

AccuBoost® Booster Club

Notes from the Editor:

This issue reports on the latest AccuBoost developments: new installations, new staff, recent patient testimonials and a new initiative by the AccuBoost team to increase patient awareness about the lumpectomy option when pursuing breast conserving therapy. The Q&A is on applicability of AccuBoost for small breasts.

The highlight of this issue is the coverage of the APBI Brown University Oncology Group protocol study of AccuBoost. The study which was presented by Dr. Jaroslaw Hepel at the recent ABS Meeting is highly supportive of AccuBoost for monotherapy and is summarized in this issue.

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New AccuBoost Installation:

Southern Ohio Medical Center

Very Good things are happening here

SOMC is one of the latest sites to offer AccuBoost. This facility, roughly 2 hours away from the urban centers of Columbus and Dayton, takes pride in making the latest technology available to cancer patients in their own small community of Portsmouth, OH (population 21,000). Dr. Johnny Bernard is the radiation oncologist at this site. He and his team, shown in the picture, began treatment of the first two patients in May.



The SOMC AccuBoost Team: Therapist Staci Howard, physicist Mike Carroll, Johnny Bernard, M.D., therapists Katrina Thayer, Terry Midkeff, and Sherry Roffe and nurse Kim Bridwell.

Patient Testimonials

Christine Hall knows a good thing when she sees one. As a head librarian in Groton, CT, she took the time to look for the best options available when she was diagnosed with breast cancer. As her cancer was diagnosed in an early stage, she chose the lumpectomy procedure. For surgery she chose one of the best sites in Boston. When it came to Radiation therapy, she considered all different options. In the end, she opted to get AccuBoost to shorten the duration of radio-

therapy. She was the first patient to be treated by AccuBoost under the Brown University (BrUOG) protocol. She travelled on a daily basis to Providence for the treatment.



Her video testimonial, where she discusses her selection and decision making process can be watched either at the AccuBoost website

www.accuboot.com and clicking "recent news," or by searching YouTube for AccuBoost APBI. She also details her observations and personal experience with the procedure.

Ms. Hall had a previous, but unrelated, encounter with cancer and as such is a "two-time cancer survivor." She is an exemplary role model for newly diagnosed breast cancer patients who participate in the decision making process, assess the treatment options, and choose their journey.

New Addition to the Team



Ryan Flynn, Marketing Manager for AccuBoost, is one of the latest additions to the team. Ryan's responsibilities include not only the overall support for the AccuBoost brand, but also providing marketing assistance for the facilities that offer the AccuBoost procedure. In this capacity, Ryan is in constant contact with the existing facilities to provide website support, create artwork, custom graphics, posters and arranges for local media coverage. Ryan has a BFA in Fine Arts and Graphic Design and has over 10 years of experience in design, marketing, and is a certified expert in print production. Ryan states "there is never a dull moment in my job." He adds "Each site is different in terms of their approach, but a common thread in all the sites is the underlying desire to proclaim the beneficial features of AccuBoost as part of the desire to offer the latest and best treatment for their patients."

Creating Patient Awareness

One of the puzzles that the radiation oncology community is grappling with is the number of women who - when diagnosed with early stage breast cancer - still opt for mastectomy. Despite availability of long term data and definitive studies that show comparable disease free survival rates between the two options, a sizeable percentage of eligible patients with early stage breast cancer still chose the disfiguring and traumatic mastectomy procedure. What is more disturbing is the fact that mastectomy volumes have stayed relatively constant in the last decade, if not increasing.

One reason for the women who chose mastectomy, is lack of patient awareness about the options available at the time of diagnosis. It is believed that with better information, the radiation oncology community can succeed in promoting the breast conservation procedure.

AccuBoost is steadily increasing its efforts to create patient awareness by providing up to date information in the various markets where the procedure is offered. The figure here shows a sample hand-out that was produced for distribution at SOMC. The fliers are offered to patients in diagnostic centers, breast surgery wards, and radiation oncology facilities

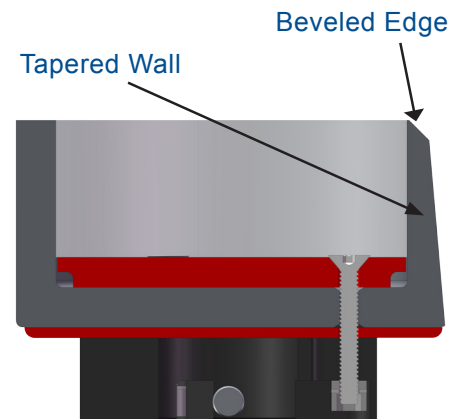


New Generation Applicators

One of the challenges for AccuBoost in the past was the difficulty to provide adequate coverage of the posterior margin of the lumpectomy cavity. To address this issue the AccuBoost team has introduced a new generation of Low-Profile applicators.

These applicators, as shown in the diagram, have a tapered wall and a beveled edge at the side facing the patient. The beveled edge is shaped to match the curvature of the bend of the mammography paddle. The tapered wall allows for the applicators to be at least 3 mm closer to the chest wall. The combination of the two features, effectively gains up to 5 mm more posterior reach - in most cases allowing for target coverage extending to pectoralis fascia. Field results indicate that these Low-Profile applicators are ideal for posterior tumor beds.

The low-profile applicators are gradually exchanged with the existing applicators. The intention is to replace all current applicators with the updated design before the end of the year. Interested parties with the urgent need for the new applicators are encouraged to contact the company for expedited shipment.



Q&A On AccuBoost for Small Breasts

With David Wazer, M.D., Chair of Medical Advisory Board

Small breasted women in general, and in particular those with A-cups, present a challenge for targeting the boost dose. Conventional electron boost causes unintentional exposure to the chest wall and beyond. The question of the unique role of AccuBoost for this subset of patients is posed to Dr. Wazer.

Q – Are small breasts suitable for treatment by AccuBoost?

A - Mammography is routinely performed on small breasted women with satisfactory results. There is no reason why a mammographic setup for the AccuBoost approach cannot be used for targeting the lumpectomy cavity margins in a small breast.

While positioning a small breast may appear more challenging, they are often ideal candidates for the best outcome. The key, as with all patients, is to identify the margins around the lumpectomy volume.

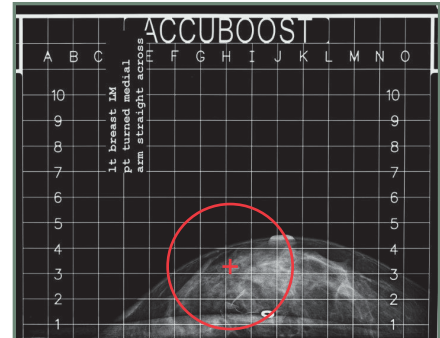
Q – Are there special techniques for positioning small breasted women?

A – There are various patient positioning techniques that help in pulling the breast tissue into the mammography paddle. When the patient is properly positioned, the breast tissue, extended to the pectoralis fascia can often be viewed in the mammogram and properly targeted by AccuBoost. A typical A-cup breast mammogram with easily identifiable pectoralis interface is shown above.

Patients positioning in the medio-lateral direction is often easier, but the cranial-caudal direction may require more attention. Extending the arm and leaning forward may prove helpful. There is a learning curve here but after a few cases radiation therapists are able to properly position patients with small breasts.

Q – Are there any other clinical observations for this group?

A – It is always safe to place the AccuBoost applicators in a “flashing geometry” – where a portion of the applicators extends beyond the edge of the breast and this is common occur-



rence for small breasts. The skin exposed in a flashing geometry does not receive a higher dose. Additionally, I find the newly designed “Low-Profile” applicators are particularly useful for targeting lumpectomy sites close to chest wall.

Q – Is there an inherent benefit in the AccuBoost approach for small breasts?

A – Small breasts when immobilized present a lower separation distance in the paddles. Lower separation implies less tissue taken to high dose and, based on the AccuBoost patient data registry, typically causes less toxicity and a better cosmetic outcome.

AccuBoost for APBI Investigation

Jaroslav Hepel, M.D., at Rhode Island Hospital is in charge of the Non-invasive Image Guided Breast Brachytherapy Protocol (NIBB) a descriptive scientific way of identifying the AccuBoost procedure for Accelerated Partial Breast Irradiation (APBI). He presented the results of the study involving 33 patients with a median

follow up of 5.7 months, between late 2011 to early 2013 at the recent ABS meeting in New Orleans.

The oral presentation, covering all aspects of the study, is summarized here:

Objective – The purpose of the study was to evaluate the suitability of this completely non-invasive yet precise target-

Continued...

Patient, Tumor & Treatment Characteristics

Age (years)	
Mean [Range]	65 [50-92]
Histology	n (%)
1DC	20 (61%)
DC1S	13 (39%)
Tumor Size (cm)	
Mean [Range]	1.2 [0.3-3.0]
Lymph Node Status	n (%)
Positive	0 (0%)
Receptor Status	n (%)
ER Positive	32 (97%)
Volume (cc)	Mean [Range]
Whole Breast	1632 [365-3,568]
Tumor Bed	22.2 [6.4-69.6]
Breast Compression (cm)	
Mean [Range]	6.5 [4.3-8]
Treatment Schedule	n (%)
Daily	24 (73%)
BID	9 (27%)

AccuBoost for APBI Investigation (Cont.)

ing technique as an alternative to other APBI techniques

Patient characteristics – the study covered a total of 33 patients to date. The median age of the participants was 65 with a range of 50 to 92. The table on the previous page shows the patient specific information in the study.

Procedure Details – The procedure was administered either daily or BID, based on patient preference of the patients. Nearly 2/3 of the patients chose the daily course of treatment. The patient discomfort was minimal; as it was rated 1 on a score of 1 to 10. Average procedure time, as measured from the time that the patient walked in the vault to the time she left, was 45 minutes in which the actual radiation treatment time was 12 minutes.

Results – 94% of patients had no to mild (Grade 0 - 1) fatigue. 72% of patients had no skin or faint erythema (Grade 0 - 1), the remaining had mild erythema. No grade 3 toxicity were observed in the study. No patient developed desquamation. In all no patient developed grade 2 or greater lasting toxicity and there were no decline in cosmetic outcome in this short duration study.

Conclusion - The study concludes that NIBB is feasible and well tolerated by patients with no significant acute toxicity. Second generation “cone applicators” appear to eliminate any sign of skin reaction. A larger cohort and further follow up is warranted to assess late toxicity endpoints, cosmetic outcome and efficacy, but the results to this point are very encouraging.



Grade 0

Grade 1

Grade 2

Resolved
2 weeks
later



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