

# BrachyBytes



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## The “PROMIS” of APBI Safety and Efficacy

One of the largest reports of outcomes in the history of partial breast irradiation therapy was published in the April issue of the *Annals of Surgical Oncology*. The study, entitled *Outcomes of Breast Cancer Patients Treated with Accelerated Partial Breast Irradiation Via Multicatheter Interstitial Brachytherapy: The Pooled Registry of Multicatheter Interstitial Sites (PROMIS) Experience*, was co-authored by Mitchell Kamrava, MD, Assistant Clinical Professor, Department of Radiation Oncology, University of California Los Angeles.



Mitchell Kamrava, MD

The two decade-long study found that women diagnosed with breast cancer and treated with a one-week regimen of radiation after lumpectomy saw no increase in cancer recurrence or cosmetic outcomes, compared to treatments where the whole breast is irradiated for up to six weeks after surgery.

The PROMIS study was recently featured in an article on *Medscape Daily News*, as well as a news segment on *CBS 2 News Los Angeles*.

Dr. Kamrava discusses the results of the PROMIS study, and also shares his thoughts on using accelerated partial breast irradiation (APBI) as an alternative to whole breast irradiation (WBI) for early stage breast cancer treatment.

### Can you tell us the premise of the PROMIS registry and its construct/design?

Interstitial tube and button is the oldest technique for doing accelerated partial breast irradiation (APBI). However, there is limited long-term follow-up using this method of treatment. The goal of this study was to combine the experience of 5 centers (Arizona Breast Cancer Specialists, University of Wisconsin, William Beaumont Hospital, Gamma West Cancer Services, and University of California Los Angeles) with interstitial APBI. Over 1,000 women treated from 1992-2013 were included in this study and analyzed for local recurrence, regional recurrence, distant metastasis, cause-specific

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survival, overall survival, new contralateral breast cancers, and factors associated with a local recurrence.

### In your estimation, what was the biggest finding in the PROMIS data?

With an average follow-up of 6.9 years, the 10-year actuarial risk of a local breast tumor recurrence was 7.6%. Physician-reported cosmesis was excellent/good in 84% of patients (98/116) with > 5 years of follow-up. This data is very much in line with the 10% local recurrence risk reported in the Early Breast Cancer Trialists’ Collaborative Group meta-analysis of over 6,000 women with node negative disease treated with whole breast radiation.

## Whole breast radiotherapy, the current standard of care, is now being delivered in 3 weeks. What is your opinion of this treatment?

It is great that long-term randomized data demonstrates equivalent oncologic and cosmetic outcomes with 3-4 week whole breast radiation regimens. While this is an important step forward, WBI still encompasses the whole breast and one of the premises of APBI is that the whole breast is not at risk. By focusing the treatment on the area at highest risk (i.e. the lumpectomy cavity plus a small margin) APBI allows the total treatment to be reduced to one week. Our long-term data demonstrates that this does not increase the risk of a local recurrence compared to what we would expect if the whole breast were treated, and doesn't compromise cosmetic outcomes.

A one-week treatment that provides similar oncologic and cosmetic outcomes to a more protracted treatment is a meaningful improvement in convenience for a woman. This means she can get back to her life with only a very short interruption to her normal routine.

## In light of this study and its contribution to the mounting APBI literature, what would you tell physicians who still believe more data is needed to support APBI as an alternative to WBI for early stage breast cancer treatment?

Changing the treatment paradigm of WBI that has been in place since the start of breast conservation therapy

certainly takes time. There are many strong opinions on this topic and certainly the fast accrual to NSABP B39 (randomized trial comparing whole breast to partial breast irradiation) of over 4,000 women reflects the interest of the radiation oncology community in reaching an answer regarding whether APBI can be offered as an alternative to WBI.

Having Level I evidence is still ultimately the gold standard in terms of changing practice, and I am excited that the results from the GEC-ESTRO randomized trial is anticipated to be released before the end of the year.

That having been said, our data contained many patients who would be considered either "cautionary" or "unsuitable" for APBI by the ASTRO consensus guidelines, yet we did not see an increase in the risk of local recurrence in our patients. This is consistent with data from other groups as well. The ASTRO consensus guidelines are likely too conservative in their selection criteria for "suitable" patients and need to be updated to reflect new data that's been published since the guidelines first came out.

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*Dr. Kamrava is a radiation oncologist in Los Angeles, California and is affiliated with multiple hospitals in the area, including Ronald Reagan University of California Los Angeles Medical Center, Santa Monica-UCLA Medical Center and Orthopaedic Hospital, and UCLA Jonsson Comprehensive Cancer Center.*



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