Tumor Cell Dissemination Secondary to Surgical Interventions in the Breast

Stacy McClelland, RN, MSN, BSN, and Patricia Weiss, RN, MSN, OCN®, CCRP

Dissemination secondary to surgical interventions is an issue that arises in conversations between patients and providers prior to breast biopsy. Research supports needle biopsies over incisional or excisional biopsies in most situations. Tumor cell dissemination is a rare occurrence. However, the fear of dissemination as experienced by the patient is very real. That fear may influence the patient's decision to proceed with a recommended biopsy.

The proper diagnosis and treatment of cancer requires a tissue sample obtained either through a biopsy or a surgical intervention. Microscopic evaluation via histologic analysis guides treatment, particularly in the initial presentation of the disease. Some of the factors influencing biopsy type are risk to the patient, patient willingness to consent to a procedure, or the ability to obtain a sufficient sample because of tumor size or location. Types of biopsies that may be used in diagnosing breast cancer can include fine-needle aspiration biopsy, core-needle biopsy, excisional biopsy, or incisional biopsy (Vogel, 2011). American Cancer Society and National Comprehensive Cancer Network (NCCN) (2007) guidelines for breast biopsy indicate a needle biopsy as the preferred method of tissue sampling for most cases.

Implications for Practice

Current guidelines for most breast cancers involve excision of remaining tumor followed by radiation in some scenarios; in addition, radiation after excision is recommended if the tumor is 5 cm or larger, the margins were either close or positive, or with positive nodal involvement (NCCN, 2012). Many of the studies reviewed noted that when seeding occurred after biopsy, it was mostly in patients who had not received breast radiation. If a core breast biopsy and excisional breast biopsy can yield the same results, and the core biopsy does not pose significant risk of tumor cell dissemination, a core biopsy may be a better overall choice compared to an excisional biopsy. Patients may fear seeding of their tumor post-biopsy; however, biopsy has not been clearly shown to spread breast cancer. Tumor cells found in lymphatic...