I work in an outpatient chiropractic and physical therapy center. My question is: Is it safe to treat a patient with physical therapy modalities (i.e. US, E-stem, etc.) if they had or have any type of cancer? (Note: these modalities are a variety of treatment tools used by therapists to decrease pain, inflammation and treat muscle strains.)

Lora Packel MS, PT, Coordinator of Cancer Therapy Services for the Hospital of the University of Pennsylvania, responds:

The use of modalities in people with cancer is controversial. There is limited evidence surrounding this clinical question. Specifically, there is limited evidence surrounding the use of modalities at a site distant from the primary cancer, and in cancer survivors in general. When applying modalities, the therapist or chiropractor should communicate with the primary oncologist. In addition, they should consider the following precautions.

1. Skin integrity
   If the skin has been recently irradiated, it is usually fragile, red, and prone to breakdown. In this case, modalities should be avoided over the radiated area. If the area has been radiated in the past and exhibits some fascial tightness, you can consider using heat while watching the skin reaction closely.

2. Sensation
   Radiated skin, or an area of decreased sensation due to the cancer or its treatments, is prone to burns from either cold or hot modalities. One must consider the ability to sense temperature and pain before applying a modality.

3. Ultrasound
   In a study on rats, ultrasound performed directly over the tumor site did cause the tumor to increase in size. Therefore, ultrasound directly over the tumor site is contraindicated. Ultrasound at a distant location from the cancer site may be appropriate. Again, there is limited evidence to support or refute its effectiveness and safety. Ultrasound should NEVER be used over breast implants.

4. Lymphedema
   Heat modalities cause engorgement of the blood vessels, which helps with healing. However, one should consider the ability of the body to drain the area if there are damaged lymphatics. Heat, in a person with - or at risk for lymphedema, is a relative contraindication.