for support and tips for moving on and finding hope after treatment for cancer.

- **Sexuality and Cancer** (two separate booklets for men and women): These booklets provide a candid discussion of sexuality issues faced by many patients with cancer. Explanations on how surgical procedures and other cancer treatments may alter sexual activity are provided, and practical suggestions for coping with these adjustments are described. Each booklet also discusses anxiety, self-esteem, and communication as they relate to sexuality and physical changes that may occur as a result of cancer or cancer treatment. The booklets are about 70 pages long and divided into chapters. They also contain lists of other resources addressing specific aspects of sexuality.

The National Cancer Institute also provides information on coping with cancer. This information can be obtained free of charge by calling the National Cancer Institute at 800-4CANCER or visiting its Web site at www.cancer.gov.

- **How to Find Resources in Your Own Community If You Have Cancer**: This short fact sheet gives a brief description of some of the local resources that may be available to patients with cancer, such as counseling, home health care, hospice, rehabilitation, financial assistance, and housing. It also details how to find more information about these resources, how to access them, and what questions to ask to get the most from these resources.

- **Taking Time**: This 60-page pamphlet offers suggestions on how to cope with the emotional stress of receiving a cancer diagnosis. It is divided into 10 sections, including discussions of issues such as the emotions that often accompany a cancer diagnosis, sharing thoughts and feelings, regaining control, sources of support, the effects of cancer on the family, dealing with a new self-image, and living each day.

- **Facing Forward**: This 43-page booklet focuses on issues patients face after they complete their treatment and includes personal stories written by cancer survivors. It discusses continuing to care for your health, taking care of your feelings, managing insurance issues, and earning a living.

**Internet Sites**

- **American Cancer Society**: [www.cancer.org](http://www.cancer.org)
Here users will find a wide variety of information on coping with cancer. The Web site contains inspirational stories of cancer survivors and helpful hints for coping with cancer treatment, as well as information on how to deal with physical and emotional changes related to cancer treatment. Users can access the Web-based version of the Cancer Survivors Network, as well as many other support programs sponsored by the American Cancer Society.

- **National Coalition for Cancer Survivorship**: [www.cansearch.org](http://www.cansearch.org)
This Web site provides users with access to educational programs on cancer survivorship dealing with issues such as empowerment, communication, and the employment rights of a cancer survivor. It also provides a step-by-step guide to finding quality cancer resources online, a list of cancer resources and Web sites organized by different types of cancers, and general cancer and treatment-related issues.

**Other Resources**

- **The Cancer Survivor’s Toolbox**: This set of six audiotapes is available free of charge by calling 877-866-5748 or visiting [www.cansearch.org/programs/toolbox.htm](http://www.cansearch.org/programs/toolbox.htm). The audiotapes contain nine programs, each about a different aspect of coping with cancer: solving problems, negotiating, communicating, making decisions, finding information, standing up for your rights, topics for older people, finding ways to pay for care, and caring for the caregiver. The toolbox also includes a booklet that summarizes each program and has a list of suggested reading materials and other resources. These tapes are a good resource for people who learn well by listening. The accompanying booklet can help to determine which programs will be most helpful at a given time.

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**Figure 1. Cancer Resources (Continued)**

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Do you have a clinical practice question or clinical dilemma that you need help solving? Would you like to comment on the questions and responses published in this issue? Send your questions and comments to Clinical Q&A, to the attention of Associate Editor Barbara Holmes Gobel, RN, MS, AOCN® (phone 708-681-7351 or e-mail gobelbh@aol.com).