American Brachytherapy Society

The following statement has been reviewed and endorsed by the Officers and Board of the American Brachytherapy Society

At the San Antonio Breast Cancer Symposium a study was presented on December 7, 2011 ("Partial Breast Brachytherapy is Associated With Inferior Effectiveness and Increased Toxicity Compared to Whole Breast Irradiation in Older Patients") by physicians from the MD Anderson Cancer Center that compared the 5-year results of accelerated partial breast irradiation (APBI) brachytherapy to whole-breast irradiation (WBI) in patients undergoing breast-conserving therapy. In their analysis they observed a small but statistically significant increase in the rate of mastectomies in elderly patients treated with APBI-brachytherapy as compared to conventional WBI. It is noteworthy that the rate of mastectomy was quite low in both groups at 2.2% with WBI as compared to 4% with APBI-brachytherapy. The report was based upon a review of Medicare claims data and, as such, is subject to limits in interpretation due to its retrospective nature and the inherent selection bias that exists in any study of this design. From prior analyses, we know that Medicare claims data are severely limited when it comes to extracting critically important details such as the general medical condition of the patient, the extent of the tumor, and many other important prognostic factors. Further, it is very difficult to adequately ascertain critical details regarding other treatments that patients may have received such as the thoroughness of the initial breast tumor lumpectomy surgery, the full extent of systemic therapy received, and whether a subsequent mastectomy was due to a reason other than local recurrence.

In short, the analysis presented in San Antonio tells us very little in contrast to the results of many carefully performed studies of APBI accumulated over twenty years. As peer-reviewed published randomized clinical trials are the gold standard of scientific evidence to establish the safety and efficacy of medical interventions, it is important to emphasize that two such studies are available that have demonstrated equivalence of APBI in comparison to WBI for local control, complications, and cosmetic outcome. There is an on-going prospectively randomized Phase III trial sponsored by the National Cancer Institute (NSABP B-39/RTOG 0413) that directly compares conventional whole breast radiation therapy to accelerated partial breast irradiation (including that performed with brachytherapy). The results of this trial will directly and definitively tell us whether there is a difference between the two approaches.

It is the recommendation of the American Brachytherapy Society (ABS) that patients interested in APBI should, where possible, participate in the NSABP B-39/RTOG 0413 or other clinical trials. For those patients not interested or eligible for a clinical trial and wish to be considered for APBI, the ABS supports adhering to the established patient selection guidelines of our Society with consideration of similar published guidelines from the American Society of Breast Surgeons (ASBrS) and the American Society for Radiation Oncology (ASTRO).