Ann Surg Oncol (2014) 21:4049–4050
DOI 10.1245/s10434-014-4010-1

Annals of
SURGICAL ONCOLOGY
OFFICIAL JOURNAL OF THE SOCIETY OF SURGICAL ONCOLOGY

EDITORIAL – BONE AND SOFT TISSUE SARCOMAS

A Promise to Our Patients with Metastatic Bone Disease

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In the United States alone, the prevalence of cancer is approximately 5 million cases per year. There will be greater than 1.2 million new cases of cancer diagnosed this year, the majority of these patients will be older than age 40 years. Approximately half of these newly diagnosed cases will involve the skeleton. Accordingly, metastatic bone disease (MBD) is a major source of morbidity and mortality for patients afflicted with advanced cancers of the breast, prostate, lung, kidney, thyroid, as well as myeloma and other cancers. As of 2007, the cost to U.S. society was approximately $12.6 billion and made up almost 20 % of societal cancer costs as estimated by the National Institutes of Health.[1] These numbers are continuing to wax as the population ages and are not restricted to the United States. MBD is a major global health care issue. While progress has been made in the medical management of MBD and patients are living longer with their cancers more than ever before, the challenges to optimize quality of life in these patients has never proven more prevalent. Specifically bisphosphonates and denosumab have improved the quality of life for many patients with MBD, yet surgical management remains a cornerstone of skeletal stabilization and local disease control.[2,3] How beneficial is the role of surgery? We as surgeons believe it is important; but just how important is it given the potential inflicted morbidity of an invasive procedure in a patient with a limited life span? We need to better understand the quality of our interventions.

Quality—it's the new incantation for the provisioning of health care. Surgery in most arenas has been about delivering the best care possible in the setting of expert experience and high clinical volumes. Quality is defined as value/cost. Various instruments have been put forth to determine value including patient satisfaction and reported outcomes. Yet in surgery inconsistency is common, and a sedulous sense of urgency must be established to stay ahead of the curve in the rapidly evolving delivery of health care in North America and the world.[4]

In this month's issue, Wood et al.,[5] in their paper entitled "*Surgical Management of Bone Metastases: Quality of Evidence and Systematic Review,*" attempt to address the question of just how well we are doing to help our MBD patients by employing a very stringent literature review. While patients afflicted with MBD may have limited life expectancies, we must still strive to optimize patient satisfaction and reported outcomes. Historically, knowing how well we do in relieving pain and restoring activities of daily living was our standard assessment in this arena. Even today, these remain sound metrics for the level of care we are delivering. While many excellent papers have looked at the role of surgery in MBD, Wood et al. honed in specifically on manuscripts that reported on pain and functional outcomes rather than perioperative complications and mortality. Using a validated scale (MINORS) for nonrandomized studies across eight domains, the answer appears to be that we are doing a reasonably good job, with pain relief reported in greater than 90 % of cases involving the humerus, femur, and pelvis. Maintained or improved function also was seen in approximately 90 % of the time. Understanding the inherent limits of the surgical literature, we must accept the subtly pernicious bias present in interpreting the outcomes for any given paper on this subject. Accordingly, as the authors' state, given the retrospective level of evidence, we must remain vigilant in our pursuit of better measurements of our anodynes and ability to restore function.

Moving forward, we must embrace better tools, in real time, to capture outcome data. While the use of patient reported outcomes is on the rise, system-wide application is

First Received: 30 July 2014;
Published Online: 26 August 2014

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not established.[6] Nonetheless, as patients with MBD are living longer and are more active than ever before, we must begin to incorporate instruments, such as the NIH's PROMIS® into our assessment armamentarium.[7,8] We owe it to our patients, and society, to make sure we are delivering what we promise, no matter what the life expectancy.

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