

## RESEARCH HIGHLIGHTS

Cynthia R. King, PhD, RN  
Associate Editor

### Radiofrequency Ablation May Provide Relief for Patients With Pain From Bone Metastases

The presence of bone metastases is the most common cause of cancer pain. The spread of a tumor to the bone can occur with any cancer, the most common being breast, lung, prostate, and thyroid cancer and multiple myeloma. Despite recent advances, a significant number of these patients do not receive adequate pain relief. Radiofrequency ablation (RFA) is the local application of thermal energy to a specific metastatic lesion. RFA has been used most often for primary and metastatic liver tumors. A recent multicenter study involving 43 patients with painful bone metastases showed that RFA may be a promising method of pain relief in patients who have not been helped by conventional means. The study methodology was prospective, with patients serving as their own controls. Prior to receiving RFA, the mean score for worst pain in this group of patients was 7.9 (on the Brief Pain Inventory–Short Form). Patients were evaluated weekly for the first month and every two weeks for the second month. Four weeks following treatment, the mean score for the worst pain decreased to 4.5, with continued decreases at subsequent assessments. A two-unit drop was considered clinically significant and was experienced by 95% of the patients studied. The requirement for opioid analgesia also decreased over the study period. The investigator concluded that RFA provided a significant reduction in pain scores and an improvement in overall quality of life in the patients studied.

Goetz, M.P., Callstrom, M.R., Charboneau, J.W., Farrell, M.A., Maus, T.P., Welch, T.J., et al. (2004). Percutaneous image-guided radiofrequency ablation of painful metastases involving bone: A multicenter study. *Journal of Clinical Oncology*, 22, 300–306.

### Acetaminophen Improves Pain and Well-Being in Patients Already Receiving a Strong Opioid Regimen

Approximately 75% of people with advanced cancer suffer from significant pain. Many people with cancer have persistent pain despite the use of strong opioids, which is the standard for treatment in developed countries. Often the doses of opioids used are not adequate to completely control a person's pain because of the desire to decrease troublesome side effects. In the United Kingdom and Australia, acetaminophen frequently is used

with strong opioids to augment analgesia. In the United States and Canada, acetaminophen often is used with weak opioids but not with strong opioids. Acetaminophen usually is grouped with nonsteroidal anti-inflammatory drugs as a coanalgesic, but it does not share the common side effects. It is safe and well tolerated in conventional doses; its only major side effect is liver toxicity, which is rare, even in patients with chronic hepatic disease. Investigators from Australia designed a study to determine whether the addition of acetaminophen could help decrease pain levels and improve feelings of well-being in people with advanced cancer despite current treatment with strong opioids. The target population was ambulatory patients with advanced cancer who continued to have pain even with a stable opioid regimen. The participants were recruited from two major cancer referral centers in Toronto, Canada, and Sydney, Australia. The design of the study was a double-blind, placebo-controlled, two-period crossover trial. All patients received acetaminophen (1 g every four hours five times per day) for a 48-hour period and an identical-appearing placebo using the same schedule for a second 48-hour time frame. The order that the study medications were given was assigned by the study pharmacist using a computer-generated list. Pain measurement was the primary outcome and was assessed by a verbal numeric scale ranging from 0 (no pain at all) to 10 (worst pain imaginable) and 10-cm visual analog scale with similar anchors. Patient preferences, incidence of breakthrough pain, well-being, and adverse effects were the secondary outcomes. More patients preferred acetaminophen ( $n = 14$ ) over placebo ( $n = 8$ ), but many had no preference ( $n = 8$ ). The average pain and overall well-being scores were better on the days the participants took acetaminophen. The investigators concluded that acetaminophen did improve pain and overall well-being in patients already on a regimen of strong opioids. The improvements were small but clinically important. The addition of acetaminophen in patients on strong opioids is worth considering because of the potential for increased analgesia and well-being without increases in side effects.

Stockler, M., Vardy, J., Pillai, A., & Warr, D. (2004). Acetaminophen (paracetamol) improves pain and well being in people with advanced cancer already receiving a strong opioid regimen: A randomized, double-blind, placebo-controlled cross-over trial. *Journal of Clinical Oncology*, 22, 3389–3393.

### New System Assesses the Quality of Cancer Care

During the past decade, research on the quality of cancer care has demonstrated that increases in the knowledge of treatments with proven efficacy do not translate directly to the optimal delivery of such treatments to patients. In a 1999 report, the Institute of Medicine concluded that many patients with cancer did not receive state-of-the-art care and recommended the creation of a quality monitoring system capable of regularly reporting on the quality of care for patients with cancer. The American Society of Clinical Oncology (ASCO) has developed a prototype for a national system that could monitor the quality of cancer care: the National Initiative on Cancer Care Quality (NICCCQ). NICCCQ was initiated in 2000 with the goals of developing potential measures of the quality of cancer care for two common cancers, breast and colorectal, ascertaining current practice for those two diseases, and designing and implementing the first phase of a prototype quality monitoring system. Using ASCO's National Cancer Database (a national registry of incident cancer cases) and its network of participating hospital cancer registries, the NICCCQ project identified and solicited the participation of approximately 5,000 patients diagnosed with breast or colorectal cancer during 1998 in one of five major metropolitan areas of the United States. When completed, the project is expected to produce a detailed profile of the quality of care for breast and colorectal cancer in the five selected metropolitan areas. The following ASCO recommendations are based on lessons learned from the prototype NICCCQ project implementation.

- The goal of a national quality monitoring system should be to measure and report on the quality of cancer care as accurately as possible for the lowest achievable cost.
- A National Quality Monitoring System should have four key features.
  - A carefully designed sampling protocol to ensure that sampled patients are representative of the population of patients with the same cancer diagnosis
  - Procedures of protecting the privacy and confidentiality of personal information
  - Inclusion of rigorously developed measures of the quality of cancer care that are validated and updated regularly
  - A comprehensive and ongoing data collection protocol that relies on at least

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