Hot Flashes

Hot flashes are a very distressing effect of hormonal therapy and chemotherapy for a variety of cancers, most notably of the breast and prostate. This symptom affects quality of life, including discomfort, changes in mood, and interference in activities of daily living, such as work and sleep. Almost all of the research on cancer-associated hot flashes has been done with breast cancer patients and survivors. The incidence of hot flashes in women with breast cancer is very high—about two-thirds, with half of those reporting moderate to severe symptoms. The symptom may persist for months to years. The pathophysiology is unclear, but appears to be related to estrogen-mediated changes in the thermoregulatory center in the hypothalamus. The neurotransmitters serotonin and norepinephrine are involved in this mechanism.

Assessment

A “hot flash” is characterized by a sudden and progressive feeling of unpleasant warmth, especially in the face and chest; flushing and diaphoresis; and is often accompanied by emotional and behavioral reactions. Assessing the impact of hot flashes on a patient helps to direct treatment. A “hot flash score” has been developed by the North Central Cancer Treatment Group: number of hot flashes per day X severity (1 = mild; 4 = very severe). Higher score and greater impact—such as interference with work or sleep—requires trials of pharmacologic therapies. Milder symptoms may be ameliorated with environmental adjustments and cognitive-behavioral interventions. As with pain assessment, the score alone is insufficient.

The degree of distress experienced by the patient, as well as the effect on activities and relationships, is crucial information for assessment and evaluating interventions.

Management

The goal of therapy is to reduce the frequency and severity of hot flashes. Adjustments to lifestyle and behavior may be sufficient to alleviate mild to moderate hot flashes. These include avoiding precipitating factors such as caffeine, alcohol and spicy food; wearing loose clothing and using a fan or open window to reduce core body temperature; and managing stress.

Adding one, or sometimes two, pharmacologic agents is often necessary for moderate to severe symptoms. Clinical trial data suggest a high response rate in the placebo arms, so results of nonplacebo-controlled trials should be viewed with caution. Estrogens and progestins are effective for the identical symptoms in perimenopausal women, but are relatively contraindicated in hormone-sensitive cancers.

Non-hormonal interventions superior to placebo include the antidepressants venlafaxine, paroxetine, fluoxetine, and sertraline, and the anticonvulsant gabapentin. The agent with the most supporting data is venlafaxine, a serotonin norepinephrine reuptake inhibitor (SNRI). The selective serotonin reuptake inhibitors are also inhibitors of CYP2D6, so concurrent medications that use this metabolic pathway must be considered. Paroxetine is contraindicated in patients taking tamoxifen, because it interferes with tamoxifen metabolism; it is unclear what effect the other SSRI’s have on tamoxifen. Gabapentin,
alone and in combination with venlafaxine, significantly reduced the incidence of hot flashes vs placebo. Clonidine, a centrally acting alpha-adrenergic agonist, may be a less expensive alternative, but is generally not as well tolerated.

The evidence for any other interventions is weak or equivocal, but further study appears warranted for adjunct treatments such as acupuncture and mind-body interventions. Women who have undergone lymph node dissection should avoid acupuncture needles in the affected limb. Unfortunately, black cohosh, phytoestrogens, and Vitamin E have thus far not lived up to their original promise, and may be associated with their own risks.

**Conclusion**

Current evidence suggests that hot flashes is an under-appreciated short and long-term effect of certain cancers and their treatments. Most research has been done with breast cancer patients and is lacking in prostate cancer patients. SNRI's, SSRI's and gabapentin appear to be the best first line choices when more conservative measures are ineffective, but treatments should be individualized and closely monitored.

For reference list for hot flashes: [tquinn1@partners.org](mailto:tquinn1@partners.org).

**New Mucositis Guidelines**


**Distress and Suffering**

- NCCN Clinical Practice Guidelines: [Distress Management.](http://www.nccn.org)

**Palliative Care Calendar & CE**

**Yale**

- May 21, 12:30 – 1:30 Schwartz Rounds: Fitting the Treatment to the Patient and Not the Disease. CH-201.
- May 22 – 23 1st Annual Yale Cancer Survivorship Clinical Symposium, Anlyan Center.

**Connecticut**

The Connecticut Coalition of End-of-Life Nurse Educators has scheduled four offerings for 2007 based on the End-of-Life Nursing Education Consortium (ELNEC) curriculum. Open to all clinicians; CNE’s available. Contact: Pat Trotta, (203)379-4763; patricia.trotta@cancer.org.

- May 19, 8:30am – 12:30pm. Care at End of Life. Waterbury Hospital.
- Sep 15, 8:30am – 12:30pm. Pain & Symptom Management. Hartford Hospital
- November 10. Cultural and Ethical Issues at End of Life. UConn Medical Center, Farmington.

**Elsewhere**

- Jun 21 – 24. New York City. *7th International Conference on Pain & Chemical Dependency*
- Oct 12-14. Cambridge, MA. *Practical Aspects of Palliative Medicine: Integrating Palliative Care into Clinical Practice*

**Online Continuing Education**

- *Late effects of cancer treatment and survivorship: Strategies for primary care and oncology care providers. [CME] CE Medicus.*