Issue 34: January 2017

AccuBoost®
for image guided breast irradiation

BOOSTER CLUB

CEO'S CORNER

Postoperative radiation therapy has long been the standard of care for breast cancer. In recent months, a potentially practice-altering concept is being advanced that delivers the breast dose prior to surgery. Preoperative radiation therapy, for which AccuBoost is ideally suited, is poised to make inroads and may significantly broaden the utility of the procedure.

This issue of the newsletter reports on new additions, site restarts, plans to participate in the upcoming ABS and ACRO tradeshows, and quotations from users. It also provides information on the utility of wire localization films for patient screening. Finally, the much anticipated and recently released publication that updates the boost patient data registry is highlighted.

INSIDE THIS ISSUE:

Find Us on Facebook

@AccuBoost

ACCUBOOST WELCOMES NEW SITES

From Left: Sabrina Young - Cancer Program Coordinator; John E. Cantrell, MD - Radiation Oncologist; Brittany Lake - Radiation Therapist; Tricia Liberti - Admissions Rep.; Kelly Smith - Radiation Therapist; Jeff Kurr - Physicist; Daniel Lenard - Director of Oncology; Ashley Sayle - Radiation Therapist; Katrena Wallace - Radiation Therapist; Linda Ragon - Radiation Oncology Nurse

Baptist Cancer Center at Oxford, is the second Baptist Memorial Hospital in Northern Mississippi to offer the AccuBoost procedure. John Cantrell, MD, the radiation oncologist at this site, started the launch by treating four patients on day-one. Dr. Cantrell has perfected the art of using wire localization films as part of the selection process to establish if a patient is a candidate for the procedure (See the Q & A section on page 2).

Willmar Regional Cancer Center
Affiliated with Virginia Piper Cancer Institute®
A joint venture between Rice Memorial Hospital and ACMC

Willmar Regional Cancer Center, a part of Rice Memorial Hospital, is the first facility in Minnesota to make the commitment to offer the AccuBoost procedure to women in this part of the country. The efforts at this site are spearheaded by radiation oncologist Tod Speer. Dr. Speer will implement the program with colleagues Joe Schmidt, physicist and Amy Mugge, Director of Cancer Services. Willmar Cancer Center is acquiring the prerequisite HDR afterloader just to enable it to offer the AccuBoost procedure. The trend for clinics to acquire the HDR afterloader to offer AccuBoost is gaining steam.

NF The Cancer Center
North Florida Regional Healthcare

North Florida Radiation Oncology in Gainesville, is one of the latest additions to the list of AccuBoost users. This is the first HCA facility to offer AccuBoost. The treatment at this site is administered by the team of five radiation oncologists: Drs. Christopher Balamucki, Allison Grow, Cherylle Hayes, Charles Perkins and Laurel Warwicke.

EASY ACCUBOOST ROLLOUT

"Our Accuboost rollout was a total success. The AccuBoost clinical team did a great job of getting us through the first 4 patients without a glitch. Please convey our appreciation. I will also be happy to reinforce our positive experience with any of your potential/ future clients."

John Cantrell, MD
Medical Director
Radiation Oncology
Baptist Cancer Center-Oxford, MS

ACCUBOOST FOR PREOPERATIVE RADIOTHERAPY

"Delivering radiation prior to lumpectomy makes good sense and is worthy of further investigation. Although there are many options for delivering the preoperative dose, AccuBoost with its mammography image guidance and conformal brachytherapy dose is well positioned to contribute to the field."

David Wazer, MD
Radiation Oncologist-in-Chief; Chairman, Department of Radiation Oncology, Rhode Island Hospital

ACCUBOOST WELCOMES NEW USERS

AccuBoost welcomes Sanjay Emandi, MD, pictured in the photo, as the new radiation oncologist at Paris,TX. He has joined this US Oncology facility in early November. He is a brachytherapy specialist and as it turns out, an AccuBoost enthusiast.

From Left: Dana Rosencranz, PhD - Chief Physicist; Sherri Chandler - Lead Radiation Therapist; Sanjay Emandi, MD - Radiation Oncologist; Robin Kidd-Jackson - Radiation Therapist; Justin Walker, MS - Physicist

ACCUBOOST FOR PREOPERATIVE RADIOTHERAPY OF BREAST

Radiotherapy prior to surgery is not uncommon in radiation oncology. However, this approach has not been fully explored for breast. Investigators in the US and Europe, have recently started exploring this option. The main advantage of preoperative radiotherapy is a well delineated, yet substantially smaller target. Recent articles demonstrate that the preoperative target for radiotherapy is significantly smaller than its post-operative equivalent.

Literature on breast radiation therapy is replete with references to lower toxicity and improved cosmetics associated with smaller treatment volumes. Based on the promise of accurate dose targeting and the anticipated superior cosmetic outcome, AccuBoost hosted a Working-Group session just prior to the 2016 ASTRO Annual meeting in September. Many opinion leaders from the US and Europe, some with recent publications and data on the subject, attended this meeting. David Wazer, MD, the Chair a AccuBoost's Medical Advisory Board, lead the session.

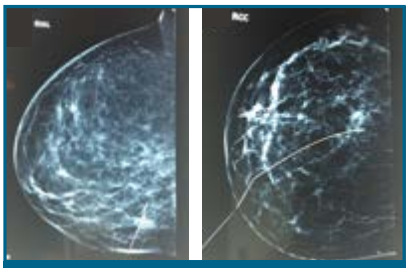
A Preop Working-Group has been formed and is developing appropriate protocols to initiate a formal multi-institutional study. Although many radiotherapy options are available/amenable to the preoperative design, the unique features of AccuBoost, namely real-time mammography image guidance and conformal dose, are key advantages to the preoperative approach.

Q & A : ON NEEDLE LOCALIZATION FILMS FOR PATIENT SELECTION

With John Cantrell, Radiation Oncologist in Oxford, MS

Qualifying patients for treatment can be a challenge. Premature promises that a patient should be a candidate and last minute discovery that, for whatever reasons, she is not a candidate can often cause unnecessary disappointment/ disruption in patients' schedules. It is not unusual to learn that occasionally patients get tears in their eyes when they hear the news. We have learned that John Cantrell, M.D. the radiation oncologist and Medical Director at Baptist Memorial Hospital in

Q&A (CONT.)



Wire localization films in the ML and CC directions used to identify proper candidates

Oxford, Mississippi had a string of success – in fact, a perfect record - in identifying appropriate patients. During the launch of AccuBoost, Dr. Cantrell relied entirely on the preoperative wire localization mammograms of the patients. Even though the contribution of wire localization images had been considered in the past, this is the first time to our knowledge that the art has, seemingly, been reduced to a science.

The contribution and utility of wire localization films for patient selection as part of continuing best industry practices, is posed to John Cantrell:

Q: How did you decide on using wire localization for prescreening patients for AccuBoost?

A: Our surgical oncology colleagues rely on wire localization mammograms for surgery. It occurred to me that a radiation oncologist using the same image sets should be able to identify canidates free from the uncertainties inherent in screening by CT.

Q: How confident can you be in pre-qualifying the patient?

A: As a cautionary step – just to be on the safe side – I rely on the wire localization mammograms to screen out patients with tumors too close to the chest wall.

Q: Are there any clues/lessons that you can share with others?

A: I find it beneficial to look at both sets of orthogonal images. The mammograms are displayed next to post-operative images taken in the same orientation. Oftentimes, it is easy to identify and line up anatomical landmarks and use them as guides to pinpoint the tissue around the tumor bed that is the target for radiation dose.

Q: Do you find the pathology reports helpful in targeting the dose?

A: In principle, the pathology report should guide the radiation oncologist to preferentially treat the microscopic residual disease. This clearly suggests that the boost dose should be targeted to the closest (negative) margin. If the pathology report indicates that the closest margin is, for instance, lateral, preferentially the boost dose should be targeted to cover the tissue near the closest margin in effect relying on disease-guided targeting.

BOOST REGISTRY UPDATED

ELSEVIER

BRACHYTHERAPY

Updated feasibility and reproducibility results of multi-institutional study of noninvasive breast tumor bed boost

Jessica Schuster[1,*,13], Christopher Chipko[1], Michael Kasper[2], Sandra Sha[3], Douglas Ciuba[4], James Petrikas[5], Anand Kuruvilla[6], Ravichandra Sandrapaty[7], Coral Quiet[8], Cynthia Anderson[9], Rashmi Benda[10], David Wazer[11], Jaroslaw Hepel[12], Douglas Arthur[1]

Jessica Schuster, MD

The boost registry has been collecting data since the time of the initial publication. Jessica Schuster, MD, while completing her residency training at Virginia Commonwealth University, coordinated data collection and analysis from various contributing centers. The updated registry, published in the October issue of BRACHYTHERAPY provides longer term data on 518 early-stage breast cancer patients who were treated from July 2007 to February 2015. The findings of this study are summarized below:

Introduction and Purpose -

Tumor bed identification, the article argues, "is one of the greatest challenges in delivery of boost radiation." It points out that non-invasive breast brachytherapy (NIBB – the generic description for AccuBoost) uniquely addresses the dose targeting challenge. With access to longer median follow up, a larger patient pool and an increased number of contributing centers, the study provides further evidence for feasibility, reproducibility and satisfactory clinical results of targeted boost combined with whole breast irradiation.

Continued on next page...

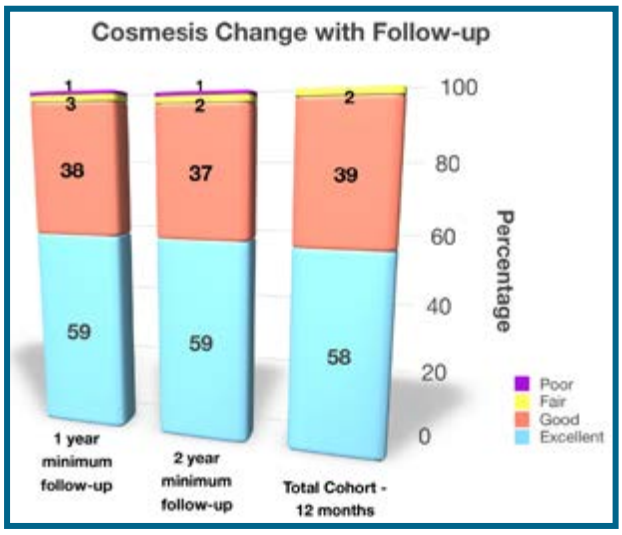
BOOST REGISTRY (CONT.)

Patient population and treatment details -

Early-stage patients had negative margins at the time of treatment, and completed WBI and tumor bed boost by NIBB. Only 60% of patients had surgical clips, whereas the remainder relied on mammographic changes for target delineation. NIBB was delivered before WBI in 16%, during WBI (but not the same day) in 52%, and after WBI in 30% of patients.

Results for early tumor control -

For the entire cohort with follow up data, freedom from any recurrence was an impressive 98.4%. Freedom from recurrence on the treated breast was 99.2% (2 recurrences at 30 and 36 months). Additionally, two patients were reported to have recurrence in the other breast – presumably unrelated to the treatment. Even though it is premature to draw any conclusions due to relatively short follow up duration, the study's low recurrence rate is worth noting.



Early overall cosmetic outcome -

The article reports excellent/good (E/G) cosmesis of 97.4% at the time of final follow up. The analyzed subsets assessing impact of treatment centers with high vs low volume revealed no difference in cosmesis. Additionally, there were no differences in the E/G outcome when the first five patients in each facility were compared with the subsequent patients. Furthermore, there were no differences between patients treated in academic centers vs. those treated in community centers. Similarly, NIBB was shown to be insensitive to timing as there were no differences in cosmetic outcome for delivery of the boost, before, during or after WBI. Most importantly, cosmesis scores remained stable when extended in follow-up duration, as shown in the chart on the left. Overall E/G score was at an impressive 96.9% for the entire cohort.

Conclusion -

The updated data registry, which provides information on more patients and longer follow-up, shows tumor control and strong evidence for stable and lasting cosmesis.

ACCUBOOST AT ACRO

Visit us at the

2017 ACRO Annual Meeting
March 9-11

at Hilton Hotel in
Lake Buena Vista, Orlando

ACRO2017

Advanced Radiation Therapy • One Industrial Way Tyngsboro, MA 01879 • (978) 649-0007 • FAX (978) 649-0077 • www.accuboost.com

65 1059 revA

AccuBoost®
for image guided breast irradiation

Advanced Radiation Therapy
One Industrial Way
Tyngsboro, MA 01879

POSTAGE