

## Inflammatory Breast Cancer: Questions and Answers

### Key Points

- Inflammatory breast cancer (IBC) is a rare but very aggressive type of breast cancer (see Question 1).
- IBC usually grows rapidly and often spreads to other parts of the body; symptoms include redness, swelling, and warmth in the breast (see Questions 2 and 3).
- Treatment for IBC usually starts with chemotherapy, which is generally followed by surgery, radiation, targeted therapy, and/or hormone therapy (see Question 4).
- People with IBC are encouraged to enroll in clinical trials (research studies with people) that explore new treatments (see Question 5).

### 1. What is inflammatory breast cancer (IBC)?

Inflammatory breast cancer is a rare but very aggressive type of breast cancer in which the cancer cells block the lymph vessels in the skin of the breast. This type of breast cancer is called “inflammatory” because the breast often looks swollen and red, or “inflamed.” IBC accounts for 1 to 5 percent of all breast cancer cases in the United States (1). It tends to be diagnosed in younger women compared to non-IBC breast cancer. It occurs more frequently and at a younger age in African Americans than in Whites. Like other types of breast cancer, IBC can occur in men, but usually at an older age than in women. Some studies have shown an association between family history of breast cancer and IBC, but more studies are needed to draw firm conclusions (2).

### 2. What are the symptoms of IBC?

Symptoms of IBC may include redness, swelling, and warmth in the breast, often without a distinct lump in the breast. The redness and warmth are caused by cancer cells blocking the lymph vessels in the skin. The skin of the breast may also appear pink, reddish purple, or bruised. The skin may also have ridges or appear pitted, like the skin of an orange (called *peau d'orange*), which is caused by a buildup of fluid and edema (swelling) in the breast. Other symptoms include heaviness, burning, aching, increase in breast size, tenderness, or a nipple that is inverted (facing inward) (3). These symptoms usually develop quickly—over a period of weeks or months. Swollen lymph nodes may also be present under the arm, above the collarbone, or in both places. However, it is important to note that these symptoms may also be signs of other conditions such as infection, injury, or other types of cancer (1).

### 3. How is IBC diagnosed?

Diagnosis of IBC is based primarily on the results of a doctor’s clinical examination (1). Biopsy, mammogram, and breast ultrasound are used to confirm the diagnosis. IBC is classified as either stage IIIB or stage IV breast cancer (2). Stage IIIB breast cancers are locally advanced; stage IV breast cancer is cancer that has spread to other organs. IBC tends to grow rapidly, and the physical appearance of the breast of patients with IBC is different from that of patients with other stage III breast cancers. IBC is an especially aggressive, locally advanced breast cancer.

Cancer staging describes the extent or severity of an individual’s cancer. (More information on staging is available in the National Cancer Institute (NCI) fact sheet *Staging: Questions and Answers*



N U 5 5

at <http://www.cancer.gov/cancertopics/factsheet/Detection/staging> on the Internet.) Knowing a cancer's stage helps the doctor develop a treatment plan and estimate prognosis (the likely outcome or course of the disease; the chance of recovery or recurrence).

#### **4. How is IBC treated?**

Treatment consisting of chemotherapy, targeted therapy, surgery, radiation therapy, and hormonal therapy is used to treat IBC. Patients may also receive supportive care to help manage the side effects of the cancer and its treatment. Chemotherapy (anticancer drugs) is generally the first treatment for patients with IBC, and is called neoadjuvant therapy. Chemotherapy is systemic treatment, which means that it affects cells throughout the body. The purpose of chemotherapy is to control or kill cancer cells, including those that may have spread to other parts of the body.

After chemotherapy, patients with IBC may undergo surgery and radiation therapy to the chest wall. Both radiation and surgery are local treatments that affect only cells in the tumor and the immediately surrounding area. The purpose of surgery is to remove the tumor from the body, while the purpose of radiation therapy is to destroy remaining cancer cells. Surgery to remove the breast (or as much of the breast tissue as possible) is called a mastectomy. Lymph node dissection (removal of the lymph nodes in the underarm area for examination under a microscope) is also done during this surgery.

After initial systemic and local treatment, patients with IBC may receive additional systemic treatments to reduce the risk of recurrence (cancer coming back). Such treatments may include additional chemotherapy, hormonal therapy (treatment that interferes with the effects of the female hormone estrogen, which can promote the growth of breast cancer cells), targeted therapy (such as trastuzumab, also known as Herceptin®), or all three. Trastuzumab is administered to patients whose tumors overexpress the HER-2 tumor protein. More information about Herceptin and the HER-2 protein is available in the NCI fact sheet *Herceptin® (Trastuzumab): Questions and Answers*, which can be found at <http://www.cancer.gov/cancertopics/factsheet/therapy/herceptin> on the Internet.

Supportive care is treatment given to improve the quality of life of patients who have a serious or life-threatening disease, such as cancer. It prevents or treats as early as possible the symptoms of the disease, side effects caused by treatment of the disease, and psychological, social, and spiritual problems related to the disease or its treatment. For example, compression garments may be used to treat lymphedema (swelling caused by excess fluid buildup) resulting from radiation therapy or the removal of lymph nodes. Additionally, meeting with a social worker, counselor, or member of the clergy can be helpful to those who want to talk about their feelings or discuss their concerns. A social worker can often suggest resources for help with recovery, emotional support, financial aid, transportation, or home care.

#### **5. Are clinical trials (research studies with people) available? Where can people get more information about clinical trials?**

Yes. The NCI is sponsoring clinical trials that are designed to find new treatments and better ways to use current treatments. Before any new treatment can be recommended for general use, doctors conduct clinical trials to find out whether the treatment is safe for patients and effective against the disease. Participation in clinical trials is a treatment option for many patients with IBC, and all patients with IBC are encouraged to consider treatment in a clinical trial.

People interested in taking part in a clinical trial should talk with their doctor. Information about clinical trials is available from the NCI's Cancer Information Service (CIS) (see below) at 1-800-4-CANCER and in the NCI booklet *Taking Part in Cancer Treatment Research Studies*, which is available at <http://www.cancer.gov/publications> on the Internet. This booklet describes how research studies are carried out and explains their possible benefits and risks. Further information about clinical trials is available at <http://www.cancer.gov/clinicaltrials> on the NCI's Web site. The Web site offers detailed information about specific ongoing studies by linking to PDQ®, the NCI's comprehensive cancer information database. The CIS also provides information from PDQ.

#### **6. What is the prognosis for patients with IBC?**

Prognosis describes the likely course and outcome of a disease—that is, the chance that a patient will recover or have a recurrence. IBC is more likely to have metastasized (spread to other areas of the body) at the time of diagnosis than non-IBC cases (3). As a result, the 5-year survival rate for patients with IBC is between 25

and 50 percent, which is significantly lower than the survival rate for patients with non-IBC breast cancer. It is important to keep in mind, however, that these statistics are averages based on large numbers of patients. Statistics cannot be used to predict what will happen to a particular patient because each person's situation is unique. Patients are encouraged to talk to their doctors about their prognosis given their particular situation.

## 7. Where can a person find more information about breast cancer and its treatment?

To learn more about IBC, other types of breast cancer, and breast health in general, please refer to the following resources:

- NCI's Breast Cancer Home Page (<http://www.cancer.gov/breast/>)
- *Breast Cancer (PDQ®): Treatment* (<http://www.cancer.gov/cancertopics/pdq/treatment/breast/patient/>)
- *Understanding Breast Changes: A Health Guide for All Women* (<http://www.cancer.gov/cancertopics/understanding-breast-changes>)
- *What You Need To Know About™ Breast Cancer* (<http://www.cancer.gov/cancertopics/wyntk/breast>)

## Selected References

1. Merajver SD, Sabel MS. Inflammatory breast cancer. In: Harris JR, Lippman ME, Morrow M, Osborne CK, editors. *Diseases of the Breast*. 3<sup>rd</sup> ed. Philadelphia: Lippincott Williams and Wilkins, 2004.
2. Anderson W, Schairer C, Chen B, Hance K, Levine P. Epidemiology of inflammatory breast cancer (IBC). *Breast Disease* 2005; 22: 9–23.
3. Chittoor SR, Swain SM. Locally advanced breast cancer: Role of medical oncology. In: Bland KI, Copeland EM, editors. *The Breast: Comprehensive Management of Benign and Malignant Diseases*. Vol. 2. 2<sup>nd</sup> ed. Philadelphia: W.B. Saunders Company, 1998.

# # #

## Related NCI materials and Web pages:

- National Cancer Institute Fact Sheet 2.1, *Cancer Information Sources* (<http://www.cancer.gov/cancertopics/factsheet/Information/sources>)
- National Cancer Institute Fact Sheet 5.32, *Staging: Questions and Answers* (<http://www.cancer.gov/cancertopics/factsheet/Detection/staging>)
- National Cancer Institute Fact Sheet 7.1, *Radiation Therapy for Cancer: Questions and Answers* (<http://www.cancer.gov/cancertopics/factsheet/Therapy/radiation>)
- National Cancer Institute Fact Sheet 7.2, *Biological Therapies for Cancer: Questions and Answers* (<http://www.cancer.gov/cancertopics/factsheet/Therapy/biological>)
- National Cancer Institute Fact Sheet 7.45, *Herceptin® (Trastuzumab): Questions and Answers* (<http://www.cancer.gov/cancertopics/factsheet/therapy/herceptin>)
- *Chemotherapy and You: Support for People With Cancer* (<http://www.cancer.gov/cancertopics/chemotherapy-and-you>)
- *Taking Part in Cancer Treatment Research Studies* (<http://www.cancer.gov/clinicaltrials/Taking-Part-in-Cancer-Treatment-Research-Studies>)

## How can we help?

We offer comprehensive research-based information for patients and their families, health professionals, cancer researchers, advocates, and the public.

- **Call** NCI's Cancer Information Service at 1–800–4–CANCER (1–800–422–6237)
- **Visit** us at <http://www.cancer.gov> or <http://www.cancer.gov/espanol>
- **Chat** using LiveHelp, NCI's instant messaging service, at <http://www.cancer.gov/livehelp>
- **E-mail** us at [cancergovstaff@mail.nih.gov](mailto:cancergovstaff@mail.nih.gov)

- **Order** publications at <http://www.cancer.gov/publications> or by calling 1-800-4-CANCER
- **Get help** with quitting smoking at 1-877-44U-QUIT (1-877-448-7848)

**This fact sheet was reviewed on 8/29/06**